CLARK COUNTY
OHIO

Solid Waste District

SOLID WASTE
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
February 18, 2025
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
ATTACHED HERETO

2025 — 2039

SOLID WASTE MANAGEMENT RATIFIED PLAN, November 14, 2024

Clark County Solid Waste Management District

GT ENVIRONMENTAL

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SWMD Name	Clark County Solid Waste Management District
Member Counties	Clark
Coordinator's Name (main contact)	Chuck Bauer
Job Title	Director
Street Address	1602 W Main St
City, State, Zip Code	Springfield, OH 45504
Phone	(937) 521-2020
Fax	937-327-6648
Email address	cbauer@clarkcountyohio.gov
Webpage	https://www.clarkcountyohio.gov/633/Solid-Waste-District

Table i-2. Members of Policy Committee

Member Name	Representing
Clark County	
Melanie Flax Wilt	County Commissioners
David Estrop	Municipal Corporations
Tim Foley	Townships
Chris Cook	Health District
Tim McDaniel	Generators
Bobbie Sin	Citizens
Larry Ricketts	Public

Table i-3. Chariperson of the Policy Committee

Name	Tim McDaniel
Street Address	6125 Urbana Road
City, State, Zip Code	Springfield OH, 45502
Phone	(937) 390-4024
Fax	None
Email address	tim.mcdaniel@navistar.com

Table i-4. Board of County Commissioners

Commissioner Name	County	Chairperson/President
Melanie Flax Wilt	Clark	Chairperson
Lowell McGlothin		N/A
Sasha Rittenhouse		N/A

Technical Advisory Committee

Members of the District's technical advisory council (TAC) include:

Bill Cook

Anne Kaup-Fett

Sandy Henry

Connie Srobbe

Merritt Wichner

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 These issues combined with Ohio's outdated and incomplete solid waste regulations caused Ohio's General Assembly to pass House Bill (H.B.) 592.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 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.[1]

A SWMD is governed by two bodies. The first is the board of directors which consists of the county commissioners from all counties in the SWMD. The second is a policy committee. The policy committee is responsible for developing a solid waste management plan for the SWMD. The board of directors is responsible for implementing the policy committee's solid waste management plan.[2] Policy committees prepare/monitor plans and create details and authorities to spend toward implementation, while the Board carries out the day-to-day implementation.

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[1] 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.

[2] 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 manner in which that information is presented. This format is very similar in concept to a permit application for a solid waste landfill.

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

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

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

C. District Overview

The Clark County Solid Waste Management District (the District) was established on October 4, 1988, by the Clark County Board of Commissioners. The District's first plan was completed in 1990 and has been updated five times since, with this document serving as the sixth update. The District operates from one centralized location in the city of Springfield, Ohio. It is a single county district that relies on neighboring districts for landfill, transfer facility, and recycling processing infrastructure. Organics processing infrastructure in the District is robust. The District operates in an open market system, which means customers have a choice of any waste hauler because the system is open to competition.

The District's mission is to ensure that comprehensive, high-quality solid waste services are available to Clark County residents and businesses, and to supply environmental education and assistance to the community that will promote cost-effective and self-supporting waste reduction programs. To that, households and businesses in the District are offered collection services by private haulers while the District focuses on litter, education, and other hard-to-recycle materials. Competition for services has always been a key component in the collection and processing system which maintained a competitive market. In more recent years, competition has narrowed to only a handful of haulers. Add to that the increase in regional waste disposal fees is presenting a transition and challenges this 2025 Plan is navigating.

A major strength is the District's skilled staff in managing challenges and using resources wisely to provide as many additional opportunities to households and businesses as possible within the budget. The District is enduring inflation, making budget cuts when necessary, and being creative to maintain programs and operations on a generation fee set in 2007. An example of an immense benefit and opportunity to households is the Specialty Recycling Center which is owned and operated by the District.

Clark County consists of large rural areas with low population density and minimal developed land. By land usage, 17% of the county is developed with its major population center being Springfield with a population of about 59,000. A majority (62%) of the County's land use is classified as cropland. The County's two cities make up 47% of the District's total population. The District has seven villages which make up 4% of the population. The remaining 48% of residents are dispersed throughout the District's ten townships. Springfield is the most densely populated area in the District with roughly 3,000 residents per square mile.

The District's role is to administer the programs in the solid waste management plan. These programs reduce reliance on landfills through diversion. Equally important is ensuring the landfills used will have adequate capacity for the waste that does not get diverted. There is competition in the region with waste directed to multiple landfills within neighboring counties, as well as minimally to out-of-state landfills. The District is reliant on neighboring Montgomery County and sends nearly 70% of waste generated in the District to the Montgomery County South Transfer Station. From here the waste is sent and disposed of at the Rumpke Sanitary Landfill in Hamilton County.

The District offers numerous recycling programs designed to assist and educate the residential, commercial, and industrial sectors in diverting solid waste from the landfill. The District continues to work towards being a key resource for disposal and recycling information for its residents and commercial businesses. In the reference year of 2021, the District had a residential/commercial diversion rate of 36% which is well above the state goal of 25%.

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), which established ten goals as follows:

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

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

3. The SWMD shall provide the following required elements: a website; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.

4. The SWMD shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse and other alternative waste management methods to identified target audiences using best practices.

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

6. The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste, and obsolete/end-of-life electronic devices.

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

8. The SWMD will use the U.S. EPA's Waste Reduction Model (WARM) or an equivalent model to evaluate the impact of recycling programs on reducing greenhouse gas emissions.

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

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

SWMDs are encouraged but not required to demonstrate they will achieve both Goal 1 and Goal 2. Instead, SWMDs have the option of meeting 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, providing evidence the approved Solid Waste Plan is implemented each year.

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

CHAPTER 2. DISTRICT PROFILE

Purpose of Chapter 2 (Content in this box is authored by Ohio EPA)

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

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

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

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

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

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

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

A. Profile of Political Jurisdictions

1) Counties in the Solid Waste Management District

The District is a single-county District located in Clark County. Geographically located in western Ohio, roughly 42 miles west of Columbus. Clark County encompasses approximately 400 square miles. The Office

of Research generally defines the District as predominantly rural[1]. The land use/cover is broken down into the following categories:

- Developed, Low Intensity: 13.85%
- Developed, High Intensity: 2.75%
- Barren: 0.08%
- Forest: 10.30%
- Grassland: 0.73%
- Pasture: 8.49%
- Cultivated Crops: 61.70%
- Wetlands: 0.56%
- Open Water: 1.54%

2) County Overview

Western Ohio is one of the fastest growing areas in the State. In terms of employment, Western Ohio is expected to grow 4% from 2020 to 2030. In 2021, Clark County had a population of 135,586 and is expected to see minimal decreases through the planning period annually. By 2050, the Ohio Department of Development projects a nearly 17% decrease in population from 2020 to 2050[2]. One major roadway, I-70 runs longitudinally across Clark County and runs just south of Springfield. This transportation thoroughfare gives both businesses and residents easy access to the metropolitan center of nearby Columbus.

The majority of Clark County residents live in townships (48%) and cities (47%). Roughly 4% of residents live in villages. Springfield is the District's largest city, with about 43% of residents living within its boundaries. The largest employment sectors of Clark County are Trade, Transportation, & Utilities, Education & Health Services, and Professional Services. Together, these employment sectors comprise 53% of all sectors.

B. Population

1) Reference Year Population

Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction's population. The District has one community that resides predominantly in another county and therefore is subtracted from the District's total population. This community is Clifton Village and results in a 47-person subtraction from the total population.

Table 2-1 presents the adjusted population, the largest city, and the population of the largest city in the SWMD during the 2021 reference year:

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[1] Ohio Department of Development, Clark County Profile. https://development.ohio.gov/about-us/research/county/county-trends

[2] Ohio Department of Development,, Projected 2050 Ohio County Populations, https://development.ohio.gov/static/research/pop1/Projected-2050-Ohio-County-Populations.pdf

Table 2-1. Population of the District in 2021

County		Largest Policial Jurisdiction		
Name	Population	Community Name	Population	Percent of Total County Population
Clark	135,586	Springfield	58,763	43%

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

2) Population Distribution

Clark County has 10 townships, two cities, and seven villages. The largest city and county seat is Springfield. The largest township is Moorefield Township. **Table 2-2** below presents the District's population of its largest communities.

Table 2-2: Population of Largest Communities

Largest Communities	Population	Percent of County Population
Springfield city	58,763	43%
Moorefield township	12,563	9%
Springfield township	12,247	9%
Bethel township	12,152	9%
Mad River township	8,510	6%
German township	7,183	5%
New Carlisle city	5,533	4%
Pike township	3,252	2%
Harmony township	3,224	2%
Pleasant township	2,871	2%

Clark County's population is fairly equally distributed among cities and townships but has very minimal population in villages. **Table 2-3** below outlines this distribution.

Table 2-3: Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Clark County	47%	4%	48%

3) *Population Change*

According to the U.S. Census Bureau, Clark County has been slowly decreasing since the early 1990s. The District's population has declined by nearly 10,000 residents since 2000 and is projected to continue to decline. The Ohio Department of Development (ODOD) projects a decrease to 113,000 residents in 2050,

a nearly 17% decrease from 2020. ODOD provides population projections for every five years. To estimate the population in between the five-year increments, linear interpolation was used.

While demographic trends and conditions detail a decreasing population, the Clark County Strategic Planning Commission is focused on stabilizing the population, then increasing it by 2025. Large employers play a key role in providing more jobs and bringing people to the County. Companies like Topre America, Silfex, and Gabe's continue to produce jobs in the area. The City of Springfield is showing early indicators of population growth on the horizon. However, neither the Ohio Department of Development nor the US census data reflect the planning commission efforts and anticipation of increased population in the County at the time this draft plan was being prepared. The District will closely monitor and may adjust the population projections as additional data is released.

4) *Implications for Solid Waste Management*

The District's population is projected to decrease through the planning period, but per capita waste generation is projected to increase. In 2021, per capita waste generation was 6.49 pounds per person per day. This is projected to rise to 7.50 pounds per person per day by 2030. The drivers for this increase are both that the population is decreasing, and waste generation (primarily waste disposal) is increasing. This combination leads to an increasing per capita generation. Population affects waste generation rates but factors of population growth such as income, people per family, and economic activity are also contributing factors. Higher-income households typically produce more waste; however, they also tend to participate in recycling activities more often than lower-income households. These factors are all simultaneously involved and affect each other, creating a dynamic system that is challenging to predict. The District has generated between 156,000 tons and 177,000 tons of residential/commercial waste historically over the last five years. In the reference year, 161,000 tons were generated. It is projected to steadily increase over the planning period, reaching 176,500 tons in 2030, after which projections are flatlined.

C. Profile of Commercial and Institutional Sectors

There were approximately 1,832 commercial businesses according to the US Census Bureau[3]. The largest employment sectors are retail trade, other (except public administration, and health care & social assistance. The District's employment sectors are divided into North American Industry Classification System (NAICS) code classifications. **Table 2-4** shows the number of commercial establishments by NAICS code. As indicated in the table, the three largest employment sectors for commercial businesses

Table 2-4 Commercial Establishments

[3] U.S. Census Bureau, https://data.census.gov/

NAICS Code	NAICS Description	Number of Commercial Establishments
42	Wholesale Trade	86
44-45	Retail Trade	346
48-49	Transportation and Warehousing	91
51	Information	26
52	Finance and Insurance	117
53	Real Estate and Rental/Leasing	93
54	Professional, Scientific, and Technical	150
55	Management of Companies and Enterprises	12
56	Administrative and Support and Waste Management and Remediation Services	95
61	Educational Services	20
62	Health Care and Social Assistance	267
71	Arts, Entertainment, and Recreation	29
72	Accommodation / Food Service	217
81	Other Services (Except Public Administration)	283
	Total	1,832

Source: *2020 County Business Patterns. U.S. Census Data.*
Note: Data from 2021 was not available as of this report.

D. Profile of Industrial Sector

The following table presents the major industrial sector employers in the District. A vast majority of industrial businesses are centered in Springfield.

Table 2-5 Top Industrial Companies

Company	Employee Size
Navistar	2,000
Yamada North America Inc	600
Tac Industries LLC	400
Topre America	300
Reiter Dairy LLC	230

Source: *U.S. Business Database. Rep. Reference USA*

E. Other Characteristics

In Clark County, only two communities, New Carlisle and Tremont City, have single-hauler contracts. The rest of the District operates using a private, open market system where residents choose a waste hauler. Residents place a very high value on this ability to choose and often favor choosing the smaller local haulers that operate. Of these local haulers, only a few offer curbside recycling. In a survey conducted of households in 2015 (part of Take it to the Curb Campaign) 58% of respondents say their trash hauler does not have

curbside recycling. This is a major barrier to increasing curbside recycling across the County. Those haulers that offer the service charge an additional fee.

The District's largest community, Springfield, is no different than the majority of the communities. Springfield households have a strong desire for autonomy and choice of hauler. This drives minimal contracted services and more open-market, subscription-based services. There is much public concern about losing the free market's ability to choose. The District has previously faced strong public opposition to Springfield contracting to a single hauler. This concern stemmed from a dispute in the 1980s that resulted in a change to the City Charter. The current City Charter may require amendments and a public referendum for Springfield to contract with a single trash hauler. This topic has been discussed in the past, but the free market system remains in effect. In 2021, the City of Springfield had six different trash service providers.

The limited curbside recycling in Springfield and other areas of the District has hindered the District's ability to gather data on diversion. Challenging as it may be, there are ample opportunities to institute new curbside recycling programs throughout the District.

The District has also long been in discussions about establishing an in-district transfer station. This could help alleviate some of the service costs for all haulers operating in the District. Currently, all haulers must transport the collected waste out-of-district, primarily to Montgomery County, incurring heavy travel costs and wear & tear on vehicles. Establishing an in-district transfer station may allow some, if not all, haulers to realize cost savings and begin to provide additional curbside recycling services. As of this plan update, discussions and plans are being had with stakeholders and potential partners, but nothing has been formally solidified.

CHAPTER 3. WASTE GENERATION

Purpose of Chapter 3 (The language in this box is authored by Ohio EPA)

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 that were generated within the SWMD in the past and that could be generated in the future.

The District's policy committee calculated how much solid waste was generated for the residential/commercial and industrial sectors. Residential/commercial waste is essentially municipal solid waste and is the waste that is generated by a typical community. Industrial solid waste is generated by manufacturing operations. 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 policy committee obtained disposal data from Ohio EPA. Owners/operators of solid waste facilities submit annual reports to Ohio EPA. In these reports, owners/operators summarize the types, origins, and amounts of waste that were accepted at their facilities. Ohio EPA adjusts the reported disposal data by adding in waste disposed in out-of-state landfills. The District also obtains disposal information from facilities that are under contract, authorizing them to receive waste generated within Butler County.

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

Waste generation is the total amount of waste generated in a given year. It includes the amount of waste disposed of in landfills as well as the amount of waste that is diverted away from landfills, such as composted waste, recycled waste, etc. The sum of waste disposed, and waste diverted is the total amount of waste generated.

Waste Generation = Total Wastes Disposed + Total Wastes Diverted

Table 3-1 below presents the District's waste generated in the reference year. The amount generated is defined by the tons disposed of 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	160,646
Industrial	2,706
Excluded	0
Total	163,353

1) *Residential/Commercial Waste Generated in Reference Year*

The residential/commercial sector generated 160,646 tons of solid waste during the reference year. This sector is the largest generator in the District, generating 99% of all the waste in 2021. With a population of 135,633, the per capita waste generation rate is 6.49 pounds per person per day (PPD).

Figure 3-1 Benchmarked Residential/Commercial Generation Rate

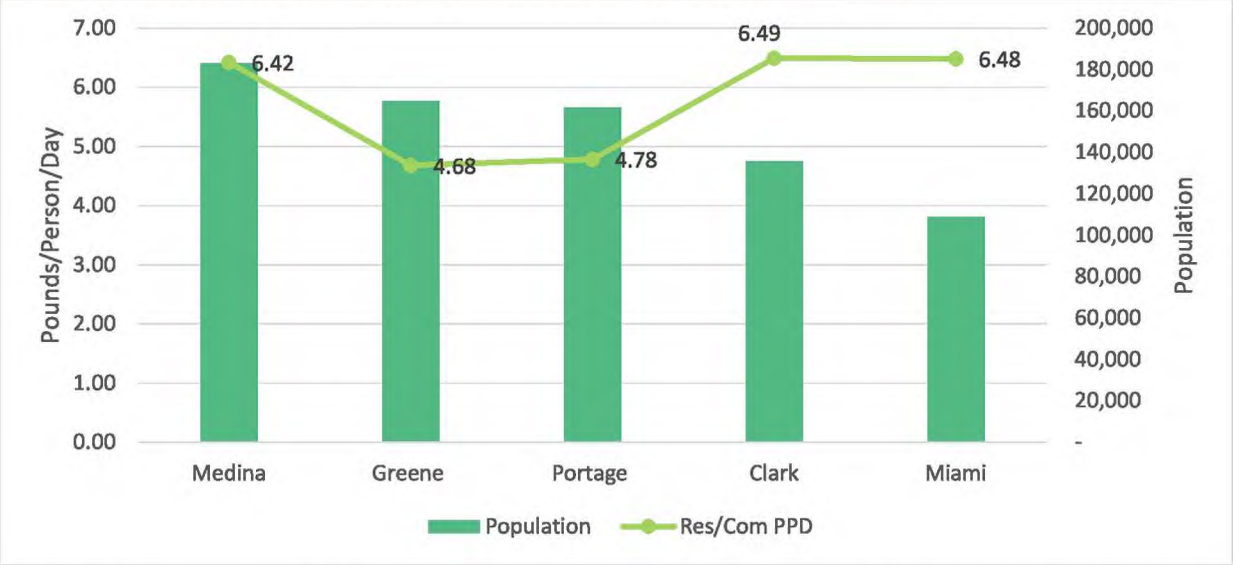
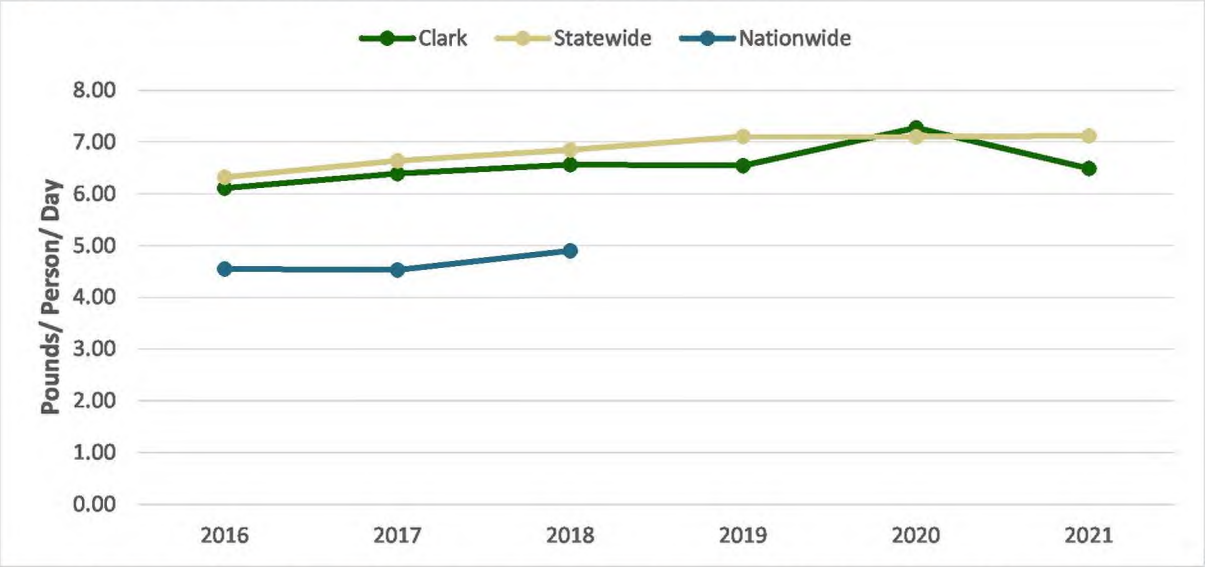


Figure 3-1 benchmarks five Districts with similar-sized populations. The statewide residential/commercial generation for 2021 was approximately 7.09 PPD. The District's 6.49 per capita generation rate is the highest among the benchmarked Districts with similar population sizes despite having the second smallest population.

Figure 3-2: Residential/Commercial Per Capita Generation

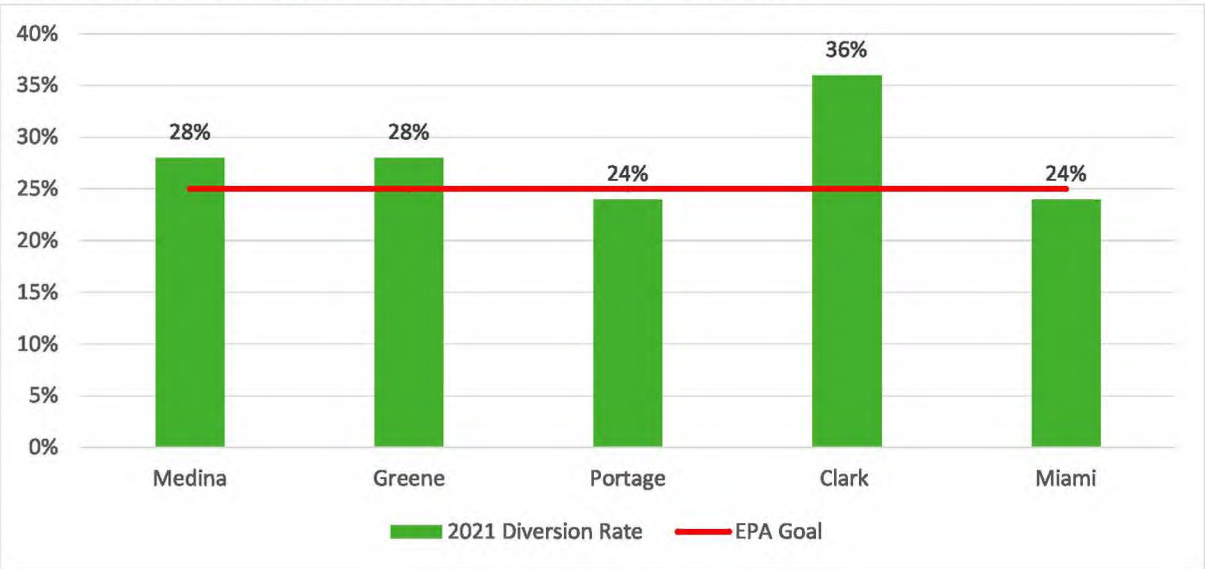


Source:
National Average Per Capita Data: EPA National Overview: Facts and Figures on Materials, Wastes, and Recycling.
Ohio Per Capita Data: Ohio EPA Solid Waste Generated in Ohio – 2020
Note: National average per capita generation 2019 through 2021 was not published as of this report.

The District's historical residential/commercial generation per capita data was compared to the U.S. EPA's national average and the Ohio EPA's statewide average data. As seen in **Figure 3-2**, the District's generation rate per capita lies just under the State average and well above the National average. The District saw a significant increase in the generation rate from 6.54 pounds per person per day in 2019 to 7.27 in 2020. This was because of an increase in yard waste diversion discussed in Appendix E. In 2021, the generation rate returned to average levels for the District.

The District's diversion rate was 36% in the reference year, well above the state goal of 25% diversion. **Figure 3-3** below shows the District's diversion rate compared to other similar-sized districts.

Figure 3-2: Residential/Commercial Per Capita Generation



A little over a third of the residential/commercial waste generated was diverted from landfills. The remaining 64% of the waste generated was sent for disposal. The District relies heavily on regional transfer facilities to manage waste to be disposed of. Disposal waste is primarily sent to the Montgomery County South Transfer Station which then sends the waste received to the Rumpke Sanitary Landfill. 69% of the District's disposal waste is first sent to a transfer station.

The District's main points of diversion data are Ohio EPA Compost Data (85%), Ohio EPA Commercial Retail Data (6%), Other Recycling Facilities (6%), and Ohio EPA Scrap Tire Report (6%). The District no longer surveys its commercial sector for recycling data and is heavily reliant on Ohio EPA reports and yard waste diversion to meet the state goal.

2) Industrial Waste Generated in Reference Year

In 2021, the District generated less than 3,000 tons of industrial waste. All of this was disposal waste, the District stopped surveying its industrial sector for recycling data. When surveys were sent, the industrial sector consistently reported diverting over 50,000 tons of waste from landfills annually. The industrial waste generated in the reference year comprises less than 2% of all waste generated in 2021.

3) Excluded Waste Generated in Reference Year

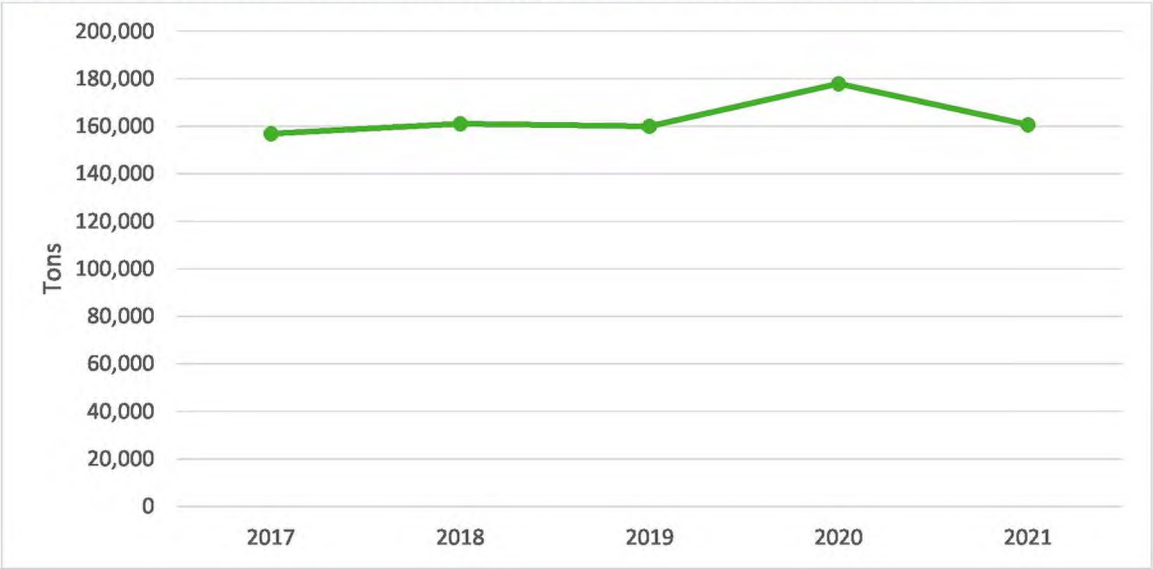
The District generated 214 tons of excluded waste in the reference year. Historically, this waste stream makes up less than 1% of the total waste stream. Per Ohio EPA Format 4.1, if this stream is under 10% of the total waste it does not need to be included in projections and calculations. Therefore, it is not included in projections throughout the planning period.

B. Historical Waste Generated

1) Historical Residential/ Commercial Waste Generated

Over the past five years, the residential/commercial sector disposed of an average of 97,000 tons annually while diverting about 66,000 tons annually. Over this time period, the District's diversion rate hovered between 36% and 44%. The District is predicting increases in waste disposal and minimal decreases in recycling. The District expects to be able to maintain diversion levels sufficient enough to meet the 25% state diversion goal through the planning period. The per capita generation in 2021 was 6.49 pounds/person/day and is expected to rise to 7.50 pounds/person/day in 2030, after which projections flatline.

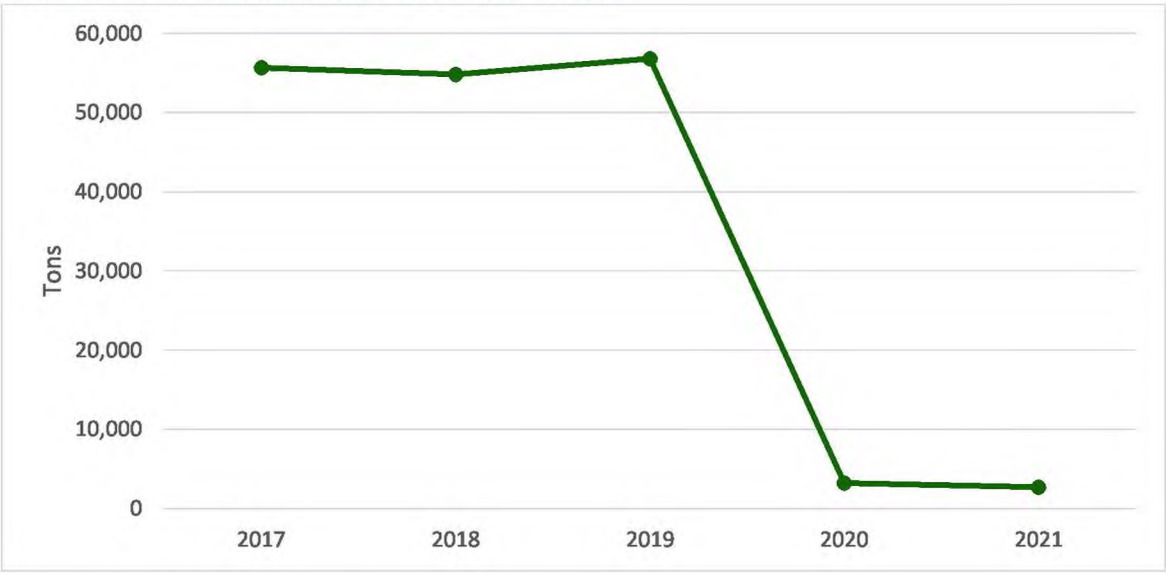
Figure 3-3: Historical Residential/Commercial Generation: 2017 – 2021



2) Historical Industrial Waste Generated

The District generated very little industrial waste in the reference year. As mentioned, the District no longer surveys the industrial sector for its recycling quantities. The lack of data presents a dramatic decrease from 2019 to 2020. The District believes these businesses are still recycling. The years 2020 and 2021 represent only waste disposal tonnages which is consistent over the previous five years. Prior to 2020, the District's industrial businesses reported diverting roughly 50,000 tons of industrial waste from the landfill annually .

Figure 3-4: Industrial Generation: 2017 – 2021



3) Historical Excluded Waste Generated

Excluded waste makes up less than 1% of the waste generation from the District historically. In 2021, there were 214 tons of excluded waste generated by the District.

C. Waste Generation Projections

Table 3-2 shown below demonstrates that waste generation during the first six years of the planning period within the District is expected to remain at similar levels as waste generation for the reference year 2021.

Table 3-2 Waste Generation Projections

Year	Residential Commercial Waste	Industrial Waste	Excluded Waste	Total
2025	172,533	2,665	0	175,199
2026	173,289	2,655	0	175,945
2027	174,059	2,645	0	176,704
2028	174,841	2,635	0	177,476
2029	175,636	2,625	0	178,262
2030	176,445	2,615	0	179,060

Residential/Commercial Waste Projections

Waste generation projections were estimated by analyzing historical trends in the District's waste generation, disposal, and recycling. The waste disposal analysis in Appendix D projects an annual increase of about 1% for the residential/commercial sector. This was based on a 10-year historical summary where the average percent change over that time period was applied. Using this model, the District's residential/ commercial sector is projected to reach 113,000 tons of disposed material in 2030 after which projections flatline.

The analysis in Appendix E looks at the various recycling activities done in Clark County and the reported totals. After projecting all recycling activities separately, the cumulative projection for recycling is expected to remain at similar levels seen historically, increasing slightly through the planning period.

The total projected residential/commercial waste generation (disposal plus recycling) for the District is expected to reach roughly 176,000 tons by 2030. A majority (113,000 tons) is expected to be from the waste disposed, with the remainder (64,000 tons) expected to come from recycling activities.

Industrial Waste Projections

Waste generation projections were estimated using historical trends for waste generation, disposal, and recycling. The District also considered the Ohio manufacturing employment projections in the region from the Ohio Jobs Outlook, West Ohio report by the Department of Jobs and Family Services. As indicated in the report, southwest Ohio manufacturing is projected to decrease by 3.8% from 2018 to 2028, or 0.38% annually. This was applied to the disposal projections for industrial waste. The District no longer tracks industrial recycling data. As such, this was not projected.

Excluded Waste Projections

Due to the low amount of excluded waste historically, this waste stream was not projected.

CHAPTER 4. WASTE MANAGEMENT

Purpose of Chapter 4

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

A District must have access to facilities that can manage the waste the District 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 District during the planning period.

To ensure the District has access to facilities, the solid waste management plan identifies the facilities the District expects will take the District's trash, compost, and recyclables. Those facilities must be adequate to manage all of the District's solid waste. The District 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 District. Further, identified facilities can be any combination of facilities located within and outside of the District (including facilities located in other states).

Although the Policy Committee needs to ensure that the District 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 District will have access to enough landfill capacity for all of the waste the District will need to dispose of. If there isn't adequate landfill capacity, then the Policy Committee develops a strategy for obtaining adequate capacity.

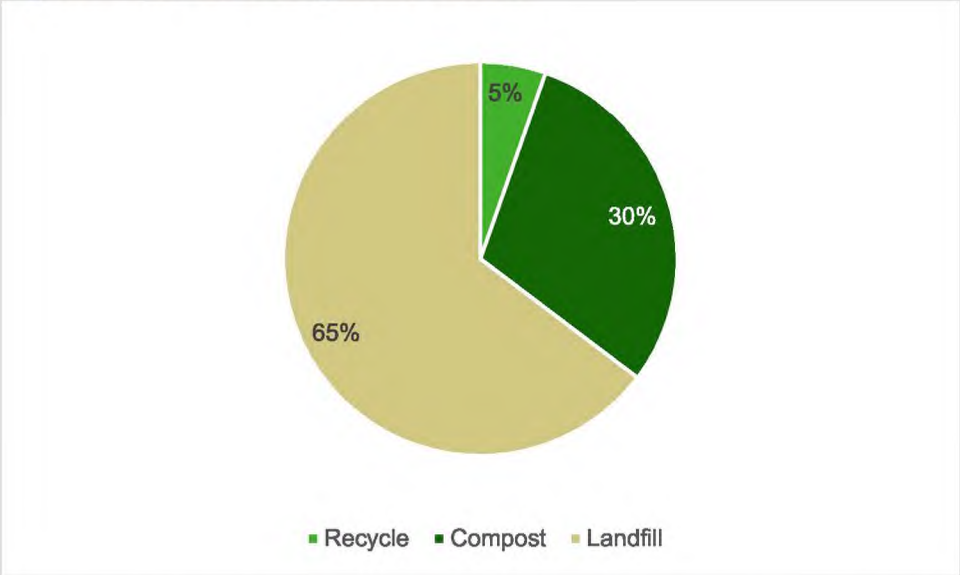
As of 2021, Ohio has more than 40 years of remaining landfill capacity. That is more than enough capacity to dispose of all of Ohio's waste. However, landfills are not located in a manner to geographically serve all areas of the state. Therefore, there is still the potential for a regional shortage of available landfill capacity, particularly if an existing landfill closes. If that happens, then the Districts in that region would likely rely on transfer facilities to transport waste to an existing landfill instead of building a new landfill.

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

A. Waste Management Overview

Clark County manages waste through a combination of landfills, recycling programs and facilities, transfer stations, and composting facilities. **Figure 4-1** below depicts total waste generation management in the reference year. The majority of the total waste generated by Clark County is managed through landfill disposal. The majority of waste generation in Clark County is derived from the residential/commercial sector at 98%, with industrial waste comprising 2% of total generation.

Figure 4-1 Waste Management Method



Based on historical analysis the future waste projections, shown for the first five years of the planning period in **Table 4-1** below, demonstrate an increase in recycling tonnages and minor increases in the total waste landfilled. A majority of the District's waste diversion stems from composting. Overall waste generation is projected to minimally increase through the first five years of the planning period.

Table 4-1 Methods for Managing Waste

Year	Generate	Recycle	Compost	Transfer to Landfill	Direct Haul to Landfill
2021	***163,353***	***8,774***	***48,906***	***73,100***	***32,572***
2025	175,199	10,331	54,976	76,019	33,873
2026	175,945	10,302	54,668	76,768	34,206
2027	176,704	10,274	54,362	77,524	34,543
2028	177,476	10,246	54,057	78,288	34,884
2029	178,262	10,219	53,755	79,060	35,228
2030	179,060	10,191	53,454	79,840	35,575

Source:
Generate: Appendix G-1 and G-2
Recycle: Appendix G-1 and G-2
Compost: Appendix E-7 and E-8
Transfer: Appendix: D-2 and D-6
Landfill: Appendix D-1 And D-6

Landfill capacity, demonstrated in Appendix M, remains abundant and exceeds the available volume of waste generated locally. Consequently, tipping fees are low, and landfills continue to be the most economically feasible disposal option. The District is not expecting changes in the structure of the waste management system throughout the planning period. Following historical trends, it is expected waste will be similarly managed with minor changes in tonnages throughout the planning period.

B. Profile of Waste Management Infrastructure

1) Solid Waste Management Facilities

Landfills

There are no active permitted solid waste disposal facilities in Clark County. Fortunately, affordable disposal capacity is available within proximity to Clark County. The volume of waste each landfill receives is dependent on its own collection and transport capabilities or upon its relationships with independent haulers, and its permit to accept approved daily waste tons.

As discussed in Appendix D, the District used seven out-of-district landfills and one out-of-state landfill. The out-of-state landfill is located in Indiana. Almost all of the waste sent to these landfills was from the residential/commercial sector. Most landfills are owned and operated by the private sector. There were no captive landfills used. The District sends 80% of its direct hauled waste to Stony Hollow Landfill in Montgomery.

Transfer Stations

There are no solid waste transfer facilities in Clark County. Three out-of-district transfer stations were used by the District in the reference year. 99% of transferred waste is sent to Montgomery County South Transfer Station. From here, the waste is sent to Rumpke Sanitary Landfill.

The District is heavily reliant on regional solid waste facilities, particularly in neighboring Montgomery County. The District has long been interested in helping to establish an in-district transfer station. The District hopes to explore a small-scale transfer station in various capacities during this planning period. See Appendix H and I for more information.

Compost Facilities

The District is heavily reliant on composting infrastructure and the diversion of organic materials from landfills to achieve Ohio's 2020 State Plan Goal 2. The District used a total of 10 compost facilities in the reference year ranging from Class II to Class IV. The District has a contract with one of these locations, C+S Tree Service. The contract allows Clark County residents to drop off yard waste free of charge. The District pays $24,000 annually to C+S Tree Service for this option. In the reference year, C+S Tree Service reported diverting nearly 37,000 tons of material which is 75% of all organic (yard waste and food waste) waste diverted by the District.

Residents of New Carlisle, Springfield, German Township, and Moorefield Township also have access to fall leaf collection and/or brush collection throughout the year.

2) Waste Collection

Municipal solid waste is collected from residents, businesses, and institutions and transported to landfills by several private waste operators. In Clark County, the freedom to choose a waste hauler is of utmost importance to residents and has been for some time. As such, various small local haulers are operating in the District as well as larger haulers such as Waste Management and Rumpke. New Carlisle (Waste Management) and Tremont City (Rumpke) have the only single-hauler contracts in Clark County. The rest of the county uses a private, open market system in which residents choose a waste hauler. Some haulers offer curbside recycling for a fee; others offer recycling only in limited areas. The District utilizes Rumpke as its hauler to service the drop-offs located in Clark County.

C. Solid Waste Facilities Used in the Reference Year

1) Landfill Facilities

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

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Disposed	Remaining Capacity (years)
	County	State			
In-District					
N/A					
Out-of-District					
SWACO Franklin County Sanitary Landfill	Franklin	Ohio	8	0%	46
American Landfill, Inc.	Stark	Ohio	19	0%	74
Suburban Landfill Inc	Perry	Ohio	1	0%	77
Cherokee Run Landfill	Logan	Ohio	5,954	18%	28
Rumpke Sanitary Landfill	Hamilton	Ohio	558	2%	37
Crawford County Landfill	Crawford	Ohio	22	0%	23
Stony Hollow Landfill Inc	Montgomery	Ohio	25,985	79%	26
Out-of-State					
Caldwell Landfill	Shelby	Indiana	238	1%	Data Not Reported
Total			**32,786**	**100%**	**311**

Note: Table does not include transferred waste that was landfilled.

2) Transfer Facilities

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

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Transferred	Landfill Where Waste was Taken for Disposal
	County	State			
In-District					
N/A					

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Transferred	Landfill Where Waste was Taken for Disposal
	County	State			
Out-of-District					
Miami County Solid Waste & Recycling Facility	Miami	Ohio	175	0%	Cherokee Run Landfill
Montgomery County South Transfer	Montgomery	Ohio	72,428	99%	Rumpke Sanitary Landfill
Rumpke Waste Inc Greenville Transfer Facility	Darke	Ohio	497	1%	Rumpke Sanitary Landfill
Out-of-State					
N/A					
	Total		**73,100**	**100%**	**NA**

3) Composting Facilities

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

Facility Name	Location (County)	Material Composted (tons)	Percent of all Material Composted
In District			
Garick LLC Paygro Division	Clark	8,953	18%
Lawnmasters	Clark	961	2%
Springfield Township Composting Facility	Clark	713	1%
Mad River Topsoil, Inc.	Clark	1,158	2%
C+S Tree Recycling Service	Clark	36,647	75%
Studebaker Nurseries Inc	Clark	82	0%
Springfield WWTP Class III	Clark	128	0%
ODOT District 7 Clark Co Harmony Post	Clark	0	0%
Out-of-District			
London Correctional Institution		34	0%
Number One Landscape		14	0%
	Total	**48,688**	**100%**

4) Processing Facilities

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

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
		State		
Out-of-District				
NA				

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
		State		
Out-of-District				
Rumpke Recycling - Dayton	Montgomery	Ohio	MRF	3,886
Out-of-State				
NA				
			Total	**3,886**

D. Use of Solid Waste Facilities During the Planning Period

An estimated 113,000 tons of municipal solid waste (not including excluded waste) is expected on average annually from 2022 through the end of the planning period. Projections flatline after the sixth year of the planning period. An estimated net disposal of about 2.1 million tons is needed in landfill capacity for the duration of the planning period.

E. Siting Strategy

The solid waste management plan must demonstrate that the District will have access to enough capacity at landfill facilities to accept all of the waste the District will need to dispose of during the planning period. If existing facilities cannot provide that capacity, then the policy committee must develop a plan for obtaining additional disposal capacity. Although unlikely, the policy committee could conclude that it is in the District's best interest to construct a new solid waste landfill facility to secure disposal capacity. In that situation, Ohio law (ORC Section 3734.53(A)(8)) requires the policy committee to develop a strategy for identifying a suitable location for the facility. The policy committee must include its siting strategy in the solid waste management plan. The solid waste management plan includes a siting strategy, presented in full in Appendix S.

F. Designation

Ohio law gives each District the ability to control where waste generated from within the District can be taken. This provision for disposal is generally referred to as flow control. In Ohio, Districts establish flow control by designating facilities. Districts can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.

Even though a District has the legal right to designate, it cannot do so until the policy committee specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If it wants the District 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 facilities in a solid waste management plan, the board of directors decides whether or not to act on that authority. If it

chooses to designate facilities, then the board of directors must follow the process prescribed in ORC Section 343.014. If it chooses not to designate facilities, then the board of directors simply takes no action.

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

If the board of directors designates facilities, then the next section will provide a summary of the designation process.

1) Description of the District's Designation Process

   The Board is authorized to establish facility designations in accordance with Sections 343.013 and 343.014 of the Ohio Revised Code. In addition, facility designation will be established and governed by applicable District rules.

2) List of Designated Facilities

   The District is not designating any facilities in this Plan Update.

CHAPTER 5. WASTE REDUCTION AND RECYCLING

Purpose of Chapter 5

As was explained in Chapter 1, a District must have programs and services to achieve reduction and recycling goals established in the state solid waste management plan. A District must also ensure that there are programs and services available to meet local needs. The District 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 District 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 District'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 13 analyses that allowed the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the District adequately serving all waste-generating sectors?
- Is the District recovering high volume wastes such as yard trimmings and cardboard?
- How well is the District'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 District'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 District could take, programs the District could implement, or other things the District 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 District 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. Program Evaluation and Priorities

1) Actions

Appendix H evaluates the District's performance of programs and strategies in offering and maintaining services. Evaluation of these programs involves determining whether the performance observed was expected or desired. If these strategies did not perform as anticipated, suggestions were presented to improve and strengthen programs and performance and increase effectiveness. As part of this analysis, a list of opportunities was created, identifying possibilities for the District's future programming.

The District estimates that 48% of the items generated could be recycled at the curb. Of the 48%, approximately 11% is recovered and 89% of the materials have a high potential for recovery at the curb and have a high economic value. These materials consist of cardboard, paper, plastics, metal, and glass. There is a great potential for collecting and processing more recyclables. The effort to increase the collection of materials requires changes to programs, such as expanded collection and the enhancement of drop-off convenience centers that complement curbside collection.

While there are at least four haulers in the county, curbside recycling collection infrastructure remains a gap. The District operates under an open market system where political jurisdictions have the ability to contract for services. Only two haulers offer curbside recycling, and the largest political jurisdiction's charter prevents trash contracted services. Historically households in the District, seek the lowest competitive price for trash services, and when compared frequently the outcome is a disinterest in paying for recycling at the curb. Thus, the cost of service for curbside recycling is a challenge.

A working strategy session with the Policy Committee discussed collection infrastructure and options as well as other future programming that could be pursued. What ensued was a suggested list of programming. Suggested areas of improvement and new programs do not bind the District to commit to every action listed.

2) Priorities

As part of the planning process, the Policy Committee gave a priority status for each program and further discussed goals, changes, and ways to improve or continue existing programs. Please see Appendix I for the full analysis and priority table,

B. Program Descriptions

This section briefly describes major programs and services available during the planning period.

Curbside Recycling Services

Table 5-1 Curbside Recycling Services

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
NCS-1	New Carlisle City	Waste Management	Ongoing
NCS-2	Village of Tremont City	Rumpke	Ongoing
SC-1	Catawba Village	Multiple, resident choice	Ongoing
SC-2	Clifton Village	Multiple, resident choice	Ongoing
SC-3	Donnelsville Village	Multiple, resident choice	Ongoing
SC-4	Bethel Township	Multiple, resident choice	Ongoing
SC-5	Enon Village	Multiple, resident choice	Ongoing

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
SC-6	German Township	Multiple, resident choice	Ongoing
SC-7	Green Township	Multiple, resident choice	Ongoing
SC-8	Harmony Township	Multiple, resident choice	Ongoing
SC-9	Mad River Township	Multiple, resident choice	Ongoing
SC-10	Madison Township	Multiple, resident choice	Ongoing
SC-11	Moorefield Township	Multiple, resident choice	Ongoing
SC-12	North Hampton Village	Multiple, resident choice	Ongoing
SC-13	Pike Township	Multiple, resident choice	Ongoing
SC-14	South Charleston Village	Multiple, resident choice	Ongoing
SC-15	South Vienna Village	Multiple, resident choice	Ongoing
SC-16	Springfield City	Multiple, resident choice	Ongoing
SC-17	Springfield Township	Multiple, resident choice	Ongoing
SC-18	Pleasant Township	Multiple, resident choice	Ongoing

In Clark County, there are two communities with non-subscription curbside services, Tremont and New Carlisle. These communities have exclusive contracts with exclusive haulers to provide trash and recycling services to all households. Materials accepted vary based on service provider, though both programs accept plastic, metal cans, paper, cardboard, and glass. The rest of the District uses a private, open market system in which residents choose a waste hauler. Some haulers offer curbside recycling for a fee; others offer recycling only in limited areas. This has been the situation in Clark County for several years. Because recyclables are picked up by various haulers from different localities, it is challenging to receive tonnage numbers for subscription curbside services. These programs were serviced by six waste haulers. Many residents throughout the District have strong local preferences for waste haulers as many are locally owned small businesses.

The materials collected through these programs vary based on each hauler. The end market for recyclables drives the ability of processors to collect different materials. In general, plastic bottles & jugs, cardboard, mixed paper, and metal cans are accepted.

Drop-off Recycling Locations

Table 5-2 Drop-off Recycling Locations

ID#	Name of Drop-off/Community Served	Service Provider	When Service was/will be Available
FTU-1	North Recycling Station - Springfield	Rumpke	Ongoing
FTU-2	West Recycling Station - Springfield	Rumpke	Ongoing
FTU-3	Mad River Township Station - Enon	Rumpke	Ongoing
FTU-4	Northridge Station - Northridge	Rumpke	Ongoing
FTR-1	Green Township Recycling Drop-off Station	Rumpke	Ongoing
FTR-2	Northeast Recycling Station - South Vienna	Rumpke	Ongoing

All drop-offs are available to the public at least 40 hours per week. The end market for recyclables drives the ability of processors to collect different materials. The recyclables collected in 2021 were Paper and cardboard; Glass Bottles and jars; plastic bottles, Jugs, and tubs, Metal Cans, and cups; and Cartons. The District maintains a list of acceptable materials on its website.

The District directly contracts with a private hauler to provide and service drop-off locations in the townships. The District contract costs include processing, transportation, and any other management-related costs of operating the drop-off locations. The District coordinates the placement of drop-offs with the hosting community or private sector entity.

Other Residential Recycling Programs

Curbside Recycling Initiatives

This program is designed to work with political subdivisions to facilitate and support curbside recycling. The District did extensive outreach in 2015 with the Take It to the Curb Campaign. In 2017, the District maintained the website and Facebook page for Take It to the Curb to respond if any political body showed interest in a contract for waste and recycling services. The District did not receive any interest from political jurisdictions. Due to the longstanding lack of success for this program, the District shelved this program in 2021. However, with the District exploring curbside feasibility again, this program is expected to remain ongoing.

City of Springfield Curbside Recycling Initiatives

The City of Springfield is the District's largest municipality with roughly 60,000 residents. In recent years, Springfield households have shifted to being predominantly rental properties as opposed to owned. The most recent estimates from the City are that 55% of all residential buildings are rental properties. The City lacks an organized system to encourage recycling and as a result, faces challenges with inequitable services and open dumping. As discussed in Appendix H, the City Charter prohibits the establishment of organized recycling services and requires a formal vote of residents to be altered. While writing this plan update, the District has worked and continues to work with the City of Springfield Commissioners to tackle these challenges. The District is establishing this program to provide financial assistance and to continue to work with the City Commissioners to improve the City's ability to collect and divert materials from the landfill.

Drop-Off Recycling Evaluations

This program is intended for the District to evaluate the effectiveness, challenges, and trends in the six drop-off sites throughout Clark County. The District monitors a variety of elements regarding drop-off recycling locations, such as total tons of materials collected and contamination issues. Monitoring will be conducted on a bi-annual basis and will increase in frequency as needed. The District may adjust the drop-off program on an as-needed basis when improvements are identified. Potential issues the District circumvents by evaluating the drop-off program continually are the following:

- Location of drop-offs
- Collection hours
- Material accepted
- Participant feedback on the program

- Estimated tonnage collected
- Excessive abuse of drop-off sites from contamination or dumping
- Underutilization of drop-off bins
- Collection frequency that does not meet public needs (i.e., issues with overflow)
- Other issues and or considerations as identified

Commercial/Institutional Sector Reduction and Recycling Programs

Government Office Paper Recycling

The county recycles paper and delivers cardboard to the Specialty Recycling Center where it is baled and sold. Every county office is supplied with recycling containers. The District offers this program to all government offices in the District. Since 2019, the District has used Document Destruction to provide this service which has been well received throughout. Baling is conducted by PRIDE inmates who volunteer for service hours at no cost to the District. The District has a baler and forklift which were purchased with grant dollars before the previous plan update.

Business Waste Reduction Assistance Program (BWRAP)

This program offers technical assistance and education/awareness to businesses within Clark County. The District has historically worked with companies to provide technical waste reduction assistance on the basis that they contact the District. Elements of this outreach approach are providing direct assistance to employ waste reduction, maintaining a web page specific to businesses, and encouraging bars and restaurants to recycle by offering free receptacles.

The District has a dedicated tab located on its website for local businesses. On this page, the District promotes its Recycling Makes $ense program which seeks to educate businesses as to how recycling can improve their bottom line while also diverting materials from landfills.

Business Paper Recycling Program

This program offers businesses the use of the District's recycling drop-off locations for recycling paper and cardboard. Since many businesses do not generate enough paper and/or cardboard to justify a separate recycling bin at their location, the District promoted to businesses the opportunity to use one of the District's recycling drop-off stations. Businesses also delivered truckloads of cardboard directly to the recycling center for convenience. Promotion for business recycling is on the District's website. In recent years, the District has observed that more businesses are bringing cardboard directly to the recycling center.

Food Waste Management Program

The District does not operate a food waste program. If calls come in for tractor-trailer loads that are refused the District sends them to Go Zero or PayGro which offers food waste collection programs in our District. The District has long been a partner of PayGro, in its early years of operation the District helped spread the word about their organics programs. PayGro is an established part of the District's recycling and diversion infrastructure.

Industrial Recycling Programs

Business Waste Reduction Assistance Program (BWRAP)

See the above description.

Materials Marketplace
The District promotes Ohio EPA's Material Marketplace on the webpage.

Market Development Grants
The District serves as a pass-through on Ohio EPA's Market Development Grant. These grants provide Ohio businesses (for example, manufacturers, recyclers, material processors, etc.) opportunities to create or expand recycling processing capacity and recycled material production. The District lists this grant opportunity on the website and provides one-on-one technical assistance to help industry complete applications.

Restricted/Difficult to Manage Wastes

C+S Tree Service Contract
The District has long partnered with C+S Tree Service to provide residents with an avenue to drop off yard waste. The facility is a private registered Class IV facility that collects yard waste/organics. C&S Tree Service started charging residents for brush and yard waste from residents in 2020. In early 2021, the District entered into a contract with them to allow residents and not-for-profit agencies to bring non-woody yard waste/ brush and tree debris to the facility again for no charge. The District relies heavily on this partnership to reach diversion goals.

Yard Waste Collection at Clark County Specialty Recycling Center
Yard waste is collected at the Clark County Specialty Recycling Center. The District has two small bins for residents to bring their yard waste. These are contracted by and get emptied at C & S Tree Service.

Organic Infrastructure
The District tracks the number of organic processing facilities and monitors the tonnages diverted. The full list of infrastructure can be found in Appendix I.

Contingency Yard Waste Shredder
This program allows for the District to begin yard waste shredding operations should C+S Tree Service no longer be able to operate in the capacity needed for the District to divert the organic volumes historically tracked. Triggers for monitoring whether this program may need to be implemented include changes to the District's contract with C+S and tonnage processed at C+S. Triggers will be monitored annually.

Should the District determine it needs to become the processor and operator of such a facility, a full evaluation and study will be conducted before moving into an active role. The study will evaluate location, any siting and permitting requirements, capital and operational costs, and potential grant funding. The capital and operational costs will be modeled and forecasted in the plan budget to show budget impacts through the planning period.

The District expects a study could be performed within a four-month timeframe. The timeline for implementation if the District were to operate would vary depending on the study findings.

Household Hazardous Waste Program
The District expanded the collection of HHW from bi-annual collections to weekly collections in late 2015 and into 2016. The District's Specialty Recycling Center accepts household hazardous waste for $1.00 a

pound during Specialty Recycling hours. Specialty Recycling occurs every Thursday, 9 a.m. to 6 p.m., and the first Saturday of the month, 9 a.m. to noon, except on major holidays. The District accepts a variety of HHW including but not limited to battery acid, bug spray, oils, fuel/ motor oil, mercury, flammable liquids, preservatives, and other chemicals.

Scrap Tire Management Program

The District accepts scrap tires at the Clark County Specialty Recycling Center from residents, community clean-ups, illegal disposal from townships, and the PRIDE program. The District collects scrap tires from residents on Thursdays, 9 a.m. to 6 p.m., and the first Saturday, 9 a.m. to noon, for 10 cents a pound. The District does not charge fees or put limits on how many illegally dumped tires will be accepted from townships and other government entities.

Electronic Waste Management Program

The District accepts electronic waste at the Clark County Specialty Recycling Center from residents including televisions, CPUs, keyboards and other computer peripherals, monitors, printers, scanners, and most other electronic devices. The District charges 10 cents per pound for TVs and monitors, all other electronic devices are free to drop off.

Battery Collection Program

Lead-acid batteries (LABs) and car battery cores were accepted year-round at the District Specialty Recycling Center starting in 2016. Battery collection for Specialty Recycling and the District Recycling Center is free of charge.

Expanded Polystyrene (EPS) Recycling

The District operates a machine at the recycling center to densify styrofoam which can then be used to make new products. Residents can use this program free of charge. The program is also open to businesses, though the District encourages businesses to call to discuss the bag drop exchange program first.

Enhancement to HHW/Electronics/LA Battery/Scrap Tire programs as a result of the Specialty Recycling Center expansion

The District makes an effort to continuously update the services offered to residents. This program incorporates any changes to the HHW, electronics, lead-acid battery, and scrap tire programs that are a direct result of the new initiatives, programs, services, and or facilities. This was first conducted when the District's Specialty Recycling Center expanded in 2017 when the District began the process of acquiring the adjacent property to the west of the Clark County Specialty Recycling Center.

Furniture Drop Program

The District established this program in 2021 to allow residents to drop off furniture at the Specialty Recycling Center. The program is held on the second Tuesday of each month from 9:00 am to 2:00 pm and requires an appointment beforehand. The District has two categories, small and large, that are charged $5 and $10 respectively to drop off. Large items are classified as anything bigger than a 4x4 ft template.

Funding/Grants

Curbside Recycling Grants

The District provided one-time incentive-based grants for political subdivisions to start new programs or enhance existing programs that help the District meet or exceed State Goals 1 and 2. For political subdivisions to yield the best incentive payment for either new program creation or enhancements to existing programs, the District requires that the residents who use the program also pay for the program. Funds awarded under this program would be paid directly to the political subdivision upon the award of a contract that meets the program's objectives.

Education for Schools

This program incorporates the existing Close the Loop Program which aims to facilitate the purchase of recycled content products. The District's message "It isn't really recycling until you are purchasing recycled content materials" is used regularly when recycling is promoted through educational and awareness, classroom presentations, and newsletters. The District also offers mini-grants to cover half of the project cost or as much as $500 each, up to a total disbursement of $3,000 in funding. These grants are for educators to provide environmental education programs relating to solid waste and waste diversion.

Facility Operation

Clark County Specialty Recycling Center

The District operates the Clark County Specialty Recycling Center where residents are able to drop off a variety of hard-to-recycle materials. A majority of the District's difficult-to-manage waste streams get collected here. The center is open Thursdays from 9:00 am to 6:00 pm and the first Saturday of every month from 9:00 am to 12:00 pm. These services are available to Clark County residents only, no businesses, farms, schools, or government agencies. The following materials are accepted:

- Electronics
- Paint
- Tires
- Lead-acid batteries and household batteries
- Appliances
- Household hazardous waste
- Cooking oil
- Propane
- Ballasts
- Furniture
- Styrofoam

Enforcement & Clean-Up

Health Department Funding

The health department provides a variety of important services to Clark County. Each year, the health department provides an annual report completed in conjunction with Clark County SWMD. The District provided $138,000 in funding to the Health Department in the reference year. As provided by Ohio Revised Code 3734.57, the District may provide funding to the board of health within its District. During this planning cycle, the District will evaluate the Board of Health's role for funding.

Adopt-A-Road/Spot/Drop Program
The District facilitates a program that allows businesses, schools, scout groups, etc. to volunteer once a month to pick up litter off the ground at locations and politely explain as residents come during their pick-up the correct items to recycle. A sign is posted giving credit to the organizations that volunteer at individual drop-off locations. The District offers assistance to groups and individuals interested in the Adopt-a-Road and Adopt-a-Spot programs, providing clean-up supplies such as trash bags, gloves, litter grabbers, safety equipment, etc.

Earth Day Community Clean-Ups (The Great American Cleanup)
The Great American Cleanup is the nation's largest beautification program, involving millions of volunteers nationally and hundreds annually in Clark County. The event is held annually by the Clark County Solid Waste District and Keep Clark County Beautiful, an affiliate of Keep America Beautiful.

Providing Responsibilities for Inmates through Duties for the Environment (PRIDE) Program
The District funds the PRIDE Program to utilize inmates for clean-up activities in all public areas, to support District special events, and provide labor for the Recycling Center, including baling cardboard, removing tires from rims, dismantling appliances, and various maintenance duties. Two deputies supervised the inmate crews and enforced litter and dumping laws. Inmates in the PRIDE program provide service hours at the Clark County Recycling Center and in addition, service various other non-profit organizations each year.

Two law enforcement officers are contracted, serving as Environmental Enforcement Deputies who supervise inmate crews for the PRIDE program. Deputies also respond to deliberate open dumping and environmental law issues. Law enforcement assists in identifying individuals responsible for environmental abuse, investigating complaints, issuing citations, and although extremely rare, arrests.

Litter Hotline
The District operates and advertises a 24-hour hotline to report litter or illegal dumping on 180 signs in the county. Each call is investigated by the District Environmental Enforcement Deputies.

Community Clean-Up Trailer
The Community Cleanup Trailer is available for loan free of charge to Clark County residents and community volunteer groups (a minimum of five households or groups with at least five volunteers). The Community Cleanup Trailer should be used for neighborhood cleanups, for beautifying public areas, or for clearing vacant lots, not for an individual's property or commercial purposes.

ClearStream Recycling/ Trash Frames
The District loans out clear stream recycling and trash frames for residents to use for events. The District asks for collections results but has experienced issues receiving them from users.

Other Programs

Legal and Consulting
The District allows for annual legal and technical assistance from lawyers and consultants.

Disaster Debris Management

Since 2010, the District has worked cooperatively with the Clark County Emergency Management Agency to develop a Disaster Debris Management Plan that was adopted in 2011. The Plan identifies the services and needs of the local jurisdictions in the event a debris management emergency or a solid waste management service emergency exists. The District acts as Debris Coordinator as part of the Emergency Operation Command in collaboration with the county EMA when called upon to do so to implement this Plan. The Disaster Debris Management Plan provides guidance to officials in the event of a disaster event.

Data Collection

The District will look to re-establish regular (annual or bi-annual) surveys for brokers, processors, and commercial businesses. An online survey platform will be explored and contact lists developed.

Events/Parks/Venues

The District will engage with the park district to explore diversion and waste reduction in the park systems.

Feasibility Study for Franchised Waste Collection in Springfield

The Policy Committee identified this as a priority #2 program. A start date of 2027 is targeted to help the City of Springfield explore how best to provide non-subscription curbside service based on choice, cost savings, local hauler availability, franchise, contracting, etc.

Development of an in-district Transfer Station

The District reserves the right to develop a licensed or unlicensed solid waste transfer station, recycle transfer station, or other consolidation facility (licensed or unlicensed) at any point in the planning period. If any such facility is developed, the District will evaluate the budgetary needs of the facility to determine if a material change in circumstance has occurred according to the policy in Chapter 1 of this Plan Update. The District will also determine if a simple plan budget revision would be required in lieu of a material change in circumstance.

Basic Convenience Center (CONTINGENT PLANNED PROGRAM)

As identified, one of the collection gaps and challenges of curbside recycling is the cost of trash service, but also litter and open dumping. Collection is a key area identified as a best management practice for a well-functioning, materials management system. All households and businesses need easy access to recycling through curbside collection, commercial collection, and/or drop-off stations. Considering these key areas, the current waste management system, infrastructure, and potential recyclable recovery, this plan update develops a contingency plan to build a convenience center to enhance collection. It is written as a contingency plan to allow discussion of a privately-owned transfer facility to develop further.

One of the many benefits of a convenience center is the option for tailoring the design to support the needs of the District's collection gaps. The concept is a drop-off point for common household recyclables and trash. Appendix O models a contingent budget using broad assumptions that would need to be fully evaluated through a feasibility study before implementation.

Education, Outreach, Awareness, and Technical Assistance

District Website

The District maintains a website address at https://www.clarkcountyohio.gov/634/About-Us. The website is a part of the broader Clark County Ohio website, but the content and updates are managed by the District. The website is a strong resource for residents, schools, businesses, institutions, and local

governments to utilize. The website offers dedicated pages for recycling, schools, illegal dumping, businesses, resources, events, and more that provide detailed information and inventories of all the services provided by the Clark County Solid Waste Management District.

Resource Guide

The District maintains a Resource Guide on the website and in this plan to identify materials and locations where materials may be taken for recycling.

Inventory

Infrastructure inventory can be found in the Solid Waste Management Plan Update Plan, which is updated every five years, and specific information is identified on the District's website.

Speaker/Presenter

The District has a full-time staff member, Program Specialist, able to give presentations to residents, businesses, communities, schools, and other groups in Clark County. Often, these presentations are directed at school-aged children and focus on litter prevention and recycling. The District also offers tours of the Clark County Specialty Recycling Center for groups.

BWRAP Outreach and Website

The District's Business Waste Reduction Assistance Program (BWRAP) offers technical assistance and education/ awareness to businesses within Clark County. To help promote this program to businesses, the District maintains a business-specific page on its website that provides information on grants, loans, waste reduction, recycling, purchasing recycled content products, and web links to materials exchange programs.

HHW and Lead Acid Battery Education/Outreach

The District emphasizes education and outreach for HHW and lead acid batteries which are accepted at the Specialty Recycling Center. The District advertises programs and information for these material streams through its website and other methods such as brochures.

Composting Workshops

The District promotes backyard composting and offers workshops detailing the importance of composting and keeping organic waste out of the landfill, how to compost, and what composting is. Each year, the District hosts two or three composting workshops for roughly 40 people.

Teacher Newsletters

The District prepares and sends newsletters to all teachers of both public and private schools in Clark County twice a year. These are sent out at the beginning of the school year and in January.

School Support/Education Materials

The District provides materials to teachers for grades Pre-K-12 about waste reduction and other solid waste issues, newsletters, skits, and workshops.

District Brochures

The District supplies brochures at four permanent locations:

- Clark County Library
- City Hall

- County Commissioners Building
- Clark County Solid Waste Management District Office

Brochures are also provided at special events, presentations, and info booths. Brochures identify all local recycling opportunities and how to reduce waste such as; Reduce, Reuse, Recycle, Home Composting, Tackle Toxic Trash, the Clark County Specialty Recycling Center, the Clark County Recycling Drop-off Stations, and Keep Clark County Beautiful.

District Advertisements

The District advertises its services, recycling infrastructure, and programming through a variety of multi-media avenues including the following:

- Monthly ads
- Digital and physical signage
- Press Releases
- Media Coverage
- Facebook
- Website
- Newsletters and Brochures

Keep Clark County Beautiful

In 2007, the District started a local Keep America Beautiful Affiliate, Keep Clark County Beautiful. The District is often involved in many of the KCCB initiatives as a sponsor, partner, or participant such as in the annual Great American Clean-Up.

Close the Loop Campaign

This campaign is designed to promote the benefits of purchasing and using recycled content products as opposed to buying virgin products. To remind residents to purchase recycled content products, the District includes information on the website and in the main brochure to "Reduce, Reuse, Recycle". The ideas behind this program are promoted in presentations and workshops, as well as advertised on the District's websites and brochures.

Take it to the Curb Campaign

The District launched the Take it to the Curb Campaign to encourage curbside recycling and consideration of community contracts as a way to encourage curbside recycling). The campaign had a dedicated website, take2curb.org, and a Facebook page. District personnel give presentations to civic groups, political subdivisions, and businesses. As a result of strong local preferences for hauling and the possible price inflation for contracted curbside recycling, new curbside programs were not implemented. Using the Take it to The Curb Campaign, the District will plan to meet with one political jurisdiction a year to conduct a household interest survey, on behalf of the political jurisdiction, to ascertain interest in curbside recycling at the curb.

Facebook/Social Media

The District has its own Facebook page that it utilizes to reach a broader audience. The Facebook page is through Keep Clark County Beautiful. Announcements about events, programs, and other relevant information to the Solid Waste District are made through this account.

Enhanced HHW Education

The District promotes the proper purchasing and management of HHW materials to residents through a public education initiative. This initiative focuses on purchasing techniques to minimize HHW generation and to purchase and use alternative products that are less hazardous. The District utilizes its website, printed materials, presentations to adults and children, social media, and other options as needed.

Drop-off Education & Awareness

To address educational gaps and provide user feedback the District will use a direct engagement campaign. This will consist of a pre-campaign waste audit of the drop-off container, an outreach campaign (direct mailing, handouts, and user surveys), and a post-campaign waste audit.

C. Waste Reduction and Recycling Rate

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

Year	Projected Quantity Collected (tons)	Residential/ Commercial WRR (%)
2021	**57,680**	**36%**
2025	65,307	38%
2026	64,970	37%
2027	64,636	37%
2028	64,304	37%
2029	63,973	36%
2030	63,645	36%

Table 5-4 Industrial Waste Reduction and Recycling Rate

Year	Projected Quantity Collected (tons)	Industrial WRR (%)
2021	**N/A**	**N/A**
2025	N/A	N/A
2026	N/A	N/A
2027	N/A	N/A
2028	N/A	N/A
2029	N/A	N/A
2030	N/A	N/A

The District no longer surveys the industrial sector for recycling totals. Therefore, no projections were estimated. However, the industrial businesses comprising this sector are known to recycle and averaged

roughly 50,000 tons of material diversion historically when the District conducted surveys. This was a roughly 98% diversion rate for this sector.

CHAPTER 6. BUDGET

Purpose of Chapter 6

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

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

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

This Chapter of the solid waste management plan provides an overview of the District's budget. Detailed information about the budget and District budget policies are provided in Appendix O.

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).

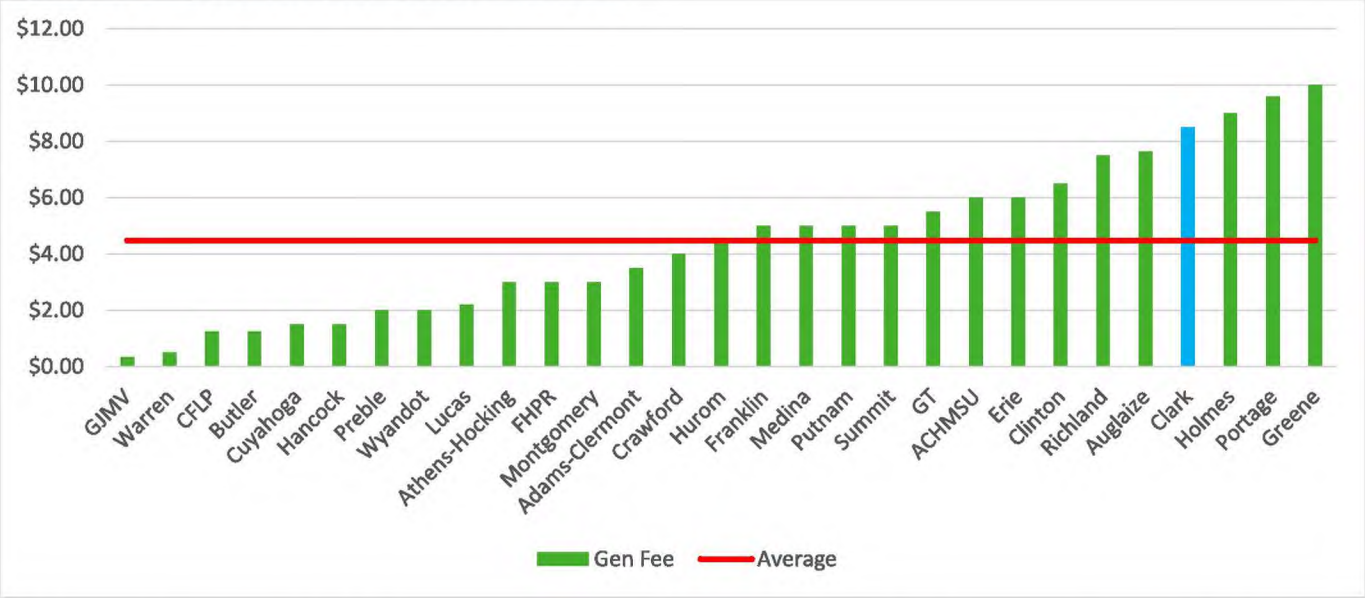
A. Overview of the District's Budget

The District's primary funding source is revenue earned through generation fees. Generation fees are collected on each ton of solid waste that is generated within the levying District and accepted at either a transfer facility or landfill located in Ohio. The fee is collected at the first facility that accepts the District's waste. The statute does not set minimum or maximum limits on the per-ton amount for generation fees.

Historically, the District has operated from a generation fee of $8.50. Receiving transfer stations, landfills or any other applicable solid waste facility will continue to collect the generation fee for each ton of solid waste originating within the District and disposed in the State of Ohio. These facilities forward the generation fee

revenue to the District. The generation fee revenue accounts for roughly 90% of the District's annual revenue. At the current fee amount, Clark County has the fourth-highest generation fee in Ohio.

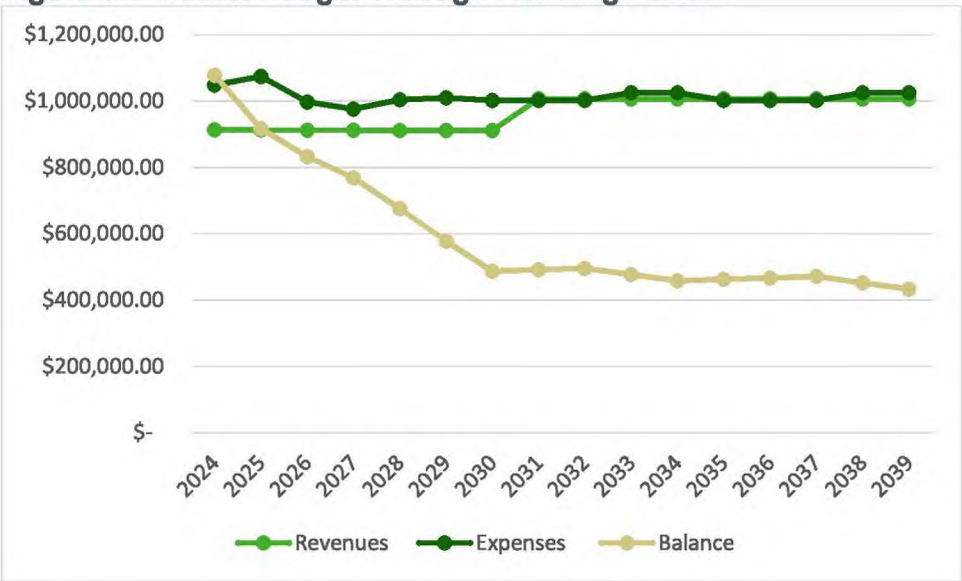
Figure 6-1 Ohio SWMD Generation Fees 2021



The District is committed to maintaining the current generation fee and will prioritize keeping it at $8.50 per ton unless the District's operation and programs are unable to be sustained at that amount. Based on historical expenses, planned future expenses, and estimated inflationary factors, the District does not expect to increase the generation fee during this planning period. However, should circumstances arise, the District reserves the right to supplement or replace the District generation fee according to Section 3734.573 of the Ohio Revised Code.

Historically, the District has been able to operate with an annual surplus, steadily increasing the fund balance. From 2017 to 2021, the District averaged roughly $950,000 in revenue and roughly $850,000 in expenses for an annual surplus of around $100,000.

Figure 6-2 District Budget Through Planning Period



B. Revenue

There are several 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. These fees are often referred to as "statutory fees" because SWMDs' authority to levy the fees is established in Ohio law.

A SWMD's policy committee has the authority to establish fees. Before a SWMD can collect a generation or disposal fee, the SWMD's policy committee must first obtain approval from local communities through a ratification process, per ORC Section 3734.57. Ratification allows communities in the SWMD to vote on whether they support levying the proposed fee. If enough communities ratify (i.e., approve) the proposed fee, then the SWMD can collect the fee.

Types of Fees:

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

Disposal fees are collected on each ton of solid waste that is disposed of at landfills within the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste was generated: in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the levying SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed of 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 ≥ $1.00 and ≤ $2.00;
- The out-of-district fee must be ≥ $2.00 and ≤ $4.00; and
- The out-of-state fee must be equal to the in-district fee.

Clark County SWMD does not have any landfills inside its borders, therefore it does not levy disposal fees.

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. The statute does not set minimum or maximum limits on the per-ton amount for generation fees.

A projected generation fee increase of $1.00 in 2031 would balance the budget. This would bring the generation fee to $9.50 per ton of waste generated. This minimal fee increase will allow the District to maintain programming. Planning for a generation fee increase in 2031 means the fee increase will not be enacted during this planning period, giving the District time to reassess the budget during the next plan cycle.

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 who receives solid waste services from the SWMD to pay for those services. The board does this by establishing and collecting rates and charges on behalf of the SWMD. Rates and charges must be paid by anyone who owns an improved lot or parcel that receives services from the SWMD. Qualifying services include solid waste collection, transfer, disposal, recycling, and processing services.

Rate and charges can be collected in two ways:

1) Through periodic billings made by the SWMD. The SWMD can bill for services through either a direct bill or through a utility bill issued by a county waste district, a county sewer district, or another political jurisdiction that provides a public utility service.

2) Through an improved parcel assessment (collected as a property tax).

The District does not collect any rates and charges.

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:

- Revenue from the sale of recyclables.
- User fees (such as fees charged to drop off hard-to-recycle materials at the Clark County Specialty Recycling Center).
- 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, loans, or bonds.

Other Funding Mechanisms

The District may receive funding from other sources. Other sources as described below are typically 10 percent or less of contributing funding.

Recycling Revenue:

The District receives revenue from the sale of collected recyclable materials. The district used the average revenue received from 2017 to 2022 as a baseline value for projections and applied a 3% inflation factor for future values. The District averaged about $25,000 annually from this source.

User Fee:

The District charges a user fee based on various materials dropped off at the Clark County Specialty Recycling Center. This ranges anywhere from $0.10 - $1.00 per pound. The District used the average revenue received from 2017 to 2022 as a baseline value for projections and applied a 3% inflation factor for future values. The District averaged about $45,000 annually from this source.

Reimbursements:

Reimbursement revenues are miscellaneous monies resulting from refunds and reimbursements. Reimbursement revenue is not projected during the planning period.

Grants:

Funds received from Ohio EPA grants and other grants as applied for by the District. Grant funds are not projected during the planning period.

Donations:

Funds received from miscellaneous donations to the District. Donation revenue is not projected during the planning period.

Interest:

Funds are received as interest for the accounts that hold the District's fund balance. This revenue stream has been held at the 2017 – 2023 average through the planning period.

Other:

Other revenue is not projected during the planning period.

Table 6-1 Summary of Revenue

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue							Total Revenue
				Recycling Revenue	User Fee	Reimbursements	Grants	Donations	Interest	Other	
Reference Year											
2021	$0	$873,053	$0	$45,196	$53,571	$0	$0	$893	$116	$2,015	$974,844
Planning Period											
2025	$0	$823,969	$0	$30,983	$55,904	$0	$0	$0	$2,108	$0	$912,964
2026	$0	$820,920	$0	$31,912	$57,581	$0	$0	$0	$2,108	$0	$912,521
2027	$0	$817,883	$0	$32,870	$59,309	$0	$0	$0	$2,108	$0	$912,169
2028	$0	$814,856	$0	$33,856	$61,088	$0	$0	$0	$2,108	$0	$911,908
2029	$0	$811,841	$0	$34,871	$62,920	$0	$0	$0	$2,108	$0	$911,741
2030	$0	$808,838	$0	$35,918	$64,808	$0	$0	$0	$2,108	$0	$911,671

C. Expenses

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 solid waste district management or to dealing with the effects of hosting a solid waste facility. The 10 uses are as follows:

1. Preparing, monitoring, and reviewing the 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 of 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). Allowable use 2 authorizes SWMDs to spend money for a wide range of purposes. Furthermore, there are many types of expenses that a solid waste management district incurs to implement a solid waste management plan. Examples include salaries and benefits; purchasing and operating equipment (such as collection vehicles and drop-off containers); operating facilities (such as

recycling centers, solid waste transfer facilities, and composting facilities); offering collection programs (such as HHW and scrap tires); providing outreach and education; providing services (such as curbside recycling services); and paying for community clean-up programs.

Conversely, Ohio's law provides narrow definitions for how a SWMD can spend money under the other nine uses. For example, allowable use 4 authorizes a SWMD to give a county money to compensate the county for the costs it incurs because it hosts a solid waste facility. The SWMD can give the county money for maintaining roads and public facilities impacted by the solid waste facility and for providing emergency and other public services. Those are the only ways an SWMD can spend money under allowable use 4.

Table 6-2 below summarizes the expected expenses for this solid waste management plan update. Further information regarding expenses can be found in Appendix O.

Table 6-2 Summary of Expenses

Expense Category	Reference	Planning Period					
	2021	2025	2026	2027	2028	2029	2030
Plan Preparation and Monitoring	$0	$7,500	$7,500	$7,500	$30,779	$30,779	$7,500
Personnel	$208,088	$201,159	$207,194	$213,410	$219,812	$226,407	$233,199
Office Overhead	$8,101	$17,963	$18,502	$19,057	$19,629	$20,218	$20,825
Other Administration	$17,548	$17,813	$18,347	$18,897	$19,464	$20,048	$20,650
Recycling Center	$165,744	$219,959	$226,558	$233,354	$240,355	$247,566	$254,993
Curbside	$0	$52,000	$26,000	$0	$0	$0	$0
Drop-off	$57,656	$66,950	$68,959	$71,027	$73,158	$75,353	$77,613
Transfer	$0	$35,000	$0	$0	$0	$0	$0
Business/Institutional	$0	$0	$0	$0	$0	$0	$0
Tire Collection	$7,535	$12,041	$12,402	$12,774	$13,158	$13,552	$13,959
HHW Collection	$35,826	$41,200	$42,436	$43,709	$45,020	$46,371	$47,762
Electronics Collection	$6,521	$14,770	$15,214	$15,670	$16,140	$16,624	$17,123
Other Collection Drives	$816	$0	$0	$0	$0	$0	$0
Yard Waste/Other Organics	$20,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
Education Staff	$924	$1,001	$1,031	$1,062	$1,093	$1,126	$1,160
Advertisement/Promotion	$7,928	$15,069	$15,521	$15,987	$16,467	$16,961	$17,470
Other Education	$794	$36,000	$17,080	$17,592	$18,120	$18,664	$19,224
Litter Collection/Education	$2,361	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Heath Departments	$138,000	$142,000	$132,000	$122,000	$112,000	$102,000	$102,000
Local Law Enforcement	$165,440	$165,000	$160,000	$155,000	$150,000	$145,000	$140,000
Other	$246	$0	$0	$0	$0	$0	$0
Total Expenses	**$843,528**	**$1,074,426**	**$997,743**	**$976,041**	**$1,004,196**	**$1,009,668**	**$1,002,476**

D. Budget Summary

Table 6-3 Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2021	$974,844	$843,528	$131,316	$1,312,131
Planning Period				
2025	$912,964	$1,074,426	($161,462)	$917,344
2026	$912,521	$997,743	($85,222)	$832,122
2027	$912,169	$976,041	($63,872)	$768,250
2028	$911,908	$1,004,196	($92,288)	$675,962
2029	$911,741	$1,009,668	($97,927)	$578,035
2030	$911,671	$1,002,476	($90,805)	$487,230

APPENDIX A

MISCELLANEOUS INFORMATION

Appendix A.

Miscellaneous Information

A. Reference Year

The reference year for this solid waste management plan is 2021.

B. Requirements of County and Joint Solid Waste Management Districts

The planning period for this solid waste management plan is 2025 to 2039.

C. Goal Statement

The District will achieve the following Goal:

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

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

1. Difference in Quantities of Materials Recovered Between the Annual District Report and the Solid Waste Management Plan

Table A.1 Residential/Commercial Sector Data Differences

Material	Quantity (tons)	2021 ADR (tons)	Difference (tons)	Reason
Appliances/ "White Goods"	0.00	0	-	
Household Hazardous Waste	35.40	35.4	-	
Used Motor Oil	0.00	0	-	
Electronics	56.40	57	(0.60)	Rounding
Scrap Tires	1,190.88	1,191.28	(0.40)	Rounding
Dry Cell Batteries	0.00	0	-	
Lead-Acid Batteries	0.00	0	-	
Food	9,200.50	9,200.5	-	
Glass	94.1	94.1	-	
Ferrous Metals	90.52	63.31	27.21	SPR[1] totals not included previously. Missed data from OEPA reports.

[1] SPR is Specialty Recycling Center

Material	Quantity (tons)	2021 ADR (tons)	Difference (tons)	Reason
Non-Ferrous Metals	38.32	38.32	-	
Corrugated Cardboard	4,362.55	4,365.98	(3.43)	Missed data from OEPA reports.
All Other Paper	2,222.33	2,199.73	22.60	Shred event and SPR totals not included previously.
Plastics	351.12	348.85	2.26	Tons added from the EPS Recycling Program.
Textiles	0.00		-	
Wood	179.47	179.47	-	
Rubber	0.00	0	-	
Commingled Recyclables (Mixed)	0.00	0	-	
Yard Waste	39,705.29	39,705.29	-	
Other (Aggregated)	153.03	712.38	(559.35)	The District included 575 tons of unacceptable materials from OEPA reports. 15 tons added for M25M[2].
Total	**57,679.90**	**58,191.61**	**(511.71)**	

This report calculated a total residential/commercial survey recovery of 57,680 tons compared to the Annual District Report's (ADR) reported tons of 58,192 tons. There were a few missed numbers from Ohio EPA reports as well as some material that was unacceptable but was included in the ADR. Finally, some materials were missing from the Specialty Recycling Center, EPS program, and paint collection. With the various adjustments described above in the table, the difference was 512 tons less than reported in the ADR.

2. Differences in Financial Information Reported in Quarterly/Summary Fee Reports and Financial Data Used in the Solid Waste Management Plan

The District's financial data used in the plan update differs from what is reported by Ohio EPA in the Summary and Quarterly Fee Reports. There is a discrepancy for the end balance of 2020 and as a result, also the beginning balance of 2021. The District shows a beginning yearly balance of $1,180,815 in 2021 whereas the Summary Fee Report shows a beginning yearly balance of $1,199,485 in 2021.

The District believes the roughly $19,000 difference is a result of an error in the 2020 Summary Fee Report. This report[3] omits both the second and fourth quarters of 2020. There are no revenues or expenses listed. However, in the District's quarterly fee reports, there are numbers listed from the financial activities conducted by the District. The District used the balances as reported in the quarterly fee reports for this plan update.

[2] M25M is Matthew 25 Ministries paint collection.
[3] https://epa.ohio.gov/static/Portals/34/document/general/2020FSR.pdf

E. Process to Determine Material Change in Circumstances and Amend the Plan

In accordance with ORC 3734.56(D), the Plan Update must be revised if the Board of Directors (Board) has determined that "circumstances materially changed from those addressed in the approved initial or amended plan of the district." A material change in circumstances shall be defined as a change that adversely affects the ability of the Board to implement the Solid Waste Plan. The criteria used to determine material change are as follows:

- Reduction in Available Capacity
- Increase in Waste Generation
- Delay in Program Implementation
- Discontinuance of Essential Waste Reduction or Recycling Activities
- Decrease in Waste Generation
- Adequately finance implementation of the Plan

The Ohio EPA's Plan Format requires that the Plan Update must include a description of the process the Board will use to determine when a material change in circumstances has occurred, and, as a result, requires an amended Plan.

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

1) Assurance of Waste Disposal Capacity

a. Reduction in Available Capacity

If the Board determines that the extended or permanent closure of a landfill utilized by the District or a combination of the closure of those landfills accepting solid waste generated in the District, impairs the capacity assurance requirement of section 3734.53(A) of the Revised Code or the Plan Format, then a material change in circumstances may have occurred. A material change in circumstances has not occurred, however, if the District is able to secure arrangements to manage the waste formerly received at the closed facility by any other properly licensed and permitted solid waste management facility.

The Board will convene within 90 days of the closure of a landfill utilized by the District to determine whether alternate capacity is available to the District or whether a material change in circumstances has occurred.

b. Increase in Waste Generation

Future capacity needs of the District as outlined in the Plan Update are based on waste generation estimates. A significant increase in solid waste generation within the District may affect capacity requirements and result in diminished capacity for handling or disposing of solid waste. A material change in circumstances may have occurred if waste generation increases, and the increase has

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

The District Coordinator will, during the term of the Plan Update, periodically review waste generation figures and report to the Board on an as needed basis a significant increase, as reported by the District Coordinator, in solid waste generation within the District that warrants the Board's consideration of whether there is adequate capacity available to handle or dispose of the increased solid waste volume. The Board shall review the report and the availability of capacity for District solid waste and determine whether sufficient capacity is available to the District.

2) Compliance with Waste Reduction Goal

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

Pursuant to the Ohio Revised code, the Ohio Administrative Code, and the State Plan, the District has established specific goals regarding waste reduction and recycling within the District. The District Coordinator will prepare an annual report for presentation to the Board each year of the planning period. The annual report will identify significant delays in program implementation, changes to waste reduction and recycling strategies or plan implementation for the preceding year that warrant consideration by the Board to determine whether any delay, change or impact on recycling is material. Should there be a significant delay in program implementation or the discontinuance of programs that result in the inability of the District to achieve the waste reduction goal, the Board shall decide as to whether a material change in circumstances has occurred. A material change in circumstances has not occurred, however, where the Board is able to implement new programs, modify existing programs and/or obtain new data and information to meet the waste reduction goal in this Plan Update as approved by the Director of Ohio EPA, to meet State of Ohio requirements.

3) Financing of Plan Implementation

a. Decrease in Waste Generation

The District obtains revenues to finance implementation of the Plan Update from an $8.50 per ton fee on the generation of solid waste within the District as authorized by section 3734.573 of the Ohio Revised Code. A significant reduction in the generation of waste within the District could result in a significant decrease in revenue and adversely affect the ability of the Board to finance implementation of the Plan Update. The District Coordinator will monitor revenues and report significant changes in the financial condition of the District to the Board quarterly or as needed. The Board will receive financial reports from the District Coordinator, consider such reports, and set budget and funding priorities to implement the Plan Update. A material change in

circumstances may have occurred where a significant reduction in revenue adversely affects the Board's ability to finance plan implementation. No material change in circumstances has occurred, however, where the Board is able to maintain programs at current funding levels through re-allocation of District funds, or through an increase in District fees, or rates and charges as permitted by the Ohio Revised Code and the Plan.

Specific timelines for determination of a material change are not provided in this policy as each situation that may arise in the future may have remedies that take varying times to implement. Providing specific timelines for situations that cannot always be determined would not be in the best interest of the District. With this said, the District's timetable for determination will be based on the facts of each situation including the possible remedies identified. The Board of Directors will determine when to declare a material change in circumstance when and only when no possible solution is identified in a reasonable timeframe at the Board's discretion.

4) Procedures Where Material Change in Circumstances has Occurred

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

The District shall monitor the circumstances of whether there is a material change in this Plan Update. If the District determines a material change in circumstances has occurred, the Board shall notify Ohio EPA within 60 days.

APPENDIX B

RECYCLING INFRASTRUCTURE INVENTORY

Appendix B.

Recycling Infrastructure Inventory

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

A. Curbside Recycling Services, Drop-off Recycling Locations, and Mixed Solid Waste Materials Recovery Facilities

1. Curbside Recycling Services

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

ID #	Name of Curbside Service	Service Provider	County	How Service is Provided	Collection Frequency	Materials Collected	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)	Houses Served
NCS-1	New Carlisle City	Waste Management	Clark	Contract with Hauler	Weekly	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons	Single Stream	Y	306	Y	1822
NCS-2	Village of Tremont City	Rumpke	Clark	Contract with Hauler	Weekly	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons	Single Stream	N	27	Y	123
Total									**334**		**1,945**

Source: 2021 Annual District Report

Two non-subscription curbside recycling services operated in the reference year. Of those reporting data, a total of 334 tons of material was collected from these programs. A total of 1,945 households were serviced in the reference year. Both communities, New Carlisle City and Village of Tremont City operate single hauler contracts. These are the only two communities in the District to do so. The rest of the District uses a private, open market system in which residents choose a waste hauler. Some haulers offer curbside recycling for a fee; others offer recycling only in limited areas. Historically, this has been how the communities of the District have operated. Because recyclables are picked up by various haulers from different localities, data on collection amounts is challenging to obtain.

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

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)	Houses Available to be Served
SC-1	Catawba Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	102
SC-2	Clifton Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	22
SC-3	Donnelsville Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	15
SC-4	Bethel Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	5,040
SC-5	Enon Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	984
SC-6	German Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	3,136
SC-7	Green Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	1,181
SC-8	Harmony Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	1,390
SC-9	Mad River Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	3,804
SC-10	Madison Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	388
SC-11	Moorefield Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	4,633
SC-12	North Hampton Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	226
SC-13	Pike Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	1,487
SC-14	South Charleston Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	616
SC-15	South Vienna Village	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	161
SC-16	Springfield City	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	22,410

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)	Houses Available to be Served
SC-17	Springfield Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	4,907
SC-18	Pleasant Township	Clark	Multiple, resident choice	Weekly	Varies	Single Stream		NA	Y	1,246
Total								**NA**		**51,748**

Source: 2021 Annual District Report

Subscription curbside recycling is available throughout the County, which includes eleven townships, seven villages (1 village contracts offering non-subscription service), and the largest municipality Springfield (1 city contracts offering non-subscription service). As mentioned, the majority of the political jurisdictions use a private, open market system in which residents choose a waste hauler. Some haulers offer curbside recycling for a fee; others may not offer recycling or only in limited areas. It is challenging to gather recycling data from the haulers. In the reference year, there were roughly 52,000 households in a subscription service area available to be served.

2. Drop-off Recycling Locations

Table B-2a. Inventory of Full-Time, Urban Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTU-1	North Recycling Station - Springfield	Rumpke	Clark	Contract with Hauler	open during daylight hours	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons	Y	Included in total	Y
FTU-2	West Recycling Station - Springfield	Rumpke	Clark	Contract with Hauler	7am - 7pm seven days a week	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons; Styrofoam	Y	Included in total	Y
FTU-3	Mad River Township Station - Enon	Rumpke	Clark	Contract with Hauler	open during daylight hours	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons	Y	Included in total	Y
FTU-4	Northridge Station - Northridge	Rumpke	Clark	Contract with Hauler	open during	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs	Y	Included in total	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
					daylight hours	& Tubs, Metal Cans; Cartons			
Total								**1,065**	

Source: 2021 Annual District Report

The District contracted service (provisioned containers and collection) for four full time urban drop-off sites for residential use. All sites are open at least 40 hours every week. The District is unable to obtain a breakdown of recycling data by site. The hauler's collection route aggregates the material and provides the District with the overall number. In the reference year, a total of 1,065 tons of recyclable material was collected: 736 tons were commingled recyclables and 329 tons were from cardboard.

Table B-2b. Inventory of Part-Time, Urban Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NA									

Source: 2021 Annual District Report

There was no part-time urban drop off locations available to residents in the reference year.

Table B-2c. Inventory of Full-Time, Rural Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTR-1	Green Twp Station	Rumpke	Clark	Contract with Hauler	Open during daylight hours	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons	Y	Included in total	Y
FTR-2	Northeast Station	Rumpke	Clark	Contract with Hauler	open during daylight hours	Paper & Cardboard, Glass Bottles & Jars; Plastics Bottles, Jugs & Tubs, Metal Cans; Cartons	Y	Included in total	Y

Source: 2021 Annual District Report

The District contracted service (provisioned containers and collection) for two full time rural drop-off sites for residential use. The sites are open during daylight hours. All sites are open at least 40 hours every week. The District is unable to obtain a breakdown of collection data by site. The hauler's collection route

aggregates the material and provides the District with the overall number. In the reference year, a total of 1,065 tons of recyclable material was collected: 736 tons were commingled recyclables and 329 tons were from cardboard.

Table B-2d. Inventory of Part-Time, Rural Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NA									

Source: 2021 Annual District Report

There were no part-time rural drop-off recycling locations available to residents in the reference year.

3. Mixed Municipal Solid Waste Recovery Facility

Table B-3. Mixed Solid Waste Material Recovery Facility

Name of Facility	Location	Communities Served	Types of Materials Recovered	Weight of Materials Recovered (tons)	Waste Processed (tons)	Bypass Waste (tons)	Total Waste (tons)	Recovery Rate in Reference Year (percent)
None								
Total								

Source: 2021 Annual District Report

A mixed solid waste materials recovery facility (MRF) gives residents access to recycling opportunities by removing recyclables from trash for residents. In 2021, no mixed solid waste material recovery facilities accepted District generated waste.

B. Curbside Recycling and Trash Collection Service Providers

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

Name of Provider	Counties Served	Trash Collection Services				Curbside Recycling Services		
		PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Waste Management	Clark		X	X	X	X	X	X
Rumpke	Clark		X	X	X	X	X	X
H.W. Mann & Sons	Clark		X	X				
Vince Refuse (purchased by	Clark		X	X				

Name of Provider	Counties Served	Trash Collection Services				Curbside Recycling Services		
		PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Rumpke in 2022)								
CJ's Refuse Hauling LLC	Clark		X	X				
Mead's Hauling	Clark		X	X				

Source(s): 2021 Annual District Report
Notes:
PAYT = Pay-As-You-Throw

There were six haulers operating in the District in the reference year. Three of these haulers are local, specific to the District and immediately surrounding area. These are H.W. Mann and Sons, Vince Refuse, and CJ's Refuse Hauling LLC. These three haulers do not collect recycling. Waste management and Rumpke also operate in the area, providing the residential, commercial, and industrial sectors trash service and curbside recycling service. The District utilizes Rumpke as the hauler for drop-off locations. Rumpke bought out Vince Refuse in 2022.

C. Composting Facilities

Table B-5. Inventory of Composting Facilities Used in the Reference Year

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
London Correctional Institution	2	N	Madison County	33.57		33.57
Garick LLC Paygro Division	2	Y	Clark County	8,949.54	3.15	8,952.69
Lawnmasters	4	Y	Clark County		960.96	960.96
Springfield Township Composting Facility	4	Y	Clark County		712.97	712.97
Mad River Topsoil, Inc.	Not Available	Y	Clark County		1,157.64	1,157.64
C+S Tree Recycling Service	Not Available	Y	Clark County		36,646.83	36,646.83
Number One Landscape	4	Y	Madison County		13.53	13.53
Studebaker Nurseries Inc (aka Evans Family Ranch, LLC)	3	N	Clark County		81.84	81.84
Springfield WWTP Class III	3 and 4	N at Class III and Y at Class IV	Clark County		128.37	128.37

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
ODOT District 7 Clark Co Harmony Post	3	N	Clark County			-
Total				**8,983**	**39,705**	**48,688**

Source:2021 Ohio EPA Compost Facility Planning Analytical Report, May 17, 2022

Organic waste is valuable material that has beneficial uses such as soil conditioners, erosion control, improved soil nutrient retention, etc. Ohio law defines composting as a method of solid waste disposal using controlled biological decomposition. Composting activities occurring at a residence and those activities using less than 500 square feet at a non-residential location are not subject to Ohio's composting regulations. Composting facilities are classified according to the feedstocks they are allowed to accept and are required to obtain a registration, license and/or permit from Ohio EPA as applicable[1].

The District's network of organic infrastructure consists of both registered and un-registered facilities. **Table B-5** identifies the yard waste management facilities and activities available in the reference year to receive yard waste and other organic waste. Some of the available facilities did not report a volume or tonnage of material managed. Also, animal waste is not a creditable material for solid waste diversion thus those facilities do not show a recorded tonnage. As shown in the table, the District diverted nearly 50,000 tons of material in the reference year. A majority, 82%, of this was yard waste while food waste made up the remaining 18%.

The District sends large quantities of yard waste to C+S Tree Recycling Service. The materials diverted at this facility accounted for 75% of all organic waste diverted in the reference year. The facility previously held a Class IV certification from the Ohio EPA. However, this certification has since expired and was not renewed. This facility allows residents of Clark to drop off yard waste. Historically, this service was free of charge. However, in 2020 the company began charging residents for brush and yard waste from residents. In early 2021, the District entered into a contract to allow residents and not-for-profit agencies to bring non-woody yard waste, brush, and tree debris to the facility again for no charge.

Clark County Recycling Center is a drop-off facility that accepts yard waste from residents for free during Specialty Recycling on Thursdays at the Clark County Recycling Center.

Mad River Topsoil is a private business that accepts yard waste from households. Their website maintains the up-to-date information on pricing, madrivermulch.com.

Lawnmasters is a private business that accepts yard waste from households. Their website maintains the up-to-date information on pricing, lawnmasters.com.

[1] https://epa.ohio.gov/divisions-and-offices/materials-and-waste-management/dmwm-programs/composting

Springfield Township operates a Class IV facility where households may drop-off yard waste.

D. Other Food and Yard Waste Management Programs

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

Facility or Activity Name	Activity Type	Location	Food Waste (tons)	Yard Waste (tons)
Hauler/Grocer Food Waste Data	Collection	Clark	217	0
City of New Carlisle	Collection	Clark	0	DNR
City of Springfield Fall Bagged Leaf Pick Up	Collection	Clark	0	DNR
German Township Brush Collection	Collection	Clark	0	DNR
Moorefield Township Brush Collection	Collection	Clark	0	DNR
Total			217	0

Source(s): 2021 Ohio EPA Compost Facility Report

The District reported diverting a total of 217 tons of material from hauler/grocer food waste data in the refence year.

City of New Carlisle offers curbside pick-up brush from storm damage and normal pruning during the second full week of the month from April through October. The service does not include large amounts of brush, such as removal from a tree. Residents must sign up at least one week in advance.

City of Springfield Fall bagged leaf pickup. The City of Springfield offers curbside pickup of bagged leaves Springfield residents in November and December. Households are also able to drop-off yard waste at the Springfield WWTP.

German Township offers a curbside brush pick-up for households. Brush is mulched and offered back to households. Christmas tree and leaf pick up are not included in the service. Households call the township to leave the address for pickup. Pick-up occurs when the township is in the area.

Moorefield Township offers curbside pick-up brush of brush/branches/limbs only during the second full week of the month from April through last week of September. The service does not include large amounts of brush, such as removal from a tree, nor anything with roots. Brush pickup is once a week.

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

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

Facility Name	County	State	Type of Facility	Weight of Material Accepted from SWMD (tons)
Rumpke Recycling – Dayton	Montgomery	OH	MRF	3,886
Total				3,886

Source: 2021 Ohio EPA Material Recovery Facility Report, May 26, 2022

As indicated above, one MRF reported accepting District recyclables in the reference year. The Rumpke Recycling Dayton MRF in Montgomery County is a single stream recycling processing center. Items accepted include aluminum and metal cans, plastic bottles and jugs, glass bottles and jars, cardboard, and paper. This facility serves as a regional glass processing facility.

APPENDIX C

POPULATION DATA

Appendix C.
Population Data

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

A. Reference Year Population

Table C-1a. Reference Year Population Adjustments

	Population
Before Adjustment	135,633
Subtractions	
Clifton Village	47
After Adjustment	135,586

Source(s):
"2021 Population Estimates for Cities, Villages, and Townships" prepared by Ohio Development Services Agency, Office of Research
"Population and Households: 2020, 2010, and 2000" prepared by Ohio Development Services Agency, Office of Research

Table C-1b: Total Reference Year Population

Unadjusted Population	Adjusted Population
135,633	135,586

Reference year population is taken from Ohio Development Services Agency Office of Statistical Research (ODSA, OSR). OSR provided population numbers for 2020 based on the 2020 U.S. Census data by governmental unit. Note: Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction's population.

The District has only one community that is located in another District. Clifton Village, also located in Greene County was subtracted from the Districts population as the majority of the village is located in Greene County. The total population change from the adjustment is 47 less residents.

B. Population Projections

Table C-2: Population Projections

Year	Clark	Total District
2021	135,633	135,633
2022	134,873	134,873
2023	134,118	134,118
2024	133,367	133,367
2025	132,620	132,620
2026	131,878	131,878
2027	131,139	131,139
2028	130,405	130,405
2029	129,674	129,674
2030	128,948	128,948
2031	128,948	128,948
2032	128,948	128,948
2033	128,948	128,948
2034	128,948	128,948
2035	128,948	128,948
2036	128,948	128,948
2037	128,948	128,948
2038	128,948	128,948
2039	128,948	128,948

Source: Ohio Department of Development, "Projected 2050 Ohio County Populations: Percent Change 2020-2050, December 2022.

Population projections for the entire planning period are shown above in **Table C-2**. The District populations calculated for 2025, 2030, 2035, and 2040 are projection estimates from the Ohio Development of Development. Linear interpolation was used to develop the population estimates for years between the five-year intervals listed above. The District flatlined these projections in the seventh year of the planning period (2031).

Population projections gauge future demand for services, but in projection calculations, there is room for errors given the difficulty associated with forecasting. **Table C-2** shows a steady decline in the population throughout the first seven years of the planning period. The population is expected to decrease by 5.78% from 2021 through 2031. This is an annual decline of 0.30%. The population is estimated to decrease to about 128,226 in 2031, the seventh year of the planning period.

While demographic trends and conditions detail a decreasing population, the Clark County Strategic Planning Commission is focused on stabilizing the population, then increasing it by 2025. Large employers

play a key role in providing more jobs and bringing people to the County. Companies like Topre America, Silfex and Gabe's continue to produce jobs in the area. The City of Springfield is showing early indicators of population growth on the horizon. However, neither the Ohio Department of Development nor the US census data reflect the planning commission efforts and anticipation of increased population in the County at the time this draft plan was being prepared. The District will closely monitor and may adjust the population projections as additional data is released.

APPENDIX D

DISPOSAL DATA

Appendix D. Disposal Data

Appendix D provides an inventory of where waste was managed in the reference year, 2021, calculates the total waste disposed in the reference year, analyzes historical waste disposal quantities, and projects waste to be disposed.

A. Reference Year Waste Disposed

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

	Location		Waste Accepted from the SWMD			
Facility Name	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
SWACO Franklin County Sanitary Landfill	Franklin	Ohio	8			8
American Landfill, Inc.	Stark	Ohio		19		19
Suburban Landfill Inc	Perry	Ohio		1		1
Cherokee Run Landfill	Logan	Ohio	4,277	1,592	84	5,954
Rumpke Sanitary Landfill	Hamilton	Ohio	505	54		558
Crawford County Landfill	Crawford	Ohio			22	22
Stony Hollow Landfill Inc	Montgomery	Ohio	25,075	803	108	25,985
Caldwell Landfill	Shelby	Indiana		238		238
Total			29,866	2,706	214	32,786

Source(s): Ohio EPA, "2021 Ohio EPA Waste Flow Report"

Note:

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

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

A wide variety of waste is disposed in municipal solid waste landfills. Material disposed at these facilities includes waste from households, businesses, institutions, and industrial activities. If permitted, asbestos construction and demolition debris, dewatered sludge, soil, and incinerated ash may also be disposed in landfills. Industrial waste includes excluded waste. Waste flows to landfills either by direct haul or through a transfer facility.

Private haulers provide waste collection services in the District. The District uses a private, open market system in which residents have the ability to choose a preferred waste hauler.

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

	Location		Waste Accepted from the District		
Facility Name	County	State	Industrial (tons)	Excluded (tons)	Total (tons)
None					0
Total			0	0	0

Source(s): Ohio EPA, "2021 Ohio EPA Waste Flow Report"

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

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

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

Residential/Commercial (tons)	Industrial (tons)	Excluded (tons)	Total
29,866	2,706	214	32,786

Source(s): Ohio EPA, "2021 Ohio EPA Waste Flow Report"

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

The District's direct hauled waste stream is comprised mainly of waste from the residential/commercial sector. This sector accounts for 91% of the total waste, while the industrial sector accounts for roughly 8%. Excluded waste accounts for less than 1% of the waste stream. Per Ohio EPA Format 4.1, excluded waste will not be accounted for going forward in this plan update as it comprises less than 10% of waste disposed.

Table D-2. Reference Year Waste Transferred[1]

	Location		Waste Received from the SWMD			
Facility Name	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Miami County Solid Waste & Recycling Facility	Miami	Ohio	175.17			175.17
Montgomery County South Transfer	Montgomery	Ohio	72,428.04			72,428.04
Rumpke Waste Inc Greenville Transfer Facility	Darke	Ohio	497.26			497.26
Total			**73,100**			**73,100**

Source(s):

Ohio EPA "2021 Ohio EPA Waste Flow Report"

Ohio EPA "2021 Ohio Facility Data Report Tables", September 20, 2022.

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

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

Transfer facilities are conveniently located where solid waste, delivered by collection companies and residents, is consolidated, temporarily stored, and loaded into semi-trailers for transport. Solid waste is then

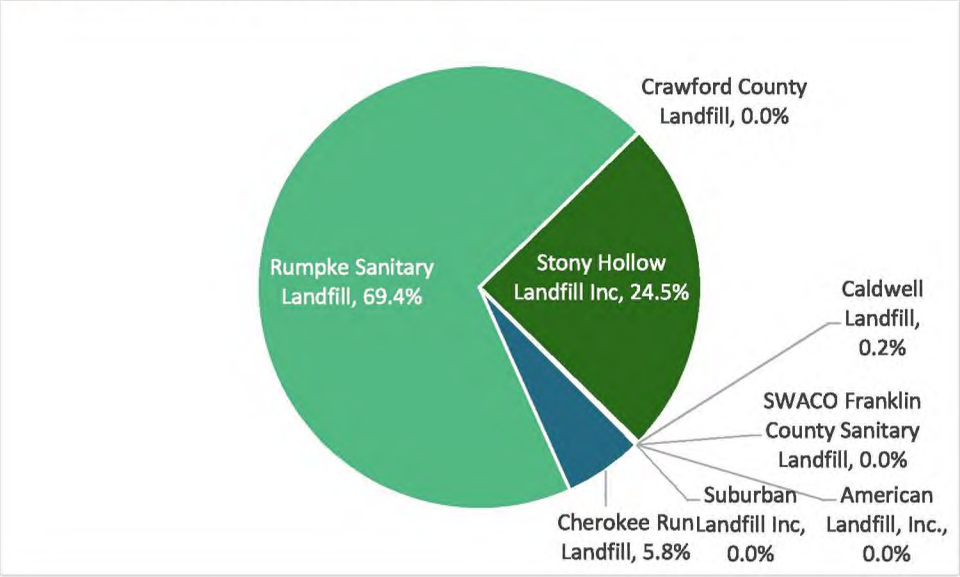
delivered to a processing facility or disposal site. In cases where waste is hauled from a transfer facility to a landfill, the county of origin is not recorded at the landfill. This means a load of trash disposed in a landfill from a transfer facility could have waste mixed from several counties. When a transfer facility hauls to more than one landfill, it becomes difficult to track which landfill received a county's waste.

Table D-2 above illustrates the waste transferred by the District in the reference year. Most of the District's waste is first hauled through a transfer facility. All facilities are in Ohio but outside of the county. The District continues to predominantly use the Montgomery County South Transfer Station which handled 97% of the District's transferred waste. The District used three transfer stations, and transferred a total of 73,100 tons of waste.

Waste transferred through a transfer facility was hauled for final disposal to a landfill. In 2021, transfer facilities managing the District waste reported hauling to the destination landfill as follows:

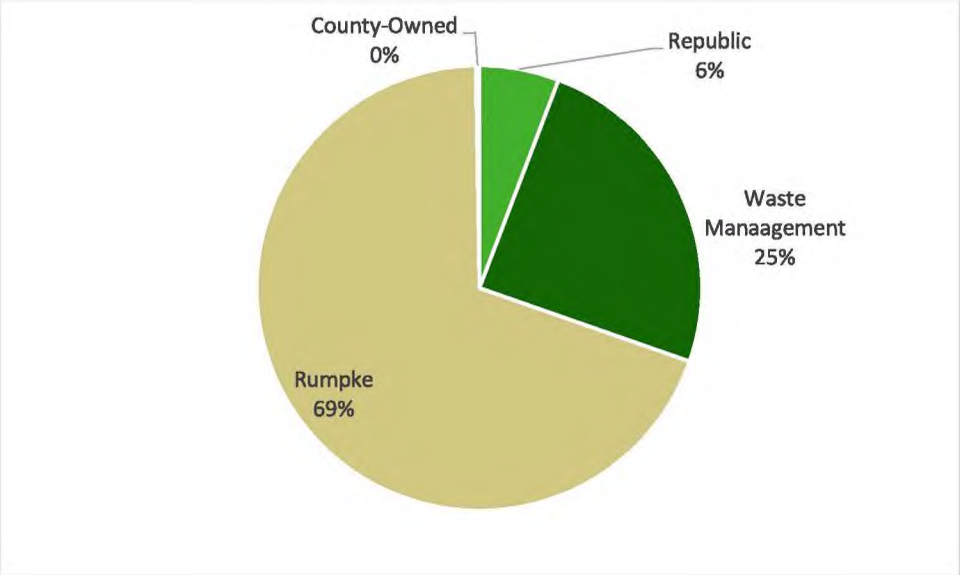
Transfer Station	Destination Landfill	Location
Miami County Solid Waste & Recycling Facility	Cherokee Run Landfill (owned by Republic)	Logan County
Montgomery County South Transfer	Rumpke Sanitary Landfill	Hamilton County
Rumpke Waste Inc Greenville Transfer Facility	Rumpke Sanitary Landfill	Hamilton County

Figure D-1 Waste Flow Total Landfilled



As mentioned earlier, the majority of the District's waste is transferred. When transferred waste is included the distribution for which landfills receive District waste changes. Figure D-1 re-assesses the landfills receiving waste and shows the majority of the District's waste landfilled is disposed in the Rumpke Sanitary Landfill.

Figure D-2 Market Share of Waste Landfilled



Waste is disposed in both public and private owned landfills. Less than 1% is disposed in public-owned landfills and the remaining is disposed in private owned landfills (see Figure D-2). Rumpke manages about 69% of the landfill volume. Waste Management is second at 25%, and Republic manages about 6%. The waste market leader for the District in the reference year (2021) is Rumpke.

Table D-3 Waste Incinerated/Burned for Energy Recovery in Reference Year[1]

		Location		Waste Accepted from the SWMD			
Facility Name	Facility Type	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
None				0	0	0	0
Total				0	0	0	0

Source(s):
Ohio EPA "2021 Ohio EPA Waste Flow Report"
Ohio EPA "2021 Ohio Facility Data Report Tables", September 20, 2022.
[1] *The facilities listed in Table D-3 constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).*

Waste was not managed at incinerators during the reference year.

Table D-4. Reference Year Total Waste Disposed

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	29,866	2,706	0	32,572	31%
Transferred	73,100	0	0	73,100	69%
Incinerated	0	0	0	0	0%
Total	102,966	2,706	0	105,673	100%
Percent of Total	97%	3%	0%	100%	

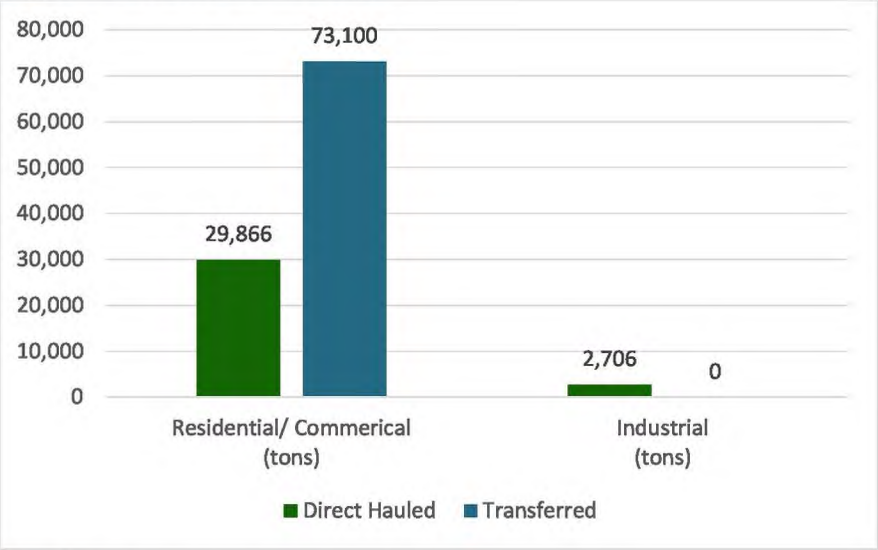
Source(s):
Ohio EPA "2021 Ohio EPA Waste Flow Report"
Ohio EPA "2021 Ohio Facility Data Report Tables", September 20, 2022.
Note: Excluded wastes are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

According to Ohio EPA Format 4.1, if excluded waste is 10% or less of total disposal in the reference year, then Districts are not required to account for excluded waste in the solid waste management plan. For the District, excluded waste accounts for less than 10% of the total disposal in 2021 and will not be included in this solid waste management plan.

The District sends most of its waste to a transfer facility directly after collection rather than direct hauling to a landfill. The District transfers about 69% of its waste and direct hauls 31% to in-state landfills. The District minimally utilized an out-of-state landfill in the reference year, disposing roughly 240 tons to the Caldwell Landfill in Indiana.

Almost all of the District's waste is from the residential/commercial sector. The District disposed of roughly 103,000, 97%, from this sector. The remaining 3% of material was disposed from the industrial sector, roughly 3,000 tons. **Figure D-3** details the total waste flow from direct haul and transferred waste in the reference year.

Figure D-3 Total Waste Flow



Source(s):
Ohio EPA "2021 Ohio EPA Waste Flow Report"
Ohio EPA "2021 Ohio Facility Data Report Tables", September 20, 2022

B. Historical Waste Analysis

Table D-5. Historical Disposal Data

Year	Population	Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (ppd)	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)
2017	134,577	3.77	92,483	4,056	N/A	96,638
2018	134,585	3.88	95,206	3,900	N/A	99,493
2019	134,083	3.98	97,364	5,888	N/A	103,541
2020	134,083	4.07	99,715	3,230	N/A	103,064
2021	135,633	4.16	102,966	2,706	N/A	105,886

Source(s): Ohio EPA ADR Review Forms for 2017, 2018, 2019, 2020, and 2021 for population and waste disposal data.
Sample Calculation:
Residential/Commercial + Industrial + Excluded = Total Waste
((Residential/Commercial tons * 2,000 pounds per ton) / 365 days) / Population = Residential/Commercial disposal rate

Table D-5a Annual Percentage Change

	Residential / Commercial	Industrial Solid Waste	Excluded Waste	Total Waste
2017				
2018	3%	-4%	N/A	3%
2019	2%	51%	N/A	4%
2020	2%	-45%	N/A	0%
2021	3%	-16%	N/A	3%

Table D-5b Annual Change in Tons Disposed

	Residential / Commercial	Industrial Solid Waste	Excluded Waste	Total Waste
2017				
2018	2,723	-156	N/A	2,855
2019	2,158	1,988	N/A	4,048
2020	2,351	-2,658	N/A	-477
2021	3,251	-524	N/A	2,822

Table D-5c Average Annual Percentage Change

Average Annual Percentage Change	
Residential/Commercial	2.72%
Industrial Waste	-3.56%
Excluded Waste	71.58%

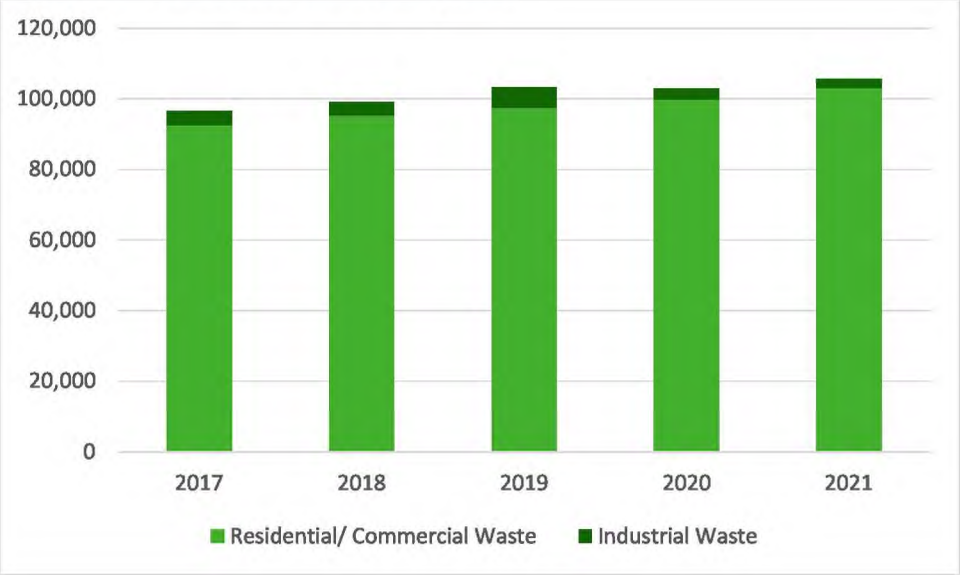
Table D-5d Average Annual Change in Tons Disposed

Average Annual Change in Tons Disposed	
Residential/Commercial	2,621
Industrial	-337
Excluded	29

Table D-5e Average Per Capita Disposal Over Time

Average Per Capita Disposal Over Time (5 Years)	
Residential/Commercial	3.97

Figure D-4 Historical Waste Disposal



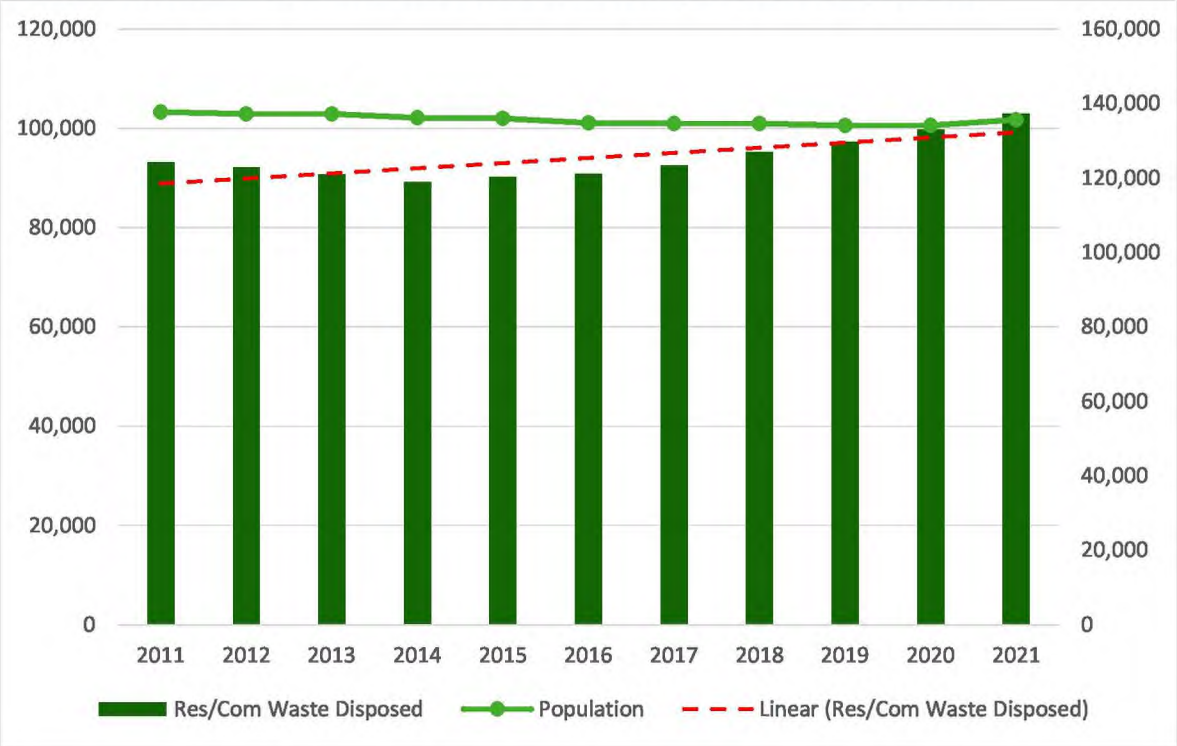
The disposal tonnages for the residential/commercial sector and the industrial sector are shown above. As seen, residential/commercial waste historically contributed 99% of all waste disposed. Overall, the District's

total waste disposed increased by 2% annually since 2017 (analysis includes excluded waste). In 2019, there was a noticeable increase in industrial waste disposed. However, the following year the levels returned to historic averages.

During the five-year period from 2017 to 2021, the District's total disposal increased from roughly 96,500 tons in 2017 to 106,000 tons in 2021. This is a roughly 9,000-ton increase, or about a 10% increase from the 2017 value. The following analysis will explore these patterns in more detail.

1. Residential/ Commercial Disposal

Figure D-5 Historical Residential/Commercial Disposal and Population



Historically, residential/commercial waste accounts for 99% of total waste disposal. Over the last 10-years, disposal followed an increasing trendline despite some minor fluctuations at the beginning of the period shown. The last five years however, the tonnage tracks a steeper steady increase. Population held fairly flat, decreasing slightly until a small increase was documented in 2021. There is no direct correlation between population and waste disposed. The approved 2019 Plan projected the District to dispose of approximately 93,000 tons in 2021 which is lower than the actual tonnage of 103,000. The previous plan predicted the waste disposal to increase steadily from the 2015 value of 90,000. The District saw steady increases since 2015, however the rate of increase observed is higher than predicted in the 2019 Plan. The District disposed of a ten-year high in 2021.

Figure D-6 Historical Residential/Commercial Disposal and Disposal Rate

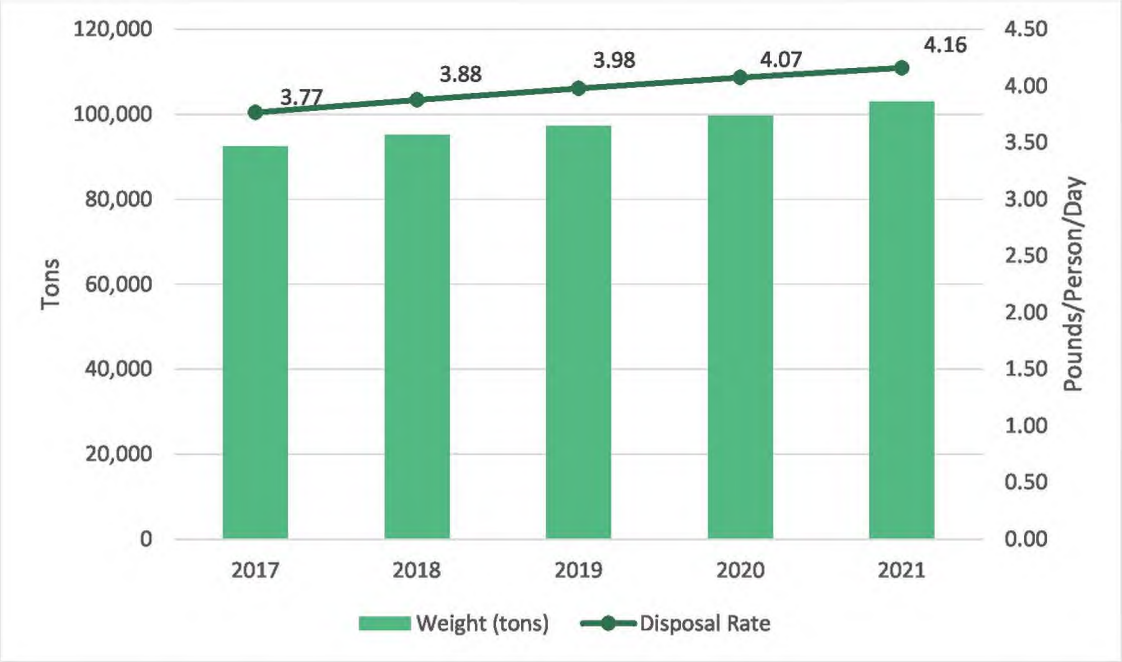
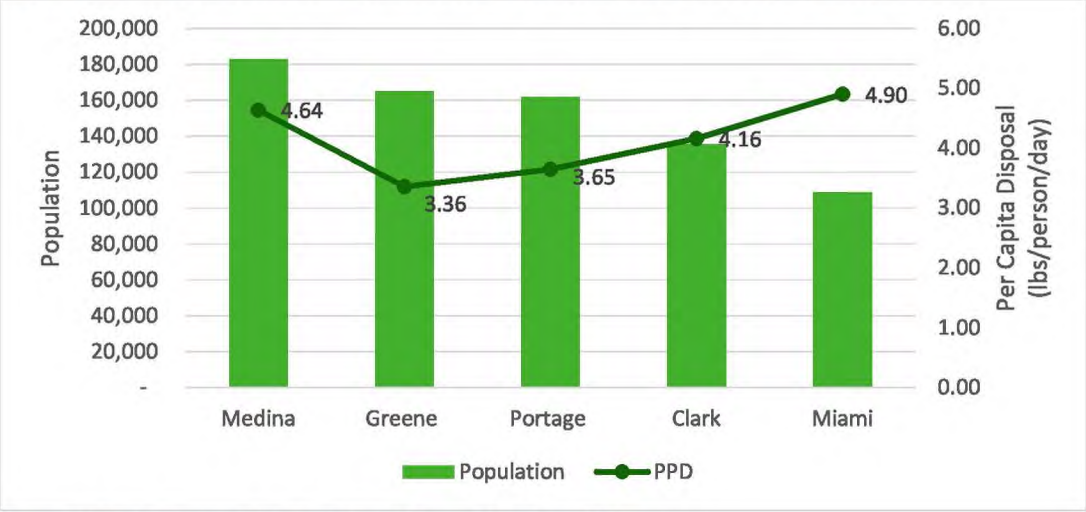


Figure D-6 shows the total amount of residential/commercial waste disposed and the rate of disposal in pounds per person per day. Despite an increase in waste disposed and disposal rate, the population of the District decreased slightly over this time period. The waste disposed increased by about 2.72% on average annually, beginning at 92,500 tons in 2017 and finishing at 103,000 tons in 2021.

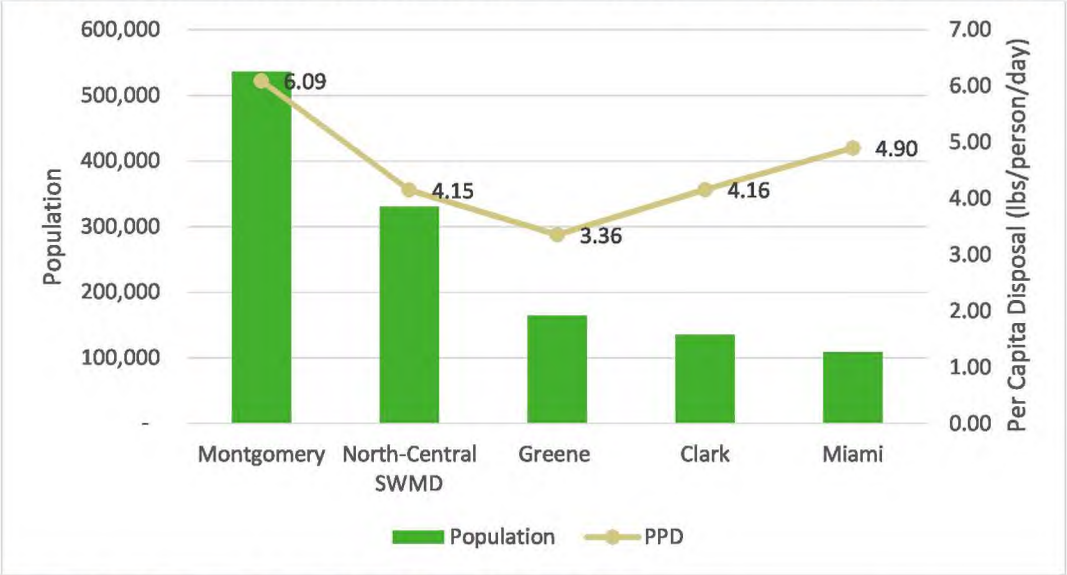
Figure D-7 Residential/ Commercial Benchmark Per Capita Disposal



Source(s): OEPA Disposal, Recycling, and Generation Report 2021

Figure D-7 compares the District's residential/commercial disposal rate to other Districts with similar sized populations. Of the District's in the comparison, Clark County has the third highest disposal rate despite having one of the smallest population sizes. Households in Clark County are disposing of approximately 4.16 pounds per person per day. Only Miami County and Medina County have higher disposal rates at 4.90 and 4.64 pounds per person per day respectively.

Figure D-8 Residential/ Commercial Benchmark Per Capita Disposal - Regional

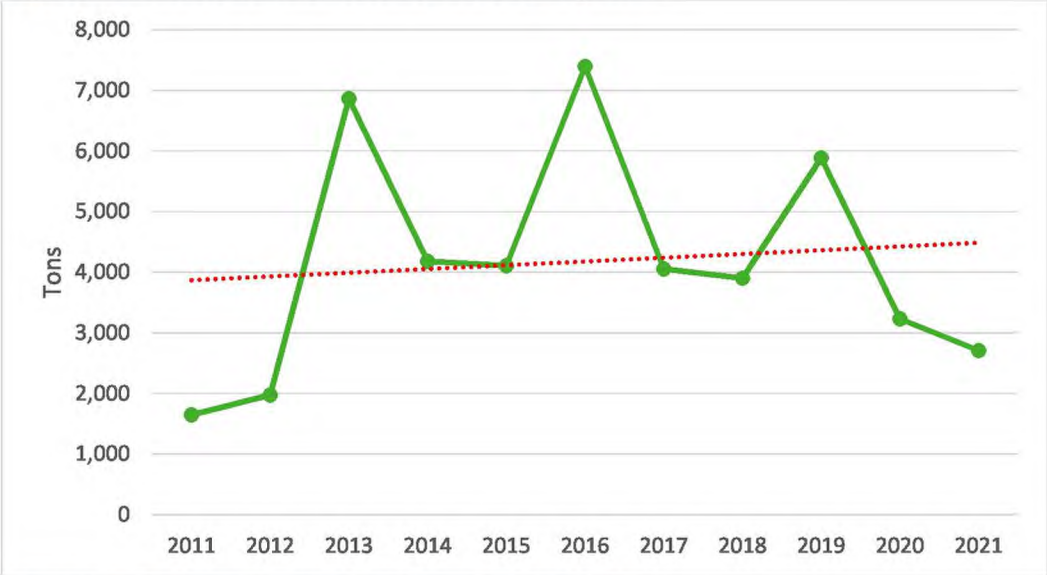


Source(s): OEPA Disposal, Recycling, and Generation Report 2021.
Note: North-Central SWMD includes Allen, Champaign, Hardin, Madison, Shelby, and Union Counties.

Figure D-8 presents the District and its neighboring counties' disposal rate and populations. Two of the Districts neighboring counties, Champaign, and Madison, are a part of the North-Central SWMD. Clark County sits in the middle of the five Districts at 4.16 pounds per person per day. Montgomery County has the highest disposal rate at 6.09 pounds per person per day as well as the largest population. Greene County has the lowest disposal rate at 3.36 pounds per person per day.

2. Industrial Sector Disposal

Figure D-9 Historical Industrial Sector Disposal



Source(s): OEPA Disposal, Recycling, and Generation Report 2021.

Industrial waste historically accounts for roughly 4% on average of the total waste disposed. Despite strong variation, the District has overall seen a minorly increasing trendline over the past 10 years. The District peaked at approximately 7,400 tons of industrial waste in 2015. The District had three large increases that are immediately followed by large decreases the following year.

The three peak years that can be seen above (2013, 2016, 2020) all were caused by large sums of industrial material being disposed of at the Cherokee Run Landfill in Logan County to the District's north. In 2020, there was also a large amount of industrial waste sent out-of-state to Indiana that added to the higher disposal tonnage. There appears to be a repeating three-year pattern observed. This pattern has occurred three times over the last 10 years and appears to be occurring again. It is uncertain what causes this pattern, but the pattern seems to follow a general trend of two years at lower tonnages that remain fairly consistent and then in the third year a large increase. For example, the pattern starts historically with 2011 and 2012 under 2,000 tons disposed followed by a massive increase in 2013 to just under 7,000 tons. In 2014 the number drops to 4,000 tons and 2015 remains around that level before the tonnages experience a large increase again to 7,500 tons in 2016.

3. Excluded Waste Disposal

Per Ohio EPA Format 4.1, excluded waste will not be accounted for in this plan update as it comprises less than 10% of waste disposed.

C. Disposal Projections

There are several methods that can be used for projecting waste disposal through the planning period, such as historical per capita, historical averages and historical trends. After conducting the historical analysis and

considering factors that could change historical disposal trends, waste disposal for the planning period is projected in **Table D-6**. Disposal projections are flatlined in the seventh year of the planning period (2031).

Table D-6. Waste Disposal Projections

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Waste	Total Waste	Waste Transferred (as part of Total Disposal)	Waste Transferred (as part of Total Disposal)
	Weight	Weight	Weight	Weight	Weight	Percent
	(tons)	(tons)	(tons)	(tons)	(tons)	69%
2021	102,966	2,706	0	105,673	73,100	
2022	104,015	2,696	0	106,711	73,819	
2023	105,075	2,686	0	107,761	74,545	
2024	106,145	2,676	0	108,821	75,278	
2025	107,227	2,665	0	109,892	76,019	
2026	108,319	2,655	0	110,974	76,768	
2027	109,422	2,645	0	112,068	77,524	
2028	110,537	2,635	0	113,172	78,288	
2029	111,663	2,625	0	114,288	79,060	
2030	112,801	2,615	0	115,416	79,840	
2031	112,801	2,615	0	115,416	79,840	
2032	112,801	2,615	0	115,416	79,840	
2033	112,801	2,615	0	115,416	79,840	
2034	112,801	2,615	0	115,416	79,840	
2035	112,801	2,615	0	115,416	79,840	
2036	112,801	2,615	0	115,416	79,840	
2037	112,801	2,615	0	115,416	79,840	
2038	112,801	2,615	0	115,416	79,840	
2039	112,801	2,615	0	115,416	79,840	

Source(s):
2021 Ohio EPA ADR Review Form
Ohio JFS 2028 Ohio Job Outlook Northeast Ohio Projections.

1. Residential / Commercial Waste Projections

For the reference year and the nine years prior, residential/commercial disposal increased from 93,200 tons to 103,000 tons. This is a 1.02% increase annually on average. From 2011 to 2016 the disposal amounts ranged from 89,200 to 93,200 with minor fluctuations both up and down. However, over the last five years, the District has increased each year by an average of 2.72%. To be conservative, the District used the 10-year historical average increase of 1.02% annually to project. Projections are flatlined in 2031.

Sample Calculation 2025:

2025 Value = (2024 value * annual growth rate) + 2024 value
107,227 = (106,145 + 0.0102) + 106,415

2. Industrial Waste Projections

Industrial waste follows a declining trendline over the previous five years. The Ohio Department of Jobs and Family Resources projected industry decreases of 3.8% in manufacturing employment from 2018 to 2028. Annualizing this over ten years calculates to a 0.38% annual decrease. Expecting decreased employment to mirror waste disposal, the District used this annual rate of decline to project the annual tonnage changes for industrial waste disposal in the District. Projections are flatlined in 2031.

Sample Calculation 2025:

2025 Value = (2024 value * annual growth rate) + 2024 value

2,665 = (2,676 * -0.0038) + 2,676

3. Excluded Waste Projections

Per Ohio EPA Format 4.1, excluded waste will not be accounted for going forward in this plan update as it comprises less than 10% of waste disposed.

D. Waste Imports

The District does not have an active landfill located inside its county, therefore has no data on waste imports. Furthermore, there are no plans currently to develop a landfill in the District boundaries. As a result, there are no projections for waste imports.

Table D-7. Waste Imports

Year																							
Facility Name	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
None																							
Total Imported	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX E

RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA

Appendix E. Residential/Commercial Recovery Data

This appendix presents the reduction and recycling data for the residential and commercial sectors in the 2021 reference year. To avoid double-counting tonnages, adjustments were made to tonnages reported by different types of entities, such as programs, brokers, and scrap yards. A material is "double counted" if the quantities from both respondents are calculated in the total recovery. 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 2022 to 2039 which are included at the end of this Appendix.

A. Reference Year Recovery Data

The District has surveyed its residential/commercial sector in the past. However, the most recent year a survey was conducted was 2018. Conducting annual recycling surveys was a time-consuming exercise that was not producing high response or collected tonnage recovery data. As such, the District decided not to conduct surveys on recycling in the residential/commercial sector as they consistently reach Goal #2 set by Ohio EPA. Goal #2 requires Districts to reduce or recycle at least 25% of the residential/commercial waste.

Because the District does not survey this sector, **Table E-1** Community Survey Results is omitted.

Table E-2. Data from Other Recycling Facilities

Source of Materials	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Wood	Commingled Recyclables (Mixed)	Yard Waste	*Other*	*Total*
Buybacks											
None											
Scrap Yards											
None											
Brokers											
None											
Processor/ MRF's											
PR1	94	63	38	1,040	2,126	281					
PR2					72						
Total	**94**	**63**	**38**	**1,040**	**2,198**	**281**					**3,715**
Adj.											0
Adj.Total	**94**	**63**	**38**	**1,040**	**2,198**	**281**					**3,715**

Source(s) of Information: 2021 Ohio EPA Material Recovery Facility and Commercial Recycling Data.
Note: Numbers are rounded to the nearest whole number

Table E-2 above contains information collected from the buyback surveys and Ohio EPA reports. Processors, buybacks, and MRFs capture recyclables and process them to prepare them for recycling. There was no need to adjust for double counting because the District does not survey the residential/commercial sector. This eliminates any possibility of an entity being counted by Ohio EPA and the District. There were 3,715 tons of material reported from two processors in the reference year.

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

Ohio EPA Data Source	Glass	Plastic	Newspaper	Cardboard	Mixed Paper	Nonferrous	Ferrous	Other	Wood	Food	Commingled	Total
Walmart		20.99		1,286.35	1.54	0.07		78.57				
Home Depot		0.31		27.62				12.35	179.47			
Dollar General		1.43		331.68								
Kohls		2.86		74.88		0.04		0.5				
Kroger		42.1		1,170.97				19.55				
CVS				104.69								
Advance Auto Parts		0.06		1.57			0.61	26.86				
Unadjusted Total	**0**	**68**	**0**	**2,998**	**2**	**0**	**1**	**138**	**179**			**3,385**
Adjustments												
Adjusted Total	**0**	**68**	**0**	**2,998**	**2**	**0**	**1**	**138**	**179**			**3,385**

Source(s) of Information: 2021 Ohio EPA Material Recovery Facility and Commercial Recycling Data
Assumptions: No adjustments were made to the data reported to Ohio EPA.
Note: Final numbers are rounded to the nearest whole number.

Quantities reported in **Table E-3** were obtained from the Ohio EPA Material Recovery Facility and Commercial Recycling Data Report. The District no longer surveys its commercial businesses, therefore there was no need to adjust for double counting. Ohio EPA reported a total of 3,385 tons of material diverted from commercial businesses in Clark County.

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

Other Programs or Sources of Data	HHW	Electronics	Scrap Tires	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	Mixed Paper	Plastics	Yard Waste	Commingled Recyclables	Other	Unadjusted Total	Adjustments	Adjusted Total
EPS[1] Recycling Program										2				2		2
Ohio EPA Scrap Tire Report			1,191	9,201										1,191	46	1,145
Ohio EPA Compost Facility Report											39,705			48,906		48,906
Specialty Recycling Center	35	56	46			27			23				15	202		202
New Carlisle Curbside Recycling												306		306	306	0
Tremont City Curbside Recycling												27		27	27	0
Drop-off Recycling												736		736	736	0
Business & Office Paper Recycling Programs								329						329	5	324
Unadjusted Total	**35**	**56**	**1,237**	**9,201**	**0**	**27**	**0**	**329**	**23**	**0**	**39,705**	**1,070**	**15**	51,700	1,121	**50,579**
Adjustments			46					5				**1,070**		1,121	1,121	**1,121**
Adjusted Total	**35**	**56**	**1,191**	**9,201**	**0**	**27**	**0**	**324**	**23**	**0**	**39,705**	**0**	**15**	50,579	1,121	**50,579**

Source(s) of Information: 2021 Ohio EPA Scrap Tire Report, 2021 Ohio EPA Compost Report, Internal District Data
Note: Numbers are rounded to the nearest whole number.

Table E-4 presents tonnages diverted through programs and services the District offers in the reference year, plus Ohio EPA's scrap tire and compost reports. This table includes all residential and commercial programs/services through which materials being credited to total diversion were recovered. Some materials may be collected from programs, processors, and haulers discussed above (see tables above) and therefore have been adjusted as such. There were three adjustments made to prevent double counting. 46 tons for scrap tire collection, five tons for corrugated cardboard, and 1,070 tons from commingled recyclables. All of these material categories were accounted for in reports from haulers or processors. The District diverted a total of 50,579 tons from other recycling programs and sources, most of which is yard waste. See analysis in Appendix B for more information on yard waste diversion.

Table E-5 Residential/Commercial Material Recovered in Reference Year

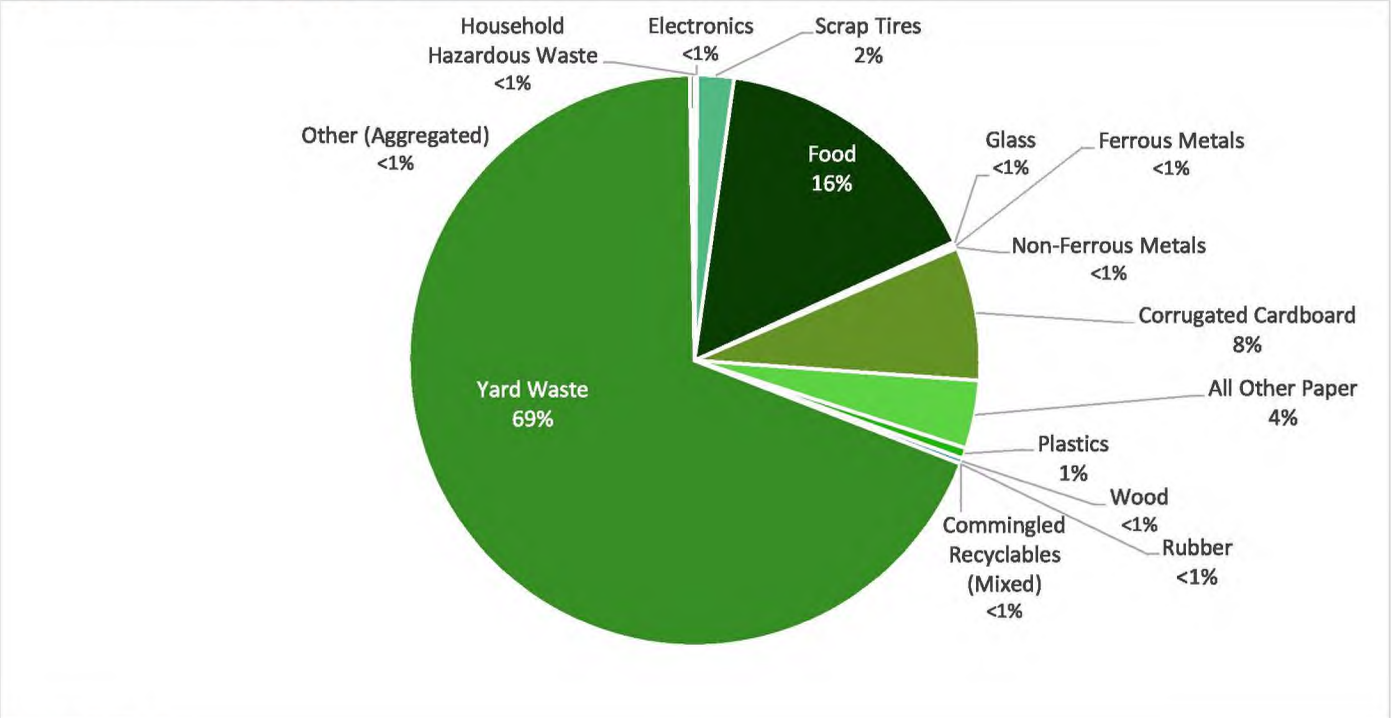
[1] EPS stands for Expanded Polystyrene

Material	Quantity (tons)
Appliances/ "White Goods"	0
Household Hazardous Waste	35
Used Motor Oil	0
Electronics	56
Scrap Tires	1,191
Dry Cell Batteries	0
Lead-Acid Batteries	0
Food	9,201
Glass	94
Ferrous Metals	91
Non-Ferrous Metals	38
Corrugated Cardboard	4,363
All Other Paper	2,222
Plastics	351
Textiles	0
Wood	179
Rubber	0
Commingled Recyclables (Mixed)	0
Yard Waste	39,705
Other (Aggregated)	153
Total	**57,680**

Source(s) of Information: 2021 ADR Calculation Spreadsheets, 2021 Ohio EPA MRF Reports, 2021 Ohio EPA Scrap Tire Report, 2021 District program data, 2021 Ohio EPA Compost Report, 2021 ADR Review Forms.
Note: All numbers are rounded to the nearest whole number.

The District diverted 57,680 tons from the residential/commercial sector. **Table E-5** presents the quantities of each material diverted. As discussed previously, a majority of the District's diverted waste is yard waste. Other notable quantities include food, corrugated cardboard, and paper. **Figure E-1** below presents the diverted material quantities graphically.

Figure E-1: Recycling By Material



Source: Table E-5

As demonstrated above, organics are the primary driver of reported diversion in the District. Yard waste accounted for 69% of diversion while food accounted for 16%. Together, the two categories account for 85% of the residential/commercial diversion. Corrugated cardboard and mixed paper account for 8% and 4% of material diversion respectively.

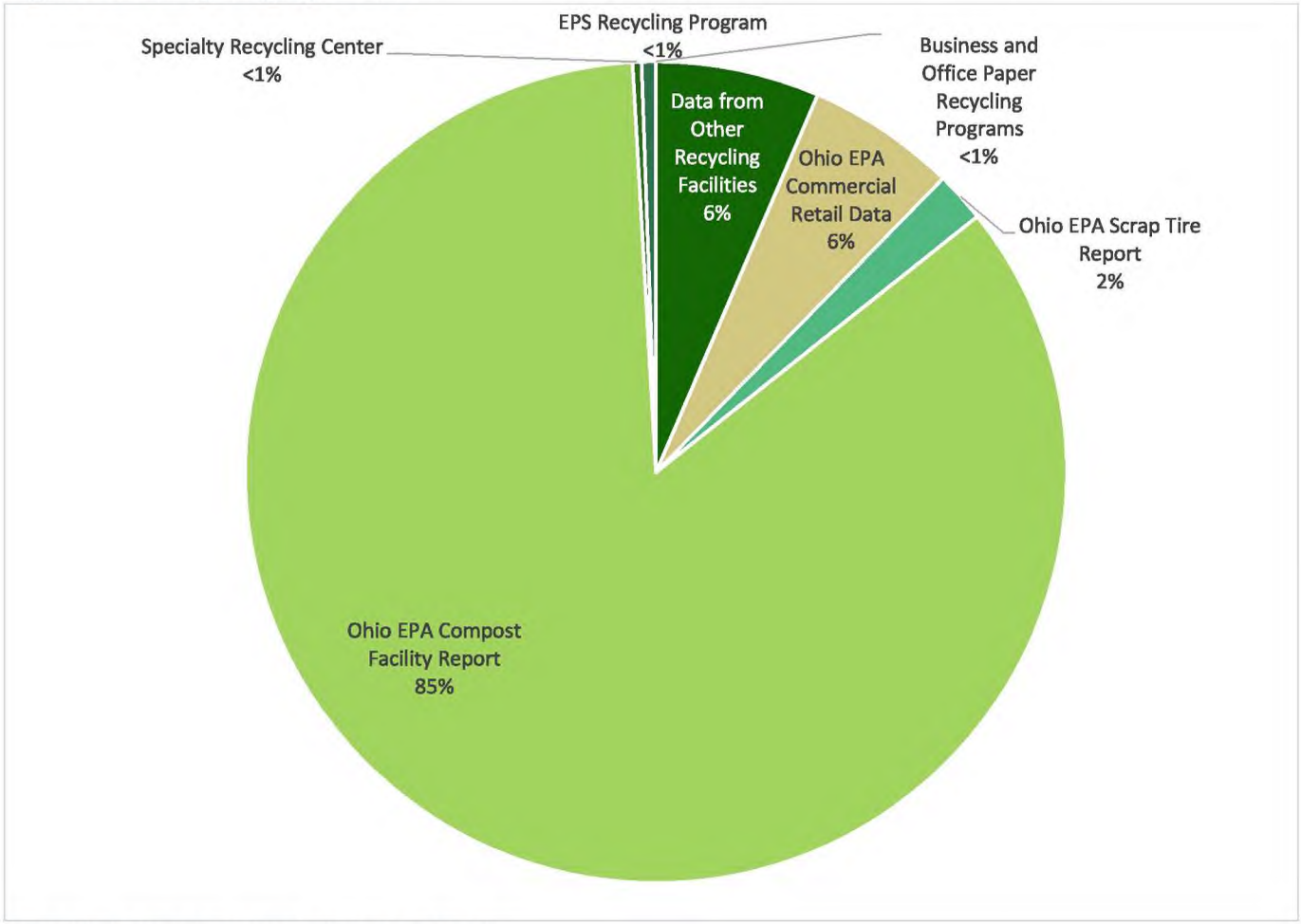
Table E-6: Quantities Recovered by Program/Source

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	0
Data from Other Recycling Facilities	3,715
Ohio EPA Commercial Retail Data	3,385
EPS Recycling Program	2
Ohio EPA Scrap Tire Report	1,145
Ohio EPA Compost Facility Report	48,906
Specialty Recycling Center	202
New Carlisle Curbside Recycling	0
Tremont City Curbside Recycling	0
Drop-off Recycling	0
Business & Office Paper Recycling Programs	324
Total	**57,680**

Source(s) of Information: Tables E-1 E-2, E-3, and E-4.

Table E-6 reports tonnages diverted for each program/source in the reference year using information from **Tables E-1** to **E-4** above. **Figure E-2** below displays this information by the percentage of recovered materials from the programs detailed.

Figure E-2 Recycling by Source



Source(s) of Information: Tables E-1 E-2, E-3, and E-4.

Similar to **Figure E-1** above, one source is where a majority of data is derived. **Figure E-2** shows that the primary source of information for diversion in the District is the Ohio EPA Compost Facility Report.

B. Historical Recovery

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

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	EPS Recycling Program	Ohio EPA Scrap Tire Report	Ohio EPA Compost Facility Report	Specialty Recycling Center	New Carlisle Curbside Recycling	Tremont City Curbside Recycling	Drop-off Recycling	Business & Office Paper Recycling Programs	Totals
2017		4,603	3,895	0	1,143	53,324	0	380	50	1,043		64,489
2018		3,841	3,612	0	517	56,200	255	326	50	1,100		65,970
2019		3,777	4,021	0	1,153	52,225	9	291	38	1,100		62,750
2020		3,904	4,180	0	727	68,221	6	305	34	862		78,303
2021	0	3,715	3,385	2	1,145	48,906	202	0	0	0	324	57,680

Table E-7a1 Annual Percent Change in Tons Recovered

2017												
2018	#DIV/0!	-17%	-7%	#DIV/0!	-55%	5%	#DIV/0!	-14%	0%	5%	#DIV/0!	2%
2019	#DIV/0!	-2%	11%	#DIV/0!	123%	-7%	-96%	-11%	-24%	0%	#DIV/0!	-5%
2020	#DIV/0!	3%	4%	#DIV/0!	-37%	31%	-37%	5%	-10%	-22%	#DIV/0!	25%
2021	#DIV/0!	-5%	-19%	#DIV/0!	58%	-28%	3326%	-100%	-100%	-100%	#DIV/0!	-26%

Table E-7a2 Average Percentage Change in Tons Recovered

	#DIV/0!	-5%	-3%	#DIV/0!	22%	-2%	#DIV/0!	-30%	-34%	-29%	#DIV/0!	-1%

Table E-7a3 Annual Change in Tons Recovered

2017												
2018	0	-761	-283	0	-626	2,877	255	-54	0	57	0	1,481
2019	0	-65	409	0	637	-3,975	-246	-35	-12	0	0	-3,221
2020	0	128	159	0	-426	15,995	-4	14	-4	-238	0	15,554
2021	0	-189	-795	2	418	-19,315	196	***-305***	***-34***	-862	324	-20,623

Table E-7a4 Annual Per Capita Recovery Rate (pounds/person/day)

2017	0.00	0.19	0.16	0.00	0.05	2.17	0.00	0.02	0.00	0.04	0.00	2.63
2018	0.00	0.16	0.15	0.00	0.02	2.29	0.01	0.01	0.00	0.04	0.00	2.69
2019	0.00	0.15	0.16	0.00	0.05	2.13	0.00	0.01	0.00	0.04	0.00	2.56
2020	0.00	0.16	0.17	0.00	0.03	2.79	0.00	0.01	0.00	0.04	0.00	3.20
2021	0.00	0.15	0.14	0.00	0.05	1.98	0.01	***0.00***	***0.00***	0.00	0.01	2.33

Table E-7a5 Average Per Capita Recovery Rate

	0.00	0.16	0.16	0.00	0.04	2.27	0.00	0.01	0.00	0.03	0.00	2.68

Table E-7a6 Average Tons of Material Recovered

	0	3,968	3,819	0	937	55,775	94	260	34	821	324	65,838

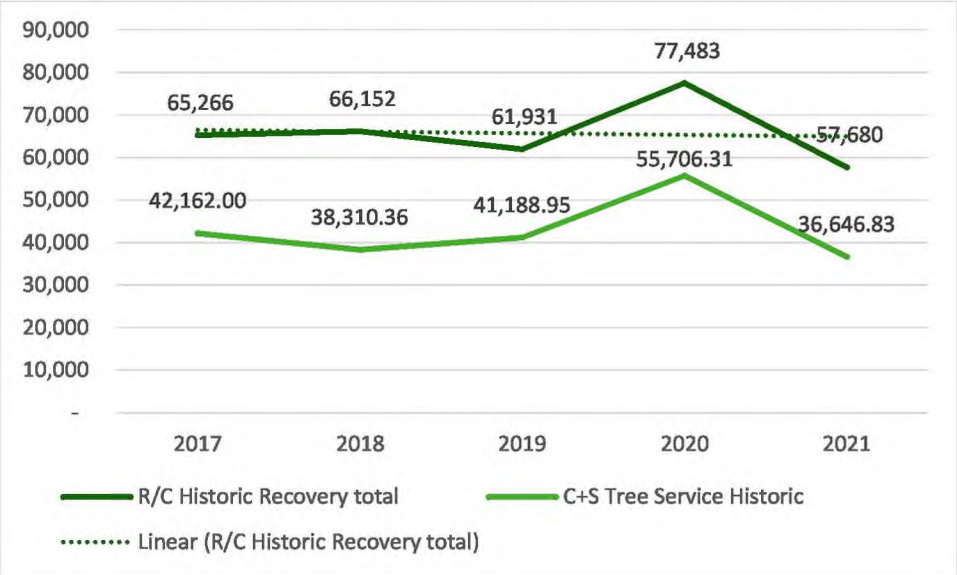
Tables E-7 through **E-7a6** show historical recycling data collected from the District. The challenge with analyzing programmatic data such as above is that each year there may be differences in how the data is recorded. These differences can result in fluctuations between recording years and can present challenges for data analysis.

As seen in the tables above, the five-year average tons of material recovered was roughly 64,000 with a declining average percent change of 1%. Analyzing on a year-to-year basis, the recovery tonnages demonstrate a more volatile annual swing. Diversion ranged from roughly 57,000 to about 78,000. These fluctuations are driven by organics recovery reported in the Ohio EPA Compost Facility Report. When recovery is mostly dependent one material stream, as is the case for the diversion in Clark County, the diversion is delicate and subject to more volatile swings. Apart from compost, many of the District's other program sources remain consistent from year to year.

A few programs do not show consistency and instead show average percentage changes ranging from 20% to 30% annually. These programs/sources are the Ohio EPA Scrap Tire Report, Tremont Curbside Recycling, and Drop-off Recycling. However, more adjustments over time were made to Tremont Curbside Recycling and Drop-off Recycling numbers. In 2021, the District adjusted these numbers to 0 tons in order prevent double counting the material. The result is a significantly higher percent change from 2020 to 2021, bringing the average of the five-year period down. A more accurate snapshot of these programs can be found by removing 2021 and re-calculating the average. Doing so yields a seven and five percent annual decrease for Tremont Curbside Recycling and Drop-off Recycling numbers respectively.

There are minor differences between the previous ADR totals and the historical totals calculated in this plan. It is likely these are due to rounding, slight changes to data that were not accounted for, and double counting.

Figure E-3 Historical Residential/ Commercial Total Recovery



Source: 2017 – 2021 District ADRs

Total residential/commercial diversion has been relatively flat over the last five years. The only significant variation in this period came in 2020. This roughly 16,000-ton increase was almost entirely driven by the amount of compost reported in the Ohio EPA's Compost Facility Report. As discussed in Appendix B, a large majority, roughly 75%, of Clark County's compost diversion comes from one company, C+S Tree Service. Upon further analysis of the unusual increase in total recovery from 2020, the District discovered the cause for this was elevated numbers reported from C+S Tree Service. They reported 55,000 tons of yard waste in 2020, an increase of 14,000 from 2019.

As shown above in **Figure E-3**, the District's total recovery is closely entwined with C+S Tree Service's diversion numbers, following almost identical trends over the five years. **Figure E-3** also confirms the significant jump in overall recovery in 2020 was predominantly the result of C+S Tree Recycling's reported recovery. It is unclear the cause of the one-year increase. Immediately following the high in 2020, the District returned to expected levels of diversion.

C. Residential/Commercial Recovery Projections

Table E-8 Residential/Commercial Recovery Projections by Source

Year	Commercial Survey	Data from Other Recycling	Ohio EPA Commercial Retail Data	EPS Recycling Program	Ohio EPA Scrap Tire Report	Ohio EPA Compost Facility Report	Specialty Recycling Center	New Carlisle Curbside Recycling	Tremont City Curbside Recycling	Drop-off Recycling	Business & Office Paper Recycling Programs	Totals
2021	***0***	***3,715***	***3,385***	***2***	***1,145***	***48,906***	***202***	***0***	***0***	***0***	***324***	***57,680***
2022	0	3,977	3,819	2	937	55,910	202	305	27	824	324	**66,326**
2023	0	3,954	3,819	2	937	55,597	202	303	27	820	324	**65,985**
2024	0	3,932	3,819	2	937	55,285	202	301	27	815	324	**65,645**
2025	0	3,910	3,819	2	937	54,976	202	300	27	810	324	**65,307**
2026	0	3,888	3,819	2	937	54,668	202	298	26	806	324	**64,970**
2027	0	3,867	3,819	2	937	54,362	202	296	26	801	324	**64,636**
2028	0	3,845	3,819	2	937	54,057	202	295	26	797	324	**64,304**
2029	0	3,823	3,819	2	937	53,755	202	293	26	792	324	**63,973**
2030	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2031	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2032	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2033	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2034	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2035	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2036	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2037	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2038	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**
2039	0	3,802	3,819	2	937	53,454	202	291	26	788	324	**63,645**

Sources: Year 2021 Data Sources: Data from other recycling facilities from Ohio EPA MRF report, Ohio EPA commercial retail data from Ohio EPA MRF report, Ohio EPA compost data from Ohio EPA Compost report (includes food waste), Ohio EPA scrap tire data from Ohio EPA reports, Specific program data from historical Annual District Reports.

Table E-8 details the projected residential/commercial recovery by source. The District's primary source of diversion comes from the compost efforts of one company, as discussed earlier and shown in **Table E-3** above. Historically, this company reported a five-year low which also caused the District's diversion to be at a five-year low. The District anticipates a return to expected totals in 2022 and is therefore projecting an increase from 2021 to 2022. However, with a decreasing population, it is projected the total diversion will decrease minimally from year to year. The District is expected to remain near historical diversion values throughout the planning period. See below for an explanation of how each source was projected. All projections are flatlined in the seventh year of the planning period.

Commercial Survey Projections:

The District does not survey its residential/commercial sector and is not expecting to through the planning period.

Data from Other Recycling Facilities Projections:

These projections were calculated based on the historical per capita recovery rate. The average annual per capita recovery rate was 0.16 pounds per person per day. This number was multiplied by the respective year's projected population and converted into tons per year.

Sample Calculation 2022: ((0.16 * 134,873) / 2000) * 365 = 3,977 tons

Ohio EPA Commercial Retail Data Projections:

These projections were held constant throughout the planning period as this data is independently acquired by the Ohio EPA and is out of the District's control.

Ohio EPA Scrap Tire Report Projections:

These projections were held constant throughout the planning period as this data is independently acquired by the Ohio EPA and is out of the District's control.

Ohio Compost Facility Report Projections:

Over 75% of the District's diverted material stems from this report. Almost all of the composted material from the District is reported from C+S Tree Service. The District has a contract with this business to allow residents to drop-off yard waste free of charge. As such, the District projected these numbers based on the historical per capita recovery rate. The average annual per capita recovery rate was 2.27 pounds per person per day. This number was multiplied by the respective year's projected population and converted into tons per year.

Sample Calculation 2022: ((2.27 * 134,873) / 2000) * 365 = 55,910 tons

Specialty Recycling Center Projections:

These projections are held at the reference year value. Cardboard is the cause of the fluctuating historical data. Some years cardboard is included in this program category and other years it is not. Including cardboard would demonstrate minimal annual fluctuations.

New Carlisle Curbside Projections:

These projections were calculated based on the historical per capita recovery rate. The average annual per capita recovery rate was 0.003 pounds per person per day. This number was multiplied by the respective year's projected population and converted into tons per year.

Sample Calculation 2022: ((0.003 * 134,873) / 2000) * 365 = 64 tons

Tremont City Curbside Projections:

These projections were calculated based on the historical per capita recovery rate using Tremont City's population. The annual per capita recovery rate was 0.30 pounds per person per day in the reference year. This number was multiplied by the respective year's projected population and converted into tons per year.

Sample Calculation 2022: ((0.30 * 5,502) / 2000) * 365 = 305 tons

Drop-Off Recycling Projections:

These projections were calculated based on the historical per capita recovery rate using the Village of Carlisle's population. The annual per capita recovery rate was 0.43 pounds per person per day in the reference year. This number was multiplied by the respective year's projected population and converted into tons per year.

Sample Calculation 2022: ((0.43 * 345) / 2000) * 365 = 27 tons

Business & Office Paper Recycling Program Projections:

These projections are held at the reference year value. There was not enough historical data to project and the program is continuing.

APPENDIX F

INDUSTRIAL REDUCTION AND RECYCLING DATA

Appendix F.
Industrial Recovery Data

Appendix F contains an inventory of materials recovered from the industrial sector in the reference year, adjusts quantities for double counting, calculates total adjusted quantities of material recovered, analyzes historical quantities recovered and projects quantities to be recovered.

The Ohio EPA 2020 State Plan no longer requires Solid Waste Management Districts to demonstrate the industrial sector percentage goal of 66% diverted waste. Upon removal of this goal, Districts may choose whether to survey the industrial sector or not.

The Clark County Solid Waste Management District chose not to conduct an industrial survey in the reference year. Thus, Appendix F has been omitted from this Plan Update.

APPENDIX G

WASTE GENERATION

Appendix G.
Waste Generation

A. Historical Waste Generated

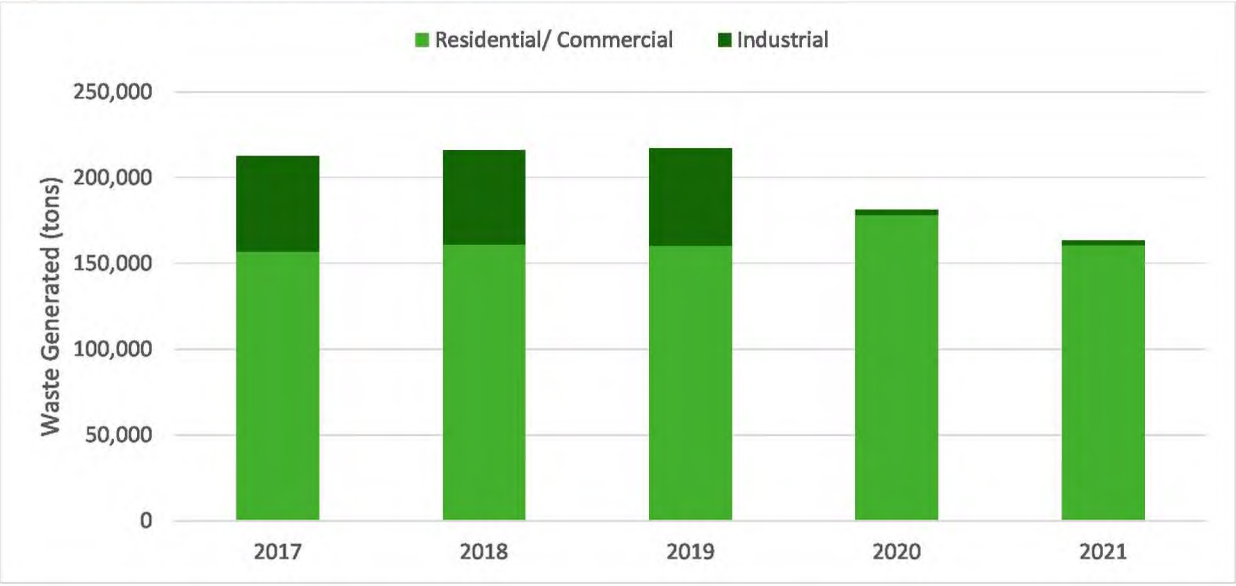
Table G-1 Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial				Industrial			Excluded	Total (tons)
		Disposed (tons)	Recycled (tons)	Generated (tons)	Per Capita Generated (ppd)	Disposed (tons)	Recycled (tons)	Generated (tons)		
2017	134,577	92,483	64,489	156,972	6.39	4,056	51,605	4,056	99	**212,732**
2018	134,585	95,206	65,970	161,176	6.56	3,900	50,923	3,900	387	**216,386**
2019	134,083	97,364	62,750	160,114	6.54	5,888	50,923	5,888	289	**217,214**
2020	134,083	99,715	78,303	178,018	7.27	3,230	0	3,230	119	**181,367**
2021	**135,633**	**102,966**	**57,680**	**160,646**	**6.49**	**2,706**	***0***	***2,706***	**0**	**163,353**

Source: Disposal Data from Appendix D, Recycle Data from Appendix E and F, 2017 – 2021 Annual District Reports

Total waste generated by the District was calculated by adding the quantities of waste disposed from Appendix D and quantities of recycled materials from Appendix E and F. Quantities from disposal and recycling in the District from 2017 to 2021 are shown in **Table G-1.** Residential/commercial waste generation held relatively flat over the last five years. Similar to the discussion in Appendix E, the only major fluctuation was in 2020. The reason behind this is due to a large increase in diversion from one of the reporting businesses. See Appendix E for more information.

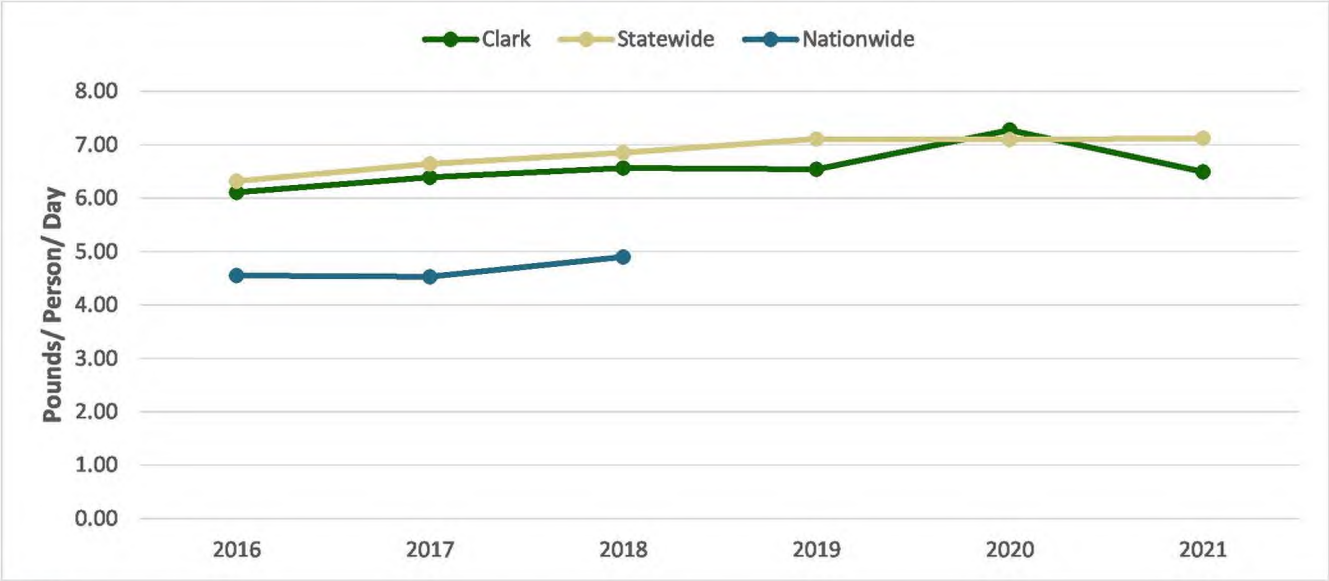
Figure G-1: Historic Waste Generated



The District's combined residential/commercial and industrial waste generation saw a large decrease in 2020. This is because the District stopped surveying the industrial sector and stopped tracking industrial

diversion. Although the District has not tracked industrial diversion in recent years, it is likely that the industrial businesses are diverting relatively the same amount of material from 2017 to 2019, about 51,000 tons on average.

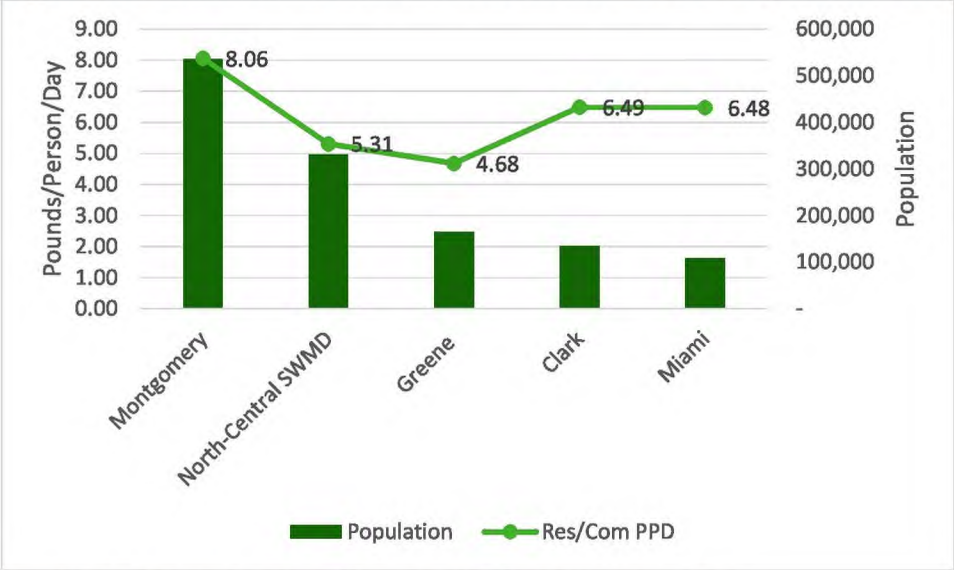
Figure G-2: Residential/Commercial Per Capita Generation



Source:
National Average Per Capita Data: EPA National Overview: Facts and Figures on Materials, Wastes, and Recycling.
Ohio Per Capita Data: Ohio EPA Solid Waste Generated in Ohio – 2020
Note: National average per capita generation 2019 through 2021 was not published as of this report.

The District's historical residential/commercial generation per capita data was compared to the U.S. EPA's national average and the Ohio EPA's statewide average data. As seen in **Figure G-2**, the District's generation rate per capita lies just under the State average and well above the National average. The District saw a significant increase in the generation rate from 6.54 pounds per person per day in 2019 to 7.27 in 2020. This was because of the aforementioned increase in yard waste diversion discussed in Appendix E. In 2021, the generation rate returned to average levels for the District.

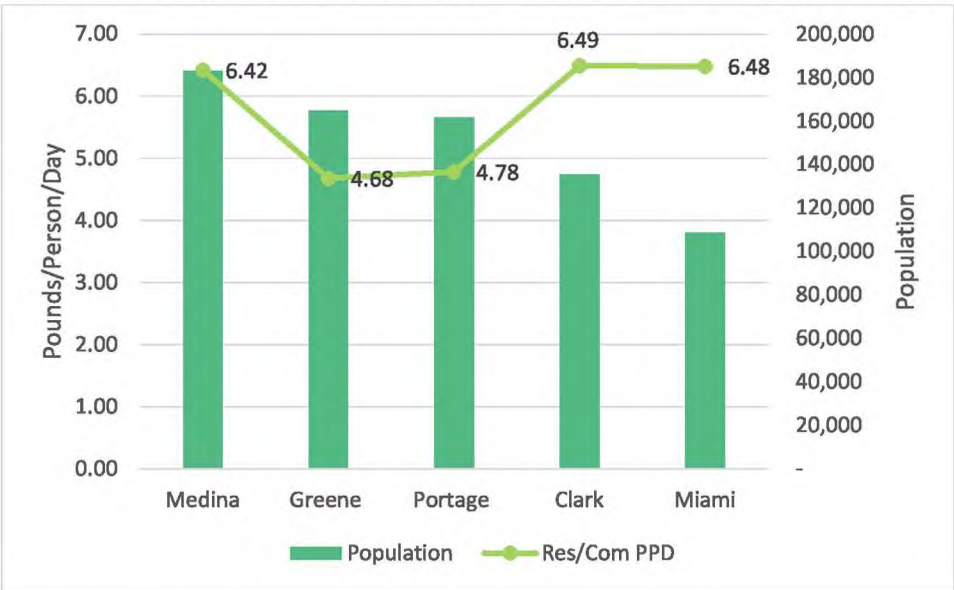
Figure G-3: Benchmark Residential/Commercial Per Capita Rate Regionally



Source: Ohio EPA SWMD Disposal, Recycling, and Generation Report – 2021
North Central SWMD: Allen-Champaign-Hardin-Madison-Shelby-Union Joint SWMD.

Figure G-3 compares the District's generation rate to four other regional Districts. Compared to surrounding Districts, Clark County measures the second highest per capita generation and the second lowest population. Montgomery County (almost 4x the population) demonstrates a higher generation rate per capita.

Figure G-4 Benchmark Residential/Commercial Per Capita Rate Similar Population



Source: Ohio EPA SWMD Disposal, Recycling, and Generation Report – 2021

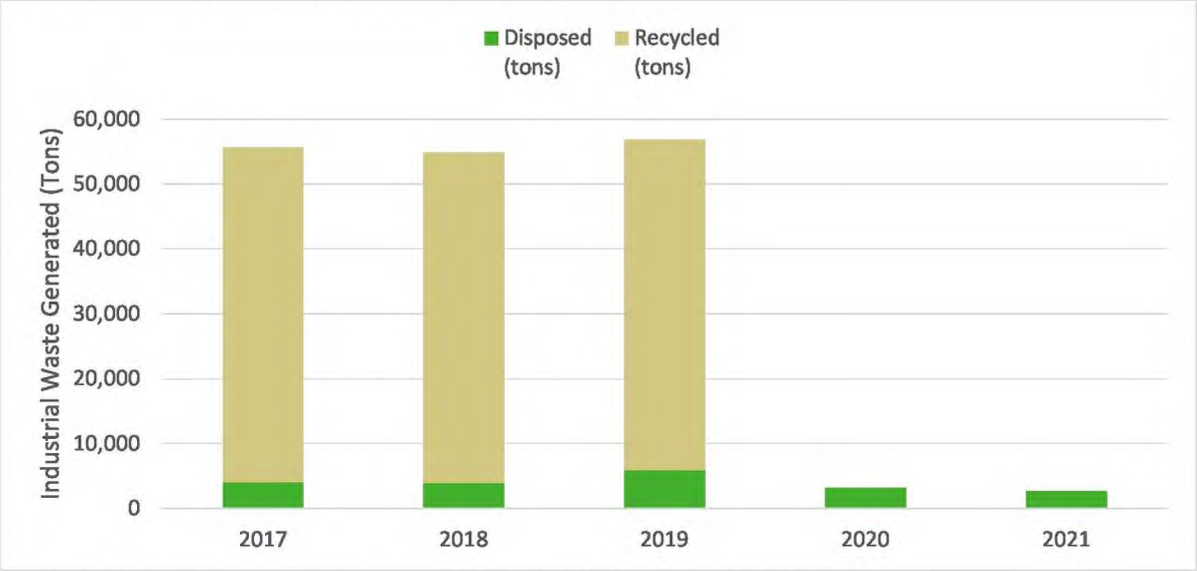
It is not only important to compare regionally, but also to Districts with similar sized populations. Population size is a key factor in the amount of waste generated and while calculating a District's pounds per person per day of trash generated normalizes the total waste on a per person basis, the overall size of the

population impacts funding, resources, and diversion opportunities. To better gauge where the District compares to other similar sized Districts, the four Districts above were benchmarked.

As demonstrated above, Clark County has the highest overall generation rate and is the second smallest District by population in comparison. Although the District has the highest generation rate, Medina County and Miami County have very similar rates despite the former having a larger population and the latter having a smaller population.

Overall, in both benchmark demonstrations, the District is on the higher end of residential/ commercial waste generation per capita. The District has a strong diversion rate that is primarily driven by organics diversion, sitting at 36% in the reference year and is well above the Ohio EPA goal of 25%. Regardless, the District should continue to seek ways to reduce waste generated and reliance on landfills.

Figure G-5 Historic Industrial Waste Generated



Source: Ohio EPA SWMD Disposal, Recycling, and Generation Reports 2017 – 2021

As mentioned previously, the District stopped surveying the industrial sector's recycling efforts after 2019. Prior to this, the District's industrial sector was diverting approximately 51,000 tons on average and was consistently diverting roughly 90% of the total waste generated from this sector. In the reference year, the District disposed of 2,700 tons of industrial waste.

B. Generation Projections

Table G-2 Generation Projections

Year	Population	Residential/ Commercial				Industrial			Excluded Waste (tons)	Total (tons)
		Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycle (tons)	Generation (tons)		
2021	***135,633***	***102,966***	***57,680***	***160,646***	***6.49***	***2,706***	***0***	***2,706***	***0***	***163,353***
2022	134,873	104,015	66,326	170,342	***6.92***	2,696	0	2,696	0	173,038
2023	134,118	105,075	65,985	171,059	***6.99***	2,686	0	2,686	0	173,745
2024	133,367	106,145	65,645	171,790	***7.06***	2,676	0	2,676	0	174,466
2025	132,620	107,227	65,307	172,533	***7.13***	2,665	0	2,665	0	175,199
2026	131,878	108,319	64,970	173,289	***7.20***	2,655	0	2,655	0	175,945
2027	131,139	109,422	64,636	174,059	***7.27***	2,645	0	2,645	0	176,704
2028	130,405	110,537	64,304	174,841	***7.35***	2,635	0	2,635	0	177,476
2029	129,674	111,663	63,973	175,636	***7.42***	2,625	0	2,625	0	178,262
2030	128,948	112,801	63,645	176,445	***7.50***	2,615	0	2,615	0	179,060
2031	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2032	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2033	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2034	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2035	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2036	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2037	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2038	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060
2039	128,226	112,801	63,645	176,445	***7.54***	2,615	0	2,615	0	179,060

Source(s) of Information:
Disposal from Appendix D
Recycled from Appendices E and F
Populations: Ohio Department of Development, "Projected 2050 Ohio County Populations: Percent Change 2020-2050, December 2022.

Historically, the District demonstrates annual increases in the amount of residential/commercial waste disposed. The District expects that despite a decreasing population this trend will continue throughout the planning period. Residential/commercial recycling is expected to decrease. Historically, residential/commercial recycling totals held relatively flat with minor up-and-down fluctuations year over year. It is expected that with a decreasing population, there will be less recycling. The District recorded a five year low in residential/commercial recycling in the reference year after recording a five year high the year prior.

The expected increase in overall waste generation throughout the planning period is primarily fueled by projected increases in residential/commercial disposal based on historical analysis. The District is expected to see a sizeable increase from 2021 to 2022 in overall waste generation as it is projected the five year low of residential/commercial recycling will return closer to average levels in 2022. After this initial increase, the District projects minor increases each year to the overall waste generation.

The residential/commercial per capita waste generation is expected to rise to 8.24 pounds per person per day by the end of the planning period. Increasing disposal tonnages paired with a decreasing population size is projected to lead to a fairly quick rise in per capita waste generation.

C. Waste Composition

Table G-3: Composition of Residential/Commercial Waste

Material	Percent of Total Generation	2021	2022	2023	2024	2025	2026	2027	2028	2029
Paper and Paperboard	23.10%	37,109	39,355	39,521	39,690	39,862	40,036	40,214	40,395	40,578
Glass	4.20%	6,747	7,156	7,186	7,216	7,248	7,279	7,312	7,344	7,378
Ferrous	6.60%	10,603	11,244	11,292	11,340	11,389	11,439	11,490	11,541	11,594
Aluminum	1.30%	2,088	2,215	2,224	2,234	2,243	2,253	2,263	2,273	2,284
Other Nonferrous	0.90%	1,446	1,533	1,540	1,546	1,553	1,560	1,567	1,574	1,581
Plastics	12.20%	19,599	20,785	20,873	20,962	21,052	21,145	21,239	21,334	21,431
Rubber and Leather	3.10%	4,980	5,281	5,304	5,326	5,349	5,373	5,397	5,421	5,446
Textiles	5.80%	9,317	9,881	9,923	9,965	10,009	10,052	10,097	10,142	10,189
Wood	6.20%	9,960	10,563	10,607	10,653	10,699	10,746	10,793	10,842	10,891
Other	1.50%	2,410	2,556	2,566	2,577	2,588	2,600	2,611	2,623	2,635
Food	21.60%	34,700	36,800	36,955	37,113	37,273	37,437	37,603	37,772	37,943
Yard Trimmings	12.10%	19,438	20,615	20,702	20,790	20,880	20,971	21,064	21,159	21,255
Misc inorganic wastes	1.40%	2,249	2,385	2,395	2,405	2,416	2,426	2,437	2,448	2,459
R/C waste generated		160,646	170,342	171,059	171,790	172,533	173,289	174,059	174,841	175,636

Material	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Paper and Paperboard	40,765	40,765	40,765	40,765	40,765	40,765	40,765	40,765	40,765	40,765
Glass	7,412	7,412	7,412	7,412	7,412	7,412	7,412	7,412	7,412	7,412
Ferrous	11,647	11,647	11,647	11,647	11,647	11,647	11,647	11,647	11,647	11,647
Aluminum	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294
Other Nonferrous	1,588	1,588	1,588	1,588	1,588	1,588	1,588	1,588	1,588	1,588
Plastics	21,530	21,530	21,530	21,530	21,530	21,530	21,530	21,530	21,530	21,530
Rubber and Leather	5,471	5,471	5,471	5,471	5,471	5,471	5,471	5,471	5,471	5,471
Textiles	10,235	10,235	10,235	10,235	10,235	10,235	10,235	10,235	10,235	10,235
Wood	10,941	10,941	10,941	10,941	10,941	10,941	10,941	10,941	10,941	10,941
Other	2,647	2,647	2,647	2,647	2,647	2,647	2,647	2,647	2,647	2,647
Food	38,118	38,118	38,118	38,118	38,118	38,118	38,118	38,118	38,118	38,118
Yard Trimmings	21,353	21,353	21,353	21,353	21,353	21,353	21,353	21,353	21,353	21,353

Material	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Misc inorganic wastes	2,471	2,471	2,471	2,471	2,471	2,471	2,471	2,471	2,471	2,471
R/C waste generated	**176,445**	**176,445**	**176,445**	**176,445**	**176,445**	**176,445**	**176,445**	**176,445**	**176,445**	**176,445**

Source(s):
Percent of Total Generation: Advancing Sustainable Materials Management: 2018 Tables and Figures
Waste Generated: Table G-2

Table G-3 presents the residential/commercial waste generated totals from **Table G-2** and the estimated percent of total generation by material. Using the quantities of waste generated and the estimated percent of total generation, each material is projected during the planning period. The estimations above are based on a U.S. EPA National Study of waste generated from 2018. It is important to note that there are likely differences between the actual waste generation composition and the estimated composition above. For example, the District generates a large amount of organic material (yard waste and food waste) such that roughly 30% of the entire waste stream is derived from organics diversion alone, not including any that was landfilled. It is almost certain that the District's waste stream is comprised of more than the 34% organic waste estimated above. All projections are flatlined in the seventh year of the planning period.

APPENDIX H

STRATEGIC ANALYSIS

Appendix H.
Strategic Analysis

The state solid waste management plan establishes recycling and reduction goals for solid waste management districts. At the time of the District's 2018 Plan Update, the 2009 State Plan was in effect. Ohio EPA adopted the 2020 State Plan in November 2019, making several changes to the goals that guide programming. The programs and strategies evaluated in Appendix H, consider the changes in the State Plan and analyze gaps in service, programs, and strategy offerings. The evaluation provides a variety of opportunities that result from identified gaps and may bolster a management or education/outreach area. These opportunities present a strategy or direction to consider.

Appendix H is divided into thirteen (13) separate analyses or sections. The status of the reduction and recycling efforts was evaluated based on criteria presented in Format 4.1. Some of the analyses are further subdivided, such as **Section H-1**. The strategic program evaluation was performed on the following:

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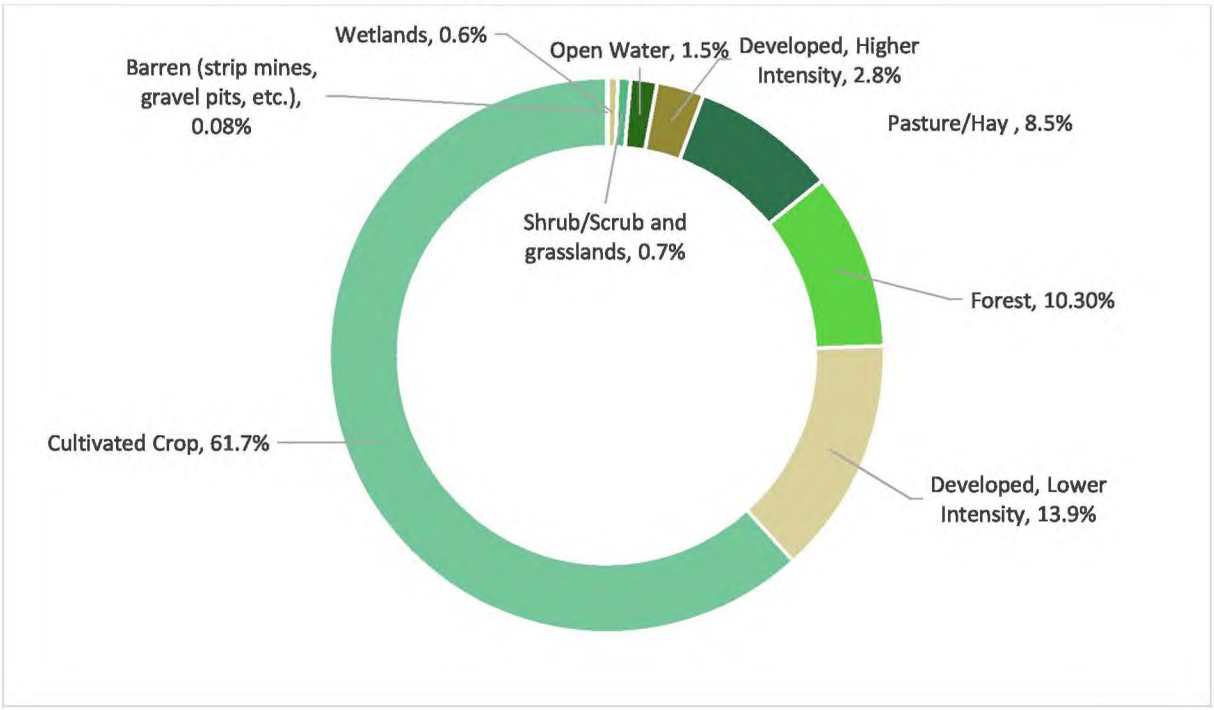
Geographical

Before evaluating District programs it's ideal to understand the geographic and demographic area of Clark County. Defining rural and urban areas is based on decennial census criteria related to population thresholds, density, distance, and land use. In general, rural areas are sparsely populated, have low housing density, and are far from urban centers. **Figure H-1.1** shows the breakdown of land cover for the District.

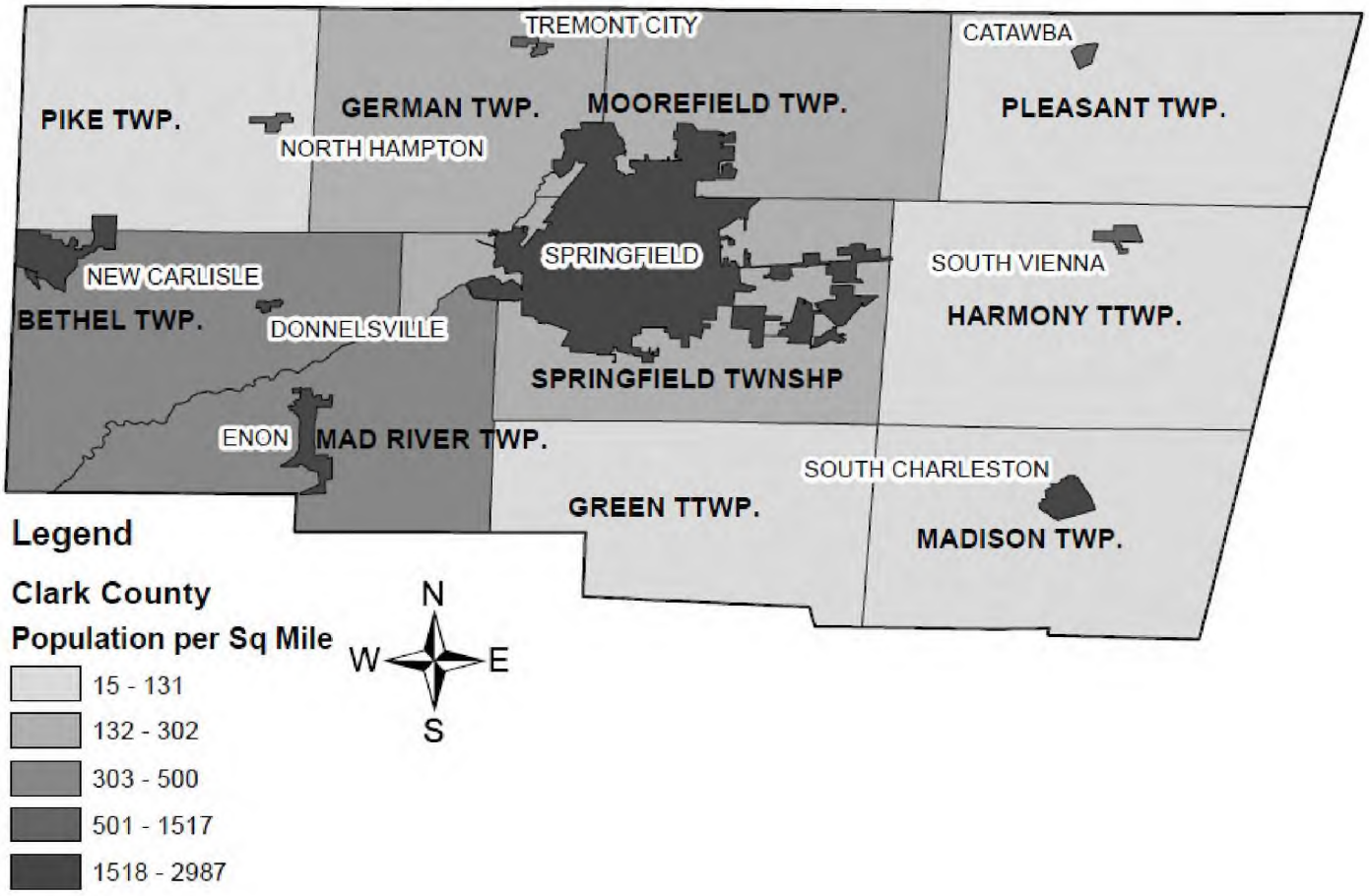
Figure H-1.1 Land Cover



About 17% of the District's land usage is classified as developed land. Roughly 83% of the District's land is rural with 62% being cropland, 10% being forested, 9% being pasture/hay, and 2% being water.

There are two municipalities classified as cities, Springfield with a population of roughly 59,000, and New Carlisle with a population of roughly 5,500. Together, these two cities make up 47% of the District's total population. Springfield also hosts the County Seat. The District has seven villages which make up 4% of the population. The remaining 48% of residents are dispersed throughout the District's ten townships. Springfield is the most densely populated area in the District with roughly 3,000 residents per square mile.

Figure H-1.2 District Population Density



1. Residential Recycling Infrastructure Analysis

This evaluation of the District's existing residential recycling infrastructure determines whether the existing infrastructure meets the needs of the residential sector, recovering viable materials, and if the infrastructure is adequately performing. 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 includes curbside programs, drop-off recycling programs, reuse centers, and thrift stores. The District is not a service provider; rather, it coordinates and optimizes this network of available opportunities.

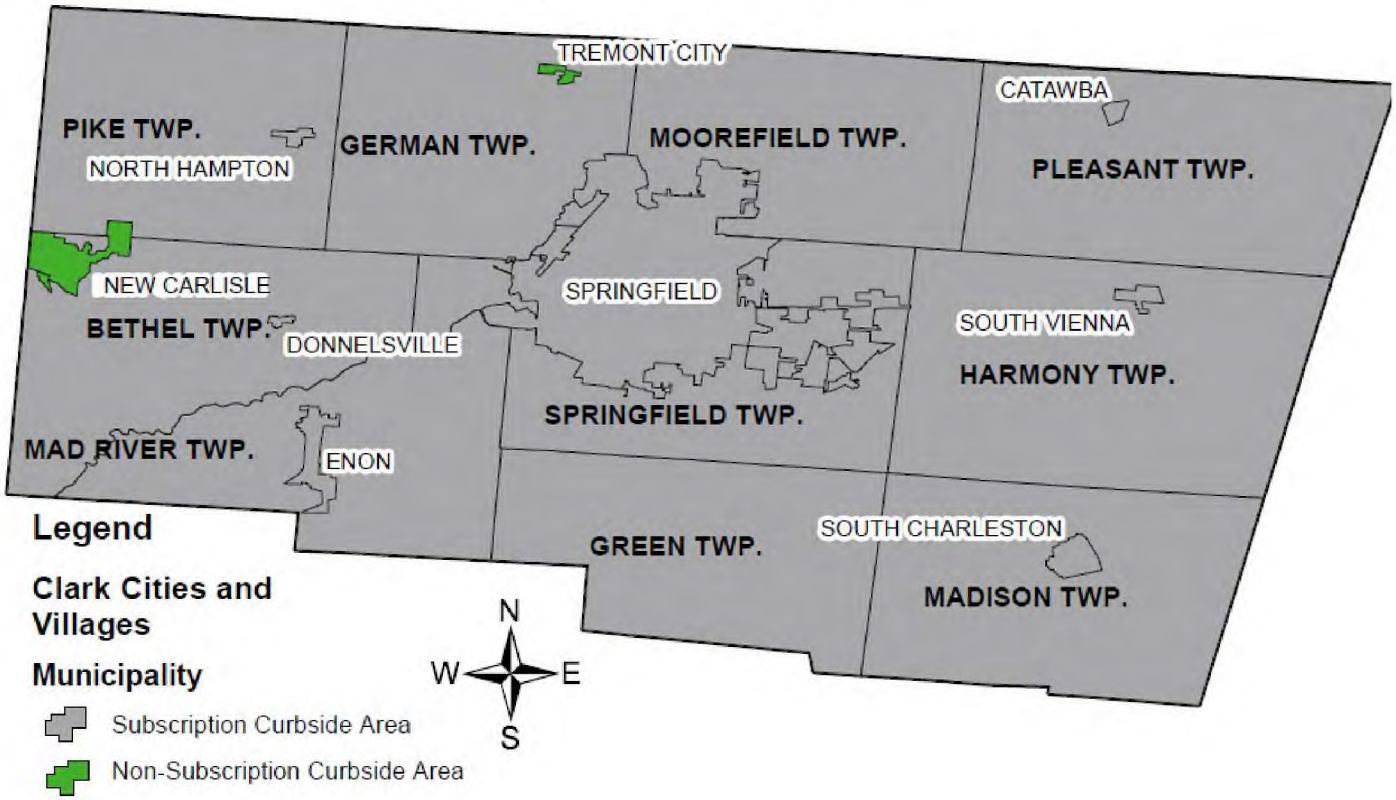
A. Curbside Evaluation

The District's 2018 plan update analyzed curbside recycling infrastructure and found Clark County's curbside infrastructure is available in all nine municipalities and all ten townships within the District. Reported data in 2021 shows curbside collection continued to be offered throughout the District's townships and municipalities.

The District has two non-subscription curbside services and 17 subscription curbside services. In a non-subscription curbside recycling program, recycling service is available to every household whether or not households choose to participate. The two communities with non-subscription curbside services are New Carlisle and Tremont City. Together, these two communities collected 334 tons of recycling in 2021. Of the total Clark County population, only 4% have non-subscription curbside services.

The remaining townships, cities, and villages have subscription-based curbside recycling services. In a subscription curbside recycling program, service is available to every household, however, the household must sign up or subscribe for the service if they want to participate. Local haulers who offer subscription services do not provide the District with any data on how much waste they divert from the landfill.

Figure H-1.1 Curbside Services



Historically, New Carlisle and Tremont City have the only single-hauler contracts in Clark County. The rest of the County uses a private, open market system where residents choose a waste hauler. The District has a few local haulers operating, some haulers offer curbside recycling and others do not. In a survey conducted of households in 2015 (part of Take it to the Curb Campaign) 58% of respondents say their trash hauler does not have curbside recycling. This is a major barrier to increasing curbside recycling across the County. Those haulers that offer the service charge an additional fee. Then the District also has the challenge of haulers not reporting collected diversion data. As such, tonnages are not available for most localities in the District. With the exception of New Carlisle and Tremont City, Clark County residents have always received curbside recycling through an open-market system. Lack of efficiency in

hauling routes, i.e., various haulers collect recyclables in multiple communities with some communities having more than one hauler, presents challenges for households to receive competitive costs of service.

Transfer stations serve as centralized collection points for solid waste and recyclables. As discussed, curbside recycling collection is a gap in the District's integrated waste management system. A strategically located, constructed, and operational transfer station could improve the overall efficiency of the solid waste system. A transfer station could minimize haul times and costs for contracted haulers, self-haulers, and subscription haulers.

As can be seen above, the District's largest municipality, City of Springfield, has subscription curbside services. Throughout Ohio SWMDs, the largest municipality, often has non-subscription recycling. **Table H-1.1** below benchmarks similar-sized districts and recycling services in the largest municipalities.

Table H-1.1 Comparison of Similar-Sized District's Largest Municipalities

District	Largest Populated Municipality	Population	Recycling Tons Collected	Lbs./Person/Day Collected	Type of Curbside		Service Provider
					NSC	SC	
Medina	Brunswick	35,340	2,284	0.35	X		Republic
Greene	Beavercreek	46,636	1,344	0.16		X	N/A
Portage	Kent	27,751	1,355	0.27	X		Republic
Clark	Springfield	58,763	Data Not Available	Data Not Available		X	N/A
Miami	Troy	26,432	2,064	0.43	X		Rumpke

Note: Data used is from the most recent Solid Waste Management Plan Updates
NSC = Non-subscription
SC = Subscription

Of the districts compared, Greene County's largest municipality, Beavercreek, also offers subscription curbside recycling as opposed to non-subscription curbside recycling. To best compare the municipalities, the District standardized the tonnages collected by population to get a pounds per person per day (PPD) value. As shown, the PPD of the cities ranges from 0.16 to 0.43. Excluding Springfield, the lowest PPD is Beavercreek with 0.16 PPD collected from its subscription curbside service. The highest in the comparison is Troy, with 0.43 PPD collected from its non-subscription curbside service. The lower end of the benchmarked non-subscription curbside collection, Kent, collected 41% more than Beavercreek based on PPD. Non-subscription service achieves a greater level of participation than subscription-based services, which generally leads to higher diversion rates. Such is the case when comparing Beavercreek's subscription service with other municipalities' non-subscription services.

Springfield households have a strong desire for autonomy and choice of hauler. This drives minimal contracted services and more open-market, subscription-based services. There is much public concern about losing the free market's ability to choose. The District has previously faced strong public opposition to Springfield contracting to a single hauler. This concern stemmed from a dispute in the 1980s that resulted in a change to the City Charter. The current City Charter may require amendments and a public

referendum for Springfield to contract with a single trash hauler. This topic has been discussed in the past, but the free market system remains in effect. In 2021, the City of Springfield had six different trash service providers.

BENEFITS OF CURBSIDE RECYCLING – Data Collection

Although the City would need to address challenges, Springfield could experience benefits from establishing a non-subscription curbside program. Currently, six haulers operate in Springfield, yet the District is unable to receive any data on annual recycling quantities. Establishing non-subscription curbside services could help with data collection and allow the District to track Springfield's recycling numbers. This would likely result in increased landfill diversion. For instance, if Springfield recovered 0.16 PPD, the rate of diversion Beavercreek measured, approximately 9,400 pounds per day would be diverted, more than 1,700 tons a year. The City could keep close to 2,000 tons a year or more out of the landfill.

In addition, diversion tonnages would be creditable towards Ohio EPA's 25% residential/commercial diversion (Goal 2). Additional data from curbside recycling services would increase the District's 2021 diversion rate of 36%. The District meets and expects to continue to reach this goal. As discussed in Appendix E, 85% of the diverted materials are composted organics. And of that 85%, three-quarters of the material comes from one business, C+S Tree Service. Other high-performing diversion programs, such as curbside recycling, will contribute to higher diversion tonnages in the future.

Recognizing the District is heavily dependent on this one business and one material (organics) to reach diversion goals implies a delicate system for materials management. If this business were to cease operations or have low tonnages, the District may not achieve Goal 2. In other words, the District has low resiliency to change within the current market and infrastructure of waste diversion. Establishing a non-subscription curbside service with the ability to track data would help improve the District's resiliency, but more importantly, keep recyclable materials out of the landfills that have established end markets.

BENEFITS OF ORGANIZED HAULING – Road Infrastructure

One increasingly pressing concern Springfield has is its road infrastructure. With six haulers operating, the roads are subject to wear and tear from their trucks driving throughout. According to Rumpke, without any material in a truck, one truck weighs 35,000 pounds[1]. Contracting with a single hauler or a reduced number of haulers would alleviate some of the wear and tear faced on the City's roads. It would simultaneously reduce noise and congestion throughout.

Unorganized hauling where haulers "leapfrog" over each other to service households places increased stress on road infrastructure, creates congestion, and noise pollution throughout the City due to overlapping routes. Organizing the system will reduce infrastructure impact and most likely increase

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[1] Rumpke, https://www.rumpke.com/newsroom/blog-post/thoughts/2013/08/24/rollin-with-rumpke-rear-load-trucks#:~:text=Completely%20empty%2C%20a%20rear%20load,truck%20is%20a%20happy%20truck.

recycling. The current practice of an open-market subscription service does not afford the necessary centralization required to maximize efficiency and drive recycling rates. This is because the open market approach results in multiple haulers overlapping areas and routes and charging different amounts based upon different rate structures, all with little or no policy priority for an efficient recycling program.

In contrast, a centralized approach for waste services could provide added benefits from economies of scale, likely resulting in a lower household cost. In addition, this type of system results in less damage to road infrastructure, less congestion, less noise, and better environmental impacts.

The City of Springfield could look to other City-conducted studies on this issue to glean best practices.

BENEFITS OF CURBSIDE RECYCLING – Convenience
Non-subscription curbside services offer more convenience to residents. Automatic service limits a step as service is included just by residing in the area. The hassle-free nature of a non-subscription curbside service increases participation and yields higher recycling rates. According to the Recycling Partnership[2], non-subscription services yield on average 459 pounds per household annually compared to the 331 pounds per household yielded annually from subscription curbside services.

Challenges

Challenges to the implementation of curbside recycling service in Springfield.

1. Current City Charter. A formal vote was passed to change the city's charter in 1987, stating that no fees or assessments can be made on the operation, collection, or disposal of residential refuse unless presented by the City Commission in a general election. Households throughout the District and the City of Springfield place a high level of importance on the ability to choose their hauler and the level of service provided, making a single hauler contract for the city implausible to suggest.
2. Delinquency. Springfield has a high delinquency rate for water and sewer bills. Adding another bill could increase this rate further.
3. Springfield's current system does not adequately encourage recycling.
4. Small haulers may not be able to compete with haulers that own recycling facilities.
5. Inequity across the City. Difficulties in the organization of curbside may arise due to the socio-economic inequity across various parts of the city.

The District previously attempted to change the current curbside recycling and trash service system but was unable to institute them. As part of this plan update process, the District analyzed potential opportunities detailed below.

Potential Opportunities

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[2] "2020 State of Curbside Recycling Report", The Recycling Partnership. https://recyclingpartnership.org/wp-content/uploads/dlm_uploads/2020/02/2020-State-of-Curbside-Recycling.pdf

It is important to note that before any level of service outside of the current service structure can be implemented, it is recommended a legal entity review the potential opportunities and the City Charter to identify any obstacles. For example, is curbside recycling considered trash hauling as called out in the Charter? If so, direct contracting or franchising may require a change to the city charter.

FRANCHISE AGREEMENTS

One potential opportunity the District may explore through the planning period is franchising collection services. The differences between a franchise agreement and a contract agreement are subtle and may vary depending on local practices. In general, a franchise agreement places more control in the hands of the haulers and is a looser form of management from the local jurisdiction's side. Comparatively, a contract gives full control of collection to the jurisdiction and places more responsibility on the jurisdiction than in an open market system.

In a franchise, the governmental body typically does not come into direct contact with the customer. In this system, the hauler must agree to a specified minimum level of service and rates for being rewarded with the service area. It is also possible to institute a required reporting agreement into the franchise, helping to collect data on recycling activities and reducing reliance on C+S Tree Service for the District to meet Goal 2.

Franchise collection can be implemented in one service area, or multiple service areas. Importantly for residents of the District, franchises allow for multiple competing haulers to serve one area (non-exclusive). However, in other cases, a single hauler may be granted the entire area (exclusive). In either case, a franchise would be awarded through competitive negotiations open to any hauler in the area. Other than the submission of negotiated mandatory reports or other stipulations, the hauler(s) would continue to do business much the same as in the open market system that currently exists.

As touched on above, there are two types of franchises. There are non-exclusive franchise agreements where multiple haulers would be able to compete within the designated service area. This places the choice of which hauler to obtain services from in the hands of the customer. Service prices are typically negotiated between the hauler and the customer. Secondly, there are exclusive franchise agreements where a city usually awards a single hauler with the service area. This can be for the entire city or can be broken into zones for each hauler. Under this agreement, customers are required to subscribe to the service and these usually include standard rates set by a city which are charged uniformly by bin number and pick-up frequency.

Importantly for Springfield specifically, under a franchise system, the responsibility for billing and collection falls entirely on the hauler operating in the service area. Thus, any additional delinquency issues are removed from the District and the City's responsibilities. Furthermore, a jurisdiction can define zone boundaries in order to maximize economies of scale and reduce the distance between routes and disposal facilities.

A franchise system could also facilitate the establishment of a transfer station in Clark County. Currently, the District lacks a transfer facility and most waste is direct hauled to the Stony Hollow Landfill and the Montgomery County South Transfer, both located in Montgomery County. A transfer station in Clark

County could reduce travel times which could decrease waste collection costs. In addition, the transfer station could serve as an outlet for recyclables, bulky materials, and special wastes such as electronics.

However, a transfer station would be difficult to develop without some level of guaranteed waste receipts. Under a franchise system, the agreement could require waste haulers to use the transfer station. While a transfer station is not required for a franchise system, it would provide efficiencies and benefits to the District and its residents. A transfer station could reduce waste collection costs, provide a centralized disposal/recycling outlet for residents who don't have service and serve as a drop-off for hard-to-manage materials such as bulky items and HHW. Ideally, to provide residential waste collection, a franchise agreement would indicate the use of a transfer station for collected waste, but this is not required. See **Section H-10** for a more detailed analysis.

The potential benefits that a franchise may generally bring to Springfield are described above. On a more specific level, the following table presents the advantages and disadvantages of non-exclusive and exclusive waste hauling:

Table H-1.2 Advantages and Disadvantages of Non-Exclusive and Exclusive Franchise

Service Delivery Option	Advantages	Disadvantages
Non-Exclusive Franchise	Economies of scale will allow the District and customers to save money	
	A greater level of services provided	City congestion and noise remain an issue
	An organized system of waste flow	Wear and tear on the road remain an issue
	Customers can choose a service provider	Potential customer view of limiting free market that exists
	Local businesses could remain a provider	A transition period would likely be needed to mitigate impacts and ensure service continuity
	Competition can reduce rates	
	Agreements can specify mandatory reporting	
	Agreements can include penalties for poor or lack of performance	
	Agreements can include franchise fees to offset the cost of administration and cover infrastructure costs	
Exclusive Franchise	Economies of scale could allow customers to save money	
	A greater level of services provided	A transition period is likely needed to optimize performance and ensure service continuity
	An organized system of waste flow	Potential opposition from private hauler companies, especially small, local businesses

Service Delivery Option	Advantages	Disadvantages
	Agreements can specify mandatory reporting	Potential loss of businesses locally
	Competition to receive the exclusive franchise could reduce customer cost	
	Agreements can include penalties for poor or lack of performance	Customer choice is no longer a factor
	Agreements can include franchise fees to offset the cost of administration and cover infrastructure costs	

Given the historical circumstances around establishing an organized waste collection system in Springfield, it is more than likely residents may not want to see any sort of change to the current structure. However, of the two options discussed above, a non-exclusive franchise agreement would likely be the preferred choice for a few reasons. Foremost of these reasons is the ability to choose a preferred waste hauler and the level of service provided. Under this system, there would be competition between haulers but ultimately, the decisive power lies in the hands of residents. This will likely also prevent any smaller local haulers from going out of business, though there may still be opposition from haulers.

B. Curbside Evaluation Conclusions

The free market system in the District allows residents to choose their haulers. The District recognizes the ability to choose is of utmost importance for residents and the current system places the hauler choice in the hands of residents. However, as stated earlier, 58% of respondents say their trash hauler does not have curbside recycling. Lack of curbside recycling offering as well as the additional cost of service for those haulers offering results in low curbside recycling programs. This limits landfill diversion. With the multiple haulers come heavy stress on the road infrastructure, causing unnecessary wear and tear. Further, the various hauler routes often overlap and cause road congestion and noise pollution for residents.

There is room for diversion from residential recycling programs to improve. Because there are various independent haulers, the District struggles to receive diversion data from the residential sector. While subscription curbside is available to all residents in the District, only two communities totaling 2,500 households have access to non-subscription curbside. This analysis explored various strategies available to the City of Springfield and other jurisdictions to explore for non-subscription curbside services in the area. The City has 27,289 households, and if all of these participated in curbside services and yielded the Recycling Partnership's estimated average of 459 pounds per household, more than 6,300 tons could be collected from the waste stream.

It is unlikely that all households would participate, however, the point is more recyclables could be diverted. If more households would participate and achieve greater diversion there would be less dependence on one waste material stream, i.e., yard waste, to achieve Ohio EPA Goal 2. As discussed, 85% of documented material diversion stems from C+S Tree Service, which decreases the District's resilience to maintaining landfill diversion rates during market shifts.

In 2015, the District gauged participation interest with the Take it to the Curb Campaign. The District could look to expand the data collected or re-invigorate with targeted education and outreach using social interventions. Understanding the barrier between having and using access is an important step; especially where marginalized populations are underserved with recycling services. Specifically, focusing on Springfield there is a higher ratio of rented property to owned property. In recent years, City officials note there has been more and more rented property as opposed to single-family owned property.

Conversations with stakeholders and strategically analyzing areas where improvements could be made are key and would be a significant start to exploring increased diversion. The District could assist community stakeholders with facilitating curbside services to help improve diversion numbers. As it stands, in order to provide an organized system of non-subscription curbside services in the City of Springfield, residents would need to vote to change the City's Charter or vote to allow a fee and/or assessment on collection of residential refuse. Section 94[3] of the Charter states,

> "No fees or assessments can be made by the City Commission for the operation, collection, or disposal of residential refuse... All fees and assessments related to residential refuse or streetlights must be presented by the City Commission to the electorate in a general election".

Springfield already has a precedent set for franchise-style agreements. The city requires vendors to service trash on certain days of the week and to register with the health district. Adding the provision for haulers to provide curbside recycling is not such a huge leap. Realistically, all haulers are still able to provide service in the city.

Due to the high likelihood of residents and potentially hauler opposition. This process must happen gradually, over a period of time. The first step should be to seek input from all stakeholders the change may impact. Groups such as haulers, customers, local civil leadership, and the general public.

If a franchise agreement is to be pursued, there must be enough confidence in the system proposed to withstand a formal vote to change the City Charter. In conjunction with a marketing campaign designed to disseminate the advantages of the proposed system, a public survey could be conducted to gather information about the resident's opinions about the existing solid waste management services and any changes that may be proposed.

There is growing interest from Springfield's local government in obtaining curbside service in the area. The District has long been a proponent and has tried in the past to get this accomplished but has seen no success. The District strongly feels establishing a curbside recycling service and creating a more organized system is imperative to diverting waste material away from landfills in the area. Expanding the

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[3] The Charter of the City of Springfield, Ohio, https://springfieldohio.gov/wp-content/uploads/2015/09/charter-for-website.pdf

franchise to include surrounding townships is also a facet the District is interested in exploring. By expanding, the communities and townships involved will have greater bargaining power in contract and pricing negotiations.

Opportunities to explore for this Plan update:

- Conduct a feasibility study for franchised waste and recycling collection in Springfield (new program).
    - Such a study will gather data for Springfield to make informed decisions. How many households currently do not have trash or recycling services? How many households can't afford trash or recycling collection? What is the cost threshold for trash and recycling service collection? How frequently do households change waste haulers and what are their reasons for selecting a new one? Identify whether marginalized populations encounter barriers to recycling. Calculate the whole fiscal picture. Research grant opportunities. Explore interest and feasibility of Springfield Charter changes/ votes.
        - Explore how best to provide non-subscription curbside service.
            - Resident choice
            - Cost savings
            - Local haulers
            - Franchise Vs. Contract hauling
- Implement curbside recycling in Springfield (new program)
    - Gauge public opinion and interest in establishing franchise recycling service.
    - Begin and/or continue discussions with local political leaders and haulers operating in the area about entering into a non-exclusive franchise agreement, thus allowing multiple haulers to compete to provide services to residents.
    - Begin developing language stipulating potential required actions for haulers to partake in such as:
        - Mandatory reporting
        - Franchise fees to authorizing jurisdiction
        - Minimum service requirements
- Resident Outreach, Take It To The Curb (ongoing program) – Outreach to residents exploring non-subscription curbside.
    - Focus on smaller wins.
    - Target one community at a time, thus a smaller scale approach.
    - Approach community elected officials first and offer to bear the costs of conducting a political jurisdiction household interest survey.
    - Update the outreach plan
    - Launch campaign.
    - Share results and couple results with contracted options: consortium, preferred hauler, franchise, etc.
- Development of in-District Transfer Station (New Program) –
    - Development of an in-district transfer station can enhance the collection of solid waste and recyclables in the District.
- Curbside Recycling Grant

- Change parameters of the grant to provide households without curbside service an incentive to subscribe to service. This could be offered as a per household cost sent directly to the preferred hauler for a set number of months.

C. Drop-Off Evaluation

The District contracts with a private service provider to collect and process materials from community drop-off recycling programs. In 2021, six full-time drop-offs were available. Full-time drop-offs are open for at least 40 hours per week. Drop-offs collected the same types of materials as curbside recycling programs – cardboard, plastic containers, mixed paper, glass, aluminum cans, and steel cans. The District's contract to service its drop-off costs about $57,000 annually. This was roughly 7% of the total District expenditures for the year. All six sites are heavily used by residents. The District continues to face challenges with contamination in the stream as well as the wind blowing items out of bins. The District continues to facilitate its Adopt-a-Drop program which allows businesses, schools, scout groups, etc. to volunteer once a month to pick up litter off the ground at these locations and politely explain what is acceptable as residents come during their pick-up the correct items to recycle. A sign is posted giving credit to the organizations that volunteer at individual drop-off locations. Palm cards were created and given to the volunteer groups to be able to hand out to those at the recycling drop-off stations. There were three groups signed up in the reference year.

Figure H-1.2 Recycling Drop-Off Sites

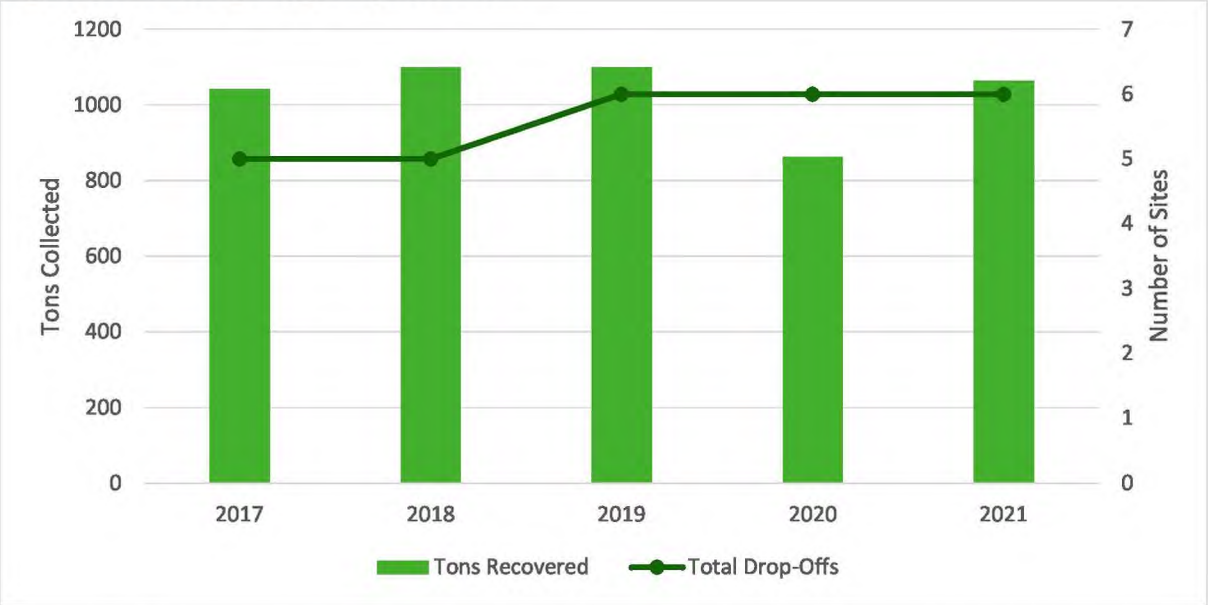


Figure H-1.2 presents the District's historic drop-off program number of sites and tons collected. The District had five drop-off locations in 2017 and 2018 before adding a sixth in 2019. There have been no new drop-off locations since 2019. Apart from the down year due to the COVID-19 pandemic in 2020, the District has remained steady in the number of tons collected each year. Excluding 2020, the District collected between 1,040 and 1,100 tons of material annually over the last five years. Although proper education on what's accepted in recycling drop-offs and contamination in the stream are challenges the District faces, the drop-off program has performed well historically.

Benchmarking to the other regional solid waste districts, **Table H-1.3** shows each District's cost per ton vary as do the tons collected per location. Greene County program costs are inclusive of special waste containers provided at festivals and events, salaries, benefits, supplies, services, and a percentage of the bond payment. The benchmarking shows the District's program could recover more relative to other Districts but that the program does a good job keeping costs per ton low. Drop-offs serve as additional collection points for recycling. The challenge the District faces is getting more households to participate in using the drop-offs.

Table H-1.3 Benchmarked Drop-off Programs

Solid Waste Management District	Total Spent on Drop-Off	Cost per Ton	Tons Collected	Number of Drop-Offs	Ton Per Location
Clark	$57,656	$54.14	1,065	6	178
Greene	$189,816	$443.50	428	1	428
Miami	$35,783	$21.88	1,636	4	409
Clinton	$26,457	$49.22	537	11	49

Source: Approved solid waste management plans for the identified districts.

Figure H-1.3 Map of Drop-Off Locations (2021)

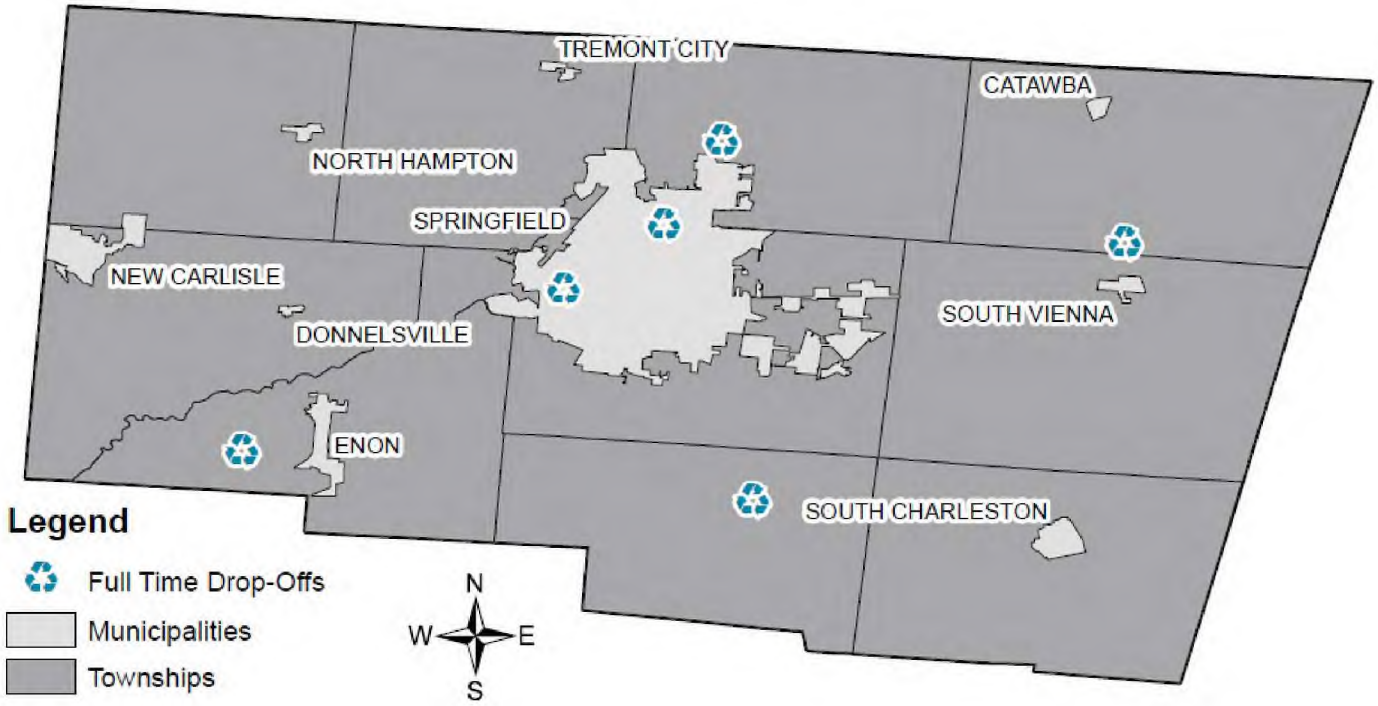


Figure H-1.3 above shows where recycling drop-off locations are located throughout the District. There are three drop-off locations in Springfield. Most of the drop-offs are located in the center of the District, the eastern and western sides of the District have limited access to recycling drop-off locations. Both the western and eastern sides of Clark County have one drop-off location. The District could conduct a study to determine if those population areas would benefit from the addition of drop-offs. While subscription curbside recycling is available throughout the District, drop-off locations are cost effective for those choosing not to subscribe to curbside. Additionally due to lower population densities they are often more feasible than establishing non-subscription curbside for rural areas such as townships. However, it's a delicate balance because remote drop-off locations are typically the highest contaminated. Due to the hauler consolidated route data, a breakdown by each drop-off location is not available. However, in the reference year, the hauler reported collecting 736 tons of commingled recycling and 329 tons of cardboard from the six drop-offs in total.

D. Drop-off Evaluation Conclusions

The District demonstrated a 36% residential/commercial diversion rate in 2021, which exceeds Goal 2 requirements. Contamination remains an issue in the recycling stream, especially at drop-off locations. However, the District's Adopt-A-Drop program has been successful in increasing education and awareness as to what is acceptable. The District has been able to keep a consistent number of drop-offs and collect a stable amount of material annually. The materials collected from drop-offs comprise 2% of the total materials diverted.

Opportunities to explore as programs for this plan update are as follows:

- Drop-off Recycling Evaluations (ongoing program) –
  - Evaluate if additional drop-offs are needed to better serve the District.
  - Conduct a contamination campaign using community based social marketing techniques. Perform the education campaigns with pre and post-audits. Seek Ohio EPA grants for funding to conduct the audits and develop the campaign.
  - Explore Miami County's program and implement some best practices they find successful for their program.

2. Commercial Sector Analysis

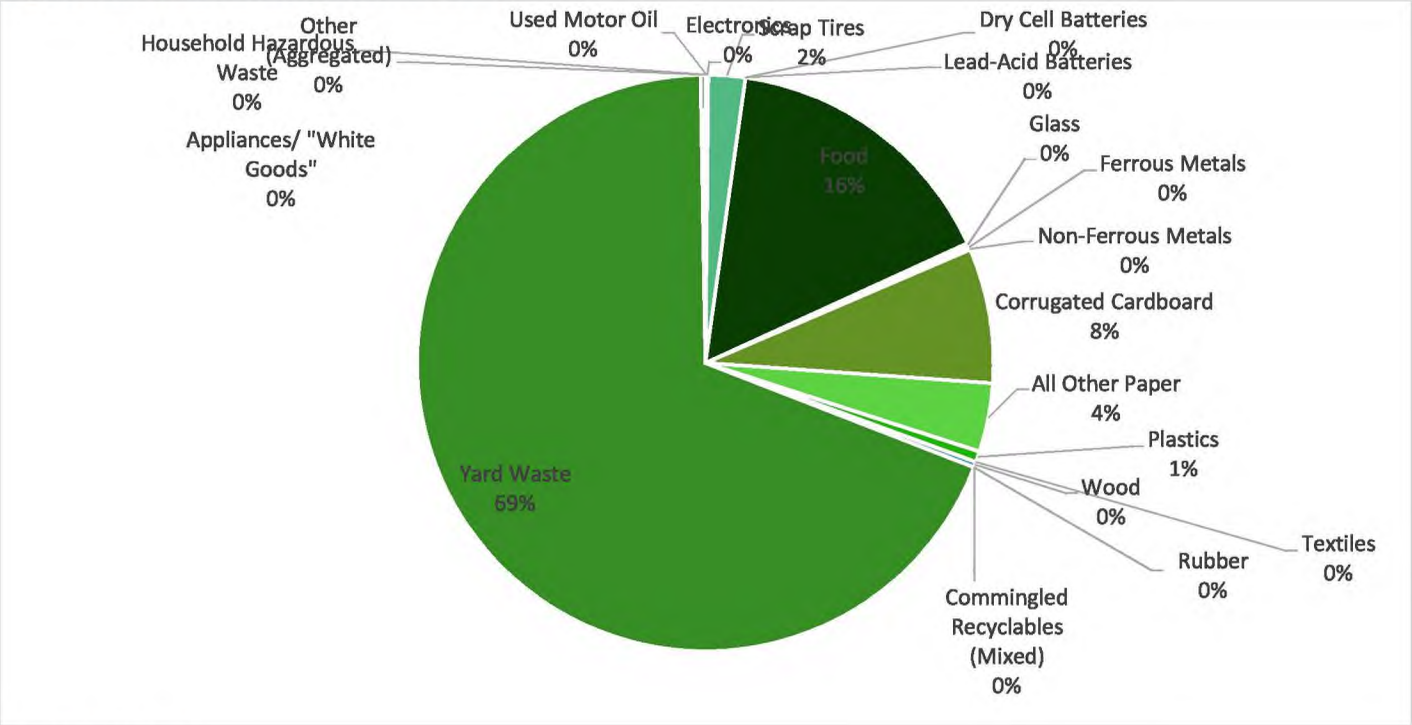
This evaluation of the District's existing commercial recycling determines if current programs are adequate to serve the sector. The goal is to identify service gaps and determine steps the District can take to further address the commercial sector. The commercial sector within the District consists of the following (non-exhaustive list): businesses, schools and universities, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals, and non-profit organizations.

Estimating the baseline diversion in this sector is the first step to reducing and recovering commercial waste. This serves as a gauge for potential opportunities in this sector. Next, the District assessed infrastructure impediments to waste reduction, collection, or provision of containers for recycling. This identifies the needs or challenges for reducing waste and recycling in this sector. Lastly, opportunities to explore include program modifications or new program suggestions.

A. Estimated Diversion

The residential/commercial sector diverted a total of 57,680 tons of material in the reference year. **Figure H-2.1** graphs the total diversion by material. The most notable materials diverted are yard waste, food, and cardboard. An opportunity is to supplement yard waste diversion with avenues to achieve greater recovery of recyclables such as cardboard, paper, metals, and glass to help increase the recycling system's resiliency to change. This is discussed further in Section 7.

Figure H-2.1 Materials Diverted 2021



Source: Appendix E

The District reports residential/commercial recycling as a combined data point. To separate commercial sector diversion from residential diversion, the District reviewed the data by source: commercial surveys, brokers, haulers, and Ohio EPA-sourced data from commercial businesses and material recovery facilities (MRFs).

Table H-2.1 Estimated Commercial Stream Recycling (2021)

Source of Commercial Recycling Data	Quantities (Tons)
Commercial Survey	0[1]
Ohio EPA Commercial Data	3,385
Data from other Recycling Facilities	3,715
Commercial Total	**7,100**
Residential/Commercial Total	**57,680**
% Commercial (estimated)	**12%**

[1] District did not survey the commercial sector.

Using this method for estimation, the District calculates roughly 12% of residential/commercial diversion is attributed to the commercial sector. However, it is assumed this estimation is low. In other Ohio districts, the commercial diversion can be as high as 40-60%. The District stopped surveying the commercial sector in 2018. Efforts to survey were returning low response rates and as the District considered the cost and the changes to the 2020 State Plan, opted to stop the survey efforts. Since the residential/commercial diversion rate is above 25% without any survey efforts, this strategy is feasible.

B. Infrastructure Impediments

This analysis sets the groundwork for looking at the commercial establishments located in the District. There were approximately 1,832 commercial businesses according to the US Census Bureau.[4] The largest employment sectors are retail trade, other (except public administration, and health care & social assistance. The District's employment sectors are divided into North American Industry Classification System (NAICS) code classifications. **Table H-2.2** shows the number of commercial establishments by NAICS code.

Table H-2.2 Commercial Establishments

NAICS Code	NAICS Description	Number of Commercial Establishments
42	Wholesale Trade	86
44-45	Retail Trade	346
48-49	Transportation and Warehousing	91
51	Information	26
52	Finance and Insurance	117
53	Real Estate and Rental/Leasing	93
54	Professional, Scientific, and Technical	150
55	Management of Companies and Enterprises	12
56	Administrative and Support and Waste Management and Remediation Services	95
61	Educational Services	20
62	Health Care and Social Assistance	267
71	Arts, Entertainment, and Recreation	29
72	Accommodation / Food Service	217
81	Other Services (Except Public Administration)	283
	Total	1,832

Source: *2020 County Business Patterns. U.S. Census Data.*
Note: Data from 2021 was not available as of this report.

Identifying the total number of establishments is an important initial step when thinking about commercial businesses and appropriate programs. In 2005, CalRecycle conducted a targeted statewide characterization study for selected industry groups. The study performed waste audits and disposal sampling at business sites of selected industry groups within California. The report details information on the types and amounts of waste disposed and diverted by groups. The highest waste generator groups were found to be retail trade and accommodation/food service businesses. In Clark County, roughly 31%

[4] U.S. Census Bureau, https://data.census.gov/

of the commercial establishments fall in this large generator group. This is a significant portion of businesses in the same sector that the District could target for waste recovery.

Lack of diversion data impedes the District from knowing whether the commercial sector needs assistance or if they are diverting materials and they are not getting captured. It is assumed there is more work that could be done in this sector. This evaluation is setting a baseline investigation for the District to frame programming. Based on data in **Table H-2.2** a good starting point would be with the highest generators.

Commercial Businesses

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 or transfer stations where the material will be processed to sell to manufacturers.

COVID-19 impacted the District's commercial programs, essentially stalling the program and preventing growth. Assistance is provided to the commercial/institutional sector. Programs like the Business Waste Reduction Assistance Program (BWRAP) and Recycling Makes $ense slowed and have not yet rebounded.

The District offers government office paper recycling and business paper recycling to all entities interested. Government offices are directly serviced and other businesses are able to deliver materials to the District's drop-off recycling stations. Additionally, several businesses regularly bring loads of cardboard to the Clark County Recycling Center.

Recycling data acquisition from the commercial sector is a gap the District could look to improve. One method would be periodically surveying drop-off and Recycling Center participants. While many businesses are likely recycling, the District does not survey this sector any longer and therefore does not have insight into the exact quantities being diverted.

Events/Venues/Parks

Clark County is served by two park districts that are merging to become one. Combined, there are 30 parks and over 2,000 acres of parkland. Public space areas in the park systems include trails, a water park, a skatepark, athletic venues, and waterways. Recycling infrastructure varies at these parks and facilities. The consolidation of the park districts is an opportunity for the District to explore recycling receptacles and service options for the combined park system.

For instance, in Lucas County, Metroparks Toledo added public recycling bins and initiated the following sustainable actions:

- Office administrative recycling containers
- Used trash bags made with 50% recycled content
- Coreless toilet paper
- Using Green Seal-certified cleaners

Schools and Institutions

The District offers grants to schools and helps to support collection infrastructure and waste reduction activities. All county schools have containers and recycling services and before COVID-19, City of Springfield schools also had recycling programs. Again, COVID-19 impacted the established programming leaving a gap.

C. Conclusions

Commercial sector participation in recycling programs is challenging primarily due to the cost of service and that recycling reporting is voluntary. The District diverted 36% of its total residential/commercial waste generated. This is above the Ohio EPA state goal to divert 25% of all residential/commercial waste generated. However, only 12% of this was estimated to have been diverted through the commercial sector.

Opportunities to explore as programs for this 2025 Plan Update:

- Event/Venues/Parks (new program)
  - Engage with the park district to explore diversion and additional sustainable efforts to reduce and close the loop.
  - Outreach to vendors to explore service costs for recycling service.
- Data collection (new program)
  - Look to re-establish regular (annual or bi-annual) surveys for the commercial sector or with brokers/buybacks.
  - Improve data collection for waste diversion to reduce reliance on yard waste services to meet Goal 2
  - Survey businesses that use District recycling facilities
- Commercial Franchising (new program) –
  - Franchise or consortium-style contracting with the goal of aggregating businesses in collection contracts. Franchising could help lower the costs by providing greater economies of scale.
- Business Waste Reduction Program (ongoing program)
  - Conduct a study to identify by NAICS codes the largest generators.
    - Recruit businesses to perform an on-site audit.
    - Target one to two businesses a year to perform the audit and present findings that include ideas for waste reduction and recycling.
  - Increase promotion of the program.
  - Target audience to decision-making positions within organizations and institutions.

3. Industrial Sector Analysis

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

A. Evaluation

Approximately 269 industrial businesses are operating in Clark County. 95% of the industrial businesses in the District have less than 100 employees. 50% of these businesses employ between 1-20 people. **Figure H-3.1** below shows the top five largest industrial businesses operating in Clark County by employee base.

Figure H-3.1 Top Industrial Companies

Company	Employee Size
Navistar	2,000
Yamada North America Inc	600
Tac Industries LLC	400
Topre America	300
Reiter Dairy LLC	230

Source: *U.S. Business Database. Rep. Reference USA*

The District's industrial businesses are heavily concentrated in Springfield. The top five communities with the largest presence of industrial businesses are listed below in **Table H-3.2.**

Table H-3.2 Largest Industrial Communities

Community	Number of Industries
Springfield	206
New Carlisle	38
South Charleston	8
Enon	6

Source: *U.S. Business Database. Rep. Reference USA*

B. Landfill Diversion

In 2021 the manufacturing industries in the District disposed of 2,700 tons of waste. The District no longer surveys the industrial sector for diversion numbers and therefore is not explored in this analysis. Most industrial sector recycling programs were implemented internally by the respective business without District support.

C. Conclusions

The District currently does not target any programs toward the industrial sector. In order to comply with Goal 5 of Ohio EPA's State Plan, the District must provide three industrial sector programs. See Appendix I for programs the District will implement with this plan update for the industrial sector.

Opportunities to explore as programs for this 2025 Plan Update:

- Business Waste Reduction Assistance Program (ongoing program)
  - Expand to industrial sector.
- Promotion of Materials Exchange (new program)

- Add Ohio EPA's Material Marketplace to the District's webpage.
- Promote at outreach events.

4. Residential/Commercial Waste Composition Analysis

This evaluation of the District's waste composition analysis describes and evaluates the materials that comprise the largest portions of the waste stream. It also describes what programs the District currently uses to recover these waste streams and what programs the District should evaluate to increase recovery.

A. Residential/Commercial Sector

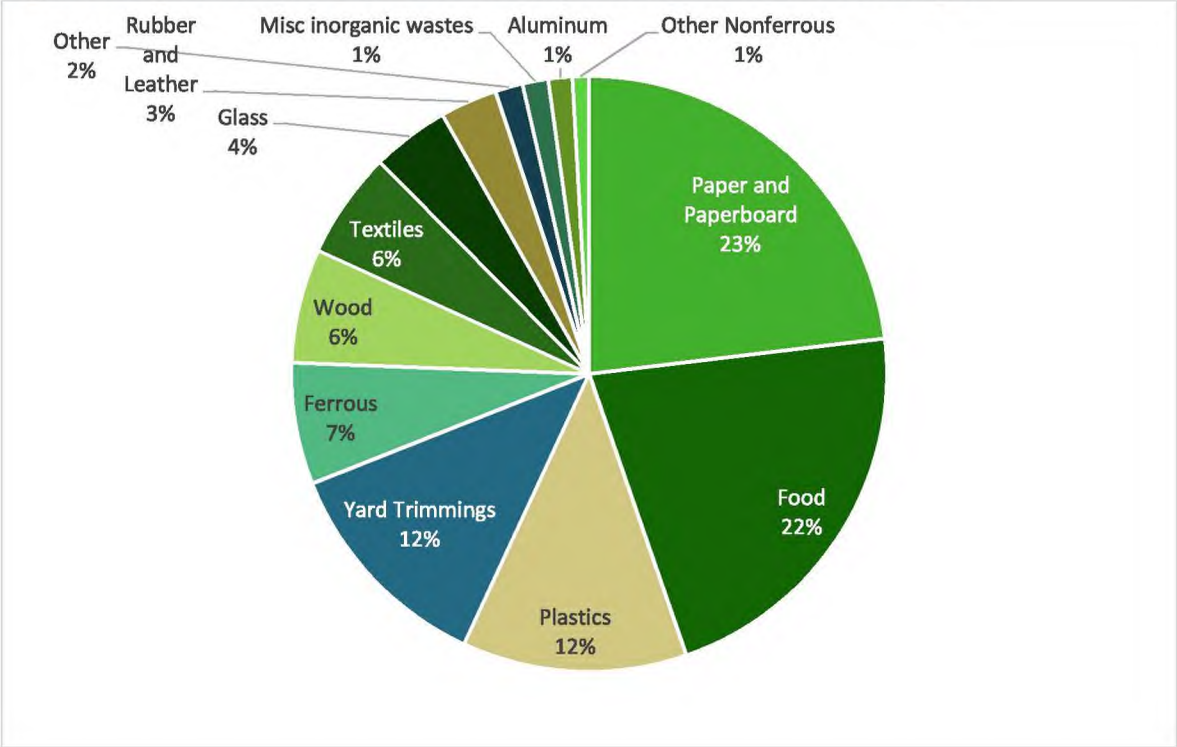
Waste Generation = Total Wastes Disposed + Total Wastes Diverted

The District generated 160,646 tons of residential/commercial waste in the reference year and recycled 36% of this waste. The historic average diversion for the past five years was 40%. The highest over the past five years was in 2020 with a 44% diversion rate. In the reference year, roughly 64% of the total generated waste was sent to landfill. To better understand the composition of the material not being diverted (the amount being landfilled), waste characterization data from the U.S. EPA was applied to the District's tons disposed of.

As discussed in Appendix G, an analysis of the estimated composition of residential/commercial waste generation was conducted for the reference year using the USEPA's Advancing Sustainable Materials Management: 2018 Trends and Figures report[5]. This report details the USEPA's estimates for the composition of waste that is generated. The District used this report and assumed the percentages listed for its estimations and projections. **Figure H-4.1** below lists the estimated waste composition for the District in the reference year.

[5] U.S EPA, Advancing Sustainable Materials Management: Facts and Figures Report. https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/advancing-sustainable-materials-management

Figure H-4.1 Reference Year Waste Composition Estimate Percentages



As seen above, the estimated major contributors to waste generation in the reference year are paper and paperboard (23%), food (22%), yard trimmings, and plastics (12%). The composition shows how much of each material is estimated to be generated in the District. As shown in **Figure H-4.1**, the top categories of paper, food, yard trimmings, and certain plastics are able to either be recycled or composted. Some plastics may be more difficult to recycle without proper infrastructure. Note the "other" stream is typically comprised of hard-to-recycle materials such as electronics.

The data used to estimate the waste stream is based on national averages from the USEPA and may not be completely reflective of the District's actual waste stream. However, these estimates provide a good basis for analyzing the recycling systems in place for managing waste streams.

Fiber Waste Stream (Paper and Paperboard)

Using the waste estimates described above, the 23% that makes up paper and paperboard in the overall waste composition represents about 37,000 tons of paper. According to the District's ADR for the reference year, 2,200 tons of paper was diverted from the landfill. This is an estimated 6% diversion. The District does have six drop-offs and two non-subscription curbside services that accept paper. Furthermore, subscription curbside is available throughout the District. These services accept newspapers and inserts, magazines, catalogs, junk mail, envelopes, phone books, paper grocery bags, cereal, and snack boxes (paperboard), cardboard, and clean pizza boxes. There is adequate infrastructure to divert this material stream. The major challenge with these sites and programs is getting residents to participate and manage their recyclable waste properly as well as educate residents on how to use the available services.

It is worth noting that the District's diversion totals do not include any local businesses' recycling totals except for those that use the drop-off sites or Specialty Recycling Center. Any commercial businesses not surveyed by Ohio EPA are not reflected in the total value. The District is likely diverting more but the data is not being collected. The District has the potential to divert more paper from landfills. According to the American Forest and Paper Association, the US recovery rate for paper and paper boards was approximately 68% in 2018.

Many businesses generate cardboard regularly from shipments of equipment, materials, or consumables. Specifically, businesses typically generating the most amount of cardboard are retailers, restaurants, distribution centers, warehouses, and wholesalers.

Table H-4.1 Cardboard Diversion Opportunities

Business Category	Number of Establishments in District
Wholesale trade	86
Accommodation and food services	217
Retail trade	346
Transportation and warehousing	91

While the quantity generated from such establishments is generally high, it usually costs money to receive commercial recycling services which many businesses do not wish to pay. Instead, many businesses will throw the cardboard generated into the dumpster where it will eventually be taken to landfills. Using the Business Waste Reduction Assistance Program (BWRAP), the District has an opportunity to identify the largest generators of cardboard and cooperatively establish a recycling program, provide funding, procure a commercial recycler, or assist in various other ways to help divert this material stream from landfills.

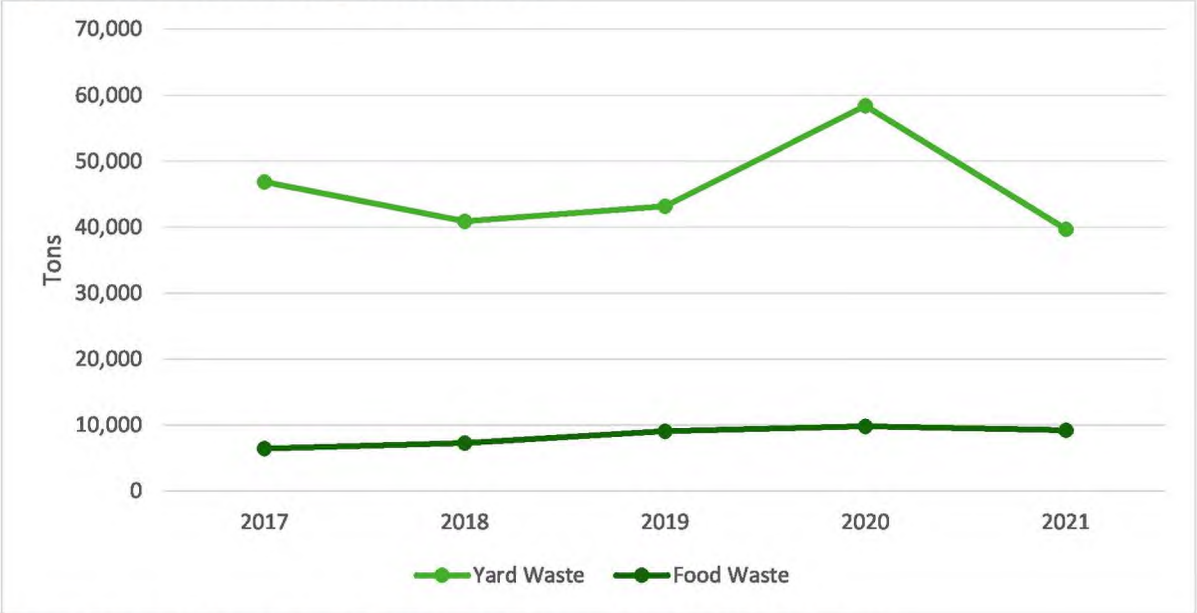
Organics Waste Stream

Using the waste composition estimates above, there are approximately 19,438 tons of food waste and 34,700 tons of yard waste (organic waste) annually generated in the District. As mentioned above, this estimate is based on a national study done by the USEPA and may not be accurate in certain circumstances.

While it is uncertain what the total disposal is for the organic waste stream, purely based on organic diversion numbers reported to the Ohio EPA it can be concluded that the District generates more than the estimate above. The District diverted nearly 40,000 tons of yard waste in the reference year, over twice the estimated total generated (disposal and diverted).

The District provides residents with ample opportunities to divert organic waste. Namely, by contracting with C+S Tree Service to allow residents to drop yard waste off free of charge. **Figure H-4.2** shows the District's historic organic waste diversion.

Figure H-4.2 Historic Organic Diversion



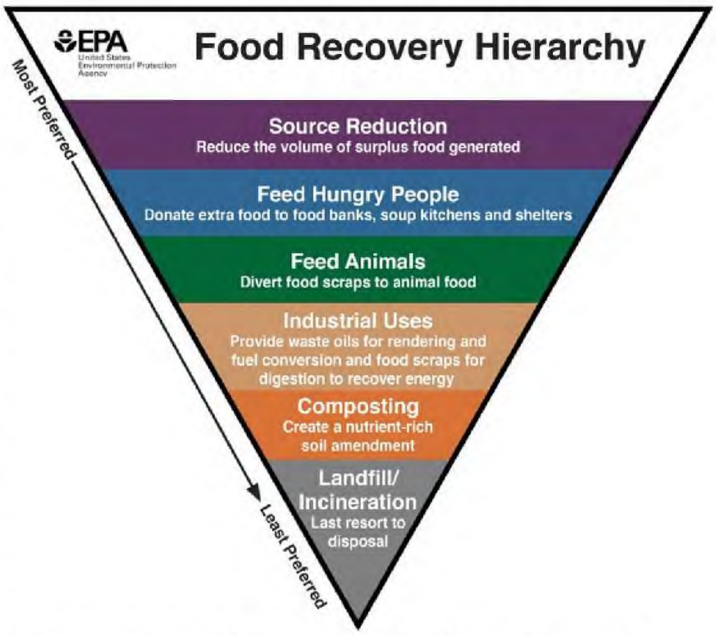
Source(s): Ohio EPA Compost Facility Planning Report for years 2017, 2018, 2019, 2020, 2021

Both food waste and yard waste diversion have remained relatively stable over the past five years. The only large annual change between either material came from yard waste in 2020. The difference stemmed from C+S Tree Service reporting high tonnages for that year. The following year returned closer to previous historic levels. This large increase was likely due to many residents working from home or businesses halting operations while the COVID-19 pandemic restrictions were in effect. With many people being at home and restrictions in place nationwide, many areas saw increased yard waste tonnages from residents having more time to do yard work at home.

The District has a strong yard waste management method in place. As discussed below, the food waste diversion stream is also respectable, although there is always the opportunity to divert, reuse, or donate food waste. Food waste occurs for a variety of reasons, namely convenience, FDA regulations, consumer behaviors, and lack of diversion knowledge.

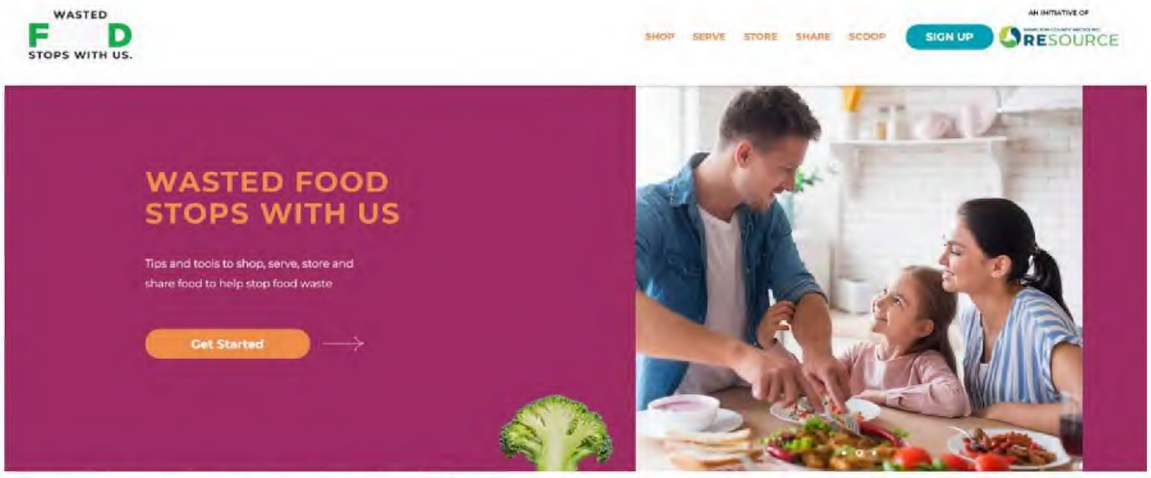
According to the estimates described above, food waste accounts for an estimated 22% of waste generated. One of the best ways to reduce food waste is through donations. This is one of the USEPA's

preferred food management methods, ranking 2nd on the food recovery hierarchy. Based on a web-based search, there are roughly 15 food pantries/banks that accept food donations in Clark County. A majority of these locations are centered in and around Springfield and consist of designated food pantries, local church groups, and larger national groups such as the Salvation Army. The District does have a food waste management program in place for the commercial sector. Through this program the District partners with Go-Zero and Paygro to provide food waste collection throughout Clark County. Taking this program one step further, the District could explore partnering with local restaurants and food banks to support organics diversion through awareness and reshaping consumer behavior. Creating awareness of the issues food waste causes to the environment and the socio-economic implications of waste food that could be donated instead could help foster consumer behaviors that are rooted in diversion/donation rather than waste.



The District could also look to incorporate food diversion and donation awareness in the existing community engagement done throughout the year. Currently, the District does not have any materials provided online about food waste diversion. While there is a section for composting on the District website, the District could explore establishing a section specifically for food waste diversion that includes helpful links, local resources, methods to influence consumer behavior, and available diversion options in the District.

Hamilton County's Solid Waste District is an example of what this could look like. On their website, they provide local food waste drop-off options, links to composting businesses, and information on why food waste diversion is important. Furthermore, the website spotlights how to reduce



food waste and through Wasted Food Stops With Us[6], an initiative of Hamilton County Recycling Resource. Through this site there are posts, videos, how-to's, and more regarding sustainable food management.

Plastic Waste Stream

Residential/commercial estimated waste composition forecasts plastics to be one of the larger percentages of waste streams being littered and landfilled. Currently, capturing this material stream is a gap in the District's recycling programs. Based on waste composition, it is estimated that 20,000 tons of plastics were generated in the reference year. The District documented diverting 351 tons of plastic. This is estimated to be 2% of all plastic generated. There is a significant opportunity to increase the amount of plastic recovered through education and awareness on what the drop-off sites and curbside recycling programs accept and do not accept. Receiving more data from haulers who service existing curbside recycling programs and drop-offs is also an important step the District may explore to continue to document diversion.

The District accepts plastic bottles, jugs, and containers for soda, water, milk, shampoo, conditioner, and other similar bottles at drop-off recycling locations. These plastics are also referred to as polyethylene plastics with a resin code of #1 or #2. The image below describes the various types of resin codes for plastics.

Plastic resin codes may confuse residents, as they do not describe if something is recyclable and/or accepted in the area, which is significantly different from the resin grade used for material packaging. More recent packaging has #1 and #2 plastics in various shapes and the difference between non-bottle and rigid plastics. MRFs frequently do not always have end markets to sell all of the various resin grades. The District should monitor the materials delivered to the drop-off sites and determine the level of plastic contamination and the most common mistakenly recycled items.

[6] Waste Food Stops With Us, https://www.wastedfoodstopswithus.org/

B. Conclusions

The District's estimated waste composition data reveals opportunities to increase diversion rates for paper and paperboard, metals, and plastic waste. The District does a good job of managing yard waste and food waste. In total, the District diverted roughly 36% of all waste in the reference year, of which 75% was from organic waste. The District has adequate resources and infrastructure to reach the state goal, but this mainly derives from contracted services with C+S Tree Service. With low capture rates for most other materials, the District could look at programs to divert additional material from landfills. Typically, non-subscription curbside recycling is the most effective way to increase diversion rates. These programs offer an easy and convenient method to dispose of recyclable materials that are more convenient than drop-off sites.

Opportunities to explore for this Plan Update:

- Drop-Off Program – Setting a goal to reduce contamination and increase participation among residents.
    - Obtain baseline tonnages and contamination rates of materials that are often mistakenly recycled.
    - Conduct a survey to understand the best method of reaching target audiences.
    - Continue to utilize the Adopt-a-Drop program to spread awareness and help monitor contamination.
- Curbside Recycling Initiatives (ongoing program) – Set a goal to achieve at least one non-subscription curbside program with a focus on areas of high population density. The steps to explore are as follows.
    - Engage communities and stakeholders to gauge interest/ demand for curbside services. A District developed survey could be a good tool to use.
    - Determine barriers to effective curbside services like cost, transportation, etc.
    - Explore possible economic incentives the District can offer to support new programs.
    - Research grant opportunities through the Ohio EPA.
    - Offer technical assistance to design curbside recycling programs.
    - Explore methods to obtain reliable data from the various haulers operating in the District to document recycling efforts.
- Business Waste Reduction Assistance Program (BWRAP) – Set a goal to work with at least one business annually to provide technical assistance for fiber recycling.
    - Identify through NAICS codes and online business resources the largest producers of commercial cardboard.
    - Reach out to local businesses to gauge interest and promote assistance.
    - Explore the feasibility of providing funding opportunities.
    - Continue offering free recycling receptacles.
- Food Waste Management Program (ongoing program) – create web infrastructure promoting local food waste diversion methods.
    - Create a section of the website dedicated to food management.

- Provide useful links to local resources and further information on the importance of food rescue and recovery.
    - Focus on methods to change consumer behavior to encourage source reduction over diversion or donation.
- List the local food bank's location and contact information.

5. Economic Incentive Analysis

Economic incentives are designed to encourage participation in recycling programs. Solid Waste Management Districts may choose to offer economic incentives to influence waste and recycling behaviors, These may include volume-based pay-as-you-throw (PAYT), grants, rewards, rebates, etc.

A. Evaluation

Economic incentives in the waste management field are offered and designed to influence behavior. Often, one of the strongest methods for behavior change is utilizing monetary factors such as cost savings, reimbursements, rewards, and rebates. A majority of SWMDs offering economic incentives in the State of Ohio do so by entwining the amount recycled to some sort of financial compensation or cost reduction of recycling.

The District's 2018 Plan outlined the District's economic incentive program designed to implement new programs or enhance existing ones. This program is discussed for this Plan Update below. The District offers three economic incentives to help foster behavior change.

Education Grants for Schools: This program is combined with the District's Close-the-Loop program. The Close-the-Loop program is designed to remind people to purchase recycled content products and that material isn't recycled until consumers purchase products made out of recycled materials. The District promotes this initiative in educational presentations. The District allocates $3,000 annually in grant money for educational waste reduction programs.

The most recent occurrence of the District awarding grant money to a school was in 2021. The District purchased 45 (seven-gallon) classroom recycling bins for Northridge Elementary/Middle School in support of their new school recycling program.

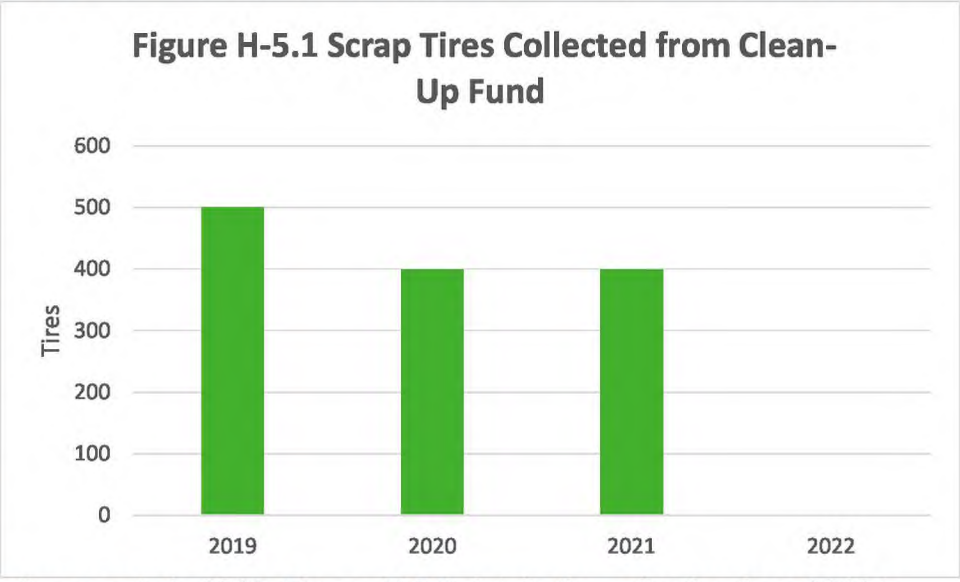
Curbside Recycling Grants: The District provided this economic incentive for political subdivisions to either start new programs or enhance existing programs that assist the District with maintaining or exceeding its goals. If a community creates a new curbside recycling program through either internal operation or contracting for the service with the private sector, the District allocates one-time funds as follows:

- Funding for a population of 1 to 10,000: $5.00 per capita.
- Funding for a population of 10,001 to 20,000: $3.00 per capita.
- Funding for a population greater than 20,000: $0.80 per capita.

The 2018 Plan update details the program was available on a first come first serve basis for qualifying communities and was available only in 2015 and 2016. There were no community applications for the grant in either year.

Open Dump/Scrap Tire Clean-Up Fund: The 2018 plan update detailed an initiative for open dumps and scrap tire clean-ups. This initiative established a fund to be used for open dump and scrap tire clean-ups. A grant manual was created before the start of the program to articulate the details of the grant program and included an application and contractual agreements. The grant program is administered by an Open Dump/Scrap Tire Grant Committee of the Board (consisting of representatives from the health department, Policy Committee, and the District Director of the District). The District can provide seed money to clean-up high priority open dump and scrap tire sites as determined by the above-referenced committee. Recovered clean-up costs are directed to the District to replenish funds expended from this program.

All requested funds for clean-up under this grant must be reviewed and agreed upon by the Open Dump/Scrap Tire Grant Committee and then submitted to the Board of County Commissioners for approval. Funding for this program will come from the unencumbered generation fee revenue from the District. The District committed in the 2018 plan update to make funds available and to evaluate on an ongoing basis the effectiveness of the program. The District reserves the right to terminate and/or not conduct the program.



The District hosted one scrap tire collection event through funding from this program each year from 2019 to 2021. There were no collection events in 2022. **Figure H-5.1** details the collection from 2019 to 2022. Each event collected on average 433 tires. In the reference year, there was no need to hold a collection event.

B. Conclusions

There are other options the District may explore during this planning period such as establishing pay-as-you-throw (PAYT) programs, rebates, reward systems, further financial assistance, etc. The District is exploring curbside recycling options and programs in the county. As of this Plan Update, immediate further economic incentives are not a priority to be explored. The District is focused on how best to establish various programs, such as curbside recycling, that could benefit from economic incentives before focusing on the incentives themselves. The District believes that getting the program infrastructure in place is key first. However, the District is aware incentives can help alleviate some of the financial barriers residents and communities may experience and these will be a part of conversations in the future.

6. Restricted and Difficult to Manage Waste Stream Analysis

Goal 6 of the 2020 State Plan requires solid waste management districts to provide strategies for managing materials that are difficult to dispose of such as scrap tires, yard waste, lead-acid batteries, household hazardous waste, and obsolete/ end-of-life electronic devices. This analysis evaluates the District's strategies and considers other materials and programs for hard-to-manage waste.

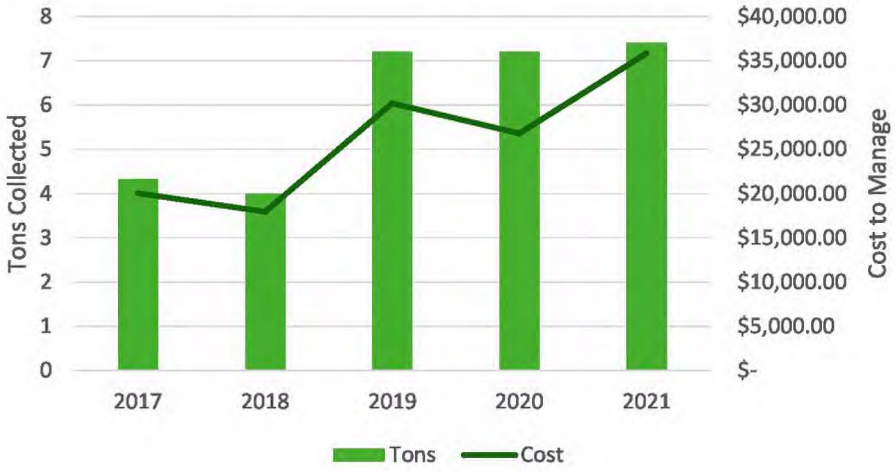
A. Evaluation

Household Hazardous Waste:

Household hazardous waste (HHW) are materials that may be generated in the home and if handled improperly may cause pollution and safety risks. HHW includes used oil, gasoline, diesel, heating oil, kerosene, household batteries, lead-acid batteries, pesticides, paint and paint thinners, mercury-containing devices, lights/light bulbs, and electronics.

In 2013 the District expanded the collection of HHW from bi-annual collections to weekly collections. The District's Specialty Recycling Center accepts HHW for $1.00 a pound during Specialty Recycling hours. Specialty Recycling occurs every Thursday, 9 a.m. to 6 p.m., and the first Saturday of the month, 9 a.m. to noon, except on major holidays. The District has a private contract with Environmental Enterprises to properly manage the collected material.

Figure H-6.1 HHW Collected



This collection service at the Specialty Recycling Center has proven to be an effective method for managing HHW, offering a readily available, centralized location for residents to utilize. **Figure H-6.1** presents the amount of HHW collected by the District historically.

HHW is difficult to manage properly. This factor drives the price of managing these materials up and forces many Districts to enter into a private contract with a business to manage it for them. The District collected six tons of HHW on average from 2017 to 2021. For each ton collected, it costs on average $4,375 to manage. The $1.00 per pound charge offsets the management cost per ton. With this fee, the District's net cost per ton is roughly 50% less.

Table H-6.1 HHW Collected and Cost Associated to Manage

HHW	2017	2018	2019	2020	2021	Average
Tons Collected	4.33	4	7.2	7.2	7.4	6
Total Cost	$20,048	$17,947	$30,203	$26,798	$35,826	$26,164
Total Cost per Ton	$4,629	$4,486	$4,194	$3,721	$4,841	$4,375
Revenue Received	$8,660	$8,000	$14,400	$14,400	$14,800	$12,052
Net Cost After Revenue Received	$11,388	$9,947	$15,803	$12,398	$21,026	$14,122
Net Cost per Ton After Revenue Received	$2,630	$2,487	$2,195	$1,722	$2,841	$2,342

Source: Annual District Reports 2017 – 2021

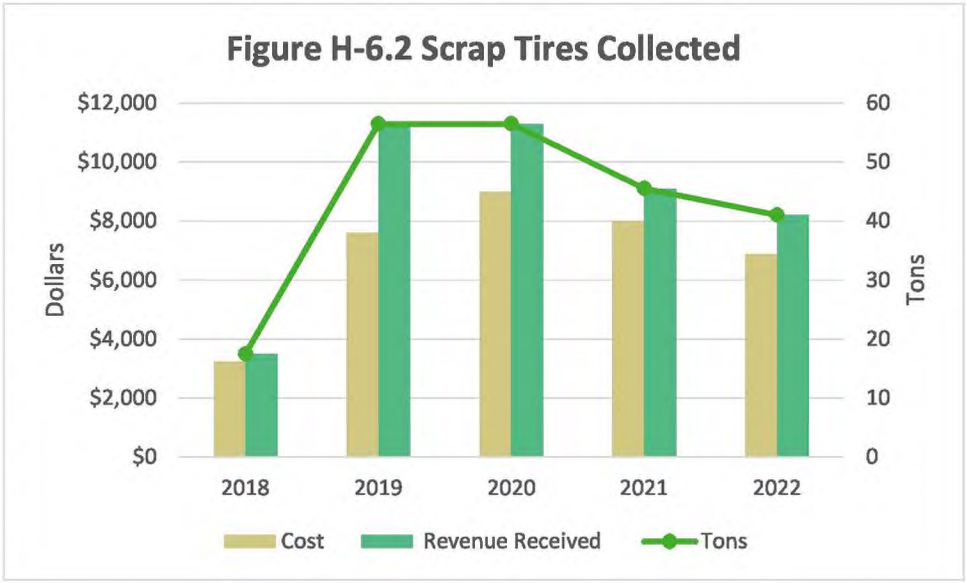
The cost per ton for SWMDs varies greatly by district along with the services each district provides its residents with regarding HHW. One consistency though, is the cost to manage HHW is significantly higher on a per ton basis than other materials. There are many ways to manage HHW collection. For example, similar to the District's collection center, Preble County SWMD provides an HHW trailer at the Preble County Landfill open Monday through Friday. As of their most recent plan update, a total of ten tons were collected at roughly $1,800 per ton. Conversely, neighboring Greene County SWMD provides monthly special collection events. As of the most recent plan update, a total of 16 tons were collected at roughly $1,400 per ton. While there is no perfect comparison able to be made for HHW management, the District per ton cost of $4,161 per ton before factoring in revenue received from fees suggests that there may be other options to explore that are more economically efficient.

Scrap Tires:

Ohio EPA estimates more than 12 million scrap tires are generated in Ohio annually. Scrap tires not properly disposed of have the potential to end up in illegal dumps, creating hazards to public health and the environment.

The District collects scrap tires at the Specialty Recycling Center. Tires at the Specialty Recycling Center are accepted at a fee of $0.10 per pound for residents. Any illegally dumped tires are also accepted from townships, PRIDE events, and clean-up events. The District's PRIDE program gives participating inmates at the Clark County Jail the opportunity to do service hours across the County to clean up trash and other physical work. The District does not charge fees or put limits on how many illegally dumped tires will be accepted from townships and other government entities. The entity bringing in the tires must provide the location where the tires were dumped. Most illegally dumped tires are disposed of through the Ohio EPA Scrap Tire program. This program allows entities to apply online for a no-cost clean-up of scrap tires. If qualified, Ohio EPA will assist in removing the illegally dumped scrap tires.

Figure H-6.2 shows the cost associated with the collection of scrap tires as well as the total tons of scrap tires collected historically. With the $0.10 charge for each pound of tires collected from residents, the District offsets most of the costs of collecting residential tires. Although the District is not able to differentiate between the total amount of tires collected at the Specialty Recycling Center versus other sources, these revenue estimates are likely slightly higher than the actual value. Despite this, assuming all tires were collected at the Specialty Recycling Facility, the District operates near a break-even point for the collection of tires as Rumpke charges $0.11 per pound.



The City of Springfield's Reserve A Roll-Off Program was used to provide coupons for free tire disposal. The City of Springfield provided roll-off containers for neighborhoods that organized annual cleanups. Coupons were provided to residents in these neighborhoods. Each coupon was good for up to eight tires. The District absorbed the cost of recycling the tires. This program stopped after 2018.

Electronics:

Electronics contain hazardous materials that can pose health and environmental risks after disposal. The preferred method of handling is through the donation of working electronics and recycling of nonworking electronics. The District accepts a wide range of electronics at the District Specialty Recycling Center including TVs, CPUs, keyboards and mice, monitors, printers, scanners, copiers, and most other electronics. TVs and monitors cost $0.10 per pound and all other materials are free of charge. The District also promotes Best Buy and Goodwill as locations to recycle electronics. In 2021, the District collected 57 tons of electronics. From 2017 to 2021, the District received an average of 55 tons of electronics at the Specialty Recycling Center

Lead-Acid Batteries:

In 2008, regulations banning the disposal of lead-acid batteries (LABs) in landfills became effective. Lead-acid batteries have a high recycling value and Ohio has a retailer take-back law. LABs and car battery cores are accepted year-round at the District Specialty Recycling Center for no charge.

In June of 2023, the U.S. Department of Energy[7] announced a $125 million Consumer Electronics Battery Recycling funding opportunity. This opportunity is an essential part of the $7 billion authorized by the Bipartisan Infrastructure Law to grow the American battery supply chain. With a national campaign to increase the supply of batteries, the District should explore methods to increase battery recycling locally. The growing demand across the nation and infrastructure being built to support it will make lead acid batteries and other batteries easier to find end markets for, creating a revenue stream for the District as well as increasing diversion from landfills.

Yard Waste:

As has been discussed, the majority of the District's diverted materials come from yard waste and other organic materials. More specifically, the majority of this waste diversion stems from a contract with C+S Tree Service. Historically, this company did not charge residents, however, they started charging for brush and yard waste from residents in 2020. In early 2021, the District entered into a contract with them to allow residents and not-for-profit agencies to bring non-woody yard waste/ brush and tree debris to the facility again for no charge. As of this Plan Update, the District allocates $6,000 per quarter ($24,000 a year) to this service. The District relies heavily on this service to meet Goal 2.

In an effort to plan for the unlikely scenario that this service no longer is available, the District analyzed the feasibility and cost of taking over the service internally. This would require the District to utilize already owned land or to purchase new land such as the land that may be available if C+S Tree Service goes out of business. Furthermore, the District would need to purchase a commercial-grade shredder to turn yard waste into viable mulch. As of this plan update the District estimates the cost of a suitable shredder to be $150,000 based on desktop research. Another option is to lease a shredder as needed.

The District would likely require a full-time or seasonal worker to operate the shredder. Because the yard waste stream experiences higher volume from the spring to the fall, the District anticipates one full-time employee would be required to operate the shredder. After base pay, insurance, and other expenses, the District estimates the employee would be paid $35 per hour and work an estimated 1,560 hours out of the year at the yard waste site. This would cost an additional $54,600 annually for the operation of the equipment.

Further analysis could be done during this planning period to estimate the total cost and resources that would be needed to operate a yard waste shredding site. This analysis does not consider the purchase or renting of land. No matter the scenario, it would cost the District significantly more money to operate its own yard waste shredding than it currently does to contact C+S Tree Service.

B. Conclusion

[7] U.S Department of Energy, https://www.energy.gov/articles/biden-harris-administration-announces-192-million-advance-battery-recycling-technology

A majority of the District's difficult-to-manage waste streams get collected at the Clark County Specialty Recycling Center. The center is open on Thursdays from 9:00 a.m. to 6:00 p.m. and the first Saturday of every month from 9:00 a.m. to 12:00 p.m. The District has a list of acceptable items and the cost associated with dropping off waste posted on its website. While prices vary by material, general HHW is $1.00 per pound to dispose of.

The fees charged to residents help offset the cost of processing restricted and hard-to-manage materials. The District contracts with private businesses to collect these materials from the Recycling Center. This program has proven to be an effective method for recovering restricted and hard-to-manage materials offering a readily available, centralized location for residents to utilize.

Specialty Recycling

Televisions & monitors.....10¢/lb.
- We recommend you **DO NOT** remove the picture tube yourself. This is dangerous. We will accept picture tubes only at $10 each.
- Goodwill and Best Buy accept many electronics, although Best Buy charges for TVs. See the information in the far right column.

Other electronics.....free

Paint.....30¢/lb.
- Try to find someone who can use the paint you don't need.
- Most types of paint can be dried with sawdust, oil dry, or kitty litter and disposed of in the trash.

Fluorescent Bulbs
- No crushed bulbs
- 50¢ each, tubes or CFL (curly-Q) bulbs
- HID (high intensity lamps): $1 each
- UV lamps: $2 each

Ballasts..non-PCB.....$1.00 ea.
PCB.....$5.00/ lb.

Household Hazardous Waste ...$1.00/ lb.
- fertilizers, pesticides, herbicides
- auto fluids, any fuels
- varnish, wood preservatives, polishes
- various other household chemicals
- visit 32trash.org for complete list

Used Tires.....10¢ /lb.
- Limit 10 per visit (you must have a hauling license to legally carry more than 10 tires at a time)

All tires accepted.

Appliances containing CFCs.....$5 each
- Limit 5 per visit
- Refrigerators
- Freezers
- Air conditioners
- Dehumidifiers

Other appliances.....free

Secure Document Destruction.....15¢ /lb.
- Limit 2 bankers boxes per visit
- Shredded paper is recycled
- No need to remove paper clips or staples

Cooking Oil & Cooking Greases .....free
Please strain out food pieces. All other oils are household hazardous waste.

No fee recycling:
- Most batteries accepted
- Cell phones*
- Eyeglasses*
- VHS and cassette tapes*
- Drop-off bins provided for cans, glass, plastics #1 and #2, paper, and cardboard. Gates open 7 days a week. 7 am to 7 pm.

*please bring these items to 1620 W. Main during Specialty Recycling hours

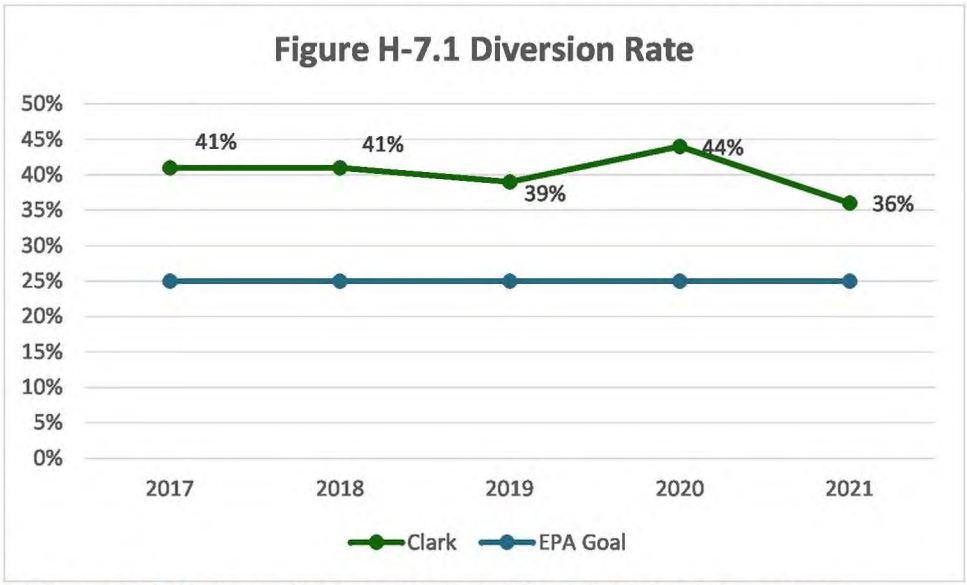
Please note: items listed with a fee are *only* accepted during specialty hours, listed on the front of this brochure, and cannot be accepted any other times.

7. Diversion Analysis

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

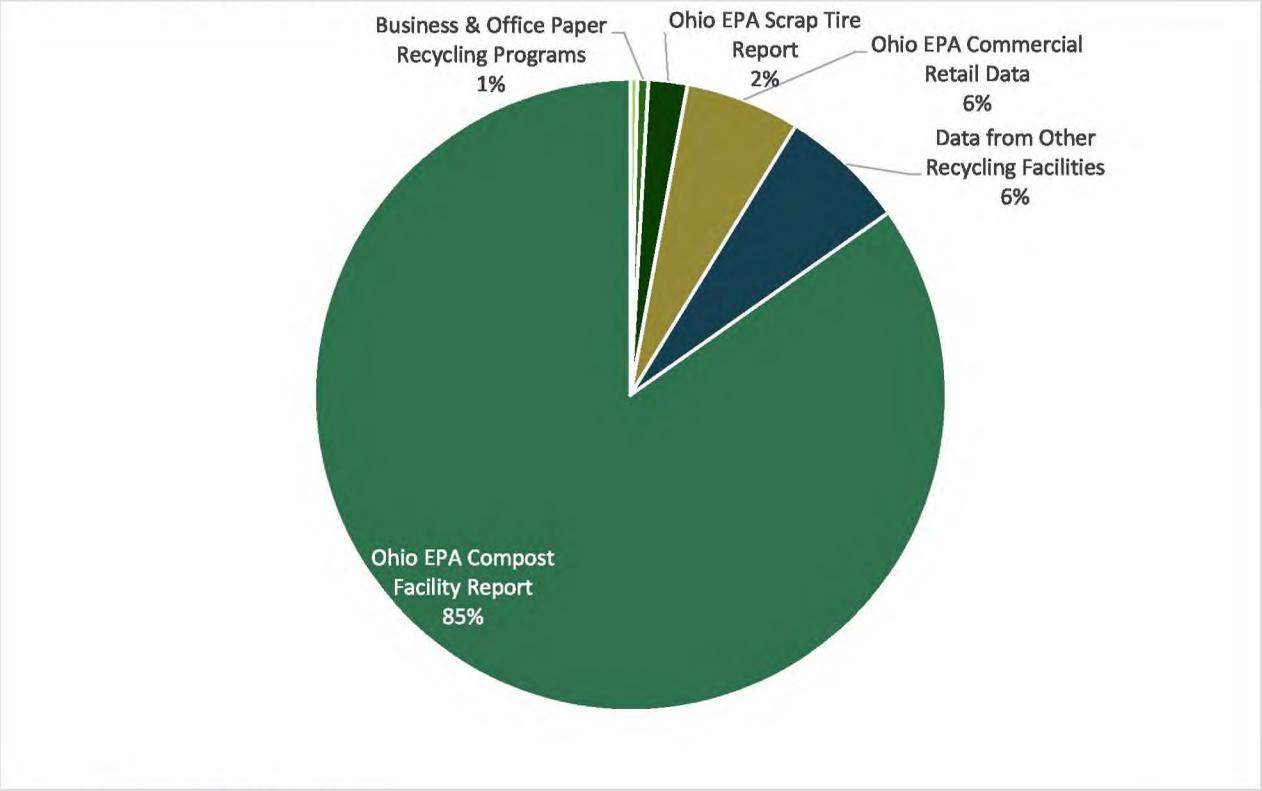
A. Evaluation

Figure H-7.1 shows the diversion achieved over the past five years in comparison to Ohio EPA Goal 2. As shown, the District exceeds the goal residential/commercial diversion rate consistently. Diversion has remained stable at around 40% for most of the last five years. Noticeable deviations from this mark were in 2020 and 2021.



The District collects data from a variety of sources. The largest driver behind the District's diversion rate is the Ohio EPA compost report. 85% of all diverted material derives from this report. Other sources of data used to calculate the diversion rate for the District are recycling facilities, Ohio EPA commercial retail data, District programs, Ohio EPA scrap tire reports, and curbside/drop-off programs. **Figure H-7.2** shows the breakdown of the District's data sources by percentage.

Figure H-7.2 Sources of Diversion

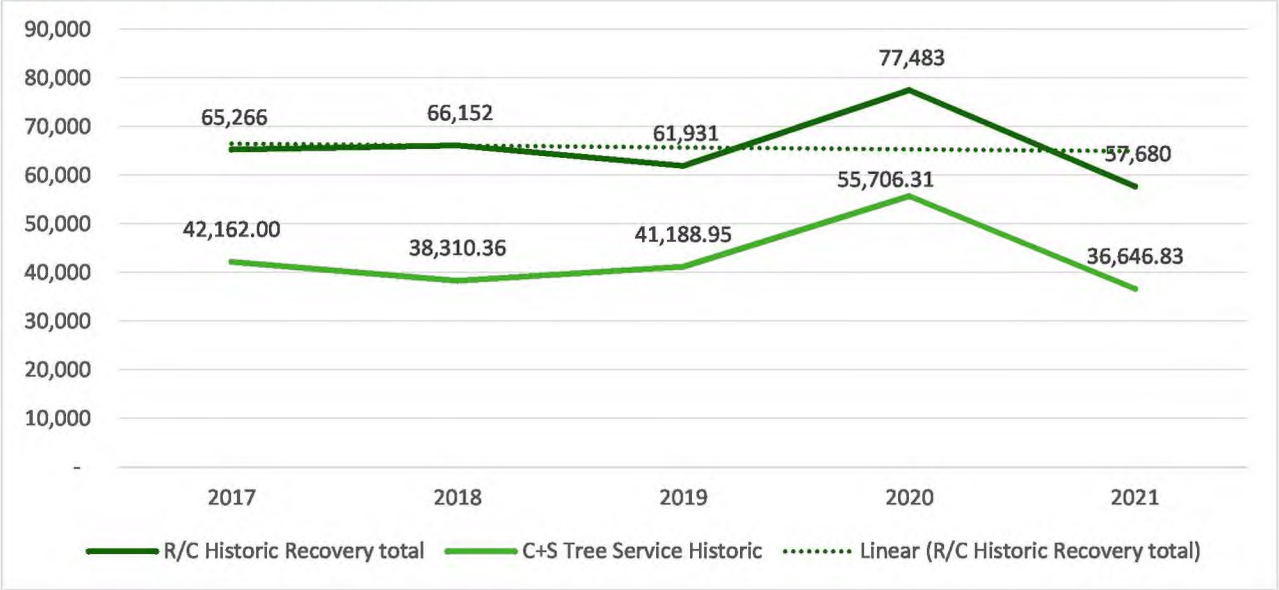


Source: 2021 Annual District Report

Not included in the above figure are drop-offs, curbside programs, and commercial surveys. The District no longer surveys either its commercial or industrial sectors. Drop-off and curbside values are not included because the amount is not significant enough to represent a percentage of the total diversion, however, a small amount of waste was diverted through these programs. The District is faced with challenges in acquiring data for these programs, see **Section H-1** for more details.

A more specific analysis of diversion data shows that the District's total diversion is closely entwined with one company specifically. As shown above, 85% of all material diverted is organic material like yard waste and compost. Of that 85%, three-quarters is reported by C+S Tree Service, a private business that accepts yard waste and tree trimmings. The District is aware of the dependence on this service to reach Goal 2 which is why when C+S began charging residents to drop off organic materials in 2020, the District entered into a contract with them to allow residents and not-for-profit agencies to bring non-woody yard waste/ brush and tree debris to the facility again for no charge.

Figure H-7.3 Historic Diversion



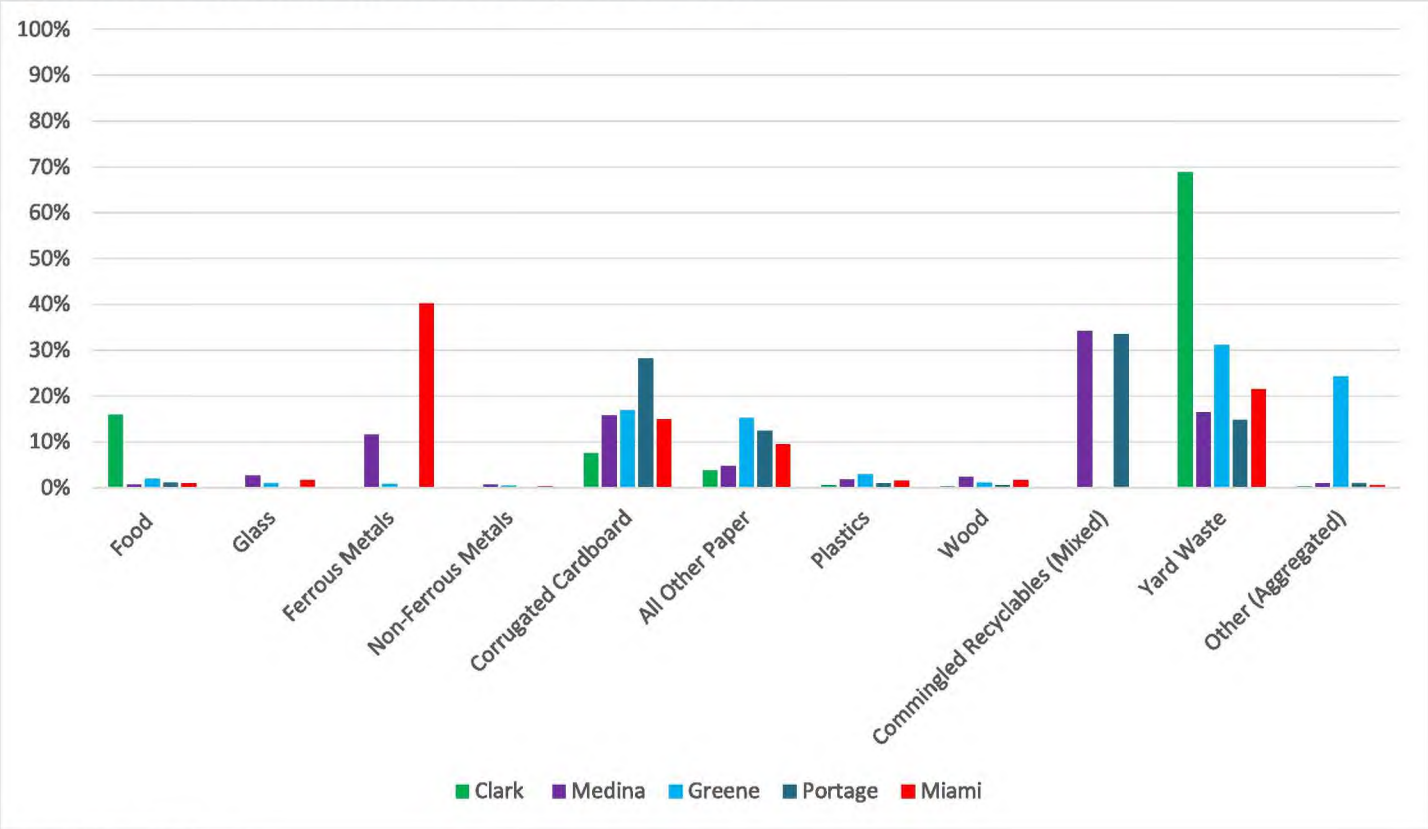
As can be seen above, the District's overall diversion mirrors C+S Tree Service's trend. When their reported tonnage drops, so too do the District's. This creates an issue of resiliency for the District. With such a dependency on one source of diverted material, the District does not have the flexibility to withstand changes to the current system. For example, if C+S Tree Service were to be forced to shut down, even for one year, the District would not be able to meet Goal 2. While this has not been an issue historically, the District wants to improve its resiliency to unexpected changes in the diversion system.

To best achieve this, the District analyzed its current diversion infrastructure and data collection methods. The following analysis explores gaps in the current system and opportunities to explore that will allow for improved data collection, documentation, material diversion, and better resiliency to change.

While the District excels at diverting organic materials, there are noticeable gaps in data collection and diversion of many materials that are well suited to be recycled. These materials include glass, metals, cardboard, paper, and commingled recyclables. However, the larger issue at hand is the lack of data collection, specifically from a commercial survey. The District has not conducted commercial surveys since 2018. Many local businesses are likely recycling, but the District is not actively tracking this diversion through annual or bi-annual surveys. There is a significant opportunity to demonstrate higher recycling tonnages, and therefore improve resiliency, by conducting commercial surveys again.

To better understand what materials the District can target to improve recovery, four similar-sized Districts that have comparable demographics were benchmarked to the District. **Figure H-7.4** and **Table H-7.1** below presents this comparison.

Figure H-7.4 Benchmark Diversion Composition Stream



Source: 2021 District ADRs

Two of the five Districts in the comparison above report their largest material diversion category being yard waste. It is not unusual for rural Districts to have a large percentage of their diversion stream be organics. In Districts such as these, there are more challenges to creating recycling programs and infrastructure than there are for larger, more urban Districts. The land use of rural counties being predominantly undeveloped is a key factor in this trend. There are much more farmland and pastures, entities producing organic waste. The rural counties also have fewer densely populated areas and are instead spread thinly over large patches of land, making centralized waste collection challenging.

Clark County had the highest percentage of yard waste in the diversion stream. Greene County also reported the primary material category being yard waste at 31% of their diversion stream. However, the District's yard waste diversion made up 69% of the stream, more than double Greene County's by percent. As can be seen above, the District has the most food and yard waste diversion by percent of waste stream compared to all the Districts. At the same time though, the District also has the lowest waste diversion by percent of the total stream for glass, metals, corrugated cardboard, mixed paper, and plastics. According to USEPA[8], the top materials recycled nationally are paper, cardboard, and metals. These materials specifically have high recyclability due to the cost-effectiveness of using recycled materials over producing

[8] U.S. EPA National Overview: Facts and Figures on Materials, Wastes, and Recycling. https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials

new ones. Waste is the same as any other commodity, it flows based on economic feasibility. Manufacturers can and will continue to use recycled material whenever possible simply because it is more economically viable to do so. There are markets for these materials, and they will only continue to grow as the national picture shifts toward circularity in the material production system.

The District would likely be at or above the other compared District's levels of diversion for these materials if an annual or bi-annual commercial survey was conducted. By choosing not to do surveys, the District is missing valuable data that can be used to assess the success or gaps of the current recycling programs and infrastructure.

Table H-7.1 Benchmark Diversion by Percent of Material Stream

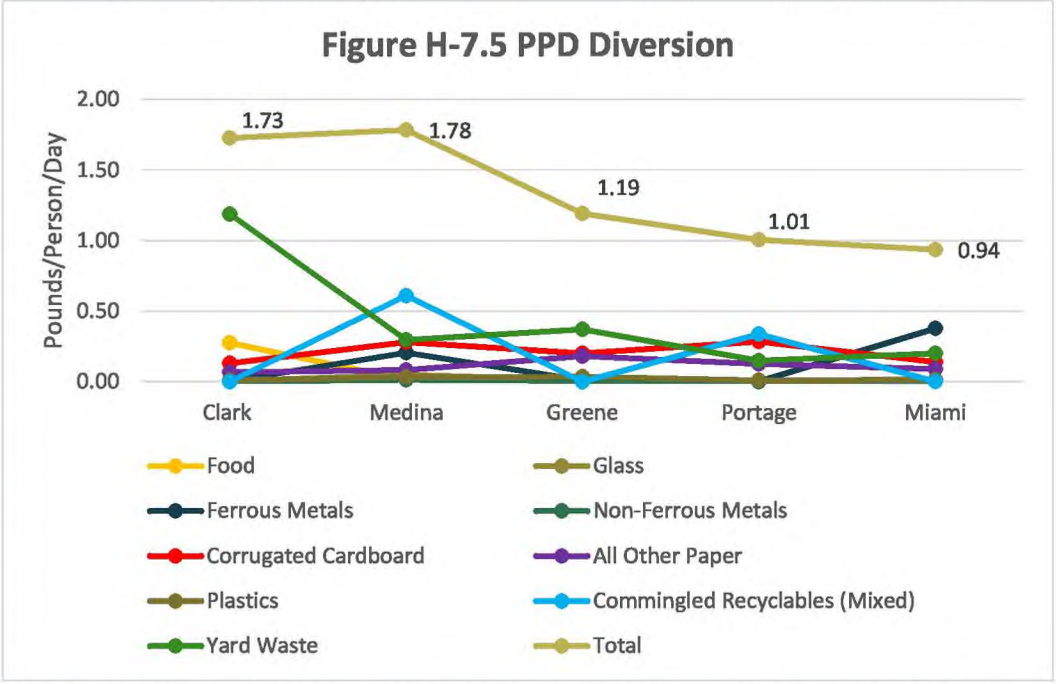
	District	Clark	Medina	Greene	Portage	Miami
Percent of Diversion Stream	Appliances/"White Goods"	0%	0%	0%	0%	0%
	Household Hazardous Waste	0%	0%	0%	0%	0%
	Used Motor Oil	0%	0%	0%	0%	0%
	Electronics	0%	0%	0%	0%	0%
	Scrap Tires	2%	6%	4%	6%	4%
	Dry Cell Batteries	0%	0%	0%	0%	0%
	Lead-Acid Batteries	0%	0%	0%	0%	2%
	Food	16%	1%	2%	1%	1%
	Glass	0%	3%	1%	0%	2%
	Ferrous Metals	0%	12%	1%	0%	40%
	Non-Ferrous Metals	0%	1%	0%	0%	0%
	Corrugated Cardboard	8%	16%	17%	28%	15%
	All Other Paper	4%	5%	15%	12%	10%
	Plastics	1%	2%	3%	1%	2%
	Textiles	0%	1%	0%	1%	0%
	Wood	0%	2%	1%	1%	2%
	Rubber	0%	0%	0%	0%	0%
	Commingled Recyclables (Mixed)	0%	34%	0%	34%	0%
	Yard Waste	69%	17%	31%	15%	21%
	Other (Aggregated)	0%	1%	24%	1%	1%

Source: 2021 District ADRs

Note: Values indicated with 0% are not true zero, the actual value is too small to be represented on a percentage basis. Appliances/white goods are lumped with the ferrous metals category.

Table H-7.1 presents the benchmarked districts' complete material diversion stream in 2021. The higher the percentage of the total stream each material comprised, the closer to green it becomes.

Figure H-7.5 presents some of the most common recyclable materials across the benchmarked districts. The materials are normalized for comparison purposes by calculating the diverted pounds per person per day (PPD) value. The District falls well behind the other benchmarked Districts in most of the material categories, demonstrating there is an opportunity to improve the diversion of glass, metals, paper, cardboard, and plastics. Despite this, the District has the second-highest total PPD at 1.73 among the benchmarked districts, trailing only Medina County which has a 1.78 PPD diversion. The difference between the two is that Clark County relies almost entirely on its organic diversion while Medina County has a greater variety of diverted materials contributing towards the total.



B. Conclusion

The District's diversion rate has remained steady overall. While the District is meeting the Ohio EPA residential/commercial diversion goal and is projected to continue to do so during the planning period, diversion is heavily dependent on organics diversion. The District has taken steps to ensure this source of diversion remains available through a contract allowing residents to take yard waste to C+S Tree Service free of charge. The District is aware of the dependence on this stream and will actively look to establish resilience to change throughout the planning period.

Curbside recycling, specifically non-subscription, being widely available for residents is generally the most effective method of increasing the number of materials diverted from landfills. In areas where curbside is unavailable, providing access to subscription-based curbside recycling and/or drop-off locations is a viable option to fill in gaps. Drop-off locations placed in higher population density or centralized areas yield material diversion best. As of this plan update, the District has only two non-subscription services and six drop-off locations. Where non-subscription curbside is not available the District does have subscription curbside, though there is no organized collection system, and the District does not receive tonnages from haulers. There is an opportunity to explore providing additional curbside programs, especially in Springfield, as well as providing additional strategically placed drop-offs throughout the District. See **Section H-1** for a full analysis.

Data collection is a gap in the District's current recycling system. While the District receives some data from haulers servicing non-subscription curbside in Tremont and New Carlisle as well as for drop-off tonnages, the remaining haulers operating and servicing subscription-based recycling programs do not

report to the District on the amount of materials diverted. The District will explore the feasibility of working with smaller local haulers to gather data for diverted materials.

Finally, there is an opportunity to explore re-establishing annual or bi-annual commercial surveys. The District has not surveyed its commercial sector on recycling activities since 2018 and is therefore not able to document any recycling business recycling. It is likely that many of the commercial businesses operating in Clark County recycle.

Opportunities to explore for this Plan Update:

- Contingency Yard Waste Shredding (new program) –
    - As a contingency for planning purposes, the District should develop a roadmap/scheduled plan for stepping into to operate a yard waste shredding program. Researching the location, siting requirements, potential costs, etc.

8. Special Program Needs Analysis

Ohio Revised Code 3734.57(G) gives districts the authority to fund a number of activities that are not related to achieving the goals of the state solid waste management plan. In addition, there are other programs that districts fund that are not addressed in either the state plan or law. This analysis evaluates the performance and status of these activities and programs and their value to the District.

Background

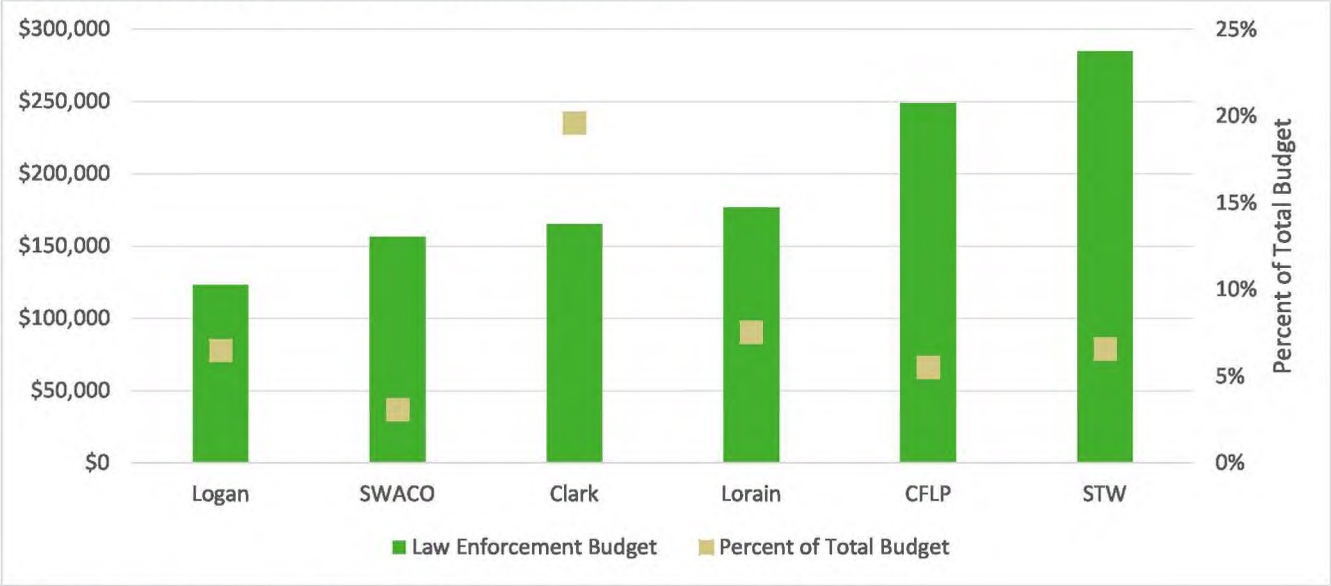
Since the District was created, it has supported the combined health district and provided funding for solid waste-related services. The funding is adequate to pay sanitarians to investigate solid waste facilities and nuisances. The partnership is valuable for the District and its residents, helping to keep Clark County litter-free.

The District also provides funding to the sheriff's department which provides two deputies who serve all jurisdictions within the county and confront environmental crime. The deputies handle dozens of investigations every year into illegal dumping and littering complaints, cleaning up the dump sites and, if needed, making arrests.

Sheriff Department Funding for Litter Prevention

Other districts provide funding to law enforcement offices for enforcement of illegal dumping and littering, clean-up services, and issuing citations. To examine the question of appropriate funding, law enforcement funding throughout Ohio was analyzed. **Figure H-8.1** shows funding provided to law enforcement for a few other Districts.

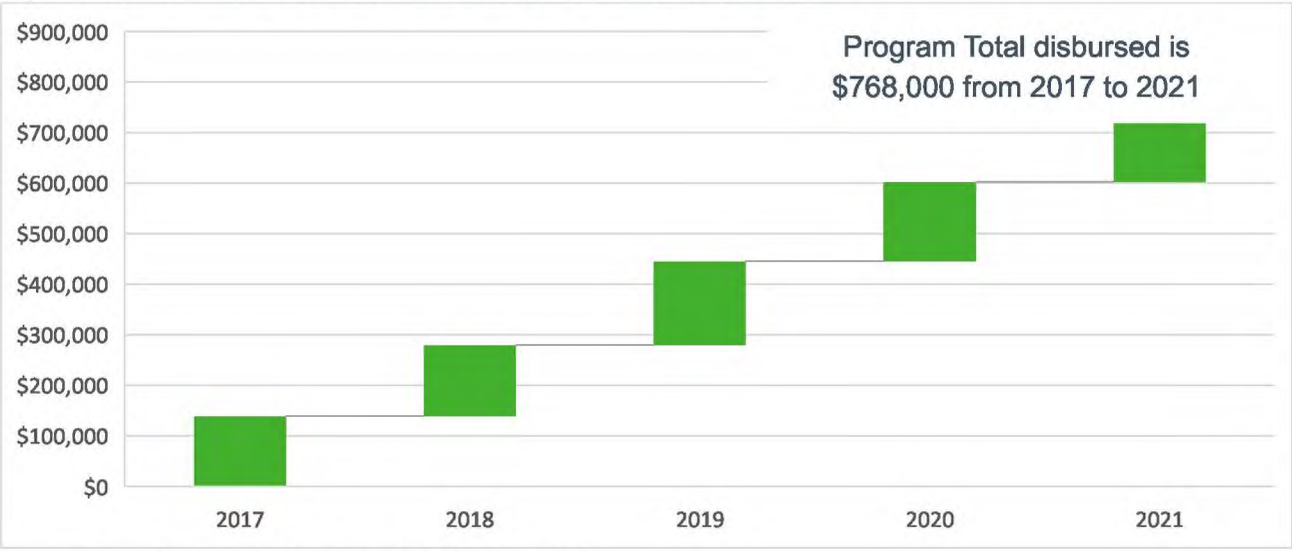
Figure H-8.1 Funds Allocated to Law Enforcement



Source: Ohio EPA Summary Fee Reports 2021

The District spent $165,000 in the Reference Year on funds allocated to local law enforcement and litter cleanup. This equates to almost 20% of the total expenditures during the reference year. Of the compared districts, Clark County sits on the lower middle end of expenses. However, in comparing the spending to the total District budget, Clark County spends the most.

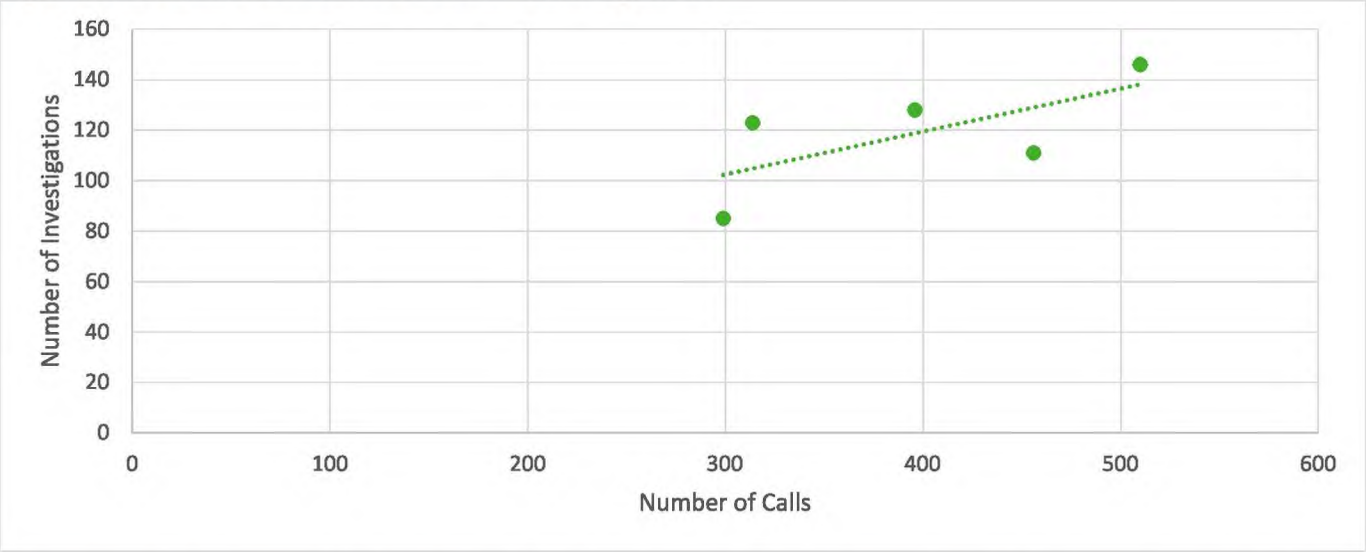
Figure H-8.2 Five-Year Fund Distribution to Law Enforcement



Source: District Fee Reports 2017, 2018, 2019, 2020, and 2021

From 2017 to 2021, the District allocated a total of $768,000 in funding to local law enforcement. Unlike the benchmarked districts, Clark focuses on operating the PRIDE program. Inmates at the Clark County Jail who are part of the PRIDE program do service hours across Clark County to clean up trash and other physical work as well as work at the Clark County Specialty Recycling Center.

Figure H-8.3 Ratio Between Calls and Investigations



The relationship between the number of calls to the number of investigations is linear. The more calls received the more investigations are conducted.

Table H-8.1 Historic Sheriff's Department Services and Funding

Year	Calls	Clean-Ups	Investigations	Arrests	Total	Cost	Cost/Clean Up
2017	510	293	146	5	954	$138,525	$145
2018	456	239	111	3	809	$140,525	$174
2019	396	245	128	3	772	$166,090	$215
2020	314	245	123	0	682	$157,419	$231
2021	299	193	85	0	577	$165,440	$287

Source: Annual District Reports 2017 – 2021

As shown in **Table H-8.1**, the average cost per clean-up is nearly double what it was in 2017. The District has historically funded one Sheriff Deputy to operate this program. Since 2010, the District has funded ½ of an additional Deputy to also work in this program.

Questions for the Policy Committee to explore:

- What is the total value of the demonstrated success of the program and the hard work accomplished by the deputies?
- Is it worth exploring the use of an alternative funding structure, maybe one based on a tiered structure per service provided?
- Are two deputies the right size for the program?

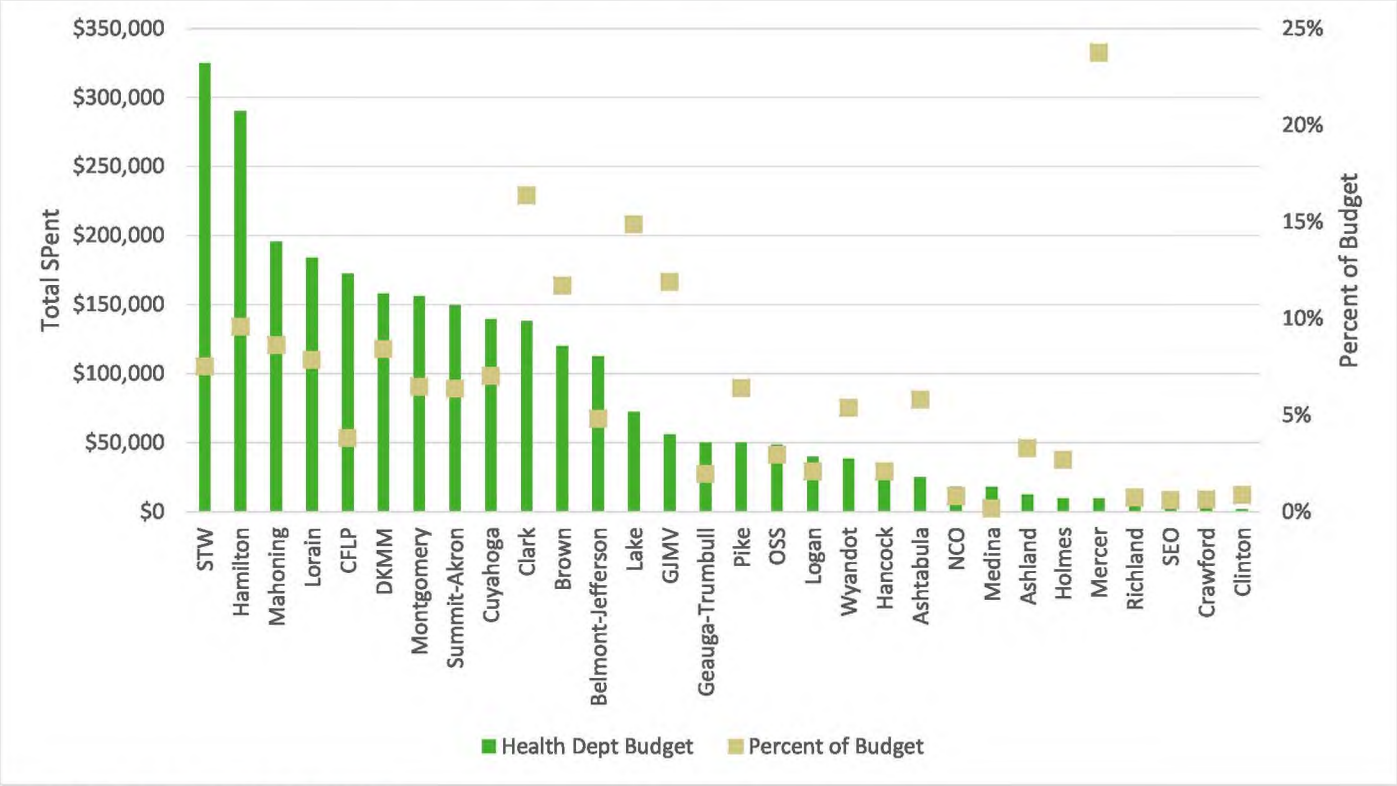
Health Department Funding

The health district provides services throughout Clark County to ensure solid waste management facilities, infrastructure, and equipment meet the standards outlined in Ohio law. The partnership is valuable to the District and its programs as it provides a significant number of services throughout the year. In 2021, the District spent $138,000 on funding the combined health district, this was 16% of the total expenditures in 2021. From 2017 to 2021 the District allocated a total of $658,000 to the health department for their services relating to solid waste. The health department's services provided in 2021 are as follows:

- Equipment inspections
- Facility inspections
- Facility permits
- Investigating complaints
- Issuing warning letters
- Administering board orders
- Participating in disaster debris management
- Participating in the Hoarding Task Force
- Annual surveying and licensing
- Explosive gas monitoring at closed landfills
- Attending health fairs, events, and meetings
- Provides nuisance clean-up and abatement

To benchmark, health department funding throughout Ohio was compiled below and analyzed.

Figure H-8.4 Funds Allocated to Health Departments



Source: Ohio EPA Summary Fee Reports

Note: This table includes all allowable uses for funding to the health department by SWMDs. These uses are as follows:

- #3 Expenditures providing financial assistance to boards of health within the district if solid waste facilities are located within the district, for enforcement of Sections 3734.01 to 3734.13 of the Ohio Revised Code.
- #5 Expenditures for paying the costs incurred by boards of health within the district for collecting and analyzing samples from public or private water wells on lands adjacent to solid waste facilities contained in the district's approved plan (pursuant to contracts entered into with boards of health).
- #7 Expenditures providing financial assistance to boards of health within the district for enforcement of Section 3734.03 of the Ohio Revised Code (open dumping restrictions) or to local law enforcement agencies having jurisdiction within the district for enforcing anti-littering laws and ordinances
- #8 Expenditures providing financial assistance to boards of health within the district that are on the Ohio EPA approved list to defray the costs for participation of their employees responsible for enforcement of solid waste regulations in Ohio's EPA's training and certification program

According to Ohio EPA reports, 30 of the 52 solid waste districts provide funding in some form to the health department. The District funds the health department exclusively under allowable use #7. Only one other district, Pike County, funds health departments under this allowable use for $25,000. Of all District health department funding across Ohio, roughly 91% falls under allowable use #3.

Of the compared districts, Mercer County spent over 20% of the total budget on the health department. Clark County was next highest, spending over 15% of the total budget on the health department.

Figure H-8.5 Five-Year Fund Distribution to Health Department

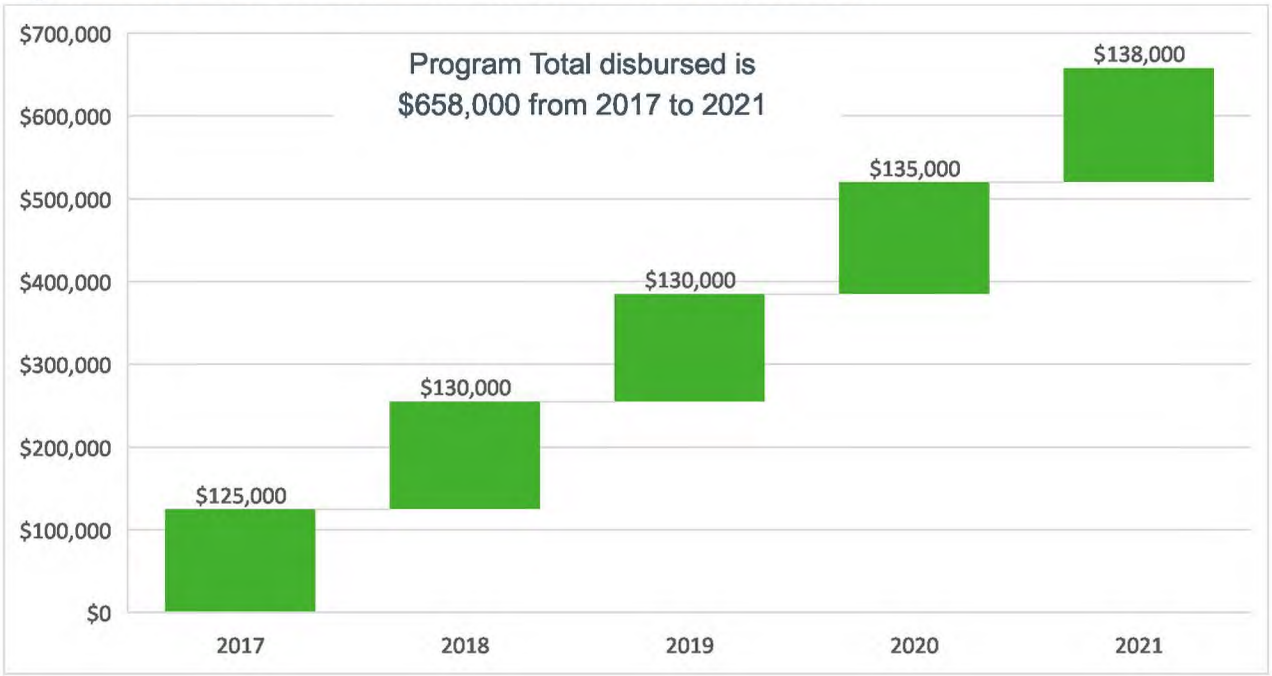
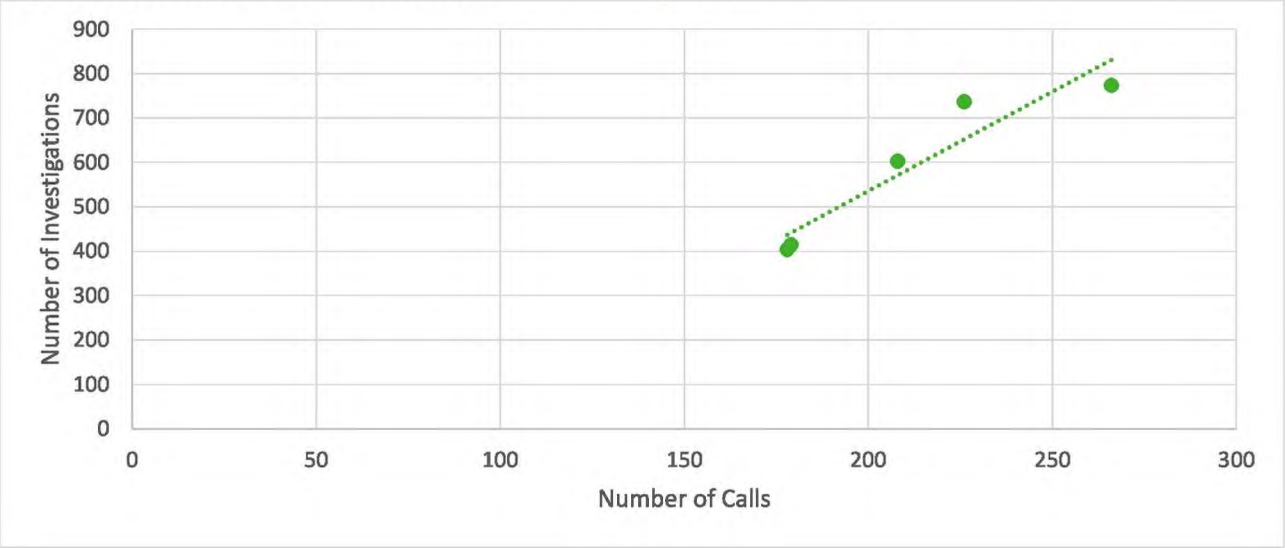


Figure H-8.6 Ratio Between Complaints and Inspections



The relationship between the number of complaints to the number of inspections is linear. The more complaints received the more inspections are conducted.

Table H-10.3 Historic Health District Services and Funding

Year	Complaint	Inspection	Warning Letters	Board Order	Vehicle Inspec-tions	Waste Facility Inspec-tions	Total	Cost	Cost / Service
2017	266	774	169	5	143	136	1493	$125,000	$84
2018	226	737	141	4	116	54	1278	$130,000	$102
2019	208	603	120	3	181	53	1168	$130,000	$111
2020	179	415	100	0	168	62	924	$135,000	$146
2021	178	404	97	4	165	67	915	$138,000	$151

Source: Clark County Solid Waste Management District Annual Report

The District experienced a decline in all of the services offered from 2017 to 2021 except for vehicle inspections. In 2020 and 2021, the number of complaints decreased by approximately 14%. This is believed to be a direct impact of the COVID-19 pandemic.

Questions for the Policy Committee to explore:

- What is the total value for the demonstrated success of the program and the hard work accomplished by the health department?
- Is it worth exploring the use of an alternative funding structure, maybe charging a portion of the communities where most of the inspections occur?
- Work with cities and townships to mandate trash collection and bulky waste pick-up.

Conclusion:

Funding for law enforcement, litter collection, and the health department are not directly related to achieving the goals of the state's solid waste management. However, these activities and programs play

a role in the District's management activities. These programs help keep Clark County litter-free and ensure the solid waste facilities/ infrastructure are operating in a safe manner as intended.

While these programs help the District manage the solid waste for Clark County, the District spends roughly 36% of the total budget on law enforcement and the health department. The financial section analysis further explores the planning period budget and how the budget is impacted.

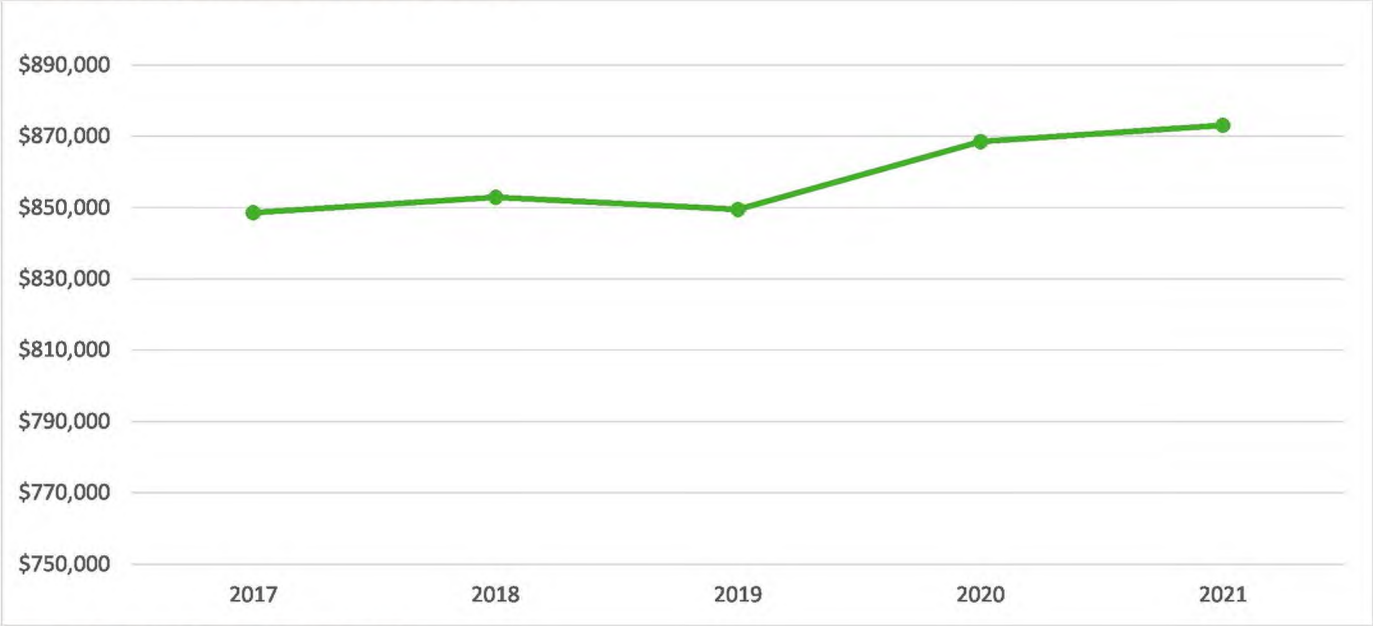
9. Financial Analysis

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 primarily from generation fees, user fees, and the sale of collected recyclables. Additionally, the District received donations and interest in small amounts each year from 2017 to 2021.

A. Evaluation

The District has a tiered disposal fee structure of $2.00 in-district waste, $4.00 out-of-district waste, and $2.00 out-of-state waste however there is not an active in-district landfill. The District is primarily funded by its generation fee. The District collects revenue from its $8.50 generation fee. **Figure H-9.1** below presents the District's historic generation fee revenues from 2017 to 2021.

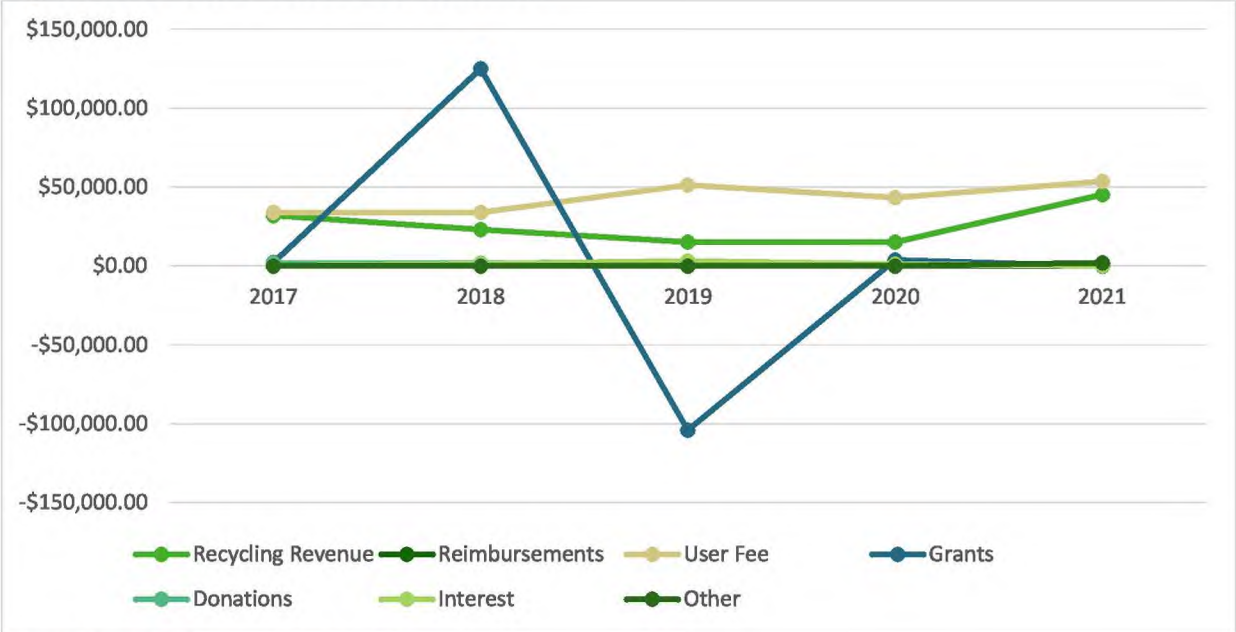
Figure H-9.1 Generation Fee Revenue



Source: Quarterly Fee Reports 2017 – 2021

Historically, the District received roughly 90% of all funds from its generation fee. However, there are a variety of other sources the District receives a small amount of revenue from. **Figure H-9.2** below presents other revenue streams.

Figure H-9.2 Other Sources of Revenue

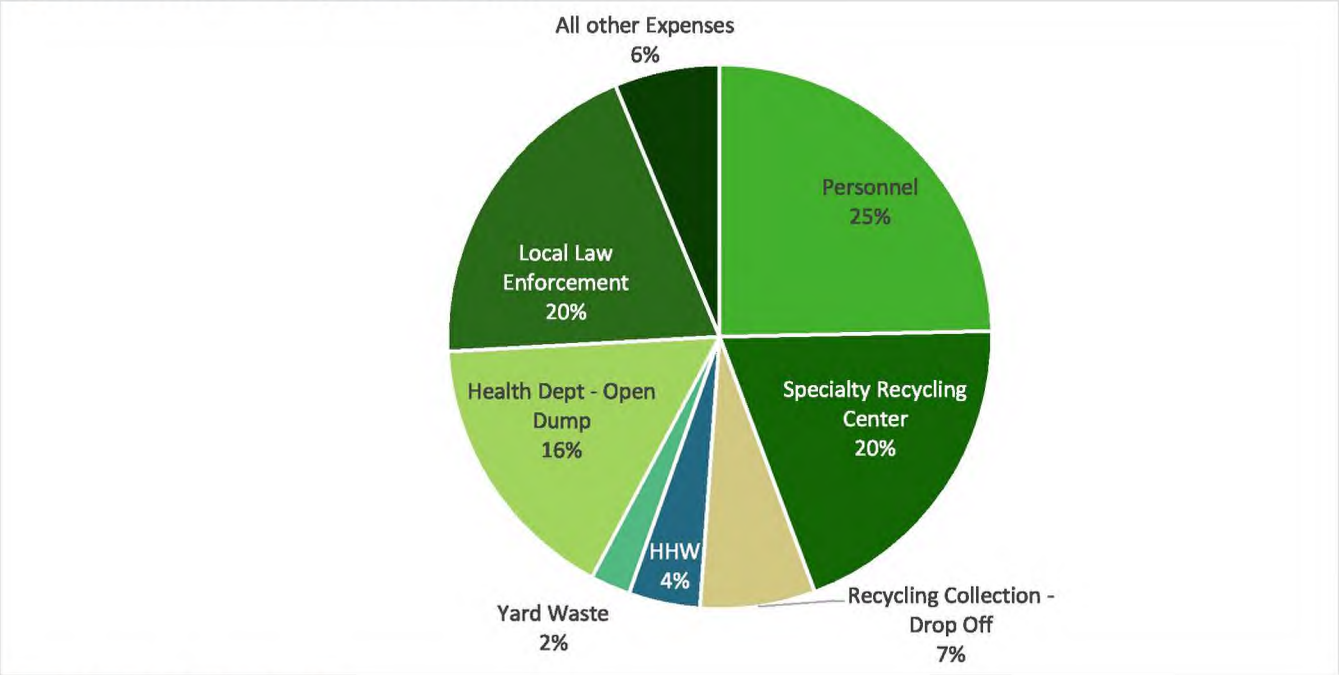


Source: Quarterly Fee Reports 2017 – 2021

Combined, the other sources of revenue account for roughly 10% annually of revenue for the District. The District received a large pass-through grant in 2018 of $125,000. The following year the District paid out that same amount for the pass-through grant but also received another grant for roughly $20,000 to purchase 20 surveillance cameras through a community and litter grant. The result of the two was a negative net source of revenue for that year.

In the reference year, the District spent a total of roughly $845,000. The top expenses were personnel, the Specialty Recycling Center, and local law enforcement funding. **Figure H-9.3** below presents the District's expenses for 2021.

Figure H-9.3 District Expense Distribution



Source: Quarterly Fee Reports 2021

Planning Period Budget Projection Scenarios

In 2021 the national average inflation rate was 4.7% and the January 2022 inflation rate was 7.5%[9]. The Policy Committee must determine what inflation factor to apply for the planning period and what services require additional spending for the planning period. Presented here are three possible budget scenarios to consider. The three following scenarios are preliminary estimates used to gauge a direction for future planning. None of these are final projections for the District's budget. Through discussions with the Policy Committee, the selected scenario will be fine-tuned for accuracy. See Appendix O for the projections to be used for the planning period by the District.

Scenario 1: Maintained Expenses with 3% Inflation

Under this budget scenario, the District maintains the current expenditures and assumes a 3% inflationary factor through the planning period. The District flatlined the expenses and revenues after the 6th year (2031) of the planning period. Given these criteria, the District is projected to incur more expenses than revenues beginning in 2026. Towards the end of 2037, it is expected that the District will reach a deficit in its fund balance despite the flatlined values beginning in 2032. **Figure H-9.4** below shows this scenario.

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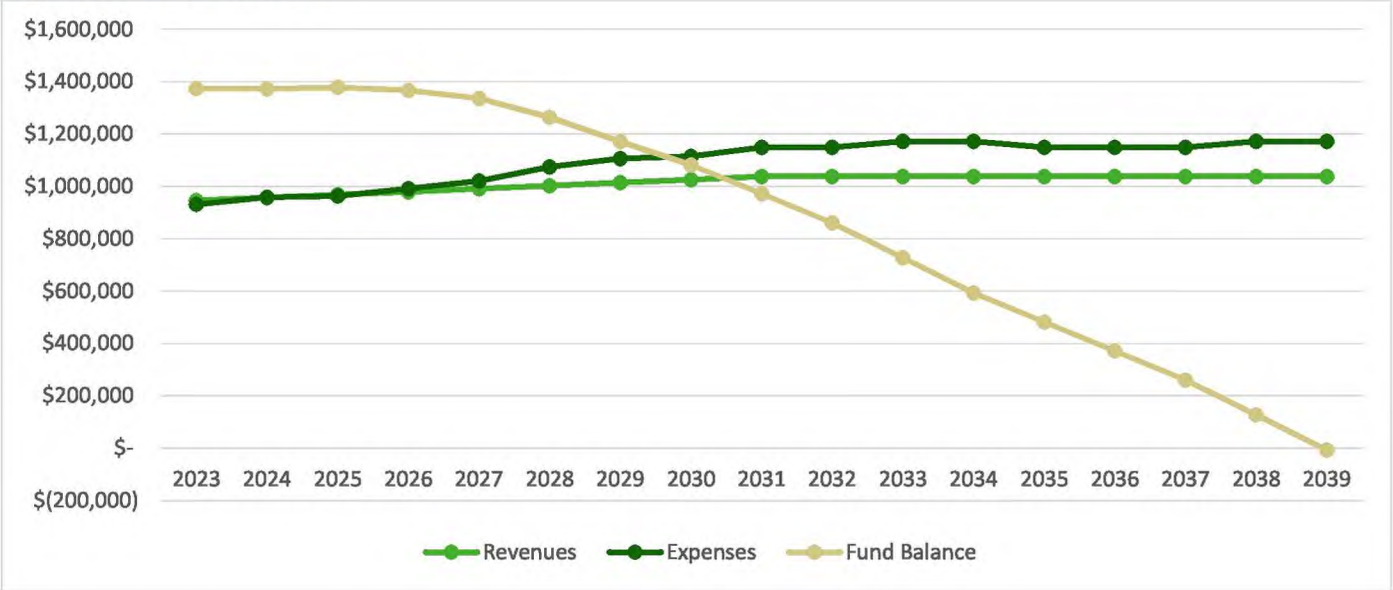
[9] Current U.S. Inflation Factor. https://www.usinflationcalculator.com/inflation/current-inflation-rates/#:~:text=The%20last%20column%2C%20%E2%80%9CAve%2C,year's%20actual%20rate%20of%20inflation.&text=Avail.,Feb.

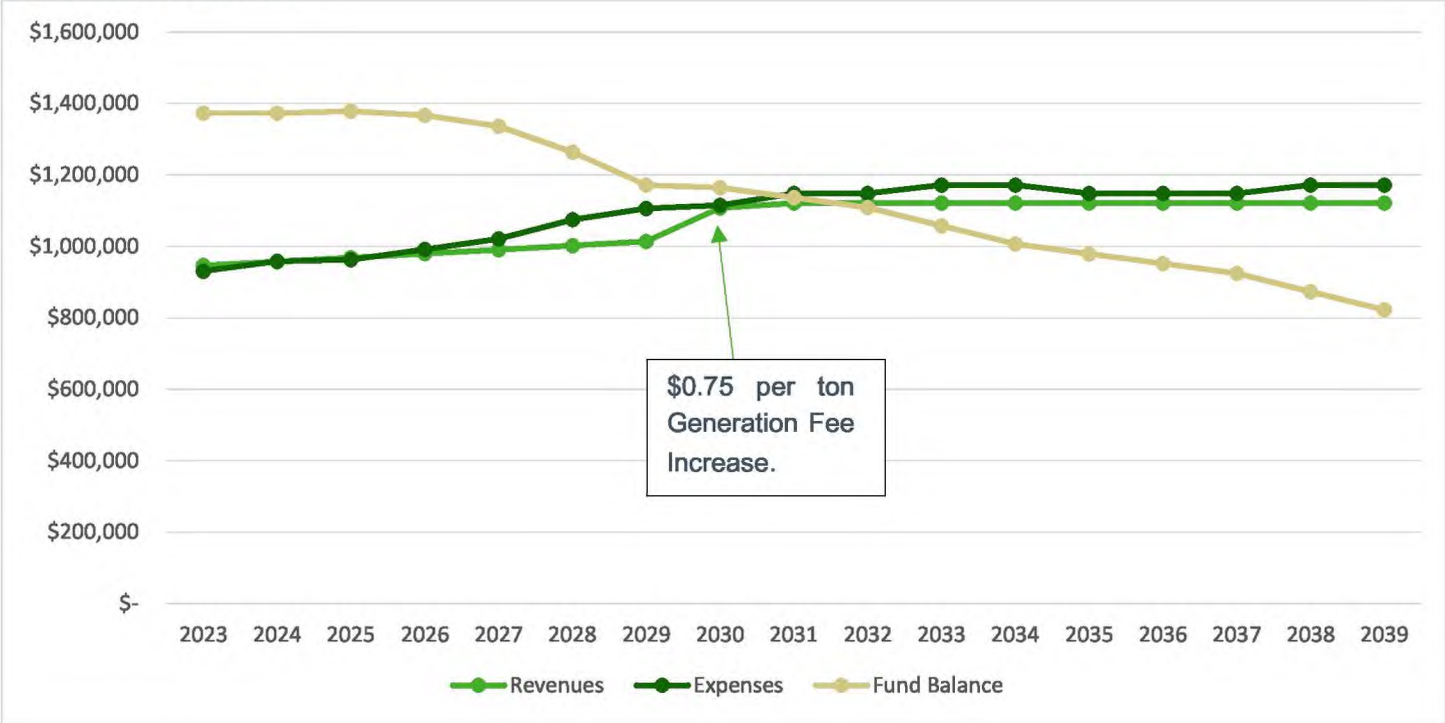
Figure H-9.4 Scenario 1



Scenario 2: Maintained Expenses with 3% Inflation and Increased Generation Fee

Under this budget scenario, the District used the same parameters as discussed in the previous scenario. The main difference for Scenario 2 is that it adds a $0.75 generation fee increase in 2030. Revenues and expenses are flatlined after the 6th year (2031) of the planning period. Assuming a generation fee increase from the current $8.50 per ton to $9.25 per ton in 2030, the District will not draw a deficit in the fund balance through the planning period. However, the District's fund balance will still be depleted beginning in 2026 until in 2039 the balance will reach roughly $820,000. This is almost a full year's worth of expenses historically. **Figure H-9.5** shows this scenario.

Figure H-9.5 Scenario 2

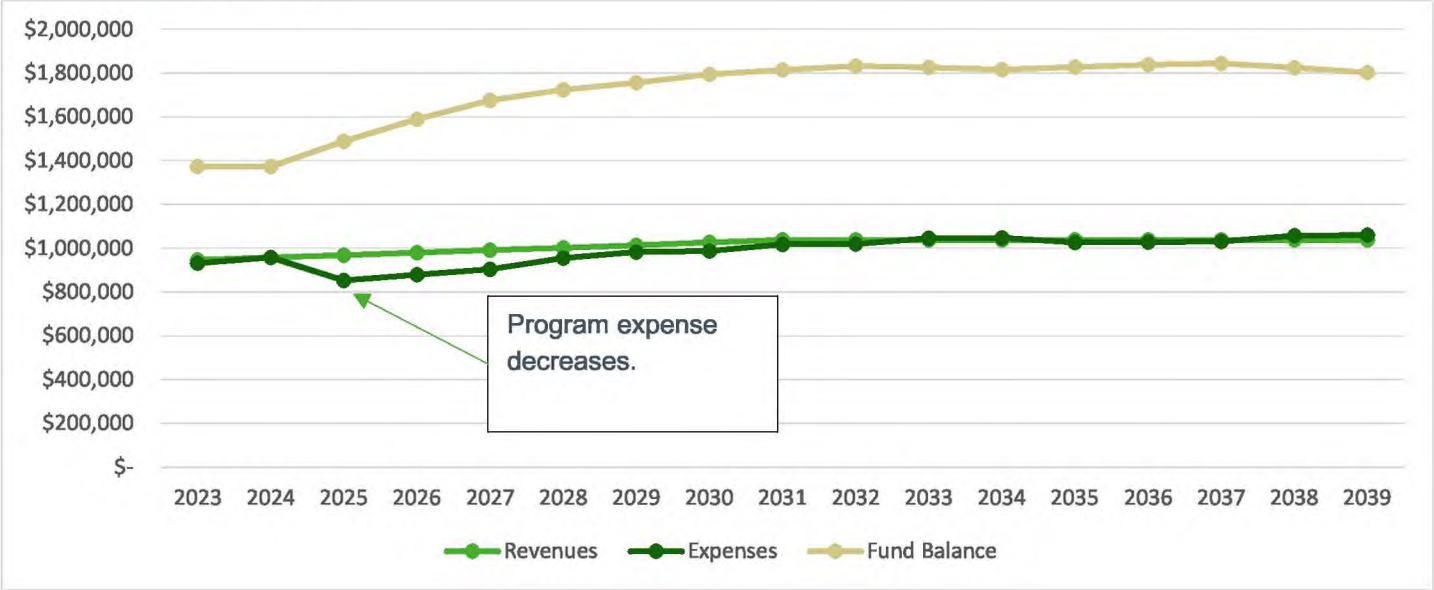


Scenario 3: Program Expense Changes with 3% Inflation

Under this budget scenario, the District assumes a 3% inflation rate throughout the planning period and flatlined expenses and revenues after the 6th year (2031) of the planning period. The District allocates 36% of its annual expenses to the health department and sheriff's department. This scenario reduces the combined funding to these programs in 2025 to 20% of the total District expenses, 10% for each program. By doing so, the District would alleviate roughly $160,000 of expenses.

Scenario 3 incorporates a portion of this amount into two programs that are currently lacking the infrastructure to recycle, curbside recycling availability, and education campaigns. This scenario allocates $40,000 to assist in the development of curbside recycling and $20,000 to assist multi-family housing complexes in the development of recycling infrastructure. These are inflated at the same rate as the rest of the expenses. This scenario shows an increase in the fund balance beginning in 2025 as a result of the savings. The balance is expected to increase until 2031 when revenues and expenses are flatlined. **Figure H-9.6** shows this scenario.

Figure H-9.6 Scenario 3



B. Conclusions

In the above scenarios, neither a status quo scenario nor a $0.75 per ton generation fee increase scenario will provide enough revenue to keep up with projected costs, even with an optimistic 3% inflation factor and numbers being flatlined after 2031. The only scenario in which the District would be expected to have an increasing fund balance, also with a 3% inflation factor, is if program expense cuts were implemented. The District will need to make changes in its current funding mechanisms or program expenses to ensure the balance remains at adequate operating levels over the 15-year planning period. This is typically operating with at least one full year's worth of expenses as an emergency buffer.

The options described above are opportunities the District considered to achieve this. After discussion with the Policy Committee, the final Budget Scenario is a hybrid and is presented in Appendix O. See Appendix O for more information on the District's detailed budget projections.

10. Regional Analysis

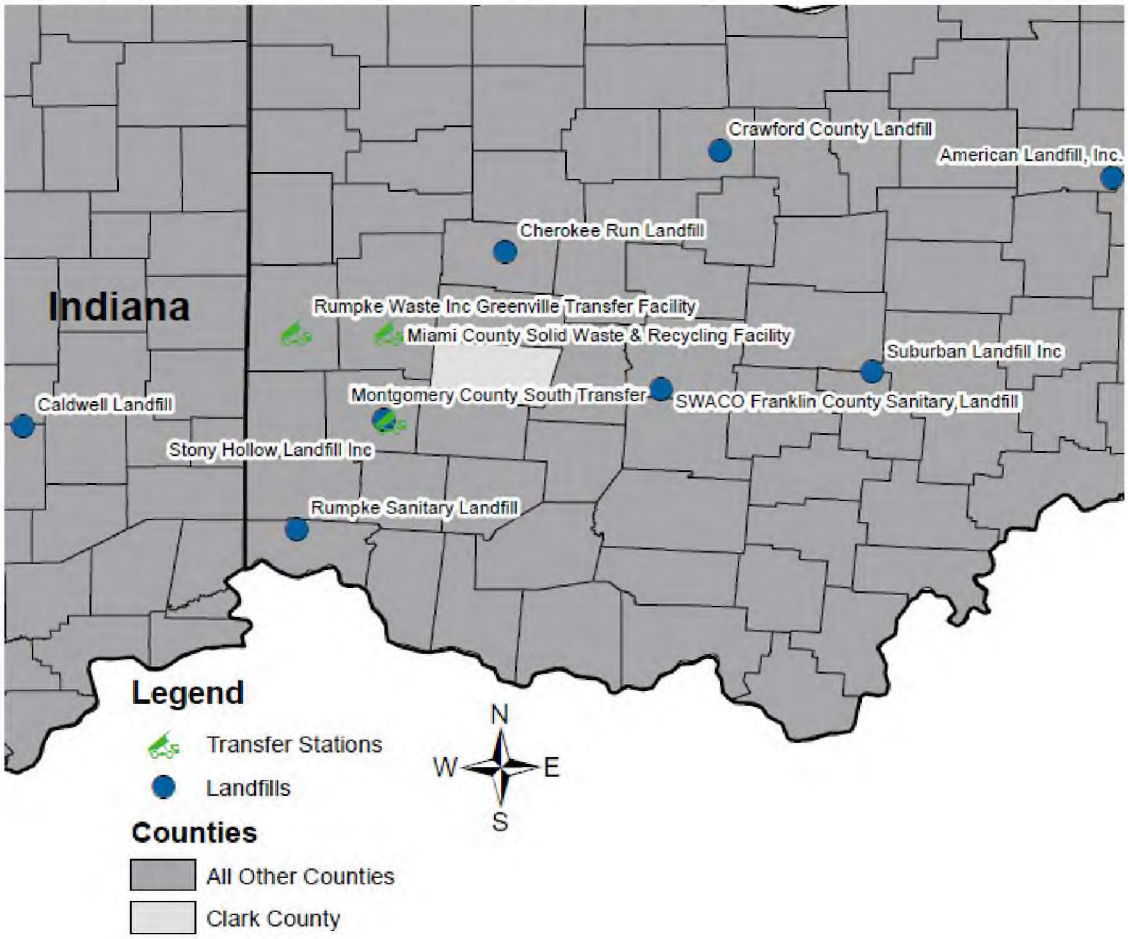
The purpose of the regional analysis is to consider regional opportunities for collaboration and partnerships and to also consider how the Policy Committee's decisions may impact other stakeholders in the region.

A. Waste Impacts

Waste material is not confined to one location or geographic area. Instead, waste can flow along multiple channels or streams based on what is the most economically beneficial. Factors such as economic pressures, the presence of facilities, the distance needed to travel, road infrastructure, and contracts between haulers and processors are all drivers of where solid waste flows.

The District does not have a landfill or a transfer station located within its geographical boundaries. The District heavily relies on neighboring Montgomery County's solid waste infrastructure to manage its waste. Roughly 80% of the District's direct hauled waste gets taken to Stony Hollow and 99% of the District's transferred waste is taken to the Montgomery County South Transfer, both facilities are located in Montgomery County. The current contract held by Montgomery County Transfer transfers waste to Rumpke Sanitary Landfill (located in Hamilton County). Clark County waste travels 30 miles to the transfer station and from there another 46 miles to the Rumpke Sanitary Landfill. **Figure H-10.1** below maps the landfills and transfer stations used by the District in the Reference Year.

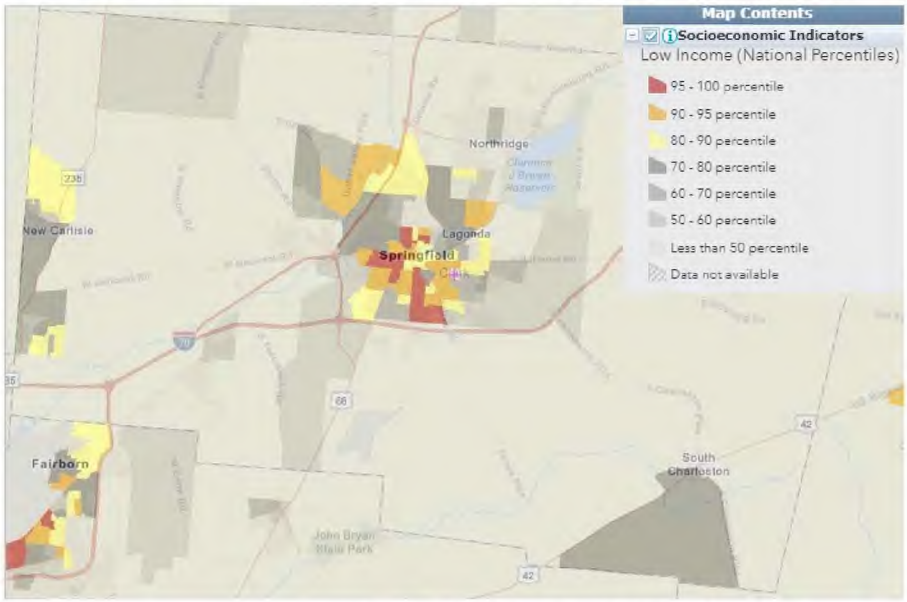
Figure H-10.1 Regional Disposal Facilities Used



B. In-District Transfer Station

COLLECTION GAP

Curbside recycling collection is a gap. The cost of waste services is considered costly by households which is an economic challenge. As discussed in *Section H-1*, the District generally has a high poverty rate. According to the US Census Bureau[10], 16% of Clark County residents live in poverty. This is 3% higher than the state average. More specifically, the District's largest city, Springfield, has a poverty rate of 22%. The District recognizes the intricate balance required to keep costs low for residents while also providing opportunities to divert materials away from landfills. As can be seen, according to the EPA's Environmental Justice Data Base, the highest levels of poverty in the District are centralized in Springfield.



Source: EPA Environmental Justice Data Base

The distance from the collection points (households and businesses) in the county creates inequality for the operating haulers. The northern county serviced areas have a farther distance than the southwestern service areas. Transportation is a factor in the service costs haulers charge to their customers. If there were an in-district transfer station the transportation costs would be more level, creating more equality for households and businesses.

One of the items explored in *Section H-1* is the ability to require haulers to provide curbside recycling collection on top of trash collection to be approved to operate in the District. This would come as an added cost to the haulers in the area and this cost increase would more than likely be passed on to the residents of the District, whether they are receiving service or not.

Smaller haulers wanting to provide curbside are forced to run the same route twice, one for trash and one for recycling. Transportation distance is an issue. These haulers must travel the farther distance to Montgomery twice as often, increasing operational costs such as fuel, maintenance, and hours, thus reducing the efficiency of the hauler's operation. Because of the increased cost for the haulers, it is likely they in turn would pass it on to residents to remain profitable.

Haulers transporting waste out of county to facilities for disposal are subject to imposed tipping fees and out-of-district fee structures. Depending on the closest facility, fees vary. This also creates inequality for the operating haulers.

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[10] U.S. Census Bureau. https://www.census.gov/quickfacts/fact/table/clarkcountyohio/PST045222

If the District were to have an in-country transfer station, the costs could remain low and possibly even decrease from economies of scale, depending on how many residents use the service and the haulers' operating costs. Like any built capital, transfer stations are expensive to construct, often being multi-million dollar projects just to build and equip. In addition, the transfer station must then be staffed and made operational, requiring more investment. One example to help manage costs is a public-private partnership. In such a model the District owns the land, while a private company operates the transfer station. The Delaware-Knox-Marion-Monroe (DKMM) Joint SWMD uses this model at their transfer station in Delaware County. Because the transfer station is county-owned, it can dictate what services must be provided. This affords many benefits to the larger Solid Waste District, allowing them to specify what material must be accepted, creating a revenue stream from tipping fees, reducing transportation costs, and allowing flow control establishment to require waste to be transported to the facility.

The District could explore the possibility of establishing a transfer station and the details on how it would be funded and run. If the District were to develop a transfer station, it could establish flow control to prevent monopolization in the waste stream and allow smaller haulers to continue to operate. Furthermore, it would reduce the distance traveled by haulers, which could save costs operationally. One method of establishing flow control is to enter into a contract that is signed by legal entities delivering solid waste in the District that states they must take waste to a designated facility, in this case, the potential transfer station in Clark County.

Montgomery County has a similar flow control agreement with its legal entities. Each legal entity signs a contract that states they must deliver waste to facilities designated within Montgomery County. The most efficient way to manage waste in the District would be if it could get its legal entities, namely Springfield as it is the largest population base in the County, to agree to sign a contract to bring all waste to a Clark County Transfer Station (if built). If this were to be accomplished, there may be fewer haulers transporting waste to Montgomery County because it would not be the most economically feasible option any longer.

If Clark County were to have an in-district transfer facility to work in conjunction with establishing organized waste collection and curbside recycling throughout the District, it would accomplish three items. First, the District as a whole could realize cost savings via a competitive bid price on the aggregated volume of waste throughout Clark County. Secondly, the transportation of waste would be much more efficient. Small haulers and large haulers alike would likely see cost savings in transportation, allowing a minimal or no increase to provide more than just trash service to residents. Lastly, because of said cost savings, the transfer station would level the playing field so to speak for small haulers, preventing a monopoly from larger haulers that could currently outbid them because of economies of scale and access to larger funding.

The construction of a transfer system in Clark County would alter the regional geographic landscape of the waste industry. Many intricacies would develop throughout the process. If the District wants to pursue constructing a transfer station in Clark County, a more in-depth analysis than the one presented above is required. The District would likely need to conduct a feasibility analysis to determine the costs, waste flow, interplay with recycling programs, requirements/designation, and regional ramifications before making any further decisions.

TONNAGE ANALYSIS

If the District were to consider building a transfer station in Clark County, the regional waste flow would be altered. Without confirming a baseline tipping fee and whether the transfer station is privately or publicly operated, it is challenging to determine where waste would flow from other regional counties. Economically, it would likely be more feasible for all District waste to be sent to this transfer station before being disposed of at a landfill. Based on historical disposal data, this would equate to about 100,000 tons of waste annually from Clark County alone. Depending on the established tipping fee, transportation distances, and market factors, other regional counties would also likely send waste here, especially if the transfer station is operated by a large hauler who also operates in neighboring Districts.

The transfer station could potentially receive materials from many counties in the region such as Miami, Greene, Champaign, and Madison, though others may also be included.

2015 TRANSFER STATION FEASIBILITY STUDY

The idea of establishing a transfer facility in Clark County is not a novel one. The District has long considered the costs and benefits of doing so. In 2015, the District hired GT Environmental to conduct a feasibility study to evaluate the development of a solid waste transfer facility in the District.

The study operated under the assumption that a transfer facility would be built in Springfield and identified the following factors faced by the District at the time:

- All solid waste in-county must be directly hauled between 26-34 miles to receiving facilities which adds cost from transportation
- Ninety percent of transferred solid waste goes to Montgomery County transfer facilities
- Montgomery County transfer tipping fees, including out-of-district waste, are low due to the Montgomery County annual property charge assessment on residential, commercial, and industrial properties.
- Southwest Ohio is reliant on two primary waste management services that own landfills, Waste Management and Rumpke

Six years later, in 2021, the District still must travel out-of-district to transfer or direct haul waste, often requiring a 1.5-hour round trip. The District has gone from 90% of transferred waste delivered to Montgomery County facilities in 2015 up to 99% in 2021. Regionally, the District is still reliant on landfills owned by Waste Management and Rumpke. While the Montgomery Transfer Facility Fees were lower in 2015, in January of 2022[11] the fees increased nearly 50% from $37 per ton to $55 per ton of out-of-district waste. This was the first fee increase in 24 years.

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[11] Dayton Daily News, https://www.daytondailynews.com/local/waste-fees-rising-for-out-of-county-users-for-first-time-in-24-years/CSZM7FTWDFEQXE2PZLPEHG47WY/#:~:text=Montgomery%20County%20will%20raise%20the,ton%20from%20%2437%20per%20ton.

The 2015 study found that the total hauling costs from the District to the Montgomery County South Transfer Facility were $135 per ton. On top of the fee increase in 2022, gas prices have increased as well. According to the U.S. Energy Information Administration [12] (EIA), gas prices have risen by $1.19 per gallon from 2015 to 2021, an increase of nearly 50%. While it is uncertain the exact amount per ton haulers in the District are paying as of 2021, it has most likely increased and is anticipated to continue to rise. In 2015, it was estimated that having a transfer station in Springfield would result in transportation savings between $800,000 to $1.2 million for haulers operating in the area. **Table H-10.1** lists the benefits and consequences identified in the report.

Table H-10.1 2015 Study Pros and Cons of a Transfer Facility

Potential Effects of Transfer Station in Clark County	
Benefits	**Consequences**
Decreased cost for solid waste management for generators and haulers	Moves away from an open market system to a flow controlled one
Provides local disposal option for small haulers who don't own a landfill	Impacts on existing transfer stations and landfills outside the District
Provide local disposal options for residents and businesses	Market downturns can significantly impact facility revenues
Provides bulky item disposal for residents	More competition could result in additional haulers operating in the District
Economic opportunities including new jobs	Cost savings may not always be passed onto the generator from the haulers
Cement an environment that fosters the inclusion of small local haulers	Large haulers who own landfills could pull out of the District for loss of disposal tonnages
Opportunity to work with other SWMDs to share facilities or jointly contract for disposal capacity	

C. Conclusion

The District could benefit from establishing a transfer station and has an opportunity to explore this in this Plan Update period. The District is reliant on regional facilities, mainly in Montgomery County, to transfer or dispose of waste. This requires haulers to drive roughly an hour and a half round trip for each truckload to dispose of waste, increasing their operating costs from fuel, vehicle maintenance, and time/efficiency. As of this Plan Update, the District is aware of conversations with private companies and the county commissioners to explore a public-private partnership for the development of a transfer station. To date, no formal agreement has been reached.

Should it prove infeasible to develop a full-scale transfer station, the District would remain interested in some sort of facility that could accept waste. The District would explore the construction of a waste

[12] U.S. Energy Information Administration, https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMD_EPD2D_PTE_R20_DPG&f=W

convenience center that could act as a small, Clark County specific facility for trash and recycling with the potential to expand the materials accepted to other material streams as well. The District would explore two possibilities for this center.

1) Basic Waste Convenience Center

This center would have limited capacity to accept waste material. One trash dumpster and one recycling dumpster would be on site. Access to these dumpsters would not be open to the public and would be restricted to select haulers. The District would prioritize building this site on county-owned land, thus eliminating the need to purchase land. The District has not conducted a comprehensive study at the time of this plan update. However, regardless of the site selected, it is expected to require site improvements, permitting, engineering inspections, and contingencies. For the purpose of this plan update, the District is using a planning estimate of roughly $60,000 for these costs plus an additional $50,000 in annual operating expenses.

2) Intermediate Waste Convenience Center

This center would have much more capacity than the Basic Center model. In this model, the District would still prioritize building this site on county-owned land, thus eliminating the need to purchase land. It is expected to require site improvements, permitting, engineering inspections, and contingencies. This facility is assumed to require tip walls, railings, elevated loading dock, lighting, and significantly more capacity to handle waste than the Basic Center. With the additional capacity, the District would also explore the opportunity to accept additional materials outside of waste and recycling such as HHW. For the purpose of this plan update, the District is using a planning estimate of roughly $500,000 for the capital costs plus an additional $50,000 in annual operating expenses and $60,000 annually for staffing.

Potential Benefits of an In-District Transfer Station:

Flexibility – Having a transfer station could provide the District with flexibility in relation to securing the most beneficial disposal options for the District. The transfer station would shorten the distance haulers must travel to drop off waste collected, therefore reducing costs. This opens the door for further improvements to the waste collection system such as the increased feasibility of haulers offering curbside recycling services to residents throughout the District.

- **Reduced Cost for District to Manage Waste** – On top of the standard operation of the transfer facility and its benefits, the District could also utilize the station similar to the Clark County Recycling Facility by providing another centralized location for residents to drop off trash and hard-to-manage materials such as bulky items, HHW, electronics, scrap tires, etc. Many of these materials are often illegally dumped, requiring the sheriff's department or health district to clean up the site. Providing another centralized outlet location could indirectly reduce costs associated with clean up and remediation of dumped materials.

- **Reduced Vehicle Maintenance for Haulers** – Haulers operating in the District travel many miles each day on streets throughout the County. Because there is no disposal facility in the District, most of the waste gets hauled to Montgomery County which is roughly 33 miles from Springfield. Meaning, each load of waste taken results in 66 miles driven on top of the amount driven to collect

the waste. These additional miles result in increased maintenance costs, shortened life span of vehicles, and additional fuel costs.

- **Reduced Labor and Time** – Similar to maintenance cost savings, haulers would spend less time on the road if delivering to an in-district facility rather than one located out-of-district. It takes about 45 minutes each way to reach Montgomery County facilities from Springfield, an hour and a half round trip. This results in the time that could be served to provide additional services within the District.

- **Curbside Recycling Feasibility** – Building off of the previous two potential benefits, a major potential positive for a transfer station in Clark County is an opportunity for curbside recycling services. Recycling is not free, it costs money for haulers to do and this is in turn passed onto residents on their bills. Because of the reduced labor and vehicle cost savings that could be realized from an in-district transfer station, haulers would likely see operating costs remain the same if not decrease even with additional curbside services. A transfer station is key to cutting costs for haulers and may provide more savings through economies of scale.

- **Local Hauler Service** – The potential cost savings from a transfer station on operation costs for haulers helps level the playing field between small and large haulers. All haulers would benefit from the cost savings, helping to maintain an open market system with residents' choice in deciding on a hauler.

Potential Challenges:

- **Flow Control** – Historically, there has been heavy pushback when it comes to removing choices from residents in Clark County. Establishing a transfer station may also result in flow control, whether loosely through economic efficiencies or by being mandated by the District. This may be seen as limiting the existing open market. However, it is likely to be more economically feasible for haulers to take waste to an in-district transfer station and so this would likely be done regardless.

- **Location and Design** – The location and design of the transfer station are critical to the successful operation of the transfer facility. A deeper analysis of the location, capacity, and rate structure would be needed before building.

- **Funding** – A transfer station will require a large capital investment if the District decides to own it. While every facility is different and may have significant variation in cost, a significant capital investment in the millions of dollars will be needed. While the District has an adequate fund balance and maintains positive net flow consistently, a separate study to determine cost estimations would be required.

- **Large Hauler Recession** – While unlikely due to the current open market that effectively negates any monopolies on waste hauling, if some sort of flow control was designated to a transfer station there may be large haulers pulling out of the District due to loss of tonnage share.

- **Owning and Operating** – The method of operation for a transfer facility varies. Some are privately operated and owned, publicly operated and owned, or a hybrid of some sort. Whichever operation is chosen must be economically and politically acceptable.

11. Data Collection Analysis

This analysis evaluates the District's current data collection efforts and identifies ways to improve its data.

Waste is generated by three sectors: residential, commercial, and industrial. Waste sources reduced, recycled, composted, incinerated, and disposed of are measured to establish a baseline determine waste generation, and measure recycling rates. Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Regardless, the primary objective of the District is to divert materials from landfills, therefore an accurate measurement of diversion from landfills is needed.

Data availability has not prevented the District from achieving Goal #2 of the State Plan, which requires a waste reduction and recycling rate of at least 25% for the residential/commercial sector. In the Reference Year, the District's residential/commercial sector achieved a 36% waste reduction and recycling rate.

As has been explored, the District relies on its yard waste diversion and EPA reports to meet Goal #2. The District has not surveyed either its industrial sector or residential/commercial sector since 2018.

Data collection is vital to measuring the waste reduction and recycling rate goals. While the District meets EPA's Goal #2, there is little data on how much the commercial and industrial sectors are recycling. It is likely that many of the businesses in Clark County are recycling, but the data is not being tracked or recorded. The District could consider surveying its commercial and industrial sectors again, on an annual or bi-annual basis. Surveying also helps establish further rapport with local businesses and creates relationships with them, making subsequent surveys easier to receive. Surveying the commercial and industrial sectors annually or bi-annually would help to reduce the reliance on Clark Couty's yard waste stream to meet diversion.

12. Education and Outreach Analysis

In accordance with Goal 3 of the 2020 State Plan, each SWMD is required to provide four minimum education programs: website, resource guide, infrastructure inventory, and speaker/presenter. Goal 4 of the State Plan, the District is required to provide education, outreach, marketing, and technical assistance to identified target audiences.

A. Minimum Education Requirements - Evaluation

Website:

The District maintains a website at https://www.clarkcountyohio.gov/633/Solid-Waste-District. The website is a sub-section of the Clark County government's website, but information is updated and maintained by the District. The website is a resource that provides much of the information that residents and educational

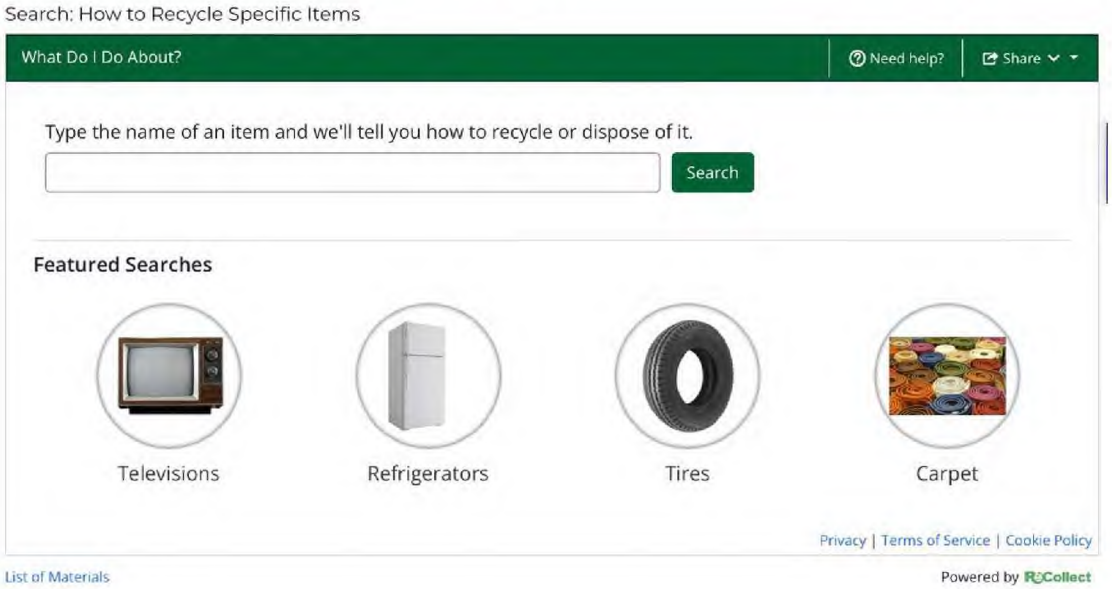
institutions would seek. The homepage is key to user navigation and is updated regularly to reflect recycling services, seasonal program info, and simple opportunities. The webpage provides a full inventory of the infrastructure, drop-off collection locations, information about compost and hazardous waste, District contact information, and local events and opportunities.

The website follows best practices with clear and concise information, minimal text, and easy-to-follow links. The website follows a simple and attractive format.

Opportunities:

- Add an online widget search function on how to recycle materials.
- Track website analytics to know which items and subjects users are searching for.
- Add short, less than one-minute, educational videos on key topics.

Figure H-12.1 Example of Website Widget



Resource Guide:

The District's webpage includes multiple tabs with information regarding the resources available for waste recovery in Clark County. These include drop-offs, alternative local recycling options, specialty recycling, compost locations, and HHW management. The District does not include any information on curbside recycling. This could be added during this plan update to ensure all recycling information throughout the District is readily accessible on the website.

Infrastructure Inventory

An infrastructure inventory can be found in the Plan, which is updated every five years, and specific infrastructure is identified on the website. Web content is updated frequently, often yearly through the publishing of the District's annual reports, events, and program changes. The District provides annual reports, previous and current solid waste plans, and Policy Committee meetings as well.

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 goals/commitments, feedback, prompts, and one-on-one interactions. The District offers the following outreach and education strategies:

- Website and social media
- Program brochures, advertisement
- Workshops
- School outreach
- Elected Official Outreach
- Keep Clark County Beautiful

The District uses many forms of outreach and education to teach and inform residents how to properly manage and divert waste. These programs are crucial for measuring and ensuring recycling programs are effective.

Target Audience: Residents

This is the primary target audience for the District. As such, there are many programs and initiatives designed to target this sector. The District utilizes its website, social media, brochures, and advertisements to provide residents with information regarding HHW, composting workshops, drop-off locations, and accepted recycling materials.

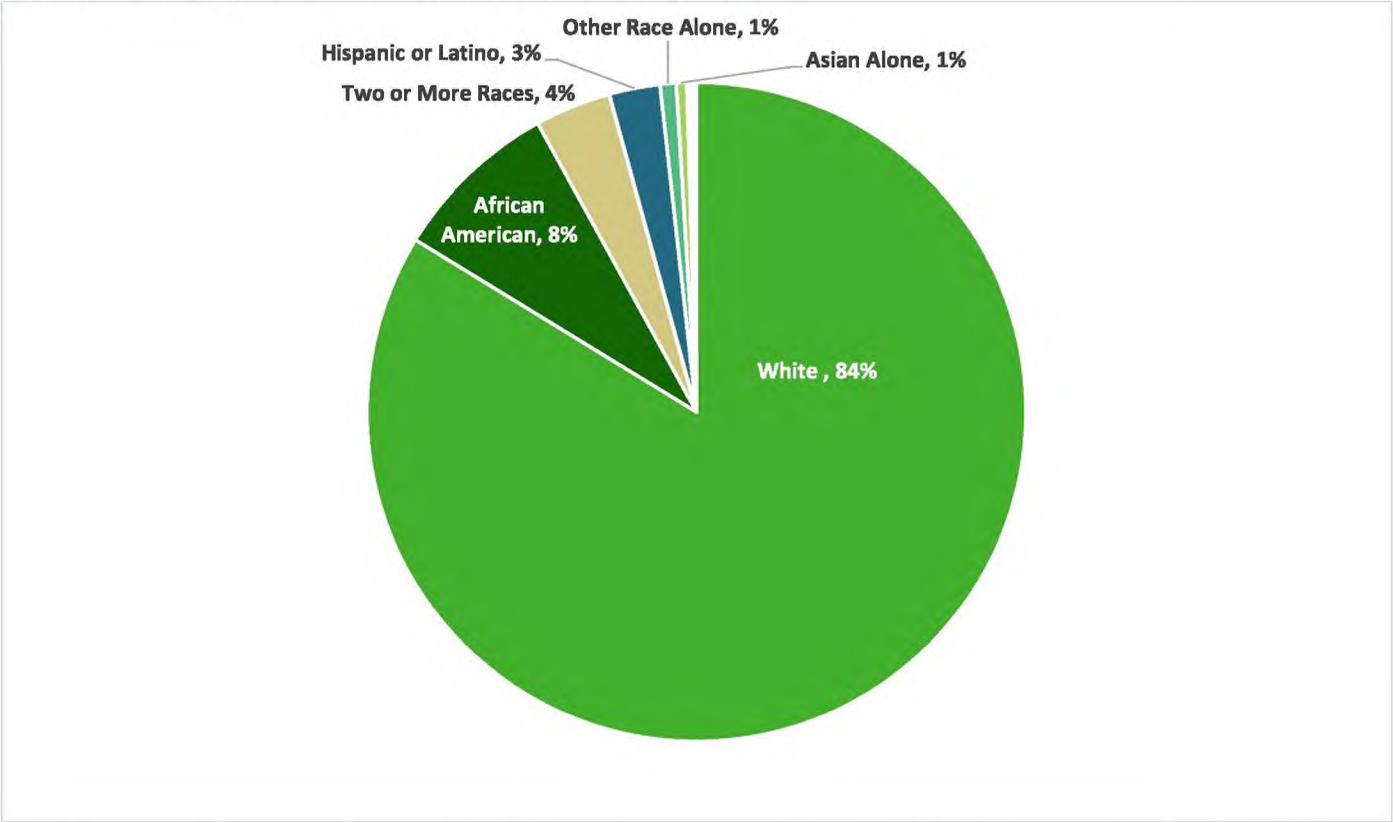
District brochures are located at four permanent locations, the Library, City Hall, County Administration Building, and its offices on Main Street. Advertisements are focused on promoting the correct recycling of materials and the decrease of incorrect items being put in bins. This is done through monthly digital ads, press releases, and media coverage. The District also has a public information officer to assist with social media and other forms of mass information to residents.

The District also partners with Keep Clark County Beautiful, a Keep America Beautiful affiliate, to engage Clark County residents to take pride, ownership, and responsibility for enhancing their community's environment. The District coordinates this national affiliation to highlight the value of community beautification and putting waste in its proper place. It offers proven models and tools that enhance residents' ability to make a difference in Clark County.

Education and outreach programs need to reach all the audience sectors. When it comes to recycling outreach, one type of approach does not reach all. Barriers can be cultural, low socio-economic levels, and languages, to name a few. Keeping these considerations front-of-mind can go a long way to cleaner recyclable streams and more recovery. What can be seen from research is a slight shift in Clark County's demographics. **Figure H-12.2** shows the District's population by percentage of ethnicity. The District has experienced a shift in race and ethnicity between 2014 and 2020 (comparison between the 2018 Plan

reference year and the closest year to the 2025 Plan reference year)[13]. Since 2014, the District has experienced a decreasing white population and increasing Hispanic population. The Hispanic population in Clark County has nearly doubled in this time from roughly 1.5% in 2014 to 2.5% in 2020. At the same time, multiracial populations have risen from 2.4% in 2014 to 3.7% in 2020. At the time of this report, 2021 data was not available.

Figure H-12.2 Population Percentage by Ethnicity 2020



Is the District's current education and outreach diverse and inclusive to languages and marginalized populations? Is the District prepared for further potential race and ethnicity shifts?

Opportunities:

- Develop brochures in Spanish.
- Household outreach to ethnic-centered community events, stores, etc.

<u>Target Audience: Commercial and Institutional:</u>

The District primarily reaches this sector through its Business Waste Recognition Assistance Program (BWRAP). This program offers technical assistance and education/awareness to businesses within Clark County. The District has historically worked with companies to provide technical waste reduction

[13] Race and ethnicity data was not published for 2021 so the 2020 data was used. Source: https://datausa.io/profile/geo/clark-county-oh

assistance on the basis that they contact the District. Elements of this outreach approach are providing direct assistance to employ waste reduction, maintaining a web page specific to businesses, and encouraging bars and restaurants to recycle by offering free receptacles.

The District has a dedicated tab located on Its website for local businesses. On this page, the District promotes its Recycling Makes $ense program which seeks to educate businesses as to how recycling can improve their bottom line while also diverting materials from landfills. In conjunction with the location of this program on the website is the promotion of Ohio Materials Marketplace, a free online platform allowing businesses and organizations to connect and find reuse and recycling solutions for waste and by-product materials. Recycling processors, manufacturers, small businesses, construction contractors, artists, and others can find usable materials and/or markets for their waste and disposal products by following the link provided on the website.

Opportunities:

- Digital and social media contest.
- Feature green businesses.
- Feature newsworthy stories about businesses going above and beyond to recycle. When coupled with county-wide recognition the opportunity is optimized. Pitching personal recycling stories to media that are visual and heartwarming are usually well received. These news stories can increase exposure to the District's target if posted on the news outlet's website and subsequently posted on the District's website and social media.
- Host webinars to commercial sector inviting case study businesses that have had success with recycling and have seen cost savings because of it.
- Material specific education and outreach campaign such as bar glass.

Target Audience: Industrial Sector

The District's commercial sector programs are also available to this sector. The 2020 State Plan created a new goal for Districts to incorporate a strategic initiative for the industrial sector into solid waste management plans. However, this is not a priority area for outreach resources for the District to spend. Lacking this programming the District benchmarked other districts to see what they are doing to reach this audience. Many across the state advertise the Ohio Marketplace, offer technical assistance, waste sorts, and grant assistance.

Target Audience: Elected Officials:

Elected officials are reached primarily through programs designed to increase curbside recycling in the District. This is a challenge the District has struggled with historically. The District's Take It To The Curb Program and Recycling Grants attempt to work with elected officials and political jurisdictions to encourage new curbside recycling programs but have not been successful in developing new programs.

Clinton County SWMD connects face to face with elected officials and conducts the household survey research to provide more information to the elected officials for moving forward with curbside recycling. It's community based which is performed on a smaller scale than the Take It to the Curb Campaign. The results gathered from one community led to Village officials inquiring of local haulers about the possibility of adding curbside recycling to their current waste collection services. Unfortunately, due to the Village's

small size and rural location, no haulers were willing to provide curbside recycling in that area. However, Village officials expressed interest in looking into the possibility of forming a waste consortium with other potential communities in the future.

Opportunities:

- Focus on using face to face meetings both one on one and in groups.
- Invite elected officials from other communities outside of the County to share about their best practices and diversion achievements.

Target Audience: Schools

The District offers classroom presentations that focus on litter prevention and recycling. The District has a full-time Program Specialist who aligns the content of each grade-specific program with ODE's New Learning Standards, allowing teachers to utilize these programs to enhance lesson plans while also providing students with a hands-on opportunity to learn about recycling and taking care of the environment. In the Reference Year, 13 presentations were given to a total of 200 students The District also offers school field trips to the Clark County Recycling Center to school groups of 25 students or less and offers partial or full subsidization for the cost of the field trip dependent on the total cost.

The District offers a Waste Reduction Program for educators who want to promote waste reduction in their schools. Contracts are for amounts up to $500 and can be used to purchase equipment for recycling or for field trips or other events to educate about recycling and waste reduction.

Lastly, newsletters are developed specifically for educators and are sent to local schools as well as posted on the District's website. The newsletters detail important information on events and programs occurring in the District. It also highlights any educational activities or programs taking place in the schools such as the Earth Day Grocery Bag decoration where students decorate paper grocery bags with environmentally friendly messages. During the week of Earth Day, a local Kroger store distributes these bags to customers shopping for their groceries. However, this program has not occurred since COVID-19.

B. Conclusion

The District's education is well-developed and strong. The strategy approach for deploying education is designed to integrate one-on-one, small, and large group settings to message and engage audiences. Social media and the website add support to the District's efforts and create additional forms of interactive communication. Collateral tactics used are varied such as field trips, presentations, brochures, etc. which drive the point of the message.

Language barriers could be an obstacle and has room to explore best practices for reaching non-English speaking audiences.

13. Processing Capacity Analysis

A material recovery facility (MRF) is a specialized facility that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers. Materials collected through curbside programs, drop-off programs, and other District programs collecting recyclables are sent to MRFs.

The only MRF the District used in the Reference Year was the Rumpke Recycling – Dayton MRF. The District sent roughly 3,900 tons of material to this location, with about 95% of those materials deriving from the residential/commercial sector.

Rumpke processes glass bottles & jars, aluminum & steel cans, plastic bottles & jugs, mixed paper, cardboard, and cartons. The Rumpke Recycling MRF is located in Montgomery County and is a Category III facility, which presorts, compacts, and transfers recyclables. Once the material is sorted at the Dayton location, the materials are sent to other locations. This facility is 25 miles away from Springfield in Clark County.

APPENDIX I

CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

Appendix I.
Actions, Priorities, and Program Descriptions

To fulfill the directives in Ohio Revised Code Section 3734.50, the District's Solid Waste Management Plan must demonstrate strategies and programs to address the 10 required goals listed below. This 2024 Plan Update is prepared to comply with the State of Ohio 2020 State Plan and ensures the District makes progress toward achieving the 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.

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 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.

Appendix K shows the District's progress in meeting Goal 2 of the 2020 State Plan. To obtain approval from Ohio EPA for the solid waste management plan, the District must demonstrate being able to achieve either Goal 1 or Goal 2. The District achieves Goal 2 by demonstrating a 36% diversion rate.

This appendix describes the accomplishments of the strategies/programs and their future direction for the 2024 Plan.

A. Actions and Priorities

1. Actions

Appendix H evaluates the District's performance of programs and strategies in offering and maintaining services. Evaluation of these programs involves determining whether the performance observed was expected or desired. If these strategies did not perform as anticipated, suggestions were presented to improve and strengthen programs and performance and increase effectiveness. As part of this analysis, a list of opportunities was created, identifying possibilities for the District's future programming.

The District estimates that 48% of the items generated could be recycled at the curb. Of the 48%, approximately 11% is recovered and 89% of the materials have a high potential for recovery at the curb and have a high economic value. These materials consist of cardboard, paper, plastics, metal, and glass. There is a great potential for collecting and processing more recyclables. The effort to increase the collection of materials requires changes to programs, such as expanded collection and the enhancement of drop-off convenience centers that complement curbside collection.

While there are at least four haulers in the county, curbside recycling collection infrastructure remains a gap. The District operates under an open market system where political jurisdictions have the ability to contract for services. Only two haulers offer curbside recycling and the largest political jurisdiction's charter prevents trash contracted services. There is a practice that households in the District competitively price for trash services which results in hauler changes and frequently a disinterest in paying for recycling at the curb. Thus, cost of service for curbside recycling is a challenge.

A working strategy session with the Policy Committee discussed collection infrastructure and options as well as other future programming that could be pursued. What ensued was a suggested list of programming. Suggested areas of improvement and new programs do not bind the District to commit to every action listed.

2. Priorities

As part of the planning process, the Policy Committee gave a priority status for each program and further discussed goals, changes, and ways to improve or continue existing programs.

The matrix below includes the list of existing programs, potential changes, and potential new programs. The priority status rating is defined as:

- Priority 1: Short term, 1 – 3 years.
- Priority 2: Medium term, 3 – 5 years.
- Priority 3: Long-term, 5+ years.

Program Description	Potential Changes	Priority			
		No Changes	1	2	3
Drop-Off Recycling Program	NONE	X			
Drop-Off Recycling Evaluations	Evaluate if additional drop-offs are needed to better serve the District. - Set a Goal of reducing contamination and increasing participation to obtain baseline tonnages and contamination rates for common mistaken materials. Conduct a survey to understand the best method of reaching target audiences.		X		
	Conduct a contamination campaign using community-based social marketing techniques. Perform the education campaigns with pre and post-audits. Seek Ohio EPA grants for funding to conduct the audits and develop the campaign.				X
	Explore Miami County's program and implement some best practices they find successful for their program.				X
	Continue to emphasize education/outreach at drop-off locations through the Adopt-A-Drop program, media ads, presentations, improved signage, and training sessions.		X		
Government Office Paper Recycling	NONE	X			
Business Waste Reduction Assistance Program, BWRAP	Conduct a study to identify by NAICS codes the largest generators to reach out to and perform on-site audits, targeting one to two businesses per year.		X		
	Increase promotion of the program to decision-making positions within organizations and institutions.		X		
	Expand to the industrial sector.		X		
Business Paper Recycling	NONE	X			
Office Paper Recycling	NONE	X			
Food Waste Management Program	Create a section of the website dedicated to food management that provides useful links to local resources and additional information on the importance of food rescue and recovery. Focus on methods to change consumer behavior and encourage source reduction.		X		
	List the local food bank's location and contact information.		X		

Program Description	Potential Changes	Priority			
		No Changes	1	2	3
	Explore private sector food depackaging to help diversion through available grant funding.			X	
C+S Tree Service Contract	NONE	X			
Monitor & Provide Support to Private Composting Facilities/Programs	NONE	X			
Yard Waste Collection at Clark County Speciality Recycling Center	NONE	X			
Electronic Waste Management Program	NONE	X			
Household Hazardous Waste Program	NONE	X			
Scrap Tire Management Program	NONE	X			
Battery Collection Program	NONE	X			
Expanded Polystyrene (EPS) Recycling	NONE	X			
Enhancement to HHW/Electronics/LA Battery/Scrap Tire programs as a result of the Specialty Recycling Center expansion	NONE	X			
Furniture Drop Program	NONE	X			
Curbside Recycling Grants	Change the parameters of the grant to provide households without curbside service an incentive to subscribe to the service. This could be offered as a per-household cost sent directly to the preferred hauler for a set number of months.		NO		
	Work with at least one political subdivision towards establishing curbside annually.				X
Curbside Recycling Initiatives	Set a goal to achieve at least one non-subscription curbside program with a focus on areas of high population density.				X
	Engage communities and stakeholders to gauge interest/demand, determine barriers, explore economic incentives, and offer technical assistance/grant funding support.				X

Program Description	Potential Changes	Priority			
		No Changes	1	2	3
	Explore methods to obtain reliable data from the various haulers operating in the District to document recycling efforts.		X		
Education for Schools	NONE	X			
Clark County Specialty Recycling Center/ Expansion of Facility	NONE	X			
Health Department Funding	NONE	X			
Sheriff Department Funding	NONE	X			
Adopt-A-Road/Spot Program	NONE	X			
Earth Day Community Clean-Ups (The Great American Cleanup)	NONE	X			
PRIDE Program	NONE	X			
ClearStream Recycling/ Trash Frames	NONE	X			
Legal and Consulting	NONE	X			
Disaster Debris Management	NONE	X			
BWRAP outreach and website	Feature and promote newsworthy stories about businesses going above and beyond to recycle. When coupled with county-wide recognition the opportunity is optimized. Pitching personal recycling stories to media that are visual and heartwarming are usually well received. These news stories can increase exposure to the District's target if posted on the news outlet's website and subsequently posted on the District's website and social media.			X	
	Host webinars to commercial and industrial sectors inviting case study businesses that have had success with recycling and have seen cost savings because of it.				X
	Material-specific education and outreach campaigns such as bar glass.			X	
HHW and Lead Acid Battery Education/Outreach	NONE	X			
Composting Workshops	NONE	X			
Teacher Newsletters	NONE	X			

Program Description	Potential Changes	Priority			
		No Changes	1	2	3
School Support/Education Materials	NONE	X			
Clark County District Website	Add an online widget search function on how to recycle materials.		X		
	Track website analytics to know which items and subjects users are searching for.		X		
	Add short, less than one-minute, educational videos on key topics.		X		
Keep Clark County Beautiful District Website	NONE	X			
Take It to the Curb Campaign District Brochures	Focus on smaller wins targeting one community at a time by approaching community elected officials, and offering to bear the costs of conducting a household interest survey. Based on the results, update the outreach plan and launch the campaign. Results can be shared and coupled with contracted options (consortium, preferred hauler, franchise).		X		
District Advertisement	NONE	X			
Close the Loop Campaign	NONE	X			
Facebook/ Social Media	NONE	X			
Enhanced HHW Education	NONE	X			
Total Education/Awareness Costs	NONE	X			
Total Administration Costs	NONE	X			
New Program Opportunities					
Feasibility Study for franchised waste collection in Springfield	Explore how best to provide non-subscription curbside service based on resident choice, cost savings, local hauler availability, franchise Vs. contract hauling. Such a study will gather data for Springfield to make informed decisions. How many households currently do not have trash or recycling services? How many households can't afford trash or recycling collection? What is the cost threshold for trash and recycling service collection? How frequently do households change waste haulers and what are their reasons for selecting a new one?			X	
Implement Curbside Recycling in Springfield (new program)	Continued discussions with local political leaders and haulers operating in the area about entering into a non-exclusive franchise agreement, thus		X		

Program Description	Potential Changes	Priority			
		No Changes	1	2	3
	allowing multiple haulers to compete to provide services to residents.				
	Begin developing language stipulating potential required actions for haulers to partake in such as mandated reporting, fees to authorizing jurisdictions, and minimum level of service requirements.			X	
	Gauge public opinion and interest in establishing franchise recycling service.			X	
City Council Outreach – Outreach targeted to households specific to non-subscription programs	Design and implement a specific campaign and outreach strategy to understand the barrier between having access and using access and identify whether marginalized populations encounter barriers to recycling.			X	
	Explore interest and feasibility of Springfield Charter changes/votes.		NO		
Development of an in-District Transfer Station	Development of an in-district transfer station can enhance the collection of solid waste and recyclables in the District.		X		
Education Campaigns for Drop-Off sites	Conduct pre and post-waste audits of drop-off sites		X		
Commercial Sector Surveys	NONE	X			
Events/Venues/Parks	Engage with the park district to explore diversion and additional sustainable efforts to reduce and close the loop while also engaging with vendors to explore service costs for recycling service.		X		
Data Collection	Look to re-establish regular (annual or bi-annual) surveys for the commercial sector and businesses that use District recycling facilities or with brokers/buybacks to improve data collection for waste diversion.		X		
Commercial Franchising	Franchise or consortium-style contracting to aggregate businesses in collection contracts. Franchising could help lower costs by providing greater economies of scale.		NO		
Promotion of Materials Exchange (Industrial Program)	Add Ohio EPA's Material Marketplace to the District's webpage and promote it at events/presentations.		X		
Contingency Yard Waste Shredding	As a contingency for planning purposes, the District should develop a roadmap/scheduled plan for stepping into operating a yard waste shredding program. Researching the location, siting requirements, potential costs, etc.		Y		

Program Description	Potential Changes	Priority			
		No Changes	1	2	3
Basic Waste Convenience Center	One trash and one recycling dumpster on county-owned land. Construction would require site improvements, contingency, permitting & compliance, and engineering inspections. Contingent on the results of a feasibility study planned to occur in 2025.		X		
Intermediate Waste Convenience Center	A larger center with more opportunity for additional materials. Construction would require site improvements, contingency, permitting & compliance, and engineering inspections. Assumes the center has tip walls, railings, elevated dock, and lighting. Contingent on the results of a feasibility study planned to occur in 2025.			X	

In this planning period, the Policy Committee is planning to implement the potential programs rated as Priority 1. Specific plans of action for the priority status programs can be found in the program descriptions section of this Appendix.

B. Program Descriptions

Residential Recycling Infrastructure

Curbside Recycling Services

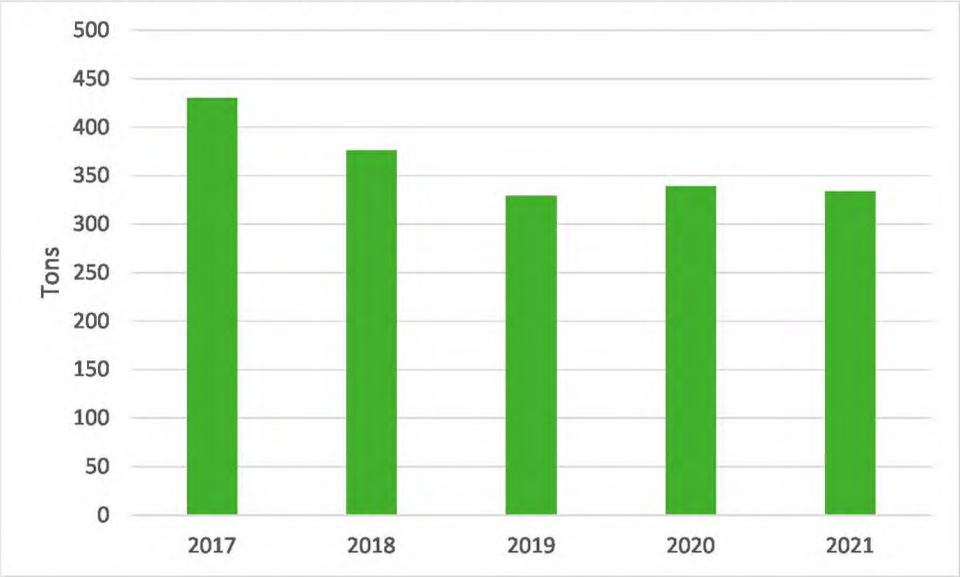
Non-Subscription Curbside Recycling

ID	Name	Start Date	End Date	Goal(s)
NCS-1	New Carlisle City	Ongoing	Ongoing	1 and 2
NCS-2	Tremont City	Ongoing	Ongoing	1 and 2

The two communities listed above are non-subscription curbside recycling collection communities. These communities have contracts with exclusive haulers to provide trash and recycling services to all households. Materials accepted vary based on service provider, though both programs accept plastic, metal cans, paper, cardboard, and glass.

In 2021, the combined communities collected 334 tons of recyclables. Historically, the average collected annually is roughly 368 tons. Data tracked annually shows fewer recyclables collected from non-subscription curbside recycling programs over the last five years.

Figure I-1 Historical Non-Subscription Curbside Recovery



Target for Next 5 Years: The District expects both political jurisdictions to continue their non-subscription curbside programs. Over the next planning period, the District wants to increase the tonnage of recyclables recovered. Take It To The Curb residential outreach program would be ideal to restore. The focus of the campaign can pivot to encourage households to recycle. In jurisdictions with non-subscription curbside recycling, households would be encouraged to use a service they are already receiving. There are roughly 2,213 households in New Carlisle and 134 households in Tremont. Appendix L provides a further description of the campaign efforts.

Subscription Curbside Recycling

ID	Name	Start Date	End Date	Goal(s)
SC-1	Catawba Village	Ongoing	Ongoing	1 and 2
SC-2	Clifton Village	Ongoing	Ongoing	1 and 2
SC-3	Donnelsville Village	Ongoing	Ongoing	1 and 2
SC-4	Bethel Township	Ongoing	Ongoing	1 and 2
SC-5	Enon Village	Ongoing	Ongoing	1 and 2
SC-6	German Township	Ongoing	Ongoing	1 and 2
SC-7	Green Township	Ongoing	Ongoing	1 and 2
SC-8	Harmony Township	Ongoing	Ongoing	1 and 2
SC-9	Mad River Township	Ongoing	Ongoing	1 and 2

ID	Name	Start Date	End Date	Goal(s)
SC-10	Madison Township	Ongoing	Ongoing	1 and 2
SC-11	Moorefield Township	Ongoing	Ongoing	1 and 2
SC-12	North Hampton Village	Ongoing	Ongoing	1 and 2
SC-13	Pike Township	Ongoing	Ongoing	1 and 2
SC-14	South Charleston Village	Ongoing	Ongoing	1 and 2
SC-15	South Vienna Village	Ongoing	Ongoing	1 and 2
SC-16	Springfield City	Ongoing	Ongoing	1 and 2
SC-17	Springfield Township	Ongoing	Ongoing	1 and 2
SC-18	Pleasant Township	Ongoing	Ongoing	1 and 2

Subscription curbside recycling occurs when individual households select a private hauler to provide recycling collection and processing services. Households must pay a separate additional fee to secure recycling with their trash collection. This additional cost is often a barrier to participation in curbside recycling. In 2021, subscription curbside recycling was available in 18 political jurisdictions.

The county uses a private, open market system in which residents choose a waste hauler. Some haulers offer curbside recycling for a fee; others offer recycling only in limited areas. This has been the situation in Clark County for several years. Because recyclables are picked up by various haulers from different localities, it is challenging to receive tonnage numbers for subscription curbside services. At one time these programs were serviced by six waste haulers which are now down to four waste haulers.

Target for Next 5 Years: The District expects subscription curbside programs will continue. Performance metrics are lacking. Over the next planning period, the District will continue to contact haulers to gather tonnages. The District receives numbers from Rumpke and Waste Management each year for the ADR.

The District will also pursue adding survey questions to the licensing application to get haulers to identify the number of curbside recycling subscribers, the type of containers used, etc.

Drop-off Recycling Locations

Full-Time Drop-off Recycling

ID	Name	Start Date	End Date	Goal(s)
FTU-1	North Recycling Station - Springfield	Ongoing	Ongoing	1 and 2
FTU-2	West Recycling Station - Springfield	Ongoing	Ongoing	1 and 2
FTU-3	Mad River Township Station - Enon	Ongoing	Ongoing	1 and 2
FTU-4	Northridge Station - Northridge	Ongoing	Ongoing	1 and 2

FTR-1	Green Township Recycling Drop-off Station	Ongoing	Ongoing	1 and 2
FTR-2	Northeast Recycling Station - South Vienna	Ongoing	Ongoing	1 and 2

The District contracts with a private service provider (provide containers, collection, and processing) to have available single-stream recycling drop-off containers. Containers are available for a minimum of 40 hours per week. Materials accepted include plastic bottles and jugs (#1, #2, and #5 tubs and lids) metal cans, paper, cardboard, glass, and cartons.

The District maintains four full-time urban drop-off sites and two full-time rural drop-off sites, contracting their service through Rumpke since 2015. The drop-off sites are all well-used by residents, multi-family housing, and small businesses. Contamination and windblown items scattering throughout the sites are issues faced at drop-off sites. A breakdown by drop-off site is not available but Rumpke does provide aggregated numbers. In 2021, the drop-off sites collected 1,065 tons of recyclable materials.

Since the previous plan update, the District added three full-time sites, a third site in Springfield, a site in South Vienna, and a site in Green Township. The original three sites were not sufficient to meet the demand. With the additional three sites, the District collected about 30% more material annually compared to the previous plan update.

Target for Next 5 Years: Continue through the planning period. The District will continue to emphasize education/outreach at drop-off locations throughout the planning period (see Appendix L). There are several methods for relaying information about recycling properly at District drop-offs. These include media ads and presentations. The District gives presentations to neighborhood associations, schools, churches, and civic organizations to promote the program. Issuing flyers and/or newsletters, improving signage at drop-off locations, and hosting training sessions are also effective strategies. Regardless of the method used, best practices must include the following: communicate accepted material, identify items not accepted in recycling, promote drop-off recycling locations, and whom to contact with questions or report site abuse. Easy-to-understand instructions and language are very important. Continuous education is critical to the long-term success of the drop-off program.

Other Residential Recycling Programs

Name	Start Date	End Date	Goal
Curbside Recycling Initiatives	Ongoing	Ongoing	Goals 1 and 2

This program is designed to work with political subdivisions to facilitate and support curbside recycling. The District did extensive outreach in 2015 with the Take It to the Curb Campaign. In 2017, the District maintained the website and Facebook page for Take It to the Curb to respond if any political body showed interest in a contract for waste and recycling services. The District did not receive any interest from political jurisdictions. Due to the longstanding lack of success for this program, the District shelved this program in 2021.

Target for Next 5 Years: Contact haulers each year to attempt to obtain curbside recycling tonnages.

Name	Start Date	End Date	Goal
City of Springfield Curbside Recycling Initiatives	2024	Ongoing	Goals 1 and 2

The City of Springfield is the District's largest municipality with roughly 60,000 residents. In recent years, Springfield households have shifted to being predominantly rental properties as opposed to owned. The most recent estimates from the City are that 55% of all residential buildings are rental properties. The City lacks an organized system to encourage recycling and as a result, faces challenges with inequitable services and open dumping. As discussed in Appendix H, the City Charter prohibits the establishment of organized recycling services and requires a formal vote of residents to be altered. While writing this plan update, the District has worked and continues to work with the City of Springfield and the County Commissioners to tackle these challenges. The District is establishing this program to provide financial assistance and to continue to work with the City and County Commissioners to improve the City's ability to collect and divert materials from the landfill.

Target for Next 5 Years: The District will continue to work with both the City of Springfield and the City Commissioners to facilitate improved recycling infrastructure in Springfield through the following actions:

- Dumpster Days – The City's budget allowed for dumpster days free to all residents in 2023 and will continue in 2024. Residents will be able to drop off any trash, including bulky items, these days with the goal of reducing open dumping in Springfield. More information is available on the City's website.

- Review and Potential Update of City Charter – As of the writing of this plan update, the City is looking to review and update the City Charter on a variety of topics. One such topic is Section 94, described in detail in Appendix H, which is a barrier to providing improved infrastructure for recycling in the City. The Charter must be voted upon for any changes by the general public. Initial discussions from the local government are scheduled for March 2024, if this moves forward, the final voting process is scheduled for November 2024.

- Additional City Ordinance: The City is exploring adding a new city ordinance such that all waste haulers operating in Springfield are required to provide curbside recycling.

- Rental Registry: In 2023, the City of Springfield established a rental registry where all property owners of rental properties must register. In 2024, it is planned to add the requirement to list the trash servicer on this registry for all property owners. The District and City hope to be able to gauge and track which haulers have market shares in the City.

- Hauler Licensing: The City of Springfield requires haulers to be licensed. The City could use licensing to collect data on where haulers are servicing. The City's ordinance requires mandatory trash hauling though there is no mechanism to check compliance. It is uncertain if the homes are all being serviced. Plus collecting data on licensing will also provide detail on which haulers are servicing what.

- Education: The District will provide education/outreach and technical assistance support to the City Commissioners and other stakeholders through these objectives. See Appendix L for the Outreach Priority campaign description.

Name	Start Date	End Date	Goal
Drop-off Recycling Evaluations	Ongoing	Ongoing	Goals 1 and 2

This program is intended for the District to evaluate the effectiveness, challenges, and trends in the six drop-off sites throughout Clark County. The District monitors a variety of elements regarding drop-off recycling locations, such as total tons of materials collected and contamination issues. Monitoring will be conducted on a bi-annual basis and will increase in frequency as needed. The District may adjust the drop-off program on an as-needed basis when improvements are identified. Potential issues the District circumvents by evaluating the drop-off program continually are the following:

- Location of drop-offs
- Collection hours
- Material accepted
- Participant feedback on the program
- Estimated tonnage collected
- Excessive abuse of drop-off sites from contamination or dumping
- Underutilization of drop-off bins
- Collection frequency that does not meet public needs (i.e., issues with overflow)
- Other issues and or considerations as identified

All stations are utilized by residents. The District continues to struggle with contamination, primarily with illegal dumping of miscellaneous trash and residents putting incorrect plastics in the bins. The Northridge and drop-offs in the east of the County are the most misused historically.

Target for Next 5 Years:

- District staff will select a drop-off location and monitor the location. Users will be handed out brochures and engaged one-on-one to educate on the proper materials to recycle. The goal is to perform one-on-one engagements periodically throughout the year at varying hours to reach more users.
- Continue to maintain signage at drop-off locations and use the Adopt-A-Drop program, media ads, and presentations.
- Reduce contamination by implementing a comprehensive education and outreach strategy to decrease the amount of trash in drop-off recycling containers. The District will model this campaign on Ohio EPA and The Recycling Partnerships drop-off education and outreach model (see Appendix L).

Commercial/Institutional Sector Reduction and Recycling Programs

Name		Start Date	End Date	Goal
Government Office Paper Recycling		Ongoing	Ongoing	Goals 1 and 2

The District supplies every county office with recycling containers for paper and cardboard. Materials are delivered to the District's Specialty Recycling Center from other county department employees and are recycled using commingled bins at one of the District's drop-off locations. The District sited one 8-cubic yard commingled bin at the Springview government center in 2023 to further support this program.

Since 2019, the District has used Document Destruction to provide shredding service and has been well received throughout. Before 2019, the District used a different company for this service. In August of that year, this company gave two weeks' notice that they were no longer providing shredding services. This resulted in a two-month disruption where this service was no longer available. Since this occurrence, there have been no complications.

Tonnages of shredding for 2020 and 2021 are 11,062 and 22,868 pounds.

Target for Next 5 Years: This program is a great service offering for government offices. The service is at no cost to government offices except that they need to deliver the materials to the Specialty Recycling Center. This will continue through the planning period.

Name	Start Date	End Date	Goal
Business Waste Reduction Assistance Program (BWRAP)	Ongoing	Ongoing	Goals 1, 2 and 4

This program offers technical assistance and education/awareness to businesses within Clark County. The District has historically worked with companies to provide technical waste reduction assistance on the basis that they contact the District. Elements of this outreach approach are providing direct assistance to employ waste reduction, maintaining a web page specific to businesses, and encouraging bars and restaurants to recycle by offering free receptacles.

The District has a dedicated landing page located on its website for local businesses. On this page, the District promotes its Recycling Makes $ense program which seeks to educate businesses as to how recycling can improve their bottom line while also diverting materials from landfills.

The program relies on businesses to request assistance. No assistance was requested in 2020, 2021, and 2022. Staff time is limited seek businesses to offer assistance.

Target for Next 5-Years: Various studies show that 50-60% of waste stream generated is from the commercial sector. With the potential opportunity for diversion, the District will implement the following program changes:

- Conduct a study to identify by NAICS codes the largest generators to reach out to and perform on-site audits, targeting one to two businesses a year.
- Increase promotion of the program to decision-making positions within organizations and institutions,
- Expand the service offering to the industrial sector. (This will satisfy one industrial goal needed to demonstrate compliance with State Plan Goal 5).

One method the District will explore is contracting services or hiring an intern. A simple method for contracting is to issue a request for a quotation for the Business WRAP program. The scope of work would identify the task for the contractor with the target number of businesses to audit and assist. Requesting an hourly rate and proposed estimate of costs to complete the tasks.

Name	Start Date	End Date	Goal
Business Paper Recycling	Ongoing	Ongoing	Goal 1 and 2

This program offers businesses the use of the District's recycling drop-off locations for recycling paper and cardboard. Many small businesses do not generate enough paper and/or cardboard to justify a separate recycling bin at their location, so the District promotes to businesses the opportunity to use one of the District's recycling drop-off stations. Businesses are also able to deliver truckloads of cardboard directly to the recycling center for convenience. Promotion for business recycling is on the District's website. In recent years, the District has observed that more businesses are bringing cardboard directly to the Specialty Recycling Center.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal
Food Waste Management Program	Ongoing	Ongoing	Goal 1 and 2

The District continues to stay committed to growing food waste diversion from the landfill. Initiatives include:

- Support existing infrastructure - If calls come in for tractor-trailer loads that are refused the District sends them to Go Zero or PayGro which offers food waste collection programs in the District. The District has long been a partner of PayGro, in its early years of operation the District helped spread the word about their organics programs. PayGro is an established part of the District's recycling and diversion infrastructure.
- Grant support for processors – District passes along grant opportunities.

- Other technology opportunities – Available technologies such as anaerobic digestion, in-vessel systems, etc. will continue to be evaluated as opportunities arise.

Target for Next 5 Years: Food waste prevention and management information will be bolstered on the webpage. A waste food landing page will be added to provide: useful links to local resources, information on the importance of food rescue and recovery, local food banks, etc.

Industrial Sector Reduction and Recycling Programs

Name	Start Date	End Date	Goal
See Business WRAP program	Ongoing	Ongoing	Goal 5

Name	Start Date	End Date	Goal
Materials Marketplace	Ongoing	Ongoing	Goal 5

The District promotes Ohio EPA's Material Marketplace on the webpage.

Target for Next 5 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
See Market Development Grants	Ongoing	Ongoing	Goal 4

Restricted/Difficult to Manage Wastes

Yard Waste & Organics

Name	Start Date	End Date	Goal
C+S Tree Service Contract	Ongoing	Ongoing	Goal 1, 2, and 6

The District has long partnered with C+S Tree Service to provide residents with an avenue to drop off yard waste. The facility is a private registered Class IV facility that collects yard waste/organics. C&S Tree Service started charging residents for brush and yard waste from residents in 2020. In early 2021, the District entered into a contract with them to allow residents and not-for-profit agencies to bring non-woody yard waste/ brush and tree debris to the facility again for no charge. The District relies heavily on this partnership to reach diversion goals. See Appendix H, Diversion Analysis for a more detailed analysis.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Organic Infrastructure	Ongoing	Ongoing	Goal 1, 2, and 6

The District tracks the number of organic processing facilities and monitors the tonnages diverted. The list of infrastructure is as follows:

- German Township Compost Facility - Residents can take tree debris to the curb seasonally for free. The Township mulches the tree waste and offers it back to residents. This facility is not a registered compost facility with Ohio EPA.
- Lawnmasters - Accept brush and yard waste from residents. The facility is a private registered Class IV facility that collects yard waste/organics.
- Mad River Topsoil - Accepts non-woody yard waste from residents for free, but started charging for tree debris/ branches after the COVID-19 pandemic forced this business to shut down temporarily. The facility is a private registered Class IV facility that collects yard waste/organics.
- Moorfield Township - Residents can take small tree debris to the curb seasonally for free. The Township mulches the tree waste and offers it back to residents. This program does not accept non-woody green waste. This facility is not a registered compost facility with Ohio EPA.
- Paygro Company - Paygro Company is a private, registered Class II facility that collects yard waste/food waste/organics. This business serves both commercial and industrial customers.
- Springfield Wastewater Treatment Plant - Composts yard waste from the City of Springfield's operations and animal carcasses from city streets. This facility is a public registered Class II facility that collects yard waste and organics.
- Studebaker Nursery - Studebakers Nursery is a private, registered Class III facility that collects yard waste, organics, and agricultural waste for composting from businesses throughout Clark County.
- Springfield Township Composting - This program collects yard waste and organics from residents and is a public registered Class IV facility.
- Number One Landscape - This Medina County brought Yard Waste into Clark County as reported by the OEPA in 2021.
- ODOT District 7 Harmony Post – Ohio EPA reported that ODOT brought Animal/AG/Other waste to Clark County in 2021.

Target for Next 5 Years: The District expects the facilities will continue through planning period.

Name	Start Date	End Date	Goal
Yard Waste Collection at Clark County Specialty Recycling Center	Ongoing	Ongoing	Goal 1, 2, and 6

Yard waste is collected at the Clark County Specialty Recycling Center. The District has two small bins for residents to bring their yard waste. These are hauled by the District and get emptied at C & S Tree Service.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Contingency Yard Waste Shredding	2025	Ongoing	Goal 2 and 6

This program allows for the District to begin yard waste shredding operations should C+S Tree Service no longer be able to operate in the capacity needed for the District to divert the organic volumes historically tracked. Triggers for monitoring whether this program may need to be implemented include changes to the District's contract with C+S and tonnage processed at C+S. Triggers will be monitored annually.

Should the District determine it needs to become the processor and operator of such a facility, a full evaluation and study will be conducted before moving into an active role. The study will evaluate location, any siting and permitting requirements, capital and operational costs, and potential grant funding. The capital and operational costs will be modeled and forecasted in the plan budget to show budget impacts through the planning period.

The District expects a study could be performed within a four-month timeframe. The timeline for implementation if the District were to operate would vary depending on the study findings.

Household Hazardous Waste

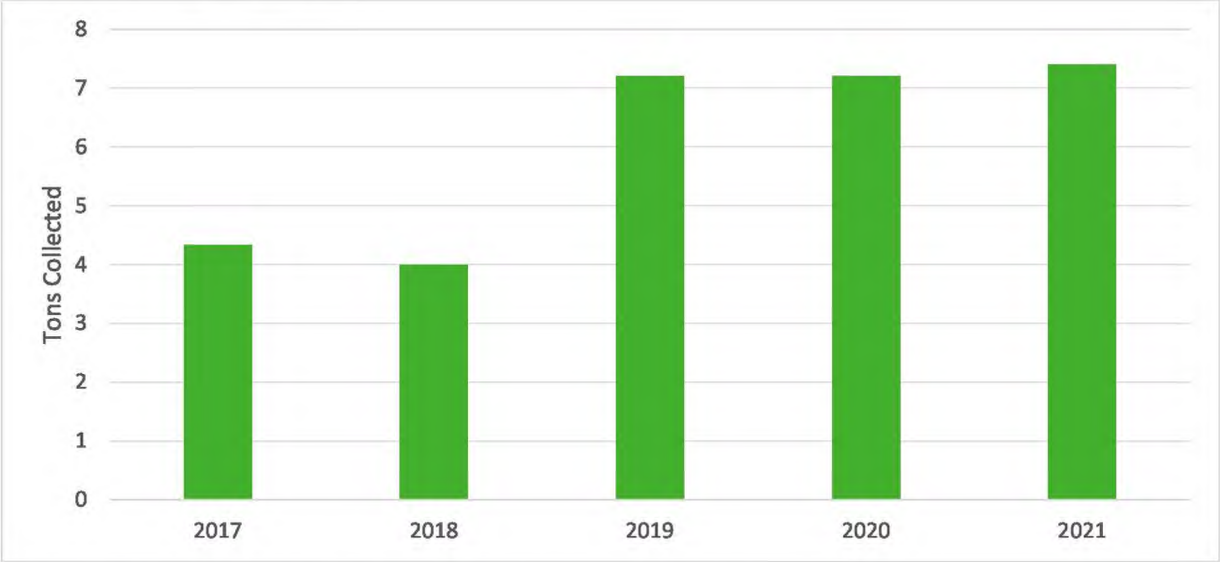
Name	**Start Date**	**End Date**	**Goal**
Household Hazardous Waste Program	Ongoing	Ongoing	Goal 1, 2, and 6

The District expanded the collection of HHW from bi-annual collections to weekly collections in late 2015 and into 2016. The District's Specialty Recycling Center accepts household hazardous waste for $1.00 a pound during Specialty Recycling hours. Specialty Recycling occurs every Thursday, 9 a.m. to 6 p.m., and the first Saturday of the month, 9 a.m. to noon, except on major holidays.

The District accepts a variety of HHW including but not limited to battery acid, bug spray, oils, fuel/ motor oil, mercury, flammable liquids, preservatives, and other chemicals. A total of 7.4 tons of HHW was collected from this program and is serviced by Environmental Enterprises, Inc. (EEI).

The District webpage provides education on managing hazardous waste and alternatives to hazardous products. As well as a link to Ohio EPA's useful fact sheet on HHW.

Figure I-2 HHW Collected



Target for Next 5 Years: Continue through planning period.

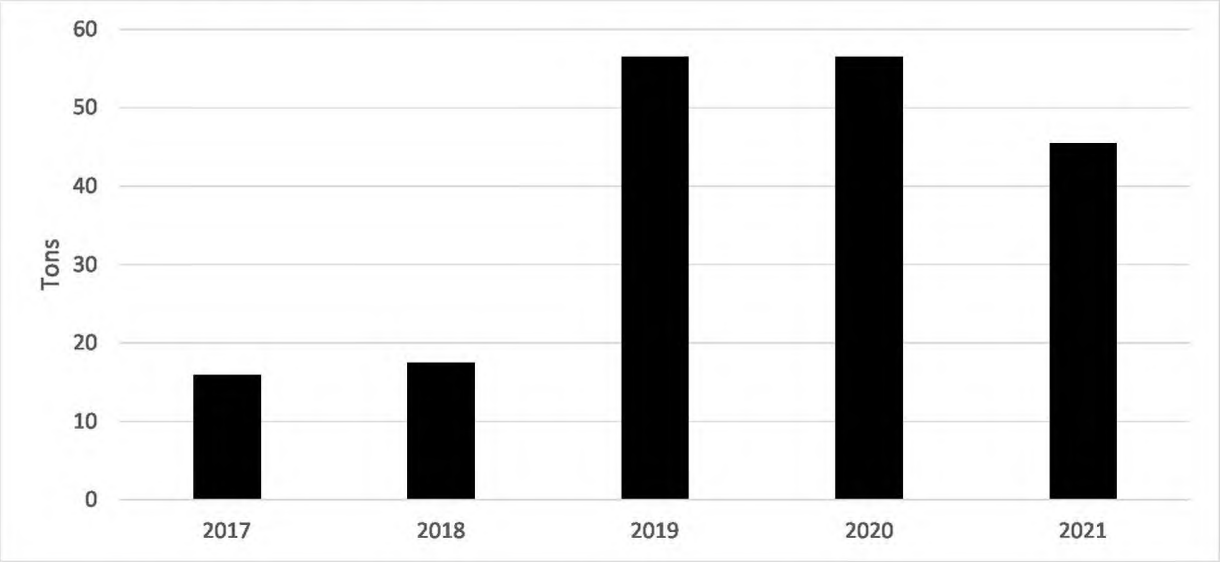
Scrap Tires

Name	Start Date	End Date	Goal
Scrap Tire Management Program	Ongoing	Ongoing	Goal 1, 2, and 6

The District accepts scrap tires at the Clark County Specialty Recycling Center from residents, community clean-ups, illegal disposal from townships, and the PRIDE program. The District collects scrap tires from residents on Thursdays, 9 a.m. to 6 p.m., and the first Saturday, 9 a.m. to noon, for 10 cents a pound.

The District does not charge fees or put limits on how many illegally dumped tires will be accepted from townships and other government entities. The entity bringing in the tires must provide the location where the tires were dumped. Most dumped tires are disposed of through the Ohio EPA Scrap Tire program.

Figure I-3 Scrap Tire Collection



Target for Next Five Years: Continue through planning period.

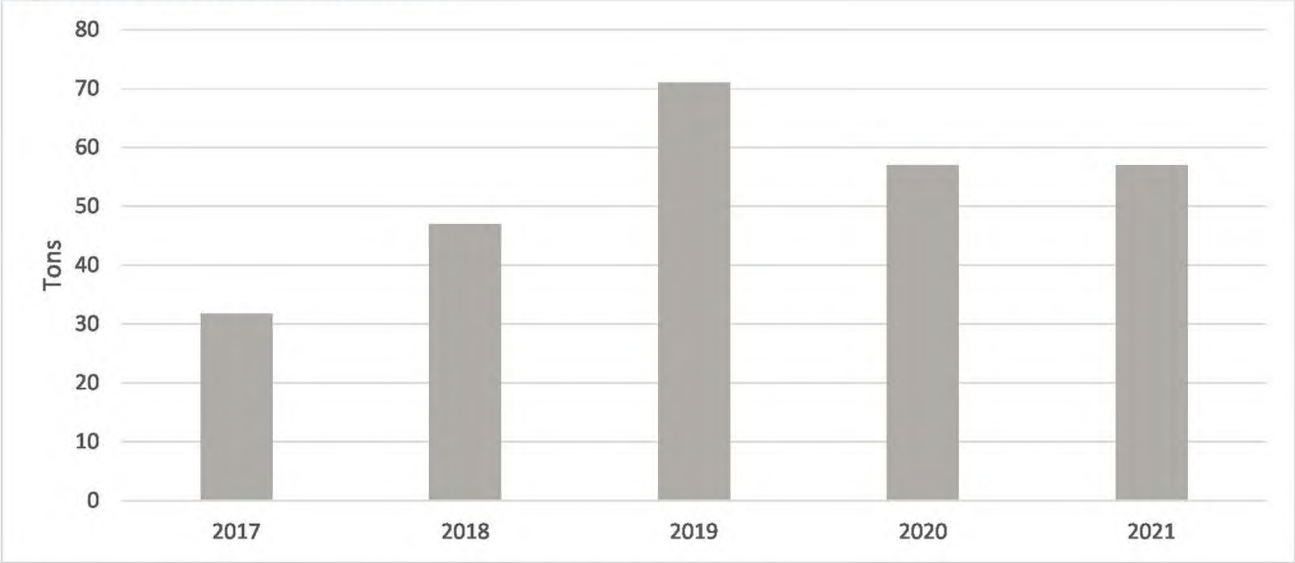
Electronic Equipment

Name	Start Date	End Date	Goal
Electronic Waste Management Program	Ongoing	Ongoing	Goal 1, 2, and 6

The District accepts electronic waste at the Clark County Specialty Recycling Center from residents including televisions, CPUs, keyboards and other computer peripherals, monitors, printers, scanners, and most other electronic devices. The District charges 10 cents per pound for TVs and monitors, all other electronic devices are free to drop off.

The District also promotes commercial business electronic recycling such as Best Buy and Goodwill. The District contracts with Green Wave to collect the electronics for recycling. In 2021, 57 tons of electronics were collected at the Clark County Specialty Recycling Center.

Figure I-4 Electronics Collection



Target for Next Five Years: Continue through planning period.

Lead-Acid Batteries

Name	Start Date	End Date	Goal
Battery Collection Program	Ongoing	Ongoing	Goal 1, 2, and 6

Lead-acid batteries (LABs) and car battery cores were accepted year-round at the District Specialty Recycling Center starting in 2016. Battery collection for Specialty Recycling and the District Recycling Center is free of charge.

Target for Next 5 Years: Continue through planning period.

Other Hard-to-Manage Material Programs

Name	Start Date	End Date	Goal
Expanded Polystyrene (EPS) Recycling	2019	Ongoing	Goal 1, 2, and 6

Beginning in 2019, this program is open for residents to drop off polystyrene, more commonly known as Styrofoam, at the Specialty Recycling Center. The District operates a machine (pictured) to densify Styrofoam which can then be used to make new products. Residents can use this program free of charge. The program is also open to businesses, though the District encourages businesses to call to discuss the bag drop exchange program first.

The drop-off accepts most Styrofoam products but cannot accept cups, plates, food containers, or packaging peanuts. The District averages one 15 cubic yard load weekly and contracts with Eco Trade to take the densified end product.

Target for Next Five Years: Continue through planning period.

Other

Name	Start Date	End Date	Goal
Enhancement to HHW/Electronics/LA Battery/Scrap Tire programs as a result of the Specialty Recycling Center	Ongoing	Included in the Specialty Recycling Center	Goal 1, 2, and 6

The previous plan update outlined that the District would incorporate any changes to the HHW, electronics, lead-acid battery, and scrap tire programs that are a direct result of new initiatives, programs, services, and or facilities when the property next to the Specialty Recycling Center was purchased. In 2017 the District began the process to acquire the adjacent property to the west of the Clark County Specialty Recycling Center. The property was purchased officially in October 2017 for a purchase price of $42,000. The purchase occurred through the Clark County Land Bank.

This additional space increased the capacity for the District to manage hard-to-recycle materials by utilizing the new property in support of the existing Specialty Recycling Center. In 2018,

the District saw a 50% increase in materials brought in on specialty recycling days. This increasing trend continued in 2019 and 2020, increasing 7% and 12% year-over-year respectively.

Target for Next 5 Years: This program is included in the Specialty Recycling Program description and no longer needs to be separately identified as program enhancements. The program is not discontinued but will be absorbed in the Specialty Recycling Program description.

Name	Start Date	End Date	Goal
Furniture Drop Program	2021	Ongoing	Goal 1, 2, and 6

The District established this program in 2021 to allow residents to drop off furniture at the Specialty Recycling Center. The program is held on the second Tuesday of each month from 9:00 am to 2:00 pm and requires an appointment beforehand. The District has two categories, small and large, that are charged $5 and $10 respectively to drop off. Large items are classified as anything bigger than a 4x4 ft template.

Target for Next 5 Years: Continue through planning period.

Funding/Grants

Community Grants

Name	Start Date	End Date	Goal
Curbside Recycling Grants	2015	Ongoing	Goal 1, 2, and 6

The District will provide one-time incentive-based grants for political subdivisions to start new programs or enhance existing programs that help the District meet or exceed State Goals 1 and 2. For political subdivisions to yield the best incentive payment for either new program creation or enhancements to existing programs, the District requires that the residents who use the program also pay for the program. Funds awarded under this program would be paid directly to the political subdivision upon the award of a contract that meets the program's objectives.

The one-time funds are based on the population of a respective community and were only available from 2015 to 2016, The higher the population, the lower the per capita funding becomes. The following funding rules are outlined for this program:

- Funds for populations of 1 to 10,000: $5.00 per capita
- Funds for populations of 10,001 to 20,000: $3.00 per capita
- Funds for populations greater than 20,000: $0.80 per capita

The District did not have any political jurisdictions to apply for this grant program. **Table I-1** below presents the amount of grant funding per political subdivision that could be realized if the District were to offer this funding opportunity again.

Table I-1 Potential One-Time Grant Funding per Community

Political Subdivision	2021 Population	NSCC Per Capita Allowance	NSCC One-Time Grant Funding
Catawba Village	241	$5.0	$1,205
Donnelsville Village	256	$5.0	$1,280
Enon Village	2,434	$5.0	$12,170
New Carlisle City	5,533	$5.0	$27,665
North Hampton Village	454	$5.0	$2,270
South Charleston Village	1,697	$5.0	$8,485
South Vienna Village	406	$5.0	$2,030
Springfield City	58,763	$0.8	$47,010
Tremont City Village	347	$5.0	$1,735
Bethel Township	12,152	$3.0	$36,456
German Township	7,183	$5.0	$35,915
Green Township	2,680	$5.0	$13,400
Harmony Township	3,224	$5.0	$16,120
Madison Township	820	$5.0	$4,100
Mad River Township	8,510	$5.0	$42,550
Moorefield Township	12,563	$3.0	$37,689
Pike Township	3,252	$5.0	$16,260
Pleasant Township	2,871	$5.0	$14,355
Springfield Township	12,247	$3.0	$36,741

Target for Next 5 Years: The grant program was available in 2015 but no political jurisdiction requested funding. Changes to the grant program to begin in 2025 include:

1) The grant will not require residents who use the program to also pay for the program for the political jurisdiction to receive the grant.
2) Grant funds available will be a flat rate of $2 per household for year 1 and $1 per household for year 2 of implementation.
3) A political jurisdiction may apply for a grant for a new non-subscription recycling service, i.e., where non-subscription is not previously a service offering.
4) The grant structure is a two-year grant.
5) The District is budgeting and plans to award one grant over a five-year planning cycle. If the maximum budgeted in the plan is not reached the District may award another political jurisdiction a grant up to the maximum budgeted.

6) Funds awarded under this program will be paid directly to the political subdivision upon the award of a contract that meets the program's objectives which is a qualifying non-subscription program (all single-family households have access to curbside recycling, are provided an acceptable receptacle for collection, and hauler delivers material to a recyclable material processing facility.)

In 2025 the District is targeting the City of Springfield to assist in providing a curbside recycling grant that will be dispersed over two years.

Other Funding/Grant Programs

Name	Start Date	End Date	Goal
Education for Schools	Ongoing	Ongoing	Goal 4

This program incorporates the existing Close the Loop Program which aims to facilitate the purchase of recycled content products. The District's message "It isn't really recycling until you are purchasing recycled content materials" is used regularly when recycling is promoted through educational and awareness, classroom presentations, and newsletters. The District also offers mini-grants to cover half of the project cost or as much as $500 each, up to a total disbursement of $3,000 in funding. These grants are for educators to provide environmental education programs relating to solid waste and waste diversion.

In 2017, the District provided roughly $1,000 to expand school recycling and provide supplies for a zero-waste lunch program between two schools. The following year in 2018, the District provided roughly $650 to help start a compost program and provide containers for a recycling program at two separate schools.

There was no requested funding in 2019 or 2020 from local schools. In 2021 the District purchased 45 (7 gal.) classroom recycling bins for an elementary and middle school in support of their new school recycling program.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Market Development Grants	Ongoing	Ongoing	Goal 4

The District serves as a pass-through on Ohio EPA's Market Development Grant. These grants provide Ohio businesses (for example, manufacturers, recyclers, material processors, etc.) opportunities to create or expand recycling processing capacity and recycled material production. The District lists this grant opportunity on the website and provides one-on-one technical assistance to help industry complete applications.

Target for Next 5 Years: Continue through planning period.

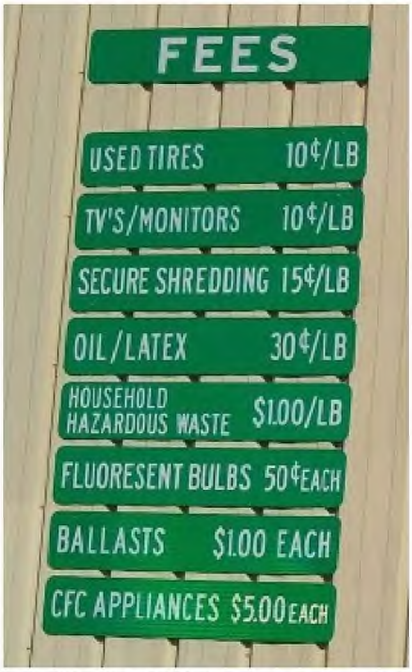
Facility Operation

Recycling Center

Name	Start Date	End Date	Goal
Clark County Specialty Recycling Center / Expansion of Facility	Ongoing	Ongoing	Goal 1, 2, and 6

The Specialty Recycling Center is a place where residents can recycle special wastes regularly throughout the year. These services are available to Clark County residents only, no businesses, farms, schools, or government agencies. The following materials are accepted:

- Electronics
- Paint
- Tires
- Lead-acid batteries and household batteries
- Appliances
- Household hazardous waste
- Cooking oil
- Propane
- Ballasts
- Furniture
- Styrofoam



As mentioned previously, the District purchased property to expand the old facility in 2017 to increase its capacity of the facility. A majority of the District's difficult-to-manage waste streams get collected at the Clark County Specialty Recycling Center. The center is open Thursdays from 9:00 am to 6:00 pm and the first Saturday of every month from 9:00 am to 12:00 pm.

Table I-2 Specialty Recycling Center Use 2017 – 2021

Year	Users	Electronics (Tons)	HHW (Tons)	Tires (Tons)	Appliances (Tons)	Paper (Tons)	Total Materials Managed (Tons)
2017	2,117	31	21	15	12	5	85
2018	2,174	47	25	18	13	5	106
2019	2,791	71	45	41	12	7	175
2020	2,678	27	31	30	15	8	111
2021	2,988	56	36	40	16	9	157

Note: Does not include fluorescent bulbs
Note: Latex Paint included in HHW
Note: Appliance tonnages estimated using EPA conversion factors

The Specialty Recycling Center has seen increased use over the past five years, peaking in terms of materials collected in 2019. The District has seen more and more users of the facility each year since 2017 except for in 2020, though this was due to COVID-19 pandemic restrictions. The District does well to

promote this facility and the data reflects this. This facility provides a centralized location for residents to use to properly dispose of many hard-to-manage materials and is one of the District's strongest programs.

The Specialty Recycling Center is a central collection point for hard-to-recycle materials and where limited processing occurs. Collected cardboard from the drop-off locations and businesses dropping off material is baled here. Styrofoam is densified and the center serves as a collection point for furniture.

Other potential initiatives, programs, services, and or facilities that will continuously be evaluated are:

- Operate an exempt transfer station for trash, and bulk materials. Tag system for procurement (sell tags that would be affixed to items showing the item has been paid for disposal)
- Develop and operate a recycling transfer station
- Create a re-use store for household hazardous waste materials that are still usable
- Develop a food waste processing system (in vessel) and accept food waste from District generators
- Develop a yard waste drop-off site
- Purchase a grinder/shredder for brushing and consolidating yard waste
- Develop and operate a textile recycling program
- Offer recycling of farm "ag" plastics and flower pots
- Develop a mattress recycling program
- Create a re-use store and/or maker space for furniture, appliances and other household items
- Purchase additional properties adjacent to the new property and for future solid waste transfer facility
- Other initiatives, programs, services, and or facilities as identified

The District reserves the right to implement one or more of the above-identified initiatives, programs, services, and or facilities at the Specialty Recycling Center and or any future purchased properties during the planning period. The complexities of developing the property(s) and time to address the following action items will require maximum flexibility in this Plan Update for the development and implementation of any given item listed above:

- Planning for existing structures for either demolition and or improvements
- Planning for site use based on final initiative, program, services, and or facility selection(s)
- Cost/benefit analysis conducted on any initiative considered for implementation
- Feasibility analysis as needed
- Equipment purchases and installment
- Contractor procurement
- Planning for promotion of new initiatives, programs, services, and or facility
- Implementation of promotion
- Other activities as needed

Target for Next Five Years: Continue through planning period.

Enforcement & Clean-Up

Health Department Support (Allowable Use 3)

Name	Start Date	End Date	Goal
Health Department Funding	Ongoing	Ongoing	Goal 4 and 6

The health department provides a variety of important services to Clark County. Each year, the health department provides an annual report completed in conjunction with Clark County SWMD. The District provided $138,000 in funding to the Health Department in the reference year. This report detailed the following number of services during the reference year.

Source: Clark SWMD 2021 Annual Report

Table I-3 Inspections of Licensed or Other Operations 2021

Type	Number of Locations	Minimum Inspections	Year-to-Date
C & DD Facilities - Licensed	2	Quarterly	11
C & DD Facilities - Closed	4	Yearly	4
Composting Facilities (I & II)	1	Quarterly	6
Composting Facilities (III & IV)	8	Yearly	9
Composting Facilities — Closed/Exempt	6	Yearly	7
Dumps - Closed	14	Yearly	15
Infectious Waste Generators	Varies	Periodically	5
Fill Locations - Legal & Illegal	Varies	Periodically	8
Landfills - Closed (post-closure care)	2	Yearly	3
Legitimate Recycling Facilities	1	Yearly	1
Salvage Yards	23	Yearly	19
Scrap Tire Addresses	Varies	Yearly	37

Type	Number of Locations	Minimum Inspections	Year-to-Date
Scrap Tire Transporters	2	Yearly	4
Trash Collection Vehicles	Varies	Yearly	165

Table I-4 New Permits/ Licenses Issued or Applications Received

Type of Permit, License, Application	Per year	Year-to-Date
C & DD License Applications Received	2	2
C & DD Licenses Approved	2	2
Licensed Hauler Permits Given	Varies	165
Notices of Intent to Fill Received	Varies	3
Solid Waste License Applications Received	1	1
Solid Waste Licenses Approved	1	1

Table I-5 Solid Waste Nuisance Inspections

Nuisance Inspections	Year-to-Date
Total Complaints	178
VALID complaints	148
INVALID complaints	30
Inspections & Re-inspections	404
Warnings mailed via the US Postal Service	97
Citations Into Court & Board of Health Orders	4

Target for Next Five Years: As provided by Ohio Revised Code 3734.57, the District may provide funding to the board of health within its District. During this planning cycle, the District will evaluate the Board of Health's role for funding.

Name	Start Date	End Date	Goal
Adopt-A-Road/Spot/Drop Program	Ongoing	Ongoing	Goal 1 and 4

The District continues to facilitate this program which allows businesses, schools, scout groups, etc. to volunteer once a month to pick up litter off the ground at these locations and politely explain as residents come during their pick-up the correct items to recycle. A sign is posted giving credit to the organizations that volunteer at individual drop-off locations. The District offers assistance to groups and individuals interested in the Adopt-a-Road and Adopt-a-Spot programs, providing clean-up supplies such as trash bags, gloves, litter grabbers, safety equipment, etc.

The number of groups varies year-to-year as this program is voluntary. In 2017 the District had 11 groups that conducted 14 clean-ups and collected 14 bags of litter. The number of groups decreased to nine in

2018, though there were 16 clean-ups and a large increase of 71 bags of litter collected. The number of groups was maintained at nine in 2019 and 55 bags of litter were collected from 14 clean-ups.

With the pandemic in 2020, the District did not take the traditional program approach. Instead, the program built two clean-up litter boxes to distribute cleaning supplies (gloves, trash bags, vests & grabbers, and safety paperwork/flyers). This total came to 1,914 trash bags, 122 litter grabbers, 381 pairs of gloves, 166 safety vests & 90 flyers.

In 2021, the District did not have any groups sign up for the traditional Adopt-a-Spot, Adopt-a-Road program. The Adopt-a-Drop (for groups cleaning up litter at the drop-off recycling locations) each did a clean-up once a month.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Earth Day Community Clean-Ups (The Great American Cleanup)	Ongoing	Ongoing	Goal 1 and 4

The Great American Cleanup is the nation's largest beautification program, involving millions of volunteers nationally and hundreds annually in Clark County. The event is held annually by the Clark County Solid Waste District and Keep Clark County Beautiful, an affiliate of Keep America Beautiful.

Table I-6 Clean-Up Numbers 2017 – 2021

Year	Volunteers	Hours	Bags of Litter Collected	Locations Cleaned
2017	1,426	2,350	645	125
2018	1,280	1,850	630	125
2019	1,457	1,967	450	70
2020	COVID-19 No Event Held			
2021	541	541	290	26

From 2017 to 2019, the District was able to gather over 1,250 volunteers each year to clean between 70 and 125 locations throughout Clark County. The COVID-19 pandemic prevented any program events from occurring in 2020 and the District was not able to gather pre-pandemic levels of service in 2021.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Providing Responsibilities for Inmates through Duties for the Environment (PRIDE) Program	Ongoing	Ongoing	Goal 1 and 4

The cost of providing litter collection crews to remove litter along roadways in the County and special clean-up projects as well as funding for Sheriff deputy(s) to conduct investigations for solid waste enforcement and prosecution. The District has historically funded one Sheriff Deputy to operate this program. The District currently funds two Deputies. The District reserves the right to operate this program at whatever Deputy level it deems necessary or at a level that the District can afford depending on incoming revenues.

Two law enforcement officers are contracted, serving as Environmental Enforcement Deputies who supervise inmate crews for the PRIDE program. Deputies also respond to deliberate open dumping and environmental law issues. Law enforcement assists in identifying individuals responsible for environmental abuse, investigating complaints, issuing citations, and although extremely rare, arrests.

The Sheriff's Department and Clark County SWMD provide for days off and work hours by the current collective bargaining agreement between the Clark County Sheriff and Deputies Association represented by the Fraternal Order of Police Ohio Labor Council. The deputy's duties are as follows:

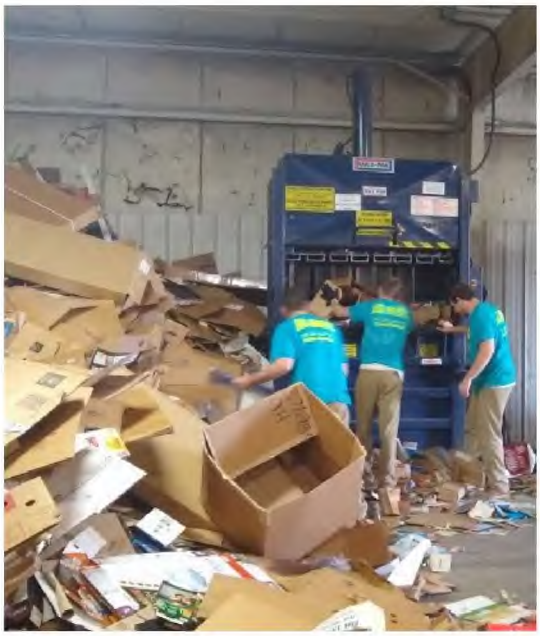
- Provide police assistance in the enforcement of applicable Sections of Chapter 3734 of the Ohio Revised Code
- Assist in duties relative to the operation of the Recycling Center and the Clark County SWMD office
- Assist Clark County Combined Health District with court-ordered cleanup of private properties
- Assist with litter projects by local organizations
- Investigate illegal dumping, nuisance calls, and other environmental law issues
- Supervise the PRIDE program to allow select inmates to help clean dump sites and litter in public areas
- Supervise PRIDE to bale cardboard and other tasks at the Specialty Recycling Center
- Assist in special projects, education, and reports as determined by the Clark County SWMD

Deputies are required to submit quarterly reports on services provided to the District within 30 days at the end of each quarter. These reports detail funds spent on personnel, vehicles, equipment, and supplies. An annual report is also submitted to the District describing all activity and services performed for that year. The District provided $165,000 in funding to the sheriff's department for the two deputies to operate the litter prevention and clean-up program.

The District also funds the PRIDE Program to utilize inmates for clean-up activities in all public areas, to support District special events, and provide labor for the Recycling Center, including baling cardboard, removing tires from rims, dismantling appliances, and various maintenance duties. Two deputies supervised the inmate crews and enforced litter and dumping laws. In 2021, Inmates picked up 157.5 tons of litter and dumped items, plus 286 tires. The projects and programs they could help with were reduced due to Covid-19. They primarily helped baled cardboard and assist with any non-public contact programs such as roadway cleanups and illegal dumping site cleanups.

Through the District's PRIDE program, inmates picked up 29 roll-off dumpsters worth of dumped debris, totaling nearly 160 tons of trash. Below is the breakdown by material.

- 565 Trash bags
- 180 mattresses
- 165 other furniture
- 286 tires
- 9 appliances
- 30 electronics
- 267 construction debris



Inmates in the PRIDE program provide service hours at the Clark County Recycling Center and in addition, service various other non-profit organizations each year. The following table provides an inventory of the job sites worked by PRIDE inmates in the reference year and the number of inmates who serviced a site.

Table I-7 PRIDE Service Hours 2021

Job site	Number of Inmates	Total Hours
Dprycling Center	1,108	6,648
Clark County Fairgrounds	33	198
National Trail Parks & Recreation District	23	138
Harmony Township	22	132
Village of Enon	8	48
Mad River Township	3	18
Clark County Combined Health District	6	36
Village of South Vienna	4	24
George Rodgers Clark Park	8	48
Total	**1,215**	**7,290**

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Litter Hotline	Ongoing	Ongoing	Goal 1 and 4

The District operates and advertises a 24-hour hotline to report litter or illegal dumping on 180 signs in the county. Each call is investigated by the District Environmental Enforcement Deputies.

The table below shows the number of calls received and their geographic area.

Table I-8 Calls Received

Township	# of calls
City of Springfield	214
Bethel	4
German	3
Green	15
Harmony	4
Mad River	18
Madison	2
Moorefield	6
Pike	5
Pleasant	4
Springfield Township	17

As shown above, a vast majority of the calls made for illegal dumping occurred in the City of Springfield. This geographic area accounted for 72% of all calls received.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Community Clean-Up Trailer	2012	Ongoing	Goal 1 and 4

This program was developed in 2012 to assist communities and civic groups in the management of litter. The Community Cleanup Trailer is available for loan free of charge to Clark County residents and community volunteer groups (a minimum of five households or groups with at least five volunteers). The Community Cleanup Trailer should be used for neighborhood cleanups, for beautifying public areas, or for clearing vacant lots, not for an individual's property or commercial purposes.

The District will deliver and pick up the trailer at the designated project area. The trailer is loaned on a first-come, first-served basis. A $25 deposit is required. The deposit is returned once all equipment is returned in good condition and the Cleanup Report Form is turned in.

To Use the Community Cleanup Trailer: Submit the Application Form, Project Coordinator's Waiver, and Participants List at least two weeks before your Community Cleanup Trailer scheduled cleanup. The Participants Waiver must be filled out on the day of the cleanup and returned with the trailer. The Cleanup Report Form should be returned within seven days of completing your project.

Participation requirements:

- Must be used in Clark County.

- Minimum of five households involved in the project or a group of at least five volunteers.
- The trailer may be borrowed for a maximum of three days.
- The project must have a designated coordinator.
- The designated coordinator will assume responsibility for the following:
  - Completion and submittal of the Community Cleanup Trailer Application.
  - Coordinator's Waiver.
  - Participant List at least two weeks before the event.
  - Ensuring all participants using the equipment from the trailer are at least 18 years old and have completed the Participants Waiver.
  - Meet CCSWD staff when the trailer is delivered and picked up at your project site. The staff person will not wait longer than 15 minutes to meet you at the site.
  - Confirmation of equipment inventory with CCSWD personnel upon delivery of the trailer and return of the trailer.
  - Distribute supplies to participants and ensure all equipment is operated safely. Retrieving supplies once the project is completed.
  - Properly securing the trailer and its contents.
  - Ensuring the trailer is free of trash and debris upon return.
  - Ensuring a proper parking location for the trailer in the project area.
  - Replacement of any missing items or items not returned in the condition they were received (normal wear and tear excluded).
  - Completion of a Cleanup Report Form within seven days.

The goal of these programs is to target litter and illegal dumping throughout Clark County and is greatly effective as well as provides manpower for the Specialty Recycling Center. ODOT pays the District to do highway cleanups. Grant funding was used for sponsorships and donations for many of these programs. The District had effectively free labor to bale paper and cardboard, and other duties at the Recycling Center and assist with setup and manpower for many other events.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
ClearStream Recycling/ Trash Frames	2021	Ongoing	Goals 1 and 4

This program is designed to allow residents/ organizations to borrow recycling and trash receptacles for events. In 2021 the District had 13 groups/organizations borrow 107 recycling frames and 39 trash frames for their events. The District asks for collection results, but these are sporadic at best.

Target for Next 5 Years: Continue through planning period.

Other Programs

Name	Start Date	End Date	Goal
Legal and Consulting	Ongoing	Ongoing	Goal 4

The District allows for annual legal and technical assistance from lawyers and consultants. There was no need for this service in 2021. However beginning in 2022, the District hired GT Environmental to assist in the preparation of the 2025 Plan Update.

Target for Next 5 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Disaster Debris Management	Ongoing	Ongoing	Goal 4

Responding to natural disasters, such as flood events, tornados, and severe storms, requires a significant effort of coordination and time from all levels of government. Natural disasters including disease (pandemic bird flu) can also significantly impact communities and specifically solid waste services. Man-made disasters, although unlikely, may also require the management of significant amounts of debris. The Ohio EPA encourages all solid waste management districts to outline a strategy and plans to be prepared in the event a natural or man-made disaster occurs.

Since 2010, the District has worked cooperatively with the Clark County Emergency Management Agency to develop a Disaster Debris Management Plan that was adopted in 2011. The Plan identifies the services and needs of the local jurisdictions in the event a debris management emergency or a solid waste management service emergency exists. The District acts as Debris Coordinator as part of the Emergency Operation Command in collaboration with the county EMA when called upon to do so to implement this Plan. The Disaster Debris Management Plan provides guidance to officials in the event of a disaster event

Understanding the roles of various agencies in responding to a disaster event is important. The Plan identifies each organization and its potential role in a debris management emergency. These include the following:

- Townships, villages, and cities
- Clark County EMA

- Ohio EMA
- Federal EMA
- Clark County Health Department
- Ohio EPA
- Landfill owners/operators
- Compost facility owner/operators
- Waste haulers

Clark County's Solid Waste District and Emergency Management Agency co-chair the Debris Management Planning Team. Complete team membership includes representation by the following: Clark County Solid Waste District, Clark County Emergency Management Agency, Clark County Combined Health District, Clark County Engineer, City of Springfield, officials from local jurisdictions, Ohio Emergency Management Agency, and Ohio Environmental Protection Agency.

In 2021, there was no need to utilize the Disaster Debris Management Plan. The District has not had to utilize this plan since its creation.

Name	Start Date	End Date	Goal
Data Collection	2025	Ongoing	Goals 1 and 2

The District will look to re-establish regular (annual or bi-annual) surveys for brokers, processors, and commercial businesses. An online survey platform will be explored and contact lists developed. Beginning in 2025, the District is planning a less robust survey effort looking to contact a smaller focused number of businesses.

Name	Start Date	End Date	Goal
Events/Parks/Venues	2025	Ongoing	Goals 1 and 2

The District will engage with the park district to explore diversion and waste reduction in the park systems.

Name	Start Date	End Date	Goal
Feasibility Study for Franchised Waste Collection in Springfield	2027	Ongoing	Goals 1 and 2

The Policy Committee identified this as a priority #2 program. A start date of 2027 is targeted to help the City of Springfield explore how best to provide non-subscription curbside service based on choice, cost savings, local hauler availability, franchise, contracting, etc.

Name	Start Date	End Date	Goal
Development of an in-district Transfer Station	Ongoing	Ongoing	Goals 1 and 2

The District reserves the right to develop a licensed or unlicensed solid waste transfer station, recycle transfer station, or other consolidation facility (licensed or unlicensed) at any point in the planning period. If any such facility is developed, the District will evaluate the budgetary needs of the facility to determine if a material change in circumstance has occurred according to the policy in Chapter 1 of this Plan Update. The District will also determine if a simple plan budget revision would be required in lieu of a material change in circumstance. The District plans to conduct a feasibility study in 2025 to provide further analysis.

Name	Start Date	End Date	Goal
Convenience Center (Basic or Intermediate)	2027	Ongoing	Goal 1 and 2

As identified, one of the collection gaps and challenges of curbside recycling is the cost of trash service, but also litter and open dumping. Collection is a key area identified as a best management practice for a well-functioning, materials management system. All households and businesses need easy access to recycling through curbside collection, commercial collection, and/or drop-off stations. Considering these key areas, the current waste management system, infrastructure, and potential recyclable recovery, this plan update develops a contingency plan to build a convenience center to enhance collection. It is written as a contingency plan to allow discussion of a privately-owned transfer facility to develop further.

One of the many benefits of a convenience center is the option for tailoring the design to support the needs of the District's collection gaps. The concept is a drop-off point for common household recyclables and trash. Appendix O models a contingent budget using broad assumptions that would need to be fully evaluated through a feasibility study before implementation.

Before the development of a convenience center, a feasibility study would be conducted. Goals for the study include to determine if a basic convenience center with limited collection capacity, an intermediate convenience center with expanded collection capacity and infrastructure, or neither of the two would best serve Clark County households. Rumpke continues to pursue building a transfer facility within Clark County which is expected to happen. However, the District wants to provide a plan to give Clark County households convenient opportunities to manage waste should the development of a privately owned facility become unavailable. Appendix I describes the contingent program and Appendix O details the contingent budget.

Depending on the feasibility study analysis, if the District decides to explore the construction of a convenience center, it would act as a small, Clark County availability only for trash and recycling with the potential to expand the materials accepted to other material streams as well. This center would have limited capacity to accept waste material. One 30 cubic-yard trash dumpster and five 8 cubic-yard recycling dumpsters are planned but would be fully evaluated in the feasibility study. Access to these dumpsters would be open to Clark County household residential use only. High-level planning assumptions assume dumpster service is needed three times per week. Further details can be found in Appendix O.

APPENDIX J

REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL 1

Appendix J.
Opportunity to Recycle and Demonstration of Achieving Goal 1

Clark County has two choices to demonstrate achieving waste reduction and recycling goals in accordance with the 2020 State Plan. The District chooses to demonstrate Goal 2, which is detailed in Appendix K.

APPENDIX K

WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL 2

Appendix K.
Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2

Clark County has two choices to demonstrate achieving waste reduction and recycling goals in accordance with the 2020 State Plan. The District chooses to demonstrate Goal 2, which is detailed here in Appendix K. Goal 2 states that the District will reduce and recycle at least 25% of the solid waste generated by the residential/ commercial sector. In the reference year, the District diverted 36% of all waste generated from this sector.

Table K-1 Residential/Commercial Annual Rate of Waste Reduction

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate (%)	Per Capita Waste Reduction & Recycling Rate (ppd)
2021	***135,633***	***57,680***	***102,966***	***160,646***	***36%***	***2.33***
2022	134,873	66,326	104,015	170,342	39%	2.69
2023	134,118	65,985	105,075	171,059	39%	2.70
2024	133,367	65,645	106,145	171,790	38%	2.70
2025	132,620	65,307	107,227	172,533	38%	2.70
2026	131,878	64,970	108,319	173,289	37%	2.70
2027	131,139	64,636	109,422	174,059	37%	2.70
2028	130,405	64,304	110,537	174,841	37%	2.70
2029	129,674	63,973	111,663	175,636	36%	2.70
2030	128,948	63,645	112,801	176,445	36%	2.70
2031	128,948	63,645	112,801	176,445	36%	2.70
2033	128,948	63,645	112,801	176,445	36%	2.70
2033	128,948	63,645	112,801	176,445	36%	2.70
2034	128,948	63,645	112,801	176,445	36%	2.70
2035	128,948	63,645	112,801	176,445	36%	2.70
2036	128,948	63,645	112,801	176,445	36%	2.70
2037	128,948	63,645	112,801	176,445	36%	2.70
2038	128,948	63,645	112,801	176,445	36%	2.70
2039	128,948	63,645	112,801	176,445	36%	2.70

Source:
Population – Appendix C, Table C-1
Recycled – Appendix E, Table E-8
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated
Per Capita Waste Reduction & Recycling Rate = (Recycled x 2000 lbs/ton) / (Population x 365 days)

In the reference year, Clark County exceeded the state goal of 25% residential/commercial waste reduction and recycling rate with a 36% rate. As detailed in **Table K-1** above, projections show that it will continue to exceed the state goal of 25% diversion. The District does anticipate this rate to decline slowly throughout the 2031 after an initial jump in the early years of the planning period. Projections have been flatlined in the seventh year of the planning period.

As was discussed in Appendix E, a major contributor to the diversion stream (organics) had a five-year low in reported tonnages diverted. This is expected to return to historic levels, thus the initial increase in recycling and diversion. However, with a decreasing population, it is projected the total diversion will decrease minimally from year to year. Despite an overall decrease in diversion rate, the per capita waste reduction is expected to rise.

The previous plan update projected a total waste reduction of roughly 59,000 tons in 2021 with about 93,000 tons of disposed waste. This was projected to be a 39% waste reduction rate. The actual numbers for 2021 are not too different from these projections, the main difference is that the observed amount of waste disposed was higher than projected by roughly 10,000 tons. This is the primary driver for the 3% difference in projected and actual waste disposal rate for 2021.

Table K-2 Industrial Annual Rate of Waste Reduction

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Non-Recyclable Waste	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
n/a					

Source:
Recycled – Appendix F, Table F-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated

The Ohio EPA 2020 State Plan no longer requires Solid Waste Management Districts to demonstrate the industrial sector percentage goal of 66% diverted waste. Upon removal of this goal, Districts may choose whether to survey the industrial sector or not.

The Clark County Solid Waste Management District chose not to conduct an industrial survey in the reference year. Therefore, there were no values reported for this sector's waste reduction and recycling. However, this is likely not representative of the sector's recycling practices. It has become common practice for many businesses to recycle with the heightened importance of sustainable business practices for stakeholders and the fact that recycling often saves many businesses money. The District expects many businesses from this sector do recycle, especially considering the low tonnages of waste reported to Ohio EPA from this sector.

During the previous plan update, the District conducted annual industrial surveys and documented a 93% industrial waste reduction rate.

Table K-3 Total Solid Waste Annual Rate of Waste Reduction

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2021	***57,680***	***105,673***	***163,353***	***35%***
2022	66,326	106,711	173,038	38%
2023	65,985	107,761	173,745	38%
2024	65,645	108,821	174,466	38%
2025	65,307	109,892	175,199	37%
2026	64,970	110,974	175,945	37%
2027	64,636	112,068	176,704	37%
2028	64,304	113,172	177,476	36%
2029	63,973	114,288	178,262	36%
2030	63,645	115,416	179,060	36%
2031	63,645	115,416	179,060	36%
2032	63,645	115,416	179,060	36%
2033	63,645	115,416	179,060	36%
2034	63,645	115,416	179,060	36%
2035	63,645	115,416	179,060	36%
2036	63,645	115,416	179,060	36%
2037	63,645	115,416	179,060	36%
2038	63,645	115,416	179,060	36%
2039	63,645	115,416	179,060	36%

Source:
Recycled – Appendix E, Table E-8 Appendix F, Table F-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated

Because the District does not survey the industrial sector, the total waste reduction and recycling rate is only minimally different from the residential/commercial rate. The previous plan projected the District's overall recycling and reduction rate to be 49% in 2021, though this included the diversion efforts projected for the industrial sector. Projections are flatlined in the seventh year of the planning period.

The District is expected to maintain above a 25% residential/commercial recycling rate and will achieve Goal 2 through the planning period, as demonstrated in the above tables.

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

A. Minimum Required Education Programs

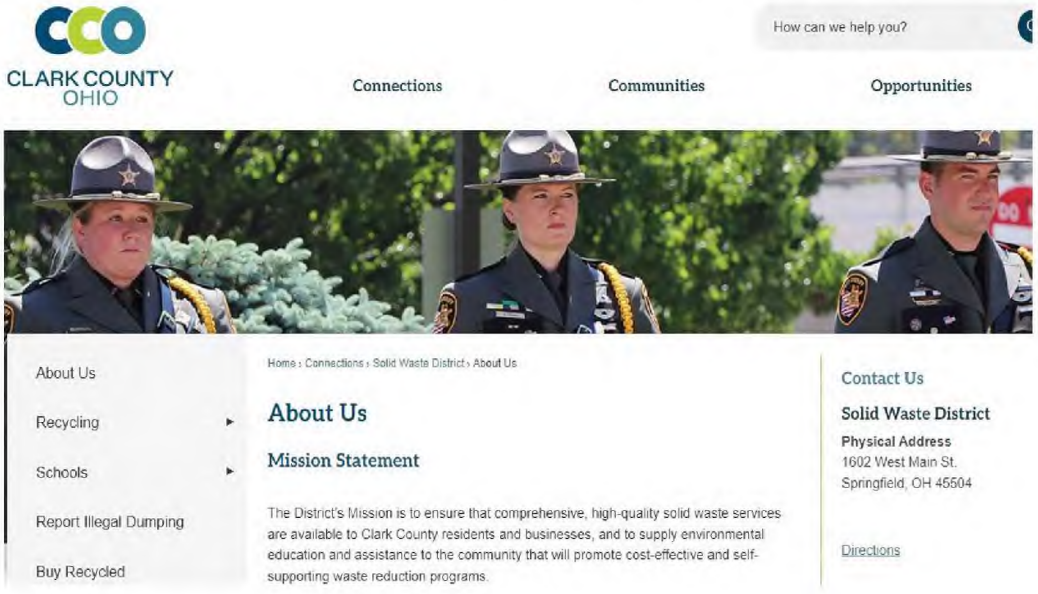
In accordance with Goal 3 of the 2020 State Plan, the District is required to provide four minimum education programs:

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.

1. Website

The District maintains a website address at https://www.clarkcountyohio.gov/634/About-Us. The website is a part of the broader Clark County Ohio website, but the content and updates are managed by the District. The website is a strong resource for residents, schools, businesses, institutions, and local governments to utilize. The website offers dedicated pages for recycling, schools, illegal dumping, businesses, resources, events, and more that provide detailed information and inventories of all the services provided by the Clark County Solid Waste Management District. The website is a reliable source for providing instant information for programs, services, and events offered by the District.



2. Comprehensive Resource Guide

The District's website includes a dedicated page for recycling resources. Under this page are drop-off locations, acceptable materials to recycle, local recycling options, and information on the Clark County Specialty Recycling Center. The District updates this annually to ensure the information is accurate and up to date.

3. Inventory

An infrastructure inventory of all available drop-off locations, curbside programs, compost sites, material recovery facilities, etc. can be found in the Plan, which is updated every five years. Specific recycling inventory can also be found on the District's website. The information on the website is updated more frequently than the District's Solid Waste Management Plans to reflect any changes that may happen in between Plan Update cycles.

4. Speaker/Presenter

The District has a full-time staff member, Program Specialist, able to give presentations to residents, businesses, communities, schools, and other groups in Clark County. District programming focuses on litter prevention and recycling. The District also offers tours of the Clark County Specialty Recycling Center for groups.

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

Goal 4 of the 2020 State Plan states 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. Per *Format 4.*1, the Outreach and Marketing Plan needs to have the following components:

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

This section discusses the District's strategies to satisfy the requirements of meeting Goal 4.

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 and Appendix I lists the priority of programs.

To align with Format 4.1, which requires the District to develop and implement programs that meet five different target audiences, the District's existing programs were organized by target audience. **Table L-1** below lists the programs offered by the District by target audience. Some of the existing SWMD programs

cross several target audiences. The District's outreach, education, and technical assistance programs address all five required target audiences. Many programs reach more than one target audience and may shift as the needs of target audiences change over time. The District is committed to offering a wide range of services, education, and outreach to all target audiences through the planning period.

Table L-1 Program Reach by Target Audience

Education/ Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities and Elected Officials
BWRAP Outreach & Website		X	X	X	
HHW & Lead Acid Battery Education/Outreach	X				
Composting Workshops	X				
Teacher Newsletters		X			
School Presentations		X			
District Website	X	X	X	X	X
District Brochures	X	X	X	X	X
Advertisement	X	X	X	X	X
Keep Clark County Beautiful	X			X	X
Close the Loop Campaign	X	X	X	X	X
Take It To The Curb Campaign	X				X
Social Media	X	X	X	X	X
Recycling Grant Engagement	X				X

Program Descriptions

Name	Start Date	End Date	Goal(s)
BWRAP Outreach and Website	Ongoing	Ongoing	Goal 4

The District's Business Waste Reduction Assistance Program (BWRAP) offers technical assistance and education/ awareness to businesses within Clark County. To help promote this program to businesses, the District maintains a business-specific page on its website that provides information on grants, loans, waste reduction, recycling, purchasing recycled content products, and web links to materials exchange programs.

The District works with companies to provide technical reduction assistance on the basis that they contact the District. Assistance with waste reduction is provided to businesses who approach the District.

<u>Recycling Makes $ense</u>

- Recycling in your business can affect your bottom line.

- Recycling paper and cardboard will reduce the amount of waste that your business disposes.
- Recycling can save money by reducing the size of your waste dumpster or by decreasing the number of times that the dumpster is serviced.
- Reducing the amount of paper and cardboard that goes into a landfill saves natural resources and protects the environment.

No businesses reached out for assistance since before 2020.

Target for Next 5 Years: To re-vitalize this program, the District will conduct a study of NAICS codes to identify the largest generators and set a goal to contact (via email or phone call) two generators in the first year of the planning period. Promotions of the program will increase by sending out social media blasts and focused promotions to the webpage at least once a year. The District will explore expanding this offering to the industrial sector.

Name	Start Date	End Date	Goal(s)
HHW and Lead Acid Battery Education/Outreach	Ongoing	Ongoing	Goal 4

As some of the most common difficult-to-manage waste streams, the District emphasizes education and outreach for HHW and lead acid batteries which are accepted at the Specialty Recycling Center. The District advertises programs and information for these material streams through its website and other methods such as brochures.

Proper purchasing and management of HHW materials is provided to households through a public education initiative. Purchasing techniques to minimize HHW generation and to purchase and use alternative products that are less hazardous is the focused message. The District uses the website, printed materials, presentations to adults and children, social media, and other options as needed.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
Composting Workshops	Ongoing	Ongoing	Goal 4

One other common difficult-to-manage waste stream, yard waste and organics, is a focus for the District. The District promotes backyard composting and offers workshops detailing the importance of composting and keeping organic waste out of the landfill, how to compost, and what composting is. Each year, the District hosts two or three composting workshops for roughly 40 people. Due to the ongoing COVID-19 limits, the District could only hold one compost program as in-person programs resumed. The District held the program with the City Parks Department.

The District also sells and promotes compost bins. There is a limited supply of Earth Machine compost bins with instructions for sale for $40 at the Specialty Recycling Center.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
Teacher Newsletters	Ongoing	Ongoing	Goal 4

The District prepares and sends newsletters to all teachers of both public and private schools in Clark County twice a year. These are sent out at the beginning of the school year and in January. In 2020, these newsletters were sent electronically rather than in hard copy because most schools were operating fully remotely during the COVID-19 pandemic.


Free Education Programs
can be done in-class, virtually via Zoom, or outdoors at your school

The Clark County Solid Waste District offers a wide variety of individual classroom education programs for grades K - 8 that focus on recycling, litter prevention, and natural resource conservation.

The benefit to teachers is that the programs are specific to each grade level and they also meet various standards in the Ohio Department of Education's Learning Standards and Model Curriculum. Although the education

There are programs available for high school and college students as well. Programs can be tailored to fit your curriculum.

If you are membe of a group, organization or just want to learn more about the recyclin opportunities available i Clark County, we can come to your meeting o event and do a presentation.

A brochure with a detailed list of the schoo recycling education

Newsletters typically entail District educational programming resources, information on the importance of school recycling, various curricula for different age ranges, accepted recyclable material updates, and funding opportunities for schools. These provide direct outreach to schools that help keep the educational sector up-to-date and are key to maintaining a relationship with the District.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
School Support/Education Materials	Ongoing	Ongoing	Goal 4

The District provides materials to teachers for grades Pre-K-12 about waste reduction and other solid waste issues, newsletters, skits, and workshops. Due to ongoing restrictions from the COVID-19 pandemic, access to schools was limited during 2020 and 2021. Though the effects of the pandemic progressively lessened, the District was able to return to a more normal state of operation, as far as program offerings and community engagement, towards the end of 2021. The District's Program Specialist conducts presentations on recycling, composting, and nature-related subjects. The content of each grade-specific program aligns with ODE's New Learning Standards, which allows teachers to utilize these programs to enhance lesson plans while also providing students with a hands-on opportunity to learn about recycling and taking care of the environment. 13 presentations were given to schools which reached 197 students in the reference year.

Table I-1 School Support Program Reach

Year	Presentations Given	Audience Reached
2017	10	1,257
2018	9	1,202
2019	16	1,836
2020	12	173
2021	13	197

The District also offers tours to students of the Clark County Recycling Center, providing an inside look at one part of the recycling process. When funds permit, the District subsidizes some or all of the cost for a school field trip. The District also provides educational grants for schools and in 2021 was able to provide 45 (7 gal.) classroom recycling bins for Northridge Elementary/Middle School in support of their new school recycling program.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
District Website	Ongoing	Ongoing	Goal 4

See the website description above.

Target for Next 5 Years:

- Track website analytics to understand which pages and searches are receiving the most hits
- Develop short, less than one-minute educational videos on key topics

Name	Start Date	End Date	Goal(s)
District Brochures	Ongoing	Ongoing	Goal 4

The District supplies brochures at four permanent locations:

- Clark County Library
- City Hall
- County Commissioners Building
- Clark County Solid Waste Management District Office

Brochures are also provided at special events, presentations, and info booths. Brochures identify all local recycling opportunities and how to reduce waste such as; Reduce, Reuse, Recycle, Home Composting, Tackle Toxic Trash, the Clark County Specialty Recycling Center, the Clark County Recycling Drop-off Stations, and Keep Clark County Beautiful. Additionally, information on special events is provided here as well.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
District Advertisement	Ongoing	Ongoing	Goal 4

The District advertises its services, recycling infrastructure, and programming through a variety of multi-media avenues including the following:

- Monthly ads
- Digital and physical signage
- Press Releases
- Media Coverage
- Facebook
- Website
- Newsletters and Brochures

The District has emphasized efforts to raise awareness around the list of accepted recyclable materials and to reduce contamination found in the recycling stream. The District has actively increased the signage at the drop-off locations to help promote the correct recycling of materials and decrease incorrect items being put in the bins and at the curb.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
Keep Clark County Beautiful	Ongoing	Ongoing	Goal 4

In 2007, the District started a local Keep America Beautiful Affiliate, Keep Clark County Beautiful (KCCB). The mission of KCCB is "To engage residents to take pride, ownership, and responsibility for enhancing their community's environment". This has helped to increase awareness of recycling and litter prevention. KCCB broadens the District's impact with the contributions of an energized board, new funding opportunities, national awareness campaigns, and a friendly name for some of our initiatives.

The District is often involved in many of the KCCB initiatives as a sponsor, partner, or participant such as in the annual Great American Clean-Up. In 2021, this annual Earth Day clean-up recruited 1,457 volunteers, who gave 1,967 hours and picked up 450 bags of litter and debris from 70 public places. KCCB has been and continues to be a huge asset for expanding community outreach and has helped to put a face to many of the programs and messages.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
Close the Loop Campaign	Ongoing	Ongoing	Goal 4

This campaign is designed to promote the benefits of purchasing and using recycled content products as opposed to buying virgin products. To remind residents to purchase recycled content products, the District includes information on the website and in the main brochure to "Reduce, Reuse, Recycle". Funds permitting, the District provides financial assistance to businesses, schools, or organizations that demonstrate the ideals of the Close the Loop Campaign. Furthermore, the ideas behind this program are promoted in presentations and workshops, as well as advertised on the District's websites and brochures.

In 2019, the District awarded four local projects with funding to help use recycled content materials, and in 2021, the District purchased 45 (7 gal.) classroom recycling bins for Northridge Elementary/Middle School in support of their new school recycling program. There was no additional usage of this program by interested entities over the last five years.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
Take It to the Curb Campaign	Ongoing	Ongoing	Goal 4

The District launched the Take it to the Curb Campaign to encourage curbside recycling and consideration of community contracts as a way to encourage curbside recycling). The campaign had a dedicated website, take2curb.org, and a Facebook page. District personnel made presentations to civic groups, political subdivisions, and businesses.

As part of this campaign, the District did extensive outreach in 2015, conducting a 10-question survey to residents across the County regarding the demand for curbside recycling. The survey yielded 212 responses

across 12 political jurisdictions, with 46% of respondents saying they lived in Springfield. Key statistics from the survey include the following:

- 81% of respondents are above the age of 40.
- 52% of respondents say they never use curbside recycling.
- 30% of respondents say they never use drop-off recycling.
- **58% of respondents say their trash hauler does not have curbside recycling.**
- 70% of respondents pay more than $16 per month for trash service.

Q9 How much would you want a community contracted curbside recycling program if your monthly trash service cost ($) is...

Answered: 204 Skipped: 8

A key theme uncovered in this survey was that there is interest in getting community-contracted curbside recycling, but that price affects this sentiment heavily. Only 13% of respondents would remain uninterested in curbside recycling if it lowered their price for trash services. This number jumps to 42% of respondents claiming to be uninterested if it increases their price for trash services.

The Take it to The Curb Campaign Highlighted the following benefits of contracting curbside recycling:

- Greater levels of trash service at a lower cost for residents
- An increase in recycling across the entire community
- Reduced carbon footprint
- One Trash Day for the entire neighborhood throughout the week
- Less litter and illegal dumping
- Decreased road deterioration, maintenance, and repair by heavy trash trucks

In 2015 the District announced that grant funding would be available from 2016 to 2017 for individual communities to take advantage of to jump-start a curbside recycling program. Funding was based on a per capita basis. The District advertised its availability to meet with stakeholders, community leaders, and haulers and that it would provide technical assistance throughout the process. Despite its efforts, there were no communities interested in meeting with the District, no communities requested assistance, and no communities requested grant funding.

There are a variety of factors that influenced this outcome. Namely, many communities have subscription recycling services available to them, residents across the County have a strong preference for local, small haulers and do not want to see large companies take away their business, and residents do not want their trash service cost to increase. Because of these factors, the Take it to The Curb Campaign to establish

contracted services for curbside recycling did not yield any new curbside recycling programs. There has been no interest from political jurisdictions for this funding opportunity over the previous five years.

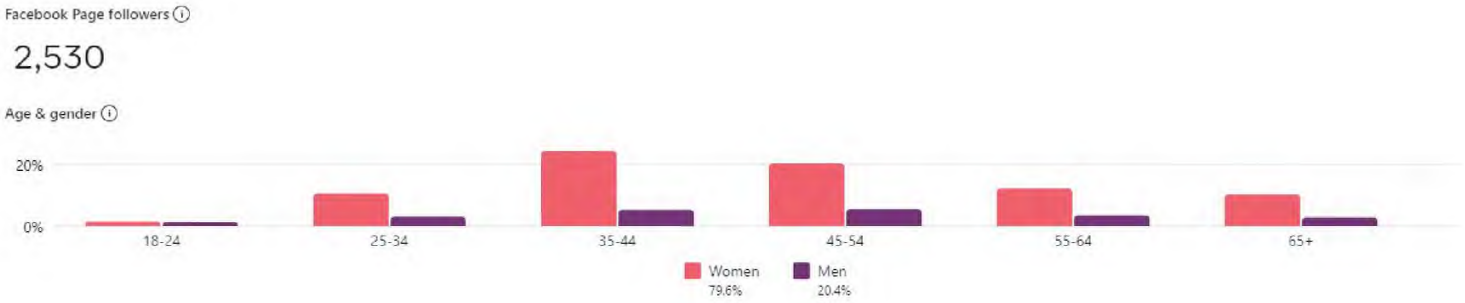
Target for Next 5 Years: As a result of strong local preferences for hauling and the possible price inflation for contracted curbside recycling, new curbside programs were not implemented. Using the Take it to The Curb Campaign, the District will plan to meet with one political jurisdiction a year and offer to bear the cost of an interest survey on behalf of the political jurisdiction.

Name	Start Date	End Date	Goal(s)
Enhance Take It to the Curb Campaign	2019	2021	Goal 4

This program was established to enhance the existing program and generate new curbside recycling programs throughout Clark County. There were no interested political jurisdictions and this program concluded in 2021.

Name	Start Date	End Date	Goal(s)
Facebook/ Social Media	Ongoing	Ongoing	Goal 4

The District has its own Facebook page that it utilizes to reach a broader audience. The Facebook page is through Keep Clark County Beautiful. Announcements about events, programs, and other relevant information to the Solid Waste District are made through this account. Since 2020, the District has worked with a Public Information Officer to help with media announcements.



Target for Next 5 Years: Currently, Facebook is a predominant resource for reaching residents, businesses, and multi-family residents due to its larger audience. However, the District could attract more followers. The District will invest a small amount in targeted social media advertisements for Facebook to encourage greater followers within Clark County. The goal is to increase engagement and interaction with residents on the District's Facebook page by 10% in the first year of the planning period.

Name	Start Date	End Date	Goal(s)
BWRAP Targeted Marketing	2019	2021	Goal 4

The District conducted targeted marketing from 2019 to 2021 to encourage businesses to partner with the District on its Business Waste Reduction Assistance Program. There were no interested businesses that reached out to the District. This program ended in 2021.

Name	Start Date	End Date	Goal(s)
Enhanced HHW Education	Ongoing	Ongoing	Goal 4

A goal for the District is to enhance HHW education for residents. The District promotes the proper purchasing and management of HHW materials to residents through a public education initiative. This initiative focuses on purchasing techniques to minimize HHW generation and to purchase and use alternative products that are less hazardous. The District utilizes its website, printed materials, presentations to adults and children, social media, and other options as needed. In 2021, this was accomplished by encouraging residents to switch to environmentally friendly cleaners in conjunction with Earth Day and the District's weekly HHW disposal day.

Target for Next 5 Years: Continue throughout planning period.

Name	Start Date	End Date	Goal(s)
Drop-off Education & Awareness	2025	Ongoing	Goal 4

To address educational gaps and provide user feedback the District will use a direct engagement campaign. This will consist of a pre-campaign waste audit of the drop-off container, an outreach campaign (direct mailing, handouts, and user surveys), and a post-campaign waste audit.

This will involve the development of a survey instrument that can be used to collect information from participants using the drop-off site. One piece of information the survey will ascertain is where users who use the site are coming from. The survey will also be designed to collect visual contamination characterizations of the recyclables being dropped at the site. Two waste characterization sorts, one pre-campaign and one post-campaign will inform if the outreach campaign resulted in behavior change.

The District will be seeking Ohio EPA grants to conduct these audits periodically throughout the planning period.

C. Outreach Priority: City of Springfield Curbside Recycling Initiatives

The Situation

The City of Springfield is planning several efforts to bring curbside recycling to their households. Appendix I outlines several bulleted descriptions of actions. An obstacle for contracted or franchised curbside recycling is the city's charter. Another is the public perception of the cost of service. Supporting the city's conversations and actions, the District is planning to assist with education and outreach as the city navigates these obstacles.

What does the District want the audience to do?

1) City officials – understand the District, solid waste plan goals, how the County measures against its peers and neighbors, propose to adjust the city's charter, educate residents and garner support for proposed charter, continue to explore how best to bring non-subscription curbside to the city, etc.
2) Residents – understand the basic collection system needs and how that supports infrastructure (less dumping, less litter, economies of scale, etc.), understand the benefit of curbside recycling (keeping out of the landfill, end markets and closing the loop, etc.), vote to adjust the city charter, explore how best to lower monthly waste disposal bill and increase services.

What will the District do to make the behavior more desirable?

The District is budgeting funds of $2 per household in the first year and $1 per household in the second year as a grant to award for supporting a non-subscription curbside program. The District is also providing education and outreach support.

How will the District communicate and what is the timeline?

The District will actively engage with the city commissioners to discuss curbside recycling in the City. The approach includes phone conversations, in-person meetings, resident research and engagement, and technical assistance. This outreach program targets community and elected officials to equip them with data to make informed decisions regarding curbside recycling for the City.

The following is a framework for education messaging development:

1) Presentation #1: Provide the city with a brief overview of the District, background of solid waste planning, progress to date, and how we compare (benchmarking of Clark County Solid Waste Management District to peer and neighboring solid waste districts). Ask Ohio EPA to present and show support.
    - Timeframe: March 2024 meet with city commissioners and present

2) Presentation #2: Provide further analysis and information on what curbside recycling in Springfield could look like. Proposed topics for the presentation:
    a. The Recycling Partnership (curbside recycling and grant opportunity)
    b. City charter obstacle
    c. What options are available and how are they different
        i. Mandatory offering City ordinance
            1. Pros and cons

2. Impacts on residents, haulers, and the City
3. Participation assumptions and challenges

ii. Franchise collection exclusive vs. non-exclusive

1. Pros and cons
2. Potential impacts on residents, haulers, and the City
3. Participation assumptions and challenges

- Timeframe: April 2024 meet with city commissioners and present

3) Presentation #3: Provide a discussion on what this would cost the households
   a. Monetary cost
      i. Transparency in the uncertainty of the cost of service
      ii. Economies of scale
   b. Environmental cost
      i. Materials out of the landfill and landfill capacity
      ii. Beautify Springfield
      iii. Finite landfills and the risk of rising costs in the long run – "pay me now or pay me later"
   - Timeframe: May 2024 meet with city commissioners and present

Campaign development materials will include key messages, and maintain the "look and feel" of the District.

This timeframe lays out a framework through May 2024. Assuming the city commissioners express interest and propose a charter amendment to the voters on the November ballot, the District will launch a campaign to the voters of Springfield. The campaign will:

- Use social marketing to deter littering, by depicting it as un-popular where the desired behavior is recycling.
- Use utility bill mailers to enforce Springfield's message/slogan. Ideas could be "time to rise", "a cleaner Springfield starts here", "we all need to do our share", etc.) The District could re-fresh the "Take It to the Curb" campaign.
- Develop videos with city commissioners.
- Create a website subsection to house information.

APPENDIX M

WASTE MANAGEMENT CAPACITY ANALYSIS

Appendix M.
Capacity Analysis

This appendix provides the District's strategy for ensuring access to solid waste management facilities.

A. Access to Publicly Available Landfill Facilities

Table M-1 Remaining Operating Life of Publicly Available Landfills

Facility	Location	Years of Remaining Capacity	Applicable Dates
In-State			
SWACO Franklin County Sanitary Landfill	Franklin County	**46**	31-Dec-21
American Landfill, Inc.	Stark County	**74**	31-Dec-21
Suburban Landfill Inc	Perry County	**77**	31-Dec-21
Cherokee Run Landfill	Logan County	**28**	31-Dec-21
Rumpke Sanitary Landfill	Hamilton County	**37**	31-Dec-21
Crawford County Landfill	Crawford County	**23**	31-Dec-21
Stony Hollow Landfill Inc	Montgomery County	**26**	31-Dec-21
Evergreen Recycling and Disposal	Wood County	**33**	31-Dec-21
Rumpke Beech Hollow Landfill	Jackson County	**76**	31-Dec-21
Rumpke Noble Road Landfill	Richland County	**16**	31-Dec-21
Celina Sanitary Landfill	Mercer County	**0**	31-Dec-21
Wood County Landfill	Wood County	**5**	31-Dec-21
Carbon Limestone Landfill	Mahoning County	**47**	31-Dec-21
Pike Sanitation Landfill	Pike County	**36**	31-Dec-21
Pine Grove Regional Facility	Fairfield County	**88**	31-Dec-21
Sunny Farms Landfill	Seneca County	**4**	31-Dec-21
Out-Of-State			
Caldwell Landfill	Indiana	**Data Not Available**	Not Available
Bavarian Trucking Landfill	Indiana	**Data Not Available**	Not Available

Source:
Ohio EPA Waste Flow Reports 2019, 2020, 2021
2021 Ohio Solid Waste Facility Data Report Tables (Table 15) published by Ohio EPA
Note: Years of remaining capacity are determined from waste accepted as of December 31, 2021.
Municipal Solid Waste Landfills listed above that only accepted CDD: Crawford County Landfill, Celina Sanitary Landfill

Table M-1 lists the municipal solid waste landfills where any waste from the District was disposed of in the reference year and two years prior. This includes residential waste, industrial waste, and exempt waste. The landfills listed include those that accepted direct hauled waste and those that accepted transferred waste. Note that municipal solid waste landfills may still accept construction and demolition debris (CDD) waste. As such, some municipal solid waste landfills listed above are included in the table despite only accepting CDD waste.

The District does not have a landfill located inside its boundaries. Over the past three years, the District has utilized 16 in-state landfills and two out-of-state landfills. Two landfills accept a majority of the District's waste. These are Rumpke Sanitary Landfill and Stony Hollow Landfill. Combined, these landfills accept 94% of the District's waste. As explored in *Appendix D*, the Montgomery County South Transfer station receives a majority of the District's waste. This facility then sends the waste received at the facility to Rumpke Sanitary Landfill, thus the majority of the District's waste ends up at this landfill. **Table M-2** below presents the waste flow from the District to its destination landfill both from direct hauled and transferred waste.

An error was found in the Ohio Solid Waste Facility Data Report (2021) for Stony Hollow Landfill. This report states there are four years of capacity at the landfill. After conversations with the Ohio EPA, this number has been corrected to 26 years of capacity in the above table.

Table M-2 Tons and Percent Waste Sent to Destination Landfills (2021)

Landfill	Direct Hauled Waste	Transferred Waste	Total Landfilled	Percent of District Waste
SWACO Franklin County Sanitary Landfill	8		8	0%
American Landfill, Inc.	19		19	0%
Suburban Landfill Inc	1		1	0%
Cherokee Run Landfill	5,954	175	6,129	6%
Rumpke Sanitary Landfill	558	72,925	73,484	69%
Crawford County Landfill	22		22	0%
Stony Hollow Landfill Inc	25,985		25,985	25%
Caldwell Landfill	238		238	0%
Total	**32,786**	**73,100**	**105,886**	**100%**

Source:
Ohio EPA Waste Flow Report 2021
2021 Ohio Solid Waste Facility Data Report Tables (Table 15) published by Ohio EPA
Note: Includes destination landfills for waste transferred

Table M-2 above presents the total amount of waste disposed of (both direct haul and transferred waste). The District identified the end destination for waste that initially gets sent to a transfer station before ultimately being disposed of in a landfill. As mentioned, the District's primary point of contact for solid waste is the Montgomery County South Transfer Station which then gets sent to Rumpke Sanitary Landfill.

Per format 4.1, adequate capacity is achieved if the landfills that combined took 75% of the District's waste have adequate capacity to continue taking waste throughout the first eight years of the planning period. The District does have adequate capacity to last throughout the first eight years of the planning period. Stony Hollow has 26 years of remaining capacity as of December 2021. Rumpke Sanitary Landfill and Cherokee Run Landfill accept 69% and 6% of the District's waste respectively (totaling 75%) and have sufficient capacity to last through the first eight years of the planning period with 37 years and 28 years of capacity respectively.

B. Access to Captive Landfills

Captive or residual waste landfills are designated exclusively for the disposal of one or any combination of wastes from seven specific industrial categories. Due to regulations, these facilities will not receive municipal solid waste. Residual/captive landfills are landfills used to dispose of waste generated exclusively by the manufacturing company that owns the landfill. The District did not send waste to captive landfills in the reference year

Table M-4 Captive Landfills

Facility	Location	Years of Remaining Capacity
None		

APPENDIX N

EVALUATING GREENHOUSE GAS EMISSIONS

Appendix N.
Evaluating Greenhouse Gas (GHG)

The Waste Reduction Model (WARM)

WARM is a tool that the US EPA developed to quantify the effects of waste management decisions on greenhouse gas emissions. The model demonstrates the benefits of alternative waste management technologies over traditional waste management methods. The WARM model is updated regularly. A District can use a different but comparable modeling program to calculate greenhouse gas emission reductions provided the model accounts for waste management and recycling activities.

Clark County is using the WARM model to compare municipal solid waste management scenarios with data derived from the residential/commercial sector.

Each District will run WARM twice and include the results in the solid waste management plan:

- For the first run, enter all quantities recycled in the reference year in the landfill column (for the baseline year) and for the alternative scenario, enter the quantities recycled in the tons recycled column.
- For the second run, enter the quantities of residential/commercial material recycled in the reference year in the tons recycled column (for the baseline scenario), and then enter the quantities projected to be recycled in the sixth year of the planning period in the alternative scenario column.

A. GHG Measurement

Gases that trap heat in the atmosphere are called greenhouse gases (GHG). These gases include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and fluorinated gases. Each gas has its own global warming potential (GWP) with carbon dioxide establishing the baseline global warming potential, all other gases are compared in units of carbon dioxide equivalent (CO2e). Each gas has varying degrees of effects on the climate and is dependent on the quantity in the atmosphere, the time they remain in the atmosphere, and how strong their GWP is on the atmosphere. Disposal and treatment of materials results in greenhouse gas emissions from collection, transportation, disposal, manufacturing, etc.

The most common method to measure the climate impact of waste management is to measure it in terms of carbon dioxide equivalents. Because waste reduction and waste disposal result in multiple types of greenhouse gases, the conversion to a standard carbon equivalent measurement allows for a total quantification of impacts. It also establishes a standard language to compare these sources of emissions to other sources like transportation and energy reduction efforts. A carbon dioxide equivalent means the number of metric tons of CO2 emissions with the same global warming potential as one metric ton of another greenhouse gas. The international standard for reporting CO2 emissions is metric tons. Carbon dioxide quantities will be reported as MTCO2e, metric tons of carbon dioxide equivalent.

Produced by US EPA, the Waste Reduction Model (WARM) was designed to help solid waste planners, municipal leaders, and other stakeholder organizations track and report greenhouse gas emissions reductions. It is a tool that helps decision-makers predict the strategies that have the greatest impact on reducing GHG emissions. The WARM model calculates GHG emissions across six waste management modalities (source reduction, recycling, composting, anaerobic digestion, combustion, and landfilling). Modeling different combinations of waste management practices allows decision-makers to see which approach leads to the least GHG entering the atmosphere.

WARM is a standard tool used for waste management GHG impacts, however, the model does have limitations. For example, the WARM GHG-related impacts of composting organics were developed within the framework of the larger WARM development effort and the presentation of results, estimation of emissions and sinks, and description of ancillary benefits are not comprehensive. Also, the material categories within the model are not exhaustive therefore materials like household hazardous wastes (HHW) are excluded from the modeling because they have no relevant WARM proxy.

The reports below show the metric tons of carbon dioxide equivalent (MTCO2e) which describes the global warming potential of all common greenhouse gases as an equivalent to CO2. Negative values indicate savings while positive values indicate increasing emissions. In 2021, Clark County generated roughly 161,000 tons of waste from the residential and commercial sectors, of which 57,680 tons (36%) were diverted from landfills.

If the District were to have no recycling initiatives in place and landfill all 161,000 tons of residential/commercial waste generated, the GHG emissions for 2021 are estimated to be 7,041 MTCO2e. When the existing recycling programs are factored into the WARM measurement, the GHG emissions for 2021 are -16,588 MTCO2e. The District saved a net value of 23,629 MTCO2e from being emitted as a result of existing diversion programs. To put this into perspective, this is equivalent to:

- Removing annual emissions from 5,017 vehicles
- Conserving 2,658,836 gallons of gasoline
- Conserving 1,360 households' annual energy consumption

In 2030, the District is projected to divert 63,645 tons of residential/commercial waste and create an additional GHG savings of 2,443 MTCO2e. The estimated increase in diversion is equivalent to:

- Removing annual emissions from an additional 519 vehicles
- Conserving an additional 274,890 gallons of gasoline
- Conserving an additional 141 household's energy consumption

Total GHG Emissions from 6th Year Baseline ($MTCO_2E$):	**(26,319.10)**
Total GHG Emissions from 6th Year Alternative ($MTCO_2E$):	**(28,762.05)**
Incremental GHG Emissions ($MTCO_2E$):	**(2,442.95)**

Note: Negative values indicate GHG savings

APPENDIX O

FINANCIAL DATA

Appendix O.
Financial Data

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

Ultimately, the solid waste management plan must demonstrate that the SWMD will have adequate money to implement the approved solid waste management plan for a period of 15 years, from 2025 to 2039.

A. Funding Mechanisms and Revenue Generated

This section examines the funding mechanisms expected to be used by the District. In addition, anticipated revenues from each source listed below are projected for each year of the planning period.

1) Disposal Fee

The District does not receive any revenue from disposal fees.

Table O-1. Disposal Fee Schedule and Revenue

Year	Disposal Fee Schedule ($/ton)			Revenue ($)			Total Disposal Fee Revenue ($)
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
Not Applicable							

2) Generation Fee

In accordance with ORC 3734.573, a solid waste management district may levy fees on the generation of solid waste within the District. Generation fees are collected on each ton of waste that passes through the transfer stations or ends up at landfills. The District's primary source of revenue is generation fees. The District's generation fee has not changed since 2007 and remains at $8.50 per ton.

Table O-2. Generation Fee Schedule and Revenue

Year	Generation Fee Schedule ($ per ton)	Total Revenue from Generation Fee ($)
Actual		
2017	$8.50	$848,559

Year	Generation Fee Schedule ($ per ton)	Total Revenue from Generation Fee ($)
2018	**$8.50**	**$852,831**
2019	**$8.50**	**$849,433**
2020	**$8.50**	**$868,475**
2021	***$8.50***	***$873,053***
2022	**$8.50**	**$897,149**
2023	**$8.50**	**$830,100**
Projected		
2024	$8.50	$827,029
2025	$8.50	$823,969
2026	$8.50	$820,920
2027	$8.50	$817,883
2028	$8.50	$814,856
2029	$8.50	$811,841
2030	$8.50	$808,838
2031	$9.50	$903,995
2032	$9.50	$903,995
2033	$9.50	$903,995
2034	$9.50	$903,995
2035	$9.50	$903,995
2036	$9.50	$903,995
2037	$9.50	$903,995
2038	$9.50	$903,995
2039	$9.50	$903,995

Source(s) of Information: Clark County SWMD Quarterly Fee Reports and Appendix D.
Note: Projections flatline after the sixth year of the planning period.
Sample Projection Calculations:
Total Revenue from Generation Fee = (Generation fee x Projected Waste Disposed)

The above table presents historical data from 2017 to 2023. From 2024 onwards are projected numbers. The District conducted an analysis of the revenue received from eligible tonnages of waste from its generation fee from 2019 to 2023. While 2023 tonnages are still within historical ranges, the District found revenue received from its generation fee decreased slightly by 1.84% since 2019. The majority of waste is managed at two facilities, Montgomery County South Transfer Station and Stoney Hollow Landfill, both are labeled in bold below.

To remain conservative and ensure the District has enough funds to operate through the planning period, the District applied a decreasing average annual percent change of 0.37% to the expected generation fee tonnages. Projections flatline after the sixth year of the planning period. The District operates on a cash accounting basis, as a result, tonnages for fee tracking are recorded when the revenues are received by a landfill facility.

To sustain the programming described in this Plan Update, a generation fee increase is expected to be required to maintain financial solvency and retain a few months of reserves. Numerous budget scenarios projecting revenue and expense modifications were developed and reviewed to determine the lowest generation fee for sustaining programming with options and services.

A projected generation fee increase of $1.00 in 2031 would balance the budget. This would bring the generation fee to $9.50 per ton of waste generated. This minimal fee increase will allow the District to maintain programming. Planning for a generation fee increase in 2031 means the fee increase will not be enacted during this planning period, giving the District time to reassess the budget during the next plan cycle.

3) Designation Fee

In accordance with Ohio Revised Code 343.014, a solid waste management district may adopt designation fees to ensure adequate financing to implement the approved solid waste plan. Designation fees can be levied on any solid waste landfill that is designated by the District to receive District-generated waste. The District does not receive revenues from designation fees.

Table O-3 Designation Fee Schedule and Removal

Year	Designation Fee Schedule ($ per ton)	Total Designation Fee Revenue ($)
Not Applicable		

4) Loans

The District does not have any outstanding debt due to existing loans and does not anticipate securing loans during this planning period.

Table O-4 Debt

Year Debt Was/Will be Obtained	Outstanding Balance	Lending Institution	Repayment Term (years)	Annual Debt Service ($)
Not Applicable				

5) Other Sources of Revenue

From 2017 to 2022, the District received revenue from recycling materials, user fees, reimbursements, grants, donations, and interest.

Recycling Revenue: The District receives revenue from the sale of collected recyclable materials. In 2021, the District received roughly $45,000 from this source. While revenue received from this source is dependent on market and commodity values, the District does expect to continue to see this source generate revenue.

As such, it has been projected through the planning period. The District used the average revenue received from 2017 to 2022 as a baseline value for projections and applied a 3% inflation factor for future values.

User Fee: The District charges a user fee based on various materials dropped off at the Clark County Specialty Recycling Center. This ranges anywhere from $0.10 - $1.00 per pound. See *Appendix I* for the full list of acceptable materials the District charges a user fee for. The District used the average revenue received from 2017 to 2022 as a baseline value for projections and applied a 3% inflation factor for future values.

Reimbursements: Reimbursement revenues are miscellaneous monies resulting from refunds and reimbursements. The District received one reimbursement in 2018. This amount is unpredictable and not guaranteed from year to year; therefore, only actual values are reported in **Table O-5**, and no future values are projected.

Grants: Funding from grants are competitive and not guaranteed. The District received small grants in 2017 and 2020. In 2019, the District returned a pass-through grant of $125,000 to Ohio EPA. The sub-recipient of this grant was not able to move forward with the project. Also in 2019, the District applied for and received a grant for a foam densifier and surveillance cameras for litter enforcement. The combined costs for these was roughly $40,000 and the District matched $10,500.

Grant revenue is unpredictable and not guaranteed from year to year; therefore, only actual values are reported in **Table O-5**, and no future values are projected.

Donations: The District receives small sums of donations from organizations and residents typically throughout the year. Given this revenue stream is not guaranteed, it has not been projected.

Interest: The District receives interest from the accounts with which its moneys are held. This revenue stream has been held at the 2017 to 2023 average through the planning period.

Other: The District received payments classified as other in 2021 and 2022. This source is not guaranteed and has not been projected.

Table O-5. Other Sources of Revenue

Year	Recycling Revenue	User Fee	Reimbursements	Grants	Donations	Interest	Other	Total Other Revenue
Actual								
2017	**$31,991**	**$33,976**	**$0**	**$2,223**	**$1,826**	**$43**	**$0**	**$70,059**
2018	**$22,999**	**$33,917**	**$460**	**$125,000**	**$1,770**	**$1,338**	**$0**	**$185,484**
2019	**$15,205**	**$51,264**	**$0**	**-$104,082**	**$2,453**	**$3,122**	**$0**	**-$32,038**
2020	**$15,027**	**$43,370**	**$0**	**$3,717**	**$459**	**$1,147**	**$0**	**$63,719**
2021	**$45,196**	**$53,571**	**$0**	**$0**	**$893**	**$116**	**$2,015**	**$101,790**
2022	**$51,399**	**$46,209**	**$0**	**$0**	**$838**	**$2,320**	**$4,250**	**$105,016**
2023	**$22,613**	**$52,695**	**$0**	**$0**	**$455**	**$6,671**	**$92**	**$82,525**
Projected								
2024	$30,080	$54,276	$0	$0	$0	$2,108	$0	$86,464

Year	Recycling Revenue	User Fee	Reimbursements	Grants	Donations	Interest	Other	Total Other Revenue
2025	$30,983	$55,904	$0	$0	$0	$2,108	$0	$88,995
2026	$31,912	$57,581	$0	$0	$0	$2,108	$0	$91,601
2027	$32,870	$59,309	$0	$0	$0	$2,108	$0	$94,286
2028	$33,856	$61,088	$0	$0	$0	$2,108	$0	$97,052
2029	$34,871	$62,920	$0	$0	$0	$2,108	$0	$99,900
2030	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2031	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2032	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2033	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2034	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2035	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2036	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2037	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2038	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834
2039	$35,918	$64,808	$0	$0	$0	$2,108	$0	$102,834

Note: Projections flatline after the sixth year of the planning period.
Source(s) of Information: CY 2017-2023 revenues sourced from Clark County SWMD Quarterly Fee Reports. All other amounts are projections.

6) Summary of District Revenues

Table O-6 Summary of District Revenues

Year	Generation Fees	Other Revenue	Total Revenue
Actual			
2017	**$848,559**	**$70,059**	**$918,619**
2018	**$852,831**	**$185,484**	**$1,038,315**
2019	**$849,433**	**-$32,038**	**$817,395**
2020	**$868,475**	**$63,719**	**$932,195**
2021	**$873,053**	***$101,790***	**$974,844**
2022	**$897,149**	**$105,016**	**$1,002,165**
2023	**$830,100**	**$82,525**	**$912,625**
Projected			
2024	$827,029	$86,464	$913,493
2025	$823,969	$88,995	$912,964
2026	$820,920	$91,601	$912,521
2027	$817,883	$94,286	$912,169
2028	$814,856	$97,052	$911,908
2029	$811,841	$99,900	$911,741
2030	$808,838	$102,834	$911,671
2031	$903,995	$102,834	$1,006,829
2032	$903,995	$102,834	$1,006,829

Year	Generation Fees	Other Revenue	Total Revenue
2033	$903,995	$102,834	$1,006,829
2034	$903,995	$102,834	$1,006,829
2035	$903,995	$102,834	$1,006,829
2036	$903,995	$102,834	$1,006,829
2037	$903,995	$102,834	$1,006,829
2038	$903,995	$102,834	$1,006,829
2039	$903,995	$102,834	$1,006,829

Note: Projections flatline after the sixth year of the planning period.
Source(s) of Information: CY 2017-2023 revenues sourced from Clark County SWMD Quarterly Fee Reports. All other amounts are projections.

Table O-6 shows the total amount of revenue generated by each method for each year of the planning period. The District's primary funding mechanism is the generation fee. The District receives revenue from a variety of other sources such as the sale of recycling, donations, interest, and other miscellaneous streams. Together, these "other" sources of revenue make up approximately 10% of the District's income. The District flatlined the projected revenues in 2031.

B. Cost of Implementing Plan

Table O-7 Years 2017 – 2024

Category/Program	2017	2018	2019	2020	2021	2022	2023	2024
1. Plan Monitoring/Prep.	**$19,536**	**$21,508**	**$5,342**	**$0**	**$0**	**$0**	**$33,068**	**$13,490**
a. Plan Preparation	$19,536	$21,508	$2,276	$0	$0	$0	$33,068	$13,490
b. Plan Monitoring	$0	$0	$2,857	$0	$0	$0	$0	
c. Other	$0	$0	$210	$0	$0	$0	$0	
2. Plan Implementation	**$525,522**	**$578,425**	**$528,709**	**$520,348**	**$540,088**	**$645,336**	**$622,849**	**$728,394**
a. District Administration	$245,621	$237,564	$258,575	$237,125	$233,737	$265,058	$223,334	$230,034
Personnel	$203,169	$205,190	$229,778	$211,956	$208,088	$205,468	$189,612	$195,300
Office Overhead	$11,050	$8,796	$8,157	$8,286	$8,101	$41,062	$16,932	$17,440
Other	$31,402	$23,579	$20,640	$16,883	$17,548	$18,529	$16,790	$17,294
b. Facility Operation	$173,390	$145,540	$162,576	$183,189	$165,744	$187,004	$207,332	$213,552
MRF/Recycling Center	$173,390	$145,540	$162,576	$183,189	$165,744	$187,004	$207,332	$213,552
Compost								
Transfer								
Special Waste								
c. Landfill Closure/Post-Closure								
d. Recycling Collection	$40,356	$43,407	$42,628	$54,380	$57,902	$113,386	$115,770	$180,000
Curbside	$0							
Drop-off	$39,887	$43,407	$42,628	$54,380	$57,656	$111,257	$115,770	$180,000
Combined Curbside/Drop-off								
Multi-family								
Business/Institutional						$2,130	$0	
Other	$469	$0	$0	$0	$246	$0	$0	
e. Special Collections	$35,902	$27,710	$40,700	$39,386	$50,697	$40,965	$39,560	$66,031
Tire Collection	$3,188	$3,238	$7,602	$8,977	$7,535	$6,893	$11,350	$11,690
HHW Collection	$20,048	$17,947	$30,203	$26,798	$35,826	$20,599	$12,469	$40,000
Electronics Collection	$12,666	$6,526	$2,895	$3,612	$6,521	$12,310	$13,923	$14,340

Category/Program	2017	2018	2019	2020	2021	2022	2023	2024
Appliance Collection								
Other Collection Drives	$0	$0	$0	$0	$816	$1,163	$1,818	
f. Yard Waste/Other Organics	$0	$0		$0	$20,000	$24,000	$24,000	$24,000
g. Education/Awareness	$18,266	$18,150	$15,200	$3,799	$9,647	$14,528	$9,492	$9,777
Education Staff	$1,679	$2,154	$1,289	$573	$924	$2,008	$943	$971
Advertisement/Promotion	$14,826	$15,996	$11,761	$2,056	$7,928	$12,520	$8,549	$8,805
Other	$1,761	$0	$2,150	$1,170	$794	$0	$0	$0
h. Recycling Market Development	$0	$0	$1,000	$0	$0	$0	$0	$0
General Market Development Activities			$1,000	$0	$0	$0	$0	
ODNR pass-through grant								
i. Service Contracts								
j. Feasibility Studies								
k. Waste Assessments/Audits								
l. Dump Cleanup								
m. Litter Collection/Education	$11,485	$5,765	$5,606	$2,405	$2,361	$395	$3,361	$5,000
n. Emergency Debris Management			$99	$62	$0	$0	$0	
o. Loan Payment								
p. Other	$502	$100,289	$2,325	$0	$0	$0	$0	
3. Health Dept. Enforcement	**$125,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
County Health Department	$125,000	$0	$0	$0	$0	$0	$0	$0
4. County Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
5. Well Testing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
6. Out-of-State Waste Inspection	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
7. Open Dump, Litter Law Enforcement	**$138,525**	**$274,166**	**$302,949**	**$292,419**	**$303,440**	**$311,151**	**$400,321**	**$307,000**
a. Health Departments	$0	$130,000	$130,000	$135,000	$138,000	$138,000	$142,000	$142,000
b. Local Law Enforcement	$138,525	$140,525	$166,090	$157,419	$165,440	$173,151	$258,321	$165,000
c. Other	$0	$3,641	$6,859	$0	$0	$0	$0	
8. Health Department Training	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
9. Municipal/Township Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
10. Compensation to Affected Community (ORC Section 3734.35)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
*****Total Expenses*****	**$808,583**	**$874,099**	**$837,000**	**$812,767**	**$843,528**	**$956,487**	**$1,056,238**	**$1,048,884**

Table O-7 Years 2025 – 2032

Category/Program	2025	2026	2027	2028	2029	2030	2031	2032
1. Plan Monitoring/Prep.	**$7,500**	**$7,500**	**$7,500**	**$30,779**	**$30,779**	**$7,500**	**$7,500**	**$7,500**
a. Plan Preparation				$23,279	$23,279			
b. Plan Monitoring	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
c. Other								
2. Plan Implementation	**$759,926**	**$698,243**	**$691,541**	**$711,417**	**$731,889**	**$752,976**	**$752,976**	**$752,976**
a. District Administration	$236,935	$244,044	$251,365	$258,906	$266,673	$274,673	$274,673	$274,673
Personnel	$201,159	$207,194	$213,410	$219,812	$226,407	$233,199	$233,199	$233,199
Office Overhead	$17,963	$18,502	$19,057	$19,629	$20,218	$20,825	$20,825	$20,825
Other	$17,813	$18,347	$18,897	$19,464	$20,048	$20,650	$20,650	$20,650
b. Facility Operation	$254,959	$226,558	$233,354	$240,355	$247,566	$254,993	$254,993	$254,993

Category/Program	2025	2026	2027	2028	2029	2030	2031	2032
MRF/Recycling Center	$219,959	$226,558	$233,354	$240,355	$247,566	$254,993	$254,993	$254,993
Compost								
Transfer	$35,000							
Special Waste								
c. Landfill Closure/Post-Closure								
d. Recycling Collection	$118,950	$94,959	$71,027	$73,158	$75,353	$77,613	$77,613	$77,613
Curbside	$52,000	$26,000						
Drop-off	$66,950	$68,959	$71,027	$73,158	$75,353	$77,613	$77,613	$77,613
Combined Curbside/Drop-off								
Multi-family								
Business/Institutional								
Other								
e. Special Collections	$68,011	$70,052	$72,153	$74,318	$76,547	$78,844	$78,844	$78,844
Tire Collection	$12,041	$12,402	$12,774	$13,158	$13,552	$13,959	$13,959	$13,959
HHW Collection	$41,200	$42,436	$43,709	$45,020	$46,371	$47,762	$47,762	$47,762
Electronics Collection	$14,770	$15,214	$15,670	$16,140	$16,624	$17,123	$17,123	$17,123
Appliance Collection								
Other Collection Drives								
f. Yard Waste/Other Organics	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
g. Education/Awareness	$52,070	$33,632	$34,641	$35,680	$36,751	$37,853	$37,853	$37,853
Education Staff	$1,001	$1,031	$1,062	$1,093	$1,126	$1,160	$1,160	$1,160
Advertisement/Promotion	$15,069	$15,521	$15,987	$16,467	$16,961	$17,470	$17,470	$17,470
Other	$36,000	$17,080	$17,592	$18,120	$18,664	$19,224	$19,224	$19,224
h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0	$0
General Market Development Activities		$0	$0	$0	$0	$0	$0	$0
ODNR pass-through grant								
i. Service Contracts								
j. Feasibility Studies								
k. Waste Assessments/Audits								
l. Dump Cleanup								
m. Litter Collection/Education	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
n. Emergency Debris Management								
o. Loan Payment								
p. Other								
3. Health Dept. Enforcement	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
County Health Department	$0	$0	$0	$0	$0	$0		
4. County Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
5. Well Testing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
6. Out-of-State Waste Inspection	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
7. Open Dump, Litter Law Enforcement	**$307,000**	**$292,000**	**$277,000**	**$262,000**	**$247,000**	**$242,000**	**$242,000**	**$242,000**
a. Health Departments	$142,000	$132,000	$122,000	$112,000	$102,000	$102,000	$102,000	$102,000
b. Local Law Enforcement	$165,000	$160,000	$155,000	$150,000	$145,000	$140,000	$140,000	$140,000
c. Other	$0	$0	$0	$0	$0	$0	$0	$0
8. Health Department Training	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
9. Municipal/Township Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Category/Program	2025	2026	2027	2028	2029	2030	2031	2032
10. Compensation to Affected Community (ORC Section 3734.35)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Expenses	$1,074,426	$997,743	$976,041	$1,004,196	$1,009,668	$1,002,476	$1,002,476	$1,002,476

Table O-7 Years 2033 - 2039

Category/Program	2033	2034	2035	2036	2037	2038	2039
1. Plan Monitoring/Prep.	**$30,779**	**$30,779**	**$7,500**	**$7,500**	**$7,500**	**$30,779**	**$30,779**
a. Plan Preparation	$23,279	$23,279				$23,279	$23,279
b. Plan Monitoring	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
c. Other							
2. Plan Implementation	**$752,976**	**$752,976**	**$752,976**	**$752,976**	**$752,976**	**$752,976**	**$752,976**
a. District Administration	$274,673	$274,673	$274,673	$274,673	$274,673	$274,673	$274,673
Personnel	$233,199	$233,199	$233,199	$233,199	$233,199	$233,199	$233,199
Office Overhead	$20,825	$20,825	$20,825	$20,825	$20,825	$20,825	$20,825
Other	$20,650	$20,650	$20,650	$20,650	$20,650	$20,650	$20,650
b. Facility Operation	$254,993	$254,993	$254,993	$254,993	$254,993	$254,993	$254,993
MRF/Recycling Center	$254,993	$254,993	$254,993	$254,993	$254,993	$254,993	$254,993
Compost							
Transfer							
Special Waste							
c. Landfill Closure/Post-Closure							
d. Recycling Collection	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613
Curbside							
Drop-off	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613
Combined Curbside/Drop-off							
Multi-family							
Business/Institutional							
Other							
e. Special Collections	$78,844	$78,844	$78,844	$78,844	$78,844	$78,844	$78,844
Tire Collection	$13,959	$13,959	$13,959	$13,959	$13,959	$13,959	$13,959
HHW Collection	$47,762	$47,762	$47,762	$47,762	$47,762	$47,762	$47,762
Electronics Collection	$17,123	$17,123	$17,123	$17,123	$17,123	$17,123	$17,123
Appliance Collection							
Other Collection Drives							
f. Yard Waste/Other Organics	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
g. Education/Awareness	$37,853	$37,853	$37,853	$37,853	$37,853	$37,853	$37,853
Education Staff	$1,160	$1,160	$1,160	$1,160	$1,160	$1,160	$1,160
Advertisement/Promotion	$17,470	$17,470	$17,470	$17,470	$17,470	$17,470	$17,470
Other	$19,224	$19,224	$19,224	$19,224	$19,224	$19,224	$19,224
h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0
General Market Development Activities	$0	$0	$0	$0	$0	$0	$0
ODNR pass-through grant							
i. Service Contracts							
j. Feasibility Studies							
k. Waste Assessments/Audits							
l. Dump Cleanup							

Category/Program	2033	2034	2035	2036	2037	2038	2039
m. Litter Collection/Education	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
n. Emergency Debris Management							
o. Loan Payment							
p. Other							
3. Health Dept. Enforcement	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
County Health Department	$0	$0	$0	$0	$0	$0	
4. County Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
5. Well Testing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
6. Out-of-State Waste Inspection	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
7. Open Dump, Litter Law Enforcement	**$242,000**	**$242,000**	**$242,000**	**$242,000**	**$242,000**	**$242,000**	**$242,000**
a. Health Departments	$102,000	$102,000	$102,000	$102,000	$102,000	$102,000	$102,000
b. Local Law Enforcement	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000
c. Other	$0	$0	$0	$0	$0	$0	$0
8. Health Department Training	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
9. Municipal/Township Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
10. Compensation to Affected Community (ORC Section 3734.35)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
*****Total Expenses*****	**$1,025,755**	**$1,025,755**	**$1,002,476**	**$1,002,476**	**$1,002,476**	**$1,025,755**	**$1,025,755**

1. Plan Monitoring/Prep.

1.a Plan Preparation

2017 – 2023 –Actual costs include staff and contracts with outside consultants to prepare the District's solid waste management plan updates.

2024 – 2039 – The District assumed the cost of the contract for all subsequent plan updates would be the same.

1.b Plan Monitoring

2017 – 2023 – Actual costs consultant, legal, etc. needed contract services for monitoring the plan.

2024 – 2039 – Anticipated costs outside for surveys and other needed monitoring reports.

1.c Other

2. Plan Implementation

2.a District Administration

2.a.1 Personnel

2017 – 2023 - This is the cost for payroll (one part-time coordinator, one full-time educator, and one full-time manager) and benefits (including PERS, Medicare, and insurance). Administrative costs include staffing time for some program costs, which are difficult to separate into their own line item. The costs of the program in 2017 through 2023 are actual expenses.

2024 – 2039 - The District expects to maintain personnel structure through the planning period but has accounted for a 3% inflation rate after 2024 to account for raises and cost of living adjustment. Expenses flatline after 2031.

2.a.2 Office Overhead –

2017 – 2023 - This includes supplies (including postage, reproductions, advertising, printing, utilities, etc.), webpage maintenance, office equipment, and travel. The costs shown for 2017 through 2023 are actual expenses. The District had an unusually high value in 2022 for this line item due to the purchase of a new vehicle.

2024 – 2039 – Costs estimated in 2024 are based on historic values multiplied by a 3% inflation rate. Expenses flatline after 2031.

2.a.3 Other

2017 – 2023 – This includes expenditures for District administration that are not represented by the other line items in this subcategory such as professional services (legal and consulting, etc.). The costs in 2017 through 2023 are actual expenses.

2024 – 2039 – Costs estimated in 2024 through 2031 are based on historical values multiplied by a 3% inflation rate. Expenses flatline after 2031.

2.b. Facility Operation – The Facility Manager's salary is reflected in this category total (full-time) as well as intermittent part-time employee's wages.

2.b.1 MRF/Recycling Center –

2017 – 2023 – The District operates the Clark County Specialty Recycling Center where residents can drop off hard-to-recycle materials. The center can recycle special wastes regularly throughout the year. These services are available to Clark County residents only, no businesses, farms, schools, or government agencies. The costs in 2017 through 2023 are actual expenses.

2024 – 2039 – Costs estimated in 2024 through 2031 are based on historical values multiplied by a 3% inflation rate. Expenses flatline after 2031.

2.b.2 Compost – No expenses incurred or budgeted.

2.b.3 Transfer –

2025 – The District is budgeting $35,000 to conduct research and assess the feasibility of building a waste convenience center as described in Appendix I.

2.b.4 Special Waste – No expenses incurred or budgeted.

2.c. Landfill Closure/Post-Closure – No expenses incurred or budgeted.

2.d. Recycling Collection – Costs itemized in line item 2.d relate to costs of providing the service, including labor; equipment; supplies; rental or purchase of containers; rental, purchase, and maintenance of vehicles. The District should report these costs regardless of who provides the service, so long as they are expenses the District incurs.

2.d.1 Curbside –

2017 – 2023 – No expenses incurred.

2024 – 2026 – The District is budgeting to provide the City of Springfield with $2.00 per household towards curbside funding assistance in 2025 and $1.00 per household in 2026. See Appendix I for the program description.

2027 – 2039 - No expenses are budgeted. Future money available in the five-year planning cycle for this expense is decided at the time of Plan Development in the Plan Update.

2.d.2 Drop-off –

2017 – 2023 – Actual costs to operate the District's drop-off collection program. The District contracts with a private sector hauler to provide containers for recycling, collect recyclables, and process recyclables. The District purchased six new cardboard containers in 2022 which resulted in an elevated number for this expense year. The following year also had an elevated expense total that resulted from the remainder balance owed for the new containers purchased in 2022.

2024 – 2039 – Drop-off costs are inflated at 3% throughout the planning period as this is a contracted service. Expenses flatline after 2031. In 2022, the District purchased a new roll-off truck that cost $115,000. The District will have to pay this balance in 2024 which is the reason this line item expense is elevated in 2024.

2.d.3 Combined Curbside/Drop-off – No expenses incurred or budgeted.

2.d.4 Multi-Family – No expenses incurred or budgeted.

2.d.5 Business/Institutional –

2017 – 2023 – Actual costs for technical service and start-up services for recycling.

2024 – 2039 – Costs are not expected for this line item through the planning period.

2.d.6 Other –

2017 – 2023 – Actual costs for this line item.

2024 – 2039 – Costs are not expected for this line item through the planning period.

2.e. Special Collections

2.e.1. Tire Collection –

2017 – 2023 – Actual costs to implement the Scrap Tire Collection Program at the Clark County Specialty Recycling Center.

2024 – 2039 – Costs estimated in 2023 through 2031 are based on historical values multiplied by a 3% inflation rate. Expenses flatline after 2031.

2.e.2. HHW Collection –

2017 – 2023 – Actual costs to implement Household Hazardous Waste Management Program at the Clark County Specialty Recycling Center.

2024 – 2039 – Costs estimated are based on historical values multiplied by a 3% inflation rate. Costs are projected using a 3% inflation rate through 2031. Expenses flatline after 2031.

2.e.3. Electronics Collection –

2017 – 2023 – Actual costs to implement the Electronics Collection Program at the Clark County Specialty Recycling Center.

2024 – 2039 – Costs estimated are based on historical values multiplied by a 3% inflation rate. Expenses flatline after 2031.

2.e.4. Appliance Collection – No expenses incurred or budgeted.

2.e.5. Other Collection Drives –

2017 – 2023 – Actual costs for this line item.

2024 – 2039 – Costs are not expected for this line item through the planning period.

2.f. Yard Waste/Other Organics –

2017 – 2023 – Actual costs to contract with C+S Tree Service to provide residents with free yard waste diversion.

2024 – 2039 – Costs are assumed to remain consistent with historic values. Appendix I programming identifies a Contingency Yard Waste Shredding program which would allow for the District to begin a yard waste shredding operations should C+S Tree Service no longer be able to operate in the capacity needed for the District to divert the organic volumes historically tracked. Should this occur and the District needs to become the processor and operator of such a facility, expected planning costs would be needed for siting, equipment, permitting, etc. Potential land purchase could also be a factor. The District does not foresee this will be an issue in this planning period. Unable to truly plan for those expenses because of the many unknowns, the District will commit to conducting a full evaluation and study before moving into an active role. If this occurs expenses will be re-allocated from other line items to conduct the study. The study will prepare a budget analysis to demonstrate how operations will impact the District's approved 2023 Plan budget. If the budget analysis deviates significantly from the parameters stated in the material change in circumstances section of this 2025 Plan, then the District will amend and ratify a new budget.

2.g. Education/Awareness

2.g.1 Education Staff –

2017 – 2023 – Actual costs for this line item. Few expenses are incurred or budgeted for this line item. Most of the staff costs to implement programs and strategies for education and outreach are absorbed in the personnel line item.

2024 – 2039 – Costs estimated are based on historical values multiplied by a 3% inflation rate. Expenses flatline after 2031.

2.g.2. Advertisement/Promotion -

2017 – 2023 – Actual costs for education and outreach supplies.

2024 – 2039 – Costs estimated in 2024 through 2031 are based on historical values multiplied by a 3% inflation rate. In 2025 the District expects to increase this line item by $2,000 for the Take It To the Curb Program and by $4,000 for drop-off education and outreach. Expenses flatline after 2031.

2.g.3. Other –

2017 – 2023 – Actual costs for other education and awareness expenses that do not have a line item.

2024 – 2039 – Costs estimated in 2024 through 2031 are based on historical values multiplied by a 3% inflation rate. In 2025 the District expects to increase this line item by $1,000 for improved website materials, $15,000 for Springfield curbside recycling outreach, and a one-time cost of $20,000 to conduct a waste characterization study on the drop-off recycling stream. Expenses flatline after 2031.

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

2.h.2 ODNR pass-through grant - No expenses incurred or budgeted.

2.i Service Contracts - No expenses incurred or budgeted.

2.j Feasibility Studies - No expenses incurred or budgeted.

2.k Waste Assessments/Audits - No expenses incurred or budgeted.

2.l Dump Cleanup - No expenses incurred or budgeted.

2.m. Litter Collection/Education –

2017 – 2023 – Actual costs for litter collection/prevention education and outreach.

2024 – 2039 – Costs estimated in 2023 through 2039 are held at $5,000 annually.

2.n. Emergency Debris Management –

2017 – 2023 – Actual costs for debris management.

2024 – 2039 – No expenses budgeted.

2.o. Loan Payment - No expenses incurred or budgeted.

2.p. Other –

2017 – 2023 – Actual costs for other expenses.

2024 – 2039 – No expenses budgeted.

3. Health Dept. Enforcement – No expenses incurred or budgeted

4. County Assistance - No expenses incurred or budgeted

5. Well Testing - No expenses incurred or budgeted

6. Out-of-State Waste Inspection - No expenses incurred or budgeted

7. Open Dump, Litter Law Enforcement -

2017 – 2023 – Actual costs for other expenses.

2024 – 2039 – The District expects to minimally reduce the funding to the health department by $10,000 per year starting in 2026 and concluding in 2029. The District will also reduce funding to the Sheriff's Department by $5,000 in 2026 and it will conclude in 2029. The District held the 2029 budgeted expenses for these expenses constant through the remaining years of the planning period.

8. Health Department Training - No expenses incurred or budgeted

9. Municipal/Township Assistance - No expenses incurred or budgeted

Revenues and expenses may change from projections anticipated in this Plan Update. Additional revenues are not expected; however, revenues could increase or decrease from what is projected. In the event additional revenues are received, and projected expenses remain within budgeted allowances, additional revenues may be added to the carryover balance.

Nothing contained in these budget projections should be construed as a binding commitment by the District to expend a specific amount of money on a particular strategy, facility, program, and/or activity. The Board of Directors, with the advice and assistance of District staff, will review and revise the budget as needed to implement planned strategies, facilities, programs, and/or activities as effectively as possible with funds available. The District reserves the right to revise the budget and reallocate funds as programs change or as otherwise determined to be in the best interest of the District.

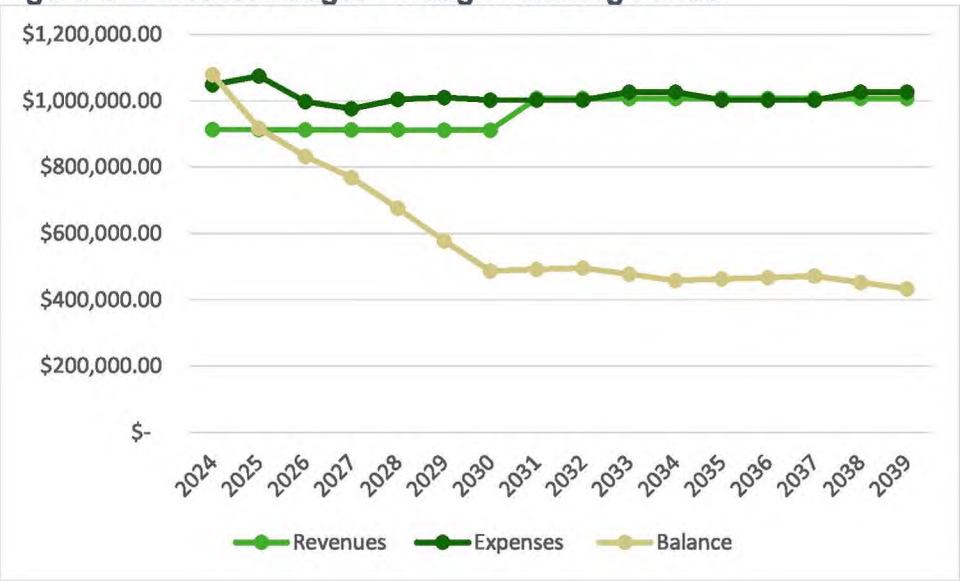
Table O-8 Budget Summary

Year	Revenue	Expenses	Annual Surplus/Deficit ($)	Balance ($)
2016			**Ending Balance**	**$806,741**
2017	**$918,619**	**$808,583**	**$110,036**	**$916,777**
2018	**$1,038,315**	**$874,099**	**$164,217**	**$1,080,993**
2019	**$817,395**	**$837,000**	**-$19,606**	**$1,061,387**
2020	**$932,195**	**$812,767**	**$119,428**	**$1,180,815**
2021	**$974,844**	***$843,528***	**$131,316**	**$1,312,131**
2022	**$1,002,165**	**$956,487**	**$45,679**	**$1,357,809**
2023	**$912,625**	**$1,056,238**	**-$143,612**	**$1,214,197**
2024	$913,493	$1,048,884	-$135,391	$1,078,806
2025	$912,964	$1,074,426	-$161,462	$917,344
2026	$912,521	$997,743	-$85,222	$832,122
2027	$912,169	$976,041	-$63,872	$768,250
2028	$911,908	$1,004,196	-$92,288	$675,962

Year	Revenue	Expenses	Annual Surplus/Deficit ($)	Balance ($)
2029	$911,741	$1,009,668	-$97,927	$578,035
2030	$911,671	$1,002,476	-$90,805	$487,230
2031	$1,006,829	$1,002,476	$4,353	$491,582
2032	$1,006,829	$1,002,476	$4,353	$495,935
2033	$1,006,829	$1,025,755	-$18,926	$477,008
2034	$1,006,829	$1,025,755	-$18,926	$458,082
2035	$1,006,829	$1,002,476	$4,353	$462,435
2036	$1,006,829	$1,002,476	$4,353	$466,787
2037	$1,006,829	$1,002,476	$4,353	$471,140
2038	$1,006,829	$1,025,755	-$18,926	$452,213
2039	$1,006,829	$1,025,755	-$18,926	$433,287

Note: Projections flatline after the sixth year of the planning period.
Source(s) of Information: CY 2017-2023 revenues sourced from Clark County SWMD Quarterly Fee Reports. All other amounts are projections.
Note: 2023 Quarter 4 amounts were not finalized as of the writing of this report. The District pro-rated the Quarter 4 numbers.

Figure O-2 District Budget Through Planning Period



The District's fund balance is expected to decrease primarily as a result of inflation and programmatic expenditures. In 2031, the District anticipates the need to raise the generation fee from its current $8.50 per ton cost to $9.50 per ton in order to maintain the necessary funds. This fee increase will allow the District to maintain programming. Planning for a generation fee increase in 2031 means the fee increase will not be enacted during this plan update , giving the District time to reassess the budget during the next plan cycle.

C. Alternative Budget

As discussed in Appendix H, the District is planning a contingent plan for the development of collection infrastructure to provide convenient access for haulers in the District. Before the development of a convenience center, a feasibility study would be conducted. Goals for the study include to determine if a basic convenience center with limited collection capacity, an intermediate convenience center with expanded collection capacity and infrastructure, or neither of the two would best serve Clark County households. Rumpke continues to pursue building a transfer facility within Clark County which is expected to happen. However, the District wants to provide a plan to give Clark County households convenient opportunities to manage waste should the development of a privately owned facility become unavailable.

Depending on the feasibility study analysis, if the District decides to explore the construction of a convenience center, it would act as a small, Clark County availability only for trash and recycling with the potential to expand the materials accepted to other material streams as well. This center would have limited capacity to accept waste material. One 30 cubic-yard trash dumpster and five 8 cubic-yard recycling dumpsters are planned but would be fully evaluated in the feasibility study. Access to these dumpsters would be open to Clark County residents and restricted to select haulers. High-level planning assumptions assume dumpster service is needed three times per week.

The District would prioritize building this site on county-owned land, thus eliminating the need to purchase land. Regardless of the site selected, it is expected to require site improvements, permitting, engineering inspections, and contingencies. The following budget explores the possibility of establishing such a center and the implications it would have on the District's budget and programs.

The feasibility study expense is estimated to be roughly $35,000 and is included in both the District budget above and the alternative budget below. The only difference between the two budgets is that this alternative budget includes estimated costs and potential revenues of establishing a convenience center with a pay-as-you-throw (PAYT) bag program. All other factors including inflation, flatline years, and other expenses/revenues remain consistent with the above budget.

Table O-9 Contingent Funding

Year	Gen Fee Revenue	PAYT Bag Revenue	Other	Total Funding from Contingent Sources
2017	**$848,559**	**$0**	**$70,059**	**$918,619**
2018	**$852,831**	**$0**	**$185,484**	**$1,038,315**
2019	**$849,433**	**$0**	**-$32,038**	**$817,395**
2020	**$868,475**	**$0**	**$63,719**	**$932,195**
2021	**$873,053**	**$0**	**$101,790**	**$974,844**
2022	**$897,149**	**$0**	**$105,016**	**$1,002,165**
2023	**$830,100**	**$0**	**$82,525**	**$912,625**
2024	$827,029	$0	$86,464	$913,493
2025	$823,969	$0	$88,995	$912,964
2026	$820,920	$0	$91,601	$912,521
2027	$817,883	$0	$94,286	$912,169
2028	$814,856	$95,584	$97,052	$1,007,492
2029	$811,841	$191,169	$99,900	$1,102,910

Year	Gen Fee Revenue	PAYT Bag Revenue	Other	Total Funding from Contingent Sources
2030	$808,838	$286,753	$102,834	$1,198,424
2031	$808,838	$382,337	$102,834	$1,294,008
2032	$808,838	$477,922	$102,834	$1,389,593
2033	$808,838	$477,922	$102,834	$1,389,593
2034	$808,838	$477,922	$102,834	$1,389,593
2035	$808,838	$477,922	$102,834	$1,389,593
2036	$808,838	$477,922	$102,834	$1,389,593
2037	$808,838	$477,922	$102,834	$1,389,593
2038	$808,838	$477,922	$102,834	$1,389,593
2039	$808,838	$477,922	$102,834	$1,389,593

Note: CY 2017 to 2023 are actual values
Note: "Other" revenue includes all other forms of revenue received by the District as described previously.
Note: Revenue and expenses flatline after the sixth year of the planning period.

In this contingent scenario, the District establishes a convenience center in 2028 and begins to receive revenue from a PAYT program through this center. The location of this center is assumed to be in Springfield, the District's largest municipality. According to the Ohio Department of Development (ODOD), Clark County has roughly 62,000 households[1]. The District conservatively estimated that 0.5% of all households would participate in the first year and that each household would use three bags per week, costing $2.00 for each bag. Using this assumption, the District is estimated to generate $312 per participating home annually. The District expects that with education and awareness around this program, should it be implemented, the District could increase the participation rate by 0.5% each year until the flatline year of 2031 when the participation is 1.5%.

Sample Calculation: Revenue from Bag Fees at Convenience Center

Sample Calculation: 0.5% of Springfield HHs x (bags per week per HH x 52 weeks x $ per bag) = 2028 Revenue

Sample Calculation: 306 Springfield HH's x (3 x 52 x $2.00) = $95,584 Revenue Received in 2028

Sample Calculation: Roll-off Dumpster Capacity at Convenience Center

Assumption: 30-yard roll-off holds on average 180 bags of trash

Sample Calculation: (3 bags/week x 306 Springfield HH's) = 918 bags/week

Number of Dumpster pulls = 918 bags/week / 180 bags/dumpster = 5 days a week

Table O-10 Contingent Expenses Years 2017 – 2024

[1] Clark County Profile, Ohio Department of Development. https://development.ohio.gov/wps/wcm/connect/gov/a55e8fcb-4eba-49b2-85b7-02e10bf532aa/Clark-County.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-a55e8fcb-4eba-49b2-85b7-02e10bf532aa-oQu9mCi

Category/Program	2017	2018	2019	2020	2021	2022	2023	2024
1. Plan Monitoring/Prep.	**$19,536**	**$21,508**	**$5,342**	**$0**	**$0**	**$0**	**$33,068**	**$13,490**
a. Plan Preparation	$19,536	$21,508	$2,276	$0	$0	$0	$33,068	$13,490
b. Plan Monitoring	$0	$0	$2,857	$0	$0	$0	$0	$0
c. Other	$0	$0	$210	$0	$0	$0	$0	$0
2. Plan Implementation	**$525,522**	**$578,425**	**$528,709**	**$520,348**	**$540,088**	**$645,336**	**$622,849**	**$728,394**
a. District Administration	$245,621	$237,564	$258,575	$237,125	$233,737	$265,058	$223,334	$230,034
Personnel	$203,169	$205,190	$229,778	$211,956	$208,088	$205,468	$189,612	$195,300
Office Overhead	$11,050	$8,796	$8,157	$8,286	$8,101	$41,062	$16,932	$17,440
Other	$31,402	$23,579	$20,640	$16,883	$17,548	$18,529	$16,790	$17,294
b. Facility Operation	$173,390	$145,540	$162,576	$183,189	$165,744	$187,004	$207,332	$213,552
MRF/Recycling Center	$173,390	$145,540	$162,576	$183,189	$165,744	$187,004	$207,332	$213,552
Compost								
Transfer								
Special Waste								
c. Landfill Closure/Post-Closure								
d. Recycling Collection	$40,356	$43,407	$42,628	$54,380	$57,902	$113,386	$115,770	$180,000
Curbside	$0							
Drop-off	$39,887	$43,407	$42,628	$54,380	$57,656	$111,257	$115,770	$180,000
Combined Curbside/Drop-off								
Multi-family								
Business/Institutional						$2,130	$0	
Other	$469	$0	$0	$0	$246	$0	$0	
e. Special Collections	$35,902	$27,710	$40,700	$39,386	$50,697	$40,965	$39,560	$66,031
Tire Collection	$3,188	$3,238	$7,602	$8,977	$7,535	$6,893	$11,350	$11,690
HHW Collection	$20,048	$17,947	$30,203	$26,798	$35,826	$20,599	$12,469	$40,000
Electronics Collection	$12,666	$6,526	$2,895	$3,612	$6,521	$12,310	$13,923	$14,340
Appliance Collection								
Other Collection Drives	$0	$0	$0	$0	$816	$1,163	$1,818	
f. Yard Waste/Other Organics	$0	$0		$0	$20,000	$24,000	$24,000	$24,000
g. Education/Awareness	$18,266	$18,150	$15,200	$3,799	$9,647	$14,528	$9,492	$9,777
Education Staff	$1,679	$2,154	$1,289	$573	$924	$2,008	$943	$971
Advertisement/Promotion	$14,826	$15,996	$11,761	$2,056	$7,928	$12,520	$8,549	$8,805
Other	$1,761	$0	$2,150	$1,170	$794	$0	$0	$0
h. Recycling Market Development	$0	$0	$1,000	$0	$0	$0	$0	$0
General Market Development Activities			$1,000	$0	$0	$0	$0	
ODNR pass-through grant								
i. Service Contracts								
j. Feasibility Studies								
k. Waste Assessments/Audits								
l. Dump Cleanup								
m. Litter Collection/Education	$11,485	$5,765	$5,606	$2,405	$2,361	$395	$3,361	$5,000
n. Emergency Debris Management			$99	$62	$0	$0	$0	
o. Loan Payment								
p. Other	$502	$100,289	$2,325	$0	$0	$0	$0	

Category/Program	2017	2018	2019	2020	2021	2022	2023	2024
3. Health Dept. Enforcement	**$125,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
4. County Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
5. Well Testing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
6. Out-of-State Waste Inspection	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
7. Open Dump, Litter Law Enforcement	**$138,525**	**$274,166**	**$302,949**	**$292,419**	**$303,440**	**$311,151**	**$400,321**	**$307,000**
a. Health Departments	$0	$130,000	$130,000	$135,000	$138,000	$138,000	$142,000	$142,000
b. Local Law Enforcement	$138,525	$140,525	$166,090	$157,419	$165,440	$173,151	$258,321	$165,000
c. Other	$0	$3,641	$6,859	$0	$0	$0	$0	$0
8. Health Department Training	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
9. Municipal/Township Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
10. Compensation to Affected Community (ORC Section 3734.35)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
*****Total Expenses*****	**$808,583**	**$874,099**	**$837,000**	**$812,767**	**$843,528**	**$956,487**	**$1,056,238**	**$1,048,884**

Table O-10 Contingent Expenses Years 2025 – 2032

Category/Program	2025	2026	2027	2028	2029	2030	2031	2032
1. Plan Monitoring/Prep.	**$7,500**	**$7,500**	**$7,500**	**$30,779**	**$30,779**	**$7,500**	**$7,500**	**$7,500**
a. Plan Preparation				$23,279	$23,279			
b. Plan Monitoring	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
c. Other								
2. Plan Implementation	**$759,926**	**$698,243**	**$691,541**	**$947,252**	**$904,244**	**$930,501**	**$930,501**	**$930,501**
a. District Administration	$236,935	$244,044	$251,365	$258,906	$266,673	$274,673	$274,673	$274,673
Personnel	$201,159	$207,194	$213,410	$219,812	$226,407	$233,199	$233,199	$233,199
Office Overhead	$17,963	$18,502	$19,057	$19,629	$20,218	$20,825	$20,825	$20,825
Other	$17,813	$18,347	$18,897	$19,464	$20,048	$20,650	$20,650	$20,650
b. Facility Operation	$254,959	$226,558	$233,354	$608,789	$556,498	$573,193	$573,193	$573,193
MRF/Recycling Center	$219,959	$226,558	$233,354	$240,355	$247,566	$254,993	$254,993	$254,993
Compost								
Transfer	$35,000	$0	$0	$368,435	$308,933	$318,201	$318,201	$318,201
Special Waste								
c. Landfill Closure/Post-Closure								
d. Recycling Collection	$118,950	$94,959	$71,027	$73,158	$75,353	$77,613	$77,613	$77,613
Curbside	$52,000	$26,000						
Drop-off	$66,950	$68,959	$71,027	$73,158	$75,353	$77,613	$77,613	$77,613
Combined Curbside/Drop-off								
Multi-family								
Business/Institutional								
Other								
e. Special Collections	$68,011	$70,052	$72,153	$74,318	$76,547	$78,844	$78,844	$78,844
Tire Collection	$12,041	$12,402	$12,774	$13,158	$13,552	$13,959	$13,959	$13,959
HHW Collection	$41,200	$42,436	$43,709	$45,020	$46,371	$47,762	$47,762	$47,762
Electronics Collection	$14,770	$15,214	$15,670	$16,140	$16,624	$17,123	$17,123	$17,123
Appliance Collection								
Other Collection Drives								

Category/Program	2025	2026	2027	2028	2029	2030	2031	2032
f. Yard Waste/Other Organics	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
g. Education/Awareness	$52,070	$33,632	$34,641	$35,680	$36,751	$37,853	$37,853	$37,853
Education Staff	$1,001	$1,031	$1,062	$1,093	$1,126	$1,160	$1,160	$1,160
Advertisement/Promotion	$15,069	$15,521	$15,987	$16,467	$16,961	$17,470	$17,470	$17,470
Other	$36,000	$17,080	$17,592	$18,120	$18,664	$19,224	$19,224	$19,224
h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0	$0
General Market Development Activities		$0	$0	$0	$0	$0	$0	$0
ODNR pass-through grant								
i. Service Contracts								
j. Feasibility Studies								
k. Waste Assessments/Audits								
l. Dump Cleanup								
m. Litter Collection/Education	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
n. Emergency Debris Management								
o. Loan Payment								
p. Other								
3. Health Dept. Enforcement	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
4. County Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
5. Well Testing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
6. Out-of-State Waste Inspection	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
7. Open Dump, Litter Law Enforcement	**$307,000**	**$292,000**	**$277,000**	**$262,000**	**$247,000**	**$242,000**	**$242,000**	**$242,000**
a. Health Departments	$142,000	$132,000	$122,000	$112,000	$102,000	$102,000	$102,000	$102,000
b. Local Law Enforcement	$165,000	$160,000	$155,000	$150,000	$145,000	$140,000	$140,000	$140,000
c. Other								
8. Health Department Training	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
9. Municipal/Township Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
10. Compensation to Affected Community (ORC Section 3734.35)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Expenses	$1,074,426	$997,743	$976,041	$1,372,631	$1,318,601	$1,320,677	$1,320,677	$1,320,677

Table O-10 Contingent Expenses Years 2033 – 2039

Category/Program	2033	2034	2035	2036	2037	2038	2039
1. Plan Monitoring/Prep.	**$30,779**	**$30,779**	**$7,500**	**$7,500**	**$7,500**	**$30,779**	**$30,779**
a. Plan Preparation	$23,279	$23,279				$23,279	$23,279
b. Plan Monitoring	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
c. Other							
2. Plan Implementation	**$930,501**	**$930,501**	**$930,501**	**$930,501**	**$930,501**	**$930,501**	**$930,501**
a. District Administration	$274,673	$274,673	$274,673	$274,673	$274,673	$274,673	$274,673
Personnel	$233,199	$233,199	$233,199	$233,199	$233,199	$233,199	$233,199
Office Overhead	$20,825	$20,825	$20,825	$20,825	$20,825	$20,825	$20,825
Other	$20,650	$20,650	$20,650	$20,650	$20,650	$20,650	$20,650

Category/Program	2033	2034	2035	2036	2037	2038	2039
b. Facility Operation	$573,193	$573,193	$573,193	$573,193	$573,193	$573,193	$573,193
MRF/Recycling Center	$254,993	$254,993	$254,993	$254,993	$254,993	$254,993	$254,993
Compost							
Transfer	$318,201	$318,201	$318,201	$318,201	$318,201	$318,201	$318,201
Special Waste							
c. Landfill Closure/Post-Closure							
d. Recycling Collection	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613
Curbside							
Drop-off	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613	$77,613
Combined Curbside/Drop-off							
Multi-family							
Business/Institutional							
Other							
e. Special Collections	$78,844	$78,844	$78,844	$78,844	$78,844	$78,844	$78,844
Tire Collection	$13,959	$13,959	$13,959	$13,959	$13,959	$13,959	$13,959
HHW Collection	$47,762	$47,762	$47,762	$47,762	$47,762	$47,762	$47,762
Electronics Collection	$17,123	$17,123	$17,123	$17,123	$17,123	$17,123	$17,123
Appliance Collection							
Other Collection Drives							
f. Yard Waste/Other Organics	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
g. Education/Awareness	$37,853	$37,853	$37,853	$37,853	$37,853	$37,853	$37,853
Education Staff	$1,160	$1,160	$1,160	$1,160	$1,160	$1,160	$1,160
Advertisement/Promotion	$17,470	$17,470	$17,470	$17,470	$17,470	$17,470	$17,470
Other	$19,224	$19,224	$19,224	$19,224	$19,224	$19,224	$19,224
h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0
General Market Development Activities	$0	$0	$0	$0	$0	$0	$0
ODNR pass-through grant							
i. Service Contracts							
j. Feasibility Studies							
k. Waste Assessments/Audits							
l. Dump Cleanup							
m. Litter Collection/Education	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
n. Emergency Debris Management							
o. Loan Payment							
p. Other							
3. Health Dept. Enforcement	$0	$0	$0	$0	$0	$0	$0
4. County Assistance	$0	$0	$0	$0	$0	$0	$0
5. Well Testing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
6. Out-of-State Waste Inspection	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
7. Open Dump, Litter Law Enforcement	**$242,000**	**$242,000**	**$242,000**	**$242,000**	**$242,000**	**$242,000**	**$242,000**
a. Health Departments	$102,000	$102,000	$102,000	$102,000	$102,000	$102,000	$102,000
b. Local Law Enforcement	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000

Category/Program	2033	2034	2035	2036	2037	2038	2039
c. Other							
8. Health Department Training	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
9. Municipal/Township Assistance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
10. Compensation to Affected Community (ORC Section 3734.35)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Expenses	$1,343,956	$1,343,956	$1,320,677	$1,320,677	$1,320,677	$1,343,956	$1,343,956

The contingent expense only differs in one line item from the proposed budget in **Table O-7**. The difference is in line item number 2.b.3 beginning in 2028. The line item cost includes an initial one-time capital expense to construct the waste convenience center as well as annual operating costs which are also carried through the budget years.

Table O-11 Contingent Budget Summary

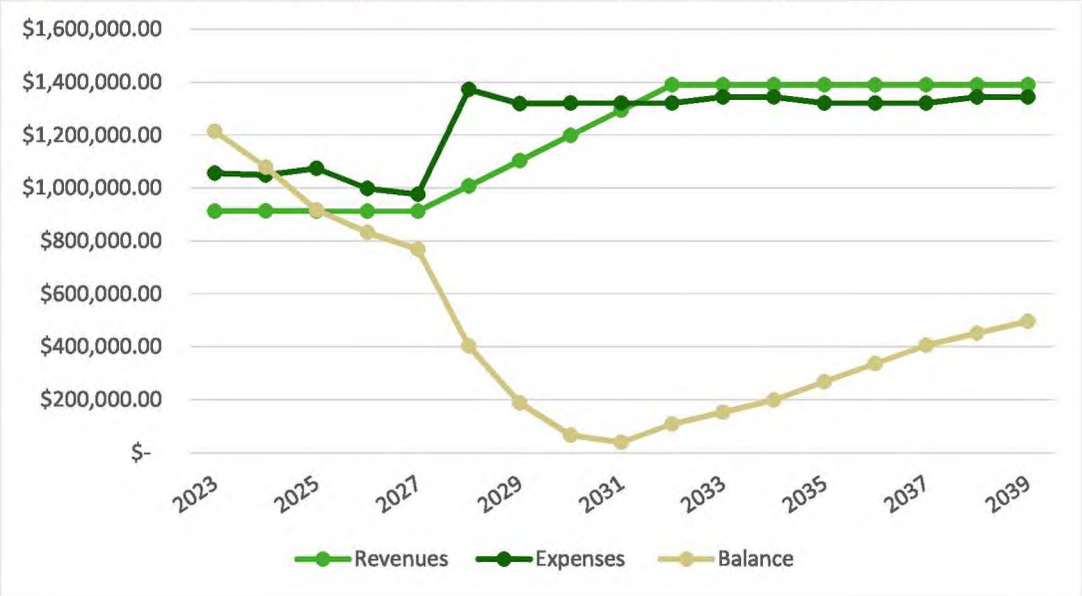
Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
2017	**$918,619**	**$808,583**	**$110,036**	**$916,777**
2018	**$1,038,315**	**$874,099**	**$164,217**	**$1,080,993**
2019	**$817,395**	**$837,000**	**-$19,606**	**$1,061,387**
2020	**$932,195**	**$812,767**	**$119,428**	**$1,180,815**
2021	**$974,844**	**$843,528**	**$131,316**	**$1,312,131**
2022	**$1,002,165**	**$956,487**	**$45,679**	**$1,357,809**
2023	**$912,625**	**$1,056,238**	**-$143,612**	**$1,214,197**
2024	$913,493	$1,048,884	-$135,391	$1,078,806
2025	$912,964	$1,074,426	-$161,462	$917,344
2026	$912,521	$997,743	-$85,222	$832,122
2027	$912,169	$976,041	-$63,872	$768,250
2028	$1,007,492	$1,372,631	-$365,138	$403,112
2029	$1,102,910	$1,318,601	-$215,691	$187,421
2030	$1,198,424	$1,320,677	-$122,253	$65,168
2031	$1,294,008	$1,320,677	-$26,668	$38,500
2032	$1,389,593	$1,320,677	$68,916	$107,416
2033	$1,389,593	$1,343,956	$45,637	$153,053
2034	$1,389,593	$1,343,956	$45,637	$198,690
2035	$1,389,593	$1,320,677	$68,916	$267,606
2036	$1,389,593	$1,320,677	$68,916	$336,522
2037	$1,389,593	$1,320,677	$68,916	$405,439
2038	$1,389,593	$1,343,956	$45,637	$451,076
2039	$1,389,593	$1,343,956	$45,637	$496,713

Note: CY 2017 to 2023 are actual values

Table O-11 above presents the District's budget under the contingent scenario. This scenario assumes the

District builds a basic convenience center in 2028 after the feasibility study is completed. The District will see a declining balance until 2032 when revenue from the center's operation will be in surplus of what it costs to run the facility with an assumed 1.5% of households participating in the PAYT program. Revenue and expenses flatline after the sixth year of the planning period.

Figure O-2 District Contingent Budget Through Planning Period



D. Major Facility Project

Under the alternate budget scenario, the District would construct or operate a new solid waste management facility during this planning period. Before the development of a waste convenience center, the District will conduct a comprehensive feasibility study. The District budgeted $35,000 in 2025 for this study in both the proposed budget and the contingent budget. The District would likely contract out this study but will be involved throughout the process. The District would present the findings from the study to the Policy Committee, which would ultimately decide the direction to take.

If, after a thorough feasibility analysis, the District decides to explore the construction of a waste convenience center, it would act as a small, Clark County specific facility for trash and recycling with the potential to expand the materials accepted to other material streams as well. This center would have limited capacity to accept waste material. One 30 cubic-yard trash dumpster and five 8 cubic-yard recycling dumpsters are planned but would be fully evaluated in the feasibility study. Access to these dumpsters would be open to the public and would be restricted to select haulers. High-level planning assumptions assume dumpster service is needed three times per week.

The District would prioritize building this site on county-owned land, thus eliminating the need to purchase land. The District has not conducted a comprehensive study at the time of this plan update. However, regardless of the site selected, it is expected to require site improvements, permitting, engineering inspections, and contingencies.

Expenses

Operational Expenses

The District expects operational expenses to include service costs for a 30-cubic-yard trash dumpster (assumed to be serviced five days a week) and five 8-cubic-yard recycling dumpsters (assumed to be serviced three times per week).

Capital Expenses

The District hopes to be able to use land already owned by the county to avoid any land purchasing costs. Still, the site will need security features such as cameras and fencing as well as a concrete pad. For the purposes of this plan update, the District estimates a 10,000-square-foot concrete pad will be needed. Further, the site will need to be permitted and inspected for compliance with all laws and regulations.

Labor Expenses

The District expects to hire another full-time staff member to assist with this site and other District operations. The District budgeted for a salary of $50,000 and an additional $12,500 in fringes and benefits for the employee.

Revenue

The District will create a new PAYT program for this site. There will be a per-bag user fee of $2.00. The analysis assumes each household will use three bags per week or 156 bags per year. This equates to $312 per participating household annually. Clark County has roughly 62,000 households as of 2021. The District assumed in the first year (2028) of this program, 0.5% of the households in Clark County would participate. This rate would rise each year by 0.5% with education and outreach efforts made by the District until it reaches 1.5%.

Funding

Given the District's projected fund balance it is not expected to be required to take out a loan. The District could use its fund balance and existing revenue streams to fund this facility. The expected revenue from this center given the above criteria would outweigh the operational costs beginning in 2029. However, if suitable county-owned land is not available the purchase of land would present a different scenario of costs than what is modeled here.

Table O-12 Pro Forma Convenience Center

PRO FORMA	2028	2029	2030	2031	2032
Revenue					
PAYT bag fees	$95,584	$191,169	$286,753	$382,337	$477,922
Expenses					
Capital	$68,500	$0	$0	$0	$0
Annual Labor	$62,500	$64,375	$66,306	$68,295	$70,344
Dumpster Service	$237,435	$244,558	$251,894	$259,451	$267,235
Total Cost	$368,435	$308,933	$318,201	$327,747	$337,579
Revenues - Expenses	-$272,850	-$117,764	-$31,448	$54,591	$140,343

Note: Revenues and Expenses Flatline after the sixth year of the planning period.

Detailed in **Table O-12** are the estimated revenues and expenditures to operate a waste convenience center. The District budgeted $35,000 in 2025 to conduct a feasibility analysis. The provided estimates are for planning purposes only. The District arrived at the assumptions and costs based on reliable data for housing numbers, dumpster service costs, and District standard labor expenses. While no formal quotes were received for capital improvement items, the District inflated the costs higher than what is thought would be a reasonable assumption for labor and site work in order to provide a buffer to work with. Through discussions with District staff, waste consultants, and brief case studies, the District feels comfortable assuming a 0.5% participation rate could potentially grow to a maximum of 1.5% in this analysis.

The District's intent with this analysis is to provide a baseline estimate for planning purposes as to what a convenience center would look like in Clark County prior to the planned formal feasibility study. Rumpke continues to pursue the development of a transfer facility in Clark County and the District feels positive an agreement will be reached. However, planning a contingent program and budget provides flexibility for the District in this planning cycle. A feasibility study will provide a more thorough analysis of the costs, revenues, site location possibilities, and size requirements. The District will conduct a feasibility study prior to making a decision on whether or not to establish a convenience center.

APPENDIX P

DESIGNATION

Appendix P.
Designation

A. Statement Authorizing Designation/ Precluding Designation

The Board of County Commissioners is authorized to establish facility designations in accordance with Sections 343.013, 343.014, and 343.015 of the Ohio Revised Code.

APPENDIX Q

DISTRICT RULES

Appendix Q.
District Rules

The District reserves the right to adopt rules specifically authorized by the Ohio Revised Code (ORC). Section 343.01 (G) of the ORC provides the Board of County Commissioners with the authority to adopt, publish and enforce rules if the District Plan authorizes rule adoption under ORC Section 3734.53 (C). The District is authorized under this Plan Update to adopt rules under the following provisions of the ORC:

ORC 3734.53 (C)(1): Prohibiting or limiting the receipt at facilities located within the solid waste management district 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. However, rules adopted by a board under division (C)(1) of this section may be adopted and enforced with respect to solid waste disposal facilities in the solid waste management district that are not owned by a county or the solid waste management district only if the board submits an application to the director of environmental protection that demonstrates that there is insufficient capacity to dispose of all solid wastes that are generated within the district at the solid waste disposal facilities located within the district and the director approves the application. The demonstration in the application shall be based on projections contained in the plan or amended plan of the district. The director shall establish the form of the application. The approval or disapproval of such an application by the director is an action that is appealable under section 3745.04 of the Revised Code. In addition, the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) if 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 directors' 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 out-of-state 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 became 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 3734.53(C)(2): Governing the maintenance, protection, and use of solid waste collection and solid waste disposal, transfer, recycling, 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.

ORC 3734.53(C)(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.

ORC 3734.53(C)(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.

A. Existing Rules

The District has one rule (1-796) that was adopted on March 16, 2000. This rule governs the construction and modification of solid waste facilities in the District. The full District rule provides that:

> "No person, municipal corporation, township, or other political subdivision shall construct, enlarge, or modify any solid waste transfer, disposal, recycling, or resource recovery facility until general plans and specifications for the proposed improvement have been submitted to and approved by the Clark County, Ohio Board of County Commissioners as complying with the Solid Waste Management Plan of the Clark County Solid Waste Management District."
>
> "General plans and specifications shall be submitted to the attention of the Clark County Solid Waste Director, c/o the Clark County Commission, 50 East Columbia, Springfield, Ohio 45501. Such general plans and specifications shall include all information necessary for the Board of Commissioners to evaluate the County level of interests identified in the siting review process contained in the District's Solid Waste Management Plan."
>
> "General plans and specifications submitted to comply with this Rule shall not include information that is required to determine the proposed facility's compliance with engineering design criteria or which address issues that do not directly relate to the County level interests identified in the District's Plan. The submission of any such extraneous material may be cause for the Board to require the developer to submit revised general plans and specifications which contain information that is appropriate for the siting review process."
>
> "No person, municipal corporation, township, or other political subdivision shall construct, modify or enlarge any solid waste transfer, disposal, recycling, or resource recovery facility that does not

comply with the Clark County, Ohio Solid Waste Management Plan, as determined by the Board of Commissioners of Clark County, Ohio."

B. Proposed Rules

The District reserves the right to promulgate any rule in 343.01 of the Ohio Revised Code to assist in implementing any or all strategies necessary to achieve the waste management goals of this Amended Plan including:

- Prohibiting or limiting the receipt of waste generated outside the District;
- Governing the maintenance, protection, and use of solid waste collection, transfer, disposal, recycling, or resource recovery facilities;
- Governing a program to inspect out-of-state waste; and
- Exempting an owner or operator of a solid waste facility from compliance with local zoning requirements.

The District is not proposing any rules under this solid waste management plan update. In the event that a new rule is proposed and accepted, the rule shall be adopted and enforced by the Board of County Commissioners as provided in Section 343.01(G).

APPENDIX R

BLANK SURVEY FORMS AND RELATED INFORMATION

Appendix R.
Blank Survey Forms and Related Information

The District has surveyed its residential/commercial and industrial sectors in the past. However, the most recent year a survey was conducted was 2018. Conducting annual recycling surveys was a time-consuming exercise that was not producing high responses or collected tonnage recovery data. As such, the District decided not to conduct surveys on recycling in the residential/commercial and industrial sectors.

APPENDIX S

SITING STRATEGY

Appendix S.
Siting Strategy

As stated in the last Plan Update, the District is to consider the impact of any new solid waste facility siting on the overall community. District Amended Rule 1-796 presently provides that:

> "No person, municipal corporation, township, or other political subdivision shall construct, enlarge, or modify any solid waste transfer, disposal, recycling, or resource recovery facility until general plans and specifications for the proposed improvement have been submitted to and approved by the Clark County, Ohio Board of County Commissioners as complying with the Solid Waste Management Plan of the Clark County Solid Waste Management District."
>
> "General plans and specifications shall be submitted to the attention of the Clark County Solid Waste Director, c/o the Clark County Commission, 50 East Columbia, Springfield, Ohio 45501. Such general plans and specifications shall include all information necessary for the Board of Commissioners to evaluate the County level of interests identified in the siting review process contained in the District's Solid Waste Management Plan."
>
> "General plans and specifications submitted to comply with this Rule shall not include information that is required to determine the proposed facility's compliance with engineering design criteria or which address issues that do not directly relate to the County level interests identified in the District's Plan. The submission of any such extraneous material may be cause for the Board to require the developer to submit revised general plans and specifications which contain information that is appropriate for the siting review process."
>
> "No person, municipal corporation, township, or other political subdivision shall construct, modify or enlarge any solid waste transfer, disposal, recycling, or resource recovery facility that does not comply with the Clark County, Ohio Solid Waste Management Plan, as determined by the Board of Commissioners of Clark County, Ohio."

It is the Board's intention to continue the requirement that no one may construct, enlarge or modify a solid waste facility within the District unless and until the developer of the proposed facility has obtained approval of general plans and specifications by the Board.

While the Board has broad discretion to disapprove general plans and specifications for a proposed solid waste facility, it is the intent of the siting review procedure set forth below that the Board shall not approve general plans and specifications for a proposed solid waste facility unless the proposed facility complies with the District's solid waste management plan as demonstrated by the Board's determination that the proposed facility is not likely to have any significant adverse impacts on the local community in Clark County. The specific interests of the county level of government that are addressed in the siting review procedure are not intended to supersede any exercise of local authority over a proposed solid waste facility but are in addition to any such exercise of local authority.

The District will attempt to approach any facility siting review cooperatively and will attempt to maintain an open channel of communication with all stakeholders in the process in order to examine relevant issues of concern to the public.

The Board shall have the discretion to approve or disapprove general plans and specifications for the proposed construction, enlargement or modification of a solid waste facility located within the District, based upon the Board's determination of impacts on the local community in Clark County with respect to any of the following County level interests:

- Consistency with the mission, central strategies and projections contained in the District's Solid Waste Management Plan;
- Effects on financing the implementation of the District's Solid Waste Management Plan;
- The local economy (e.g., cost/benefit analysis of waste disposal costs, revenues/ expenditures, job creation etc.);
- Licensing and inspection responsibilities of the Combined Health District;
- Enforcement responsibilities of local law enforcement and emergency response officials;
- Clark County's Comprehensive Plan;
- Availability of needed solid waste services;
- Related infrastructure (e.g., thoroughfares);
- Local related quality of life issues (e.g., noise and litter);
- Local political subdivisions;
- Local property values; and
- Important historic or cultural features.

Applicability

The District will maintain rule-making authority to require solid waste facility developers to submit plans and specifications for their proposed facility to the District for review. Developers will be asked to provide information in a format that will facilitate evaluation of the County-level Interests. Information relative to the County-level Interests (listed above) would be appropriate for submission. Developers should not submit information that is not directly related to the District's evaluation of the County-level Interests, such as materials that are required by Ohio EPA concerning the proposed facility's compliance with engineering design criteria, because including such extraneous information in the application for siting approval may delay performance of the siting review process.

Any proposed construction, enlargement or modification of a solid waste facility located within the District is subject to the Clark County siting review process. The siting review process is designed to take approximately 90 – 120 days. However, the District reserves the right to extend the process by appropriate amounts of time (up to 60 days), if necessary, for gathering additional information or if further review and evaluation are needed. The District recommends that the Developer complete the siting review process prior to submitting a "Permit to Install" application to the Ohio EPA so that the developer will have an opportunity to identify and respond to any County level concerns before the developer invests significant time and resources in the Ohio EPA permitting process.

Contact

The Clark County Solid Waste District Director will serve as the primary contact for local governments, developers, regulators and the public.

Responsible for Implementation

The Board will have general responsibility for the completion of any siting review process. The Board retains discretionary power to utilize the District Technical Advisory Council (TAC), Solid Waste Policy Committee (SWPC), staff, other county and/or state officials and/or technical experts for assistance and advice in the process.

Process Outline:

Approximate Day	Action
1	Director receives the proposal in a format consistent with the County-level Interests. (If the information provided to the District is not in the format requested, the Developer will be advised to amend the submission to provide the required information and the process will begin when the information is received.)
7	Director provides summary of proposed facility to the Board. The Board determines if a relevant County-level interest exists which requires further review. If they determine that there is not a relevant County-level interest that requires further review, they may elect to stop the siting review at this point. If it is determined that a relevant County-level interest exists which requires further review, the Board will set a time and date (within approximately 10-15 days) to receive comment from all stakeholders in order to identify relevant areas of potential impacts. They may also request written comment from other agencies, staff, TAC, SWPC, political jurisdictions, or experts in the field in order to consider their opinions as well in order to identify the relevant areas of potential impacts.
21	The Board holds public meeting to receive comments from all stakeholders in order to identify relevant areas of potential impacts.
28	The Board, having received comment from all stakeholders, and all others requested, identifies a list of relevant areas of potential impacts for further evaluation. The Board directs the Director to gather information and initiate an evaluation of each relevant area of potential impacts. The Board may also request information and opinions from other appropriate agencies, staff, or experts as well.
90	Director presents all findings to the Board for their review. (Director may request an extension at this point, if necessary to gather more information before making a final presentation of the findings.) The Board sets a date and time (approximately 7-10 days) to make a determination.
97	The Board, based on information presented by all stakeholders, may choose, at this point, to determine that no relevant County level concern regarding relevant potential impacts of the proposed development exists and the process will be complete. If the Board determines that County-level concerns regarding relevant potential impacts may constitute impacts by the proposed facility that are significant and adverse to the local community, the Board will make a preliminary determination of noncompliance with the Plan and notify the Developer. They will also set a date and time for a public meeting (approximately 20-30 days) in order to make a final determination.
120	If the Board determines that the relevant potential impacts do not constitute impacts by the proposed facility that are significant and adverse to the local community, then the Board may determine that the facility complies with the Solid Waste Management Plan. If the Board has determined that County-level concerns regarding relevant potential impacts are likely to result in significant adverse impacts on the local community in Clark County, the Board will conduct the most appropriate course of action, including but not limited to: 1. Request an extension and authorize further study (this must be agreed upon by the Developer as well); 2. Negotiate with the proposed facility Developer; or

Approximate Day	Action
	3. Explicitly disapprove of the site for the development. Note: If (for any reason) changes are made to the proposal after the facility has been approved by the Board, the Board reserves the right for further evaluation and reconsideration subject to the Process Outline described here.

APPENDIX T

MISCELLANEOUS PLAN DOCUMENTS

Appendix T.
Miscellaneous Plan Documents

During the process of preparing a plan, the policy committee signs three official documents certifying the plan. These documents are as follows:

1. Certification Statement for the Draft Solid Waste Management Plan –The Policy committee signs this statement to certify that the information presented in the draft solid waste management plan submitted to Ohio EPA is accurate and complies with the Format 4.1.

2. Resolution Adopting the Solid Waste Management Plan (adopted prior to distributing the draft plan for ratification) – The policy committee signs this resolution to accomplish two purposes:
    - Adopt the draft solid waste management plan
    - Certify that the information in the solid waste management plan is accurate and complies with Format 4.1.

3. Resolution Certifying Ratification of the Solid Waste Management Plan – The policy committee signs this resolution to certify that the solid waste management plan was ratified properly by the political jurisdictions within the solid waste management district. The policy committee signs this resolution after the solid waste management plan is ratified and before submitting the ratified plan to Ohio EPA).

Certification Statement for the Draft Plan

We as members of Clark County SWMD Policy Committee do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update (2025-2040), and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and in compliance with the requirements in the District Solid Waste Management Plan Format, version 4.1.

CLARK COUNTY

Jennifer M Hutchison — 2-15-24
Representing the County Commissioners — Date Signed

David C. Gibbs — 2/15/2024
Representing the Largest City — Date Signed

Representing the Health Department — Date Signed

Representing Townships — 2-15-24 — Date Signed

Representing Industrial Generators — 2-15-24 — Date Signed

Representing the Public — 2-15-24 — Date Signed

Bobbie Sue — 2-15-24
Representing Citizen — Date Signed

CLARK COUNTY
OHIO
Solid Waste District

Public Comment Hearing July 24, 2024
Springview Government Center 3130 E Main St. Room 151

PLEASE PRINT

	Name	Address	Phone	Email
1.	Bonnie Martens	1830 N Fountain Blvd 04	937-536-6099	bmartens@clarkcountyohio.gov
2.	CHARLES RAUCH	3130 E MAIN SPRGD 45505	937 521 2155	CRAUCH@CLARKCOUNTYOHIO.GOV
3.	Sam Perin	1602 W. Main St.	937-521-2622	sperin@clarkcountyohio.gov
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

over

backs, $500 for both. 513-477-0553.

Furniture

DINETTE SET
Dark Brown Wood Dinette Set
Very good condition! Table is 36x48.
Comes with 4 chairs that are 24". $100.
Call Theresa or Ron at 937-435-4854.

DAILY LAW JOURNAL

legal notices

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, filing an appeal, or ADA accommodations may be obtained at:
https://epa.ohio.gov/actions
or Hearing Clerk, Ohio EPA,
50 W. Town St. P.O. Box 1049,
Columbus, Ohio 43216.
Ph: 614-644-3037
email: HClerk@epa.ohio.gov

Final Issuance of
Permit to Install
CITY OF SPRINGFIELD
Facility Description:
Wastewater
Receiving Water: null
Date of Action: 06/20/2024
6-23/2024

0000836045-01

CLARK SWMD
Public Notice

Public Comment Period for Draft Solid Waste Management Plan Update

The Clark County Solid Waste Management District is establishing a 30-day written comment period (June 24th, 2024 until July 24th, 2024) on the draft Solid Waste Management Plan Update (Plan Update) (Ohio Revised Code Section 3734.54). The District has prepared the draft Plan Update as required by Section 3734.54 of the Ohio Revised Code. The draft Plan Update includes a budget and fees to finance the Plan, a solid waste facility inventory, projections and strategies, facilities and programs to be used, an analysis of the progress made toward achieving state solid waste reduction goals, and District rules.
This 2025 Plan is an update to a previously approved solid waste plan. The 2025 Plan Update includes a demonstration of access to landfill capacity and determines whether there are more than fifteen years of landfill capacity available to the District. Based on the landfills used to manage waste generated in the District during the 2021 reference year for the planning period, landfills had an average life expectancy of 38 years.
The District does not have a landfill or transfer station within its boundaries and does not have contractual agreements to designate specific facilities to receive Clark County's waste. The District is reliant on regional waste facilities. Due to the economics of waste hauling, the closest facilities are where a majority of Clark County's waste ends up. These are the Montgomery County South Transfer Station and Stony Hollow Landfill. Both facilities are located in neighboring Montgomery County.
The draft Plan update includes District rules contained in Appendix Q. The District currently has one rule governing the construction and modification of solid waste facilities in Clark County. The District is not proposing any new rules in this plan update.
The draft Plan Update complies with State Plan Goal #2: A 25% diversion of all residential/commercial waste generated. The District expects to continue to reach this goal throughout the planning period.
The District currently funds plan programs and current operations through generation fees collected on each ton of waste generated within Clark County. This fee is $8.50 per ton and has not been altered since 2007. No fee increase is needed in this next planning cycle. However, a fee increase is shown at a future date to balance the District budget. In 2031, a $1.00 generation fee increase to $9.50 is projected for planning purposes.
The District will hold a public hearing to obtain oral comments regarding the draft Plan Update on Wednesday, July 24th, 2024 at Room 151, Springview Government Center, 3130 E Main St., Springfield, OH 45503 at 4:30 p.m.
The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update from June 24th, 2024, until July 24th, 2024. Written comments should be sent to Clark County SWD, 1602 W. Main St. Springfield, OH 45504.
The draft Plan Update is available for review on the District's website at:
www.32trash.org
Please contact the District at (937) 521-2020 with any questions about the Plan Update.
6-23/2024

0000835912-01

Sunday June 23, 2024

MINUTES

Clark County Solid Waste District
Wednesday, July 24, 2024

Springview Government Center Rm. 151
3130 E. Main St., Springfield, OH

SWPC members present

TAC members present:

Solid Waste District staff present:
Chuck Bauer
Bonnie Martens
Sam Perin

Guest:

I. **Public Comment call to order:** Ms. Martens called the meeting to order at 4:31 p.m.

II. **Meeting opened with:** Per the Ohio Revised Code Section 3734.54, the Clark County Solid Waste District is opening this meeting to address any Public Comments related to the Solid Waste District's Draft Plan update. This meeting closes the 30-day public comment period that opened on June 24, 2024 that was posted in the Springfield News-Sun (June 23, 2024)

III. **No public comments were received by mail, email as of July 24, 2024.**

IV. **No one from the public arrived to add comments verbal or written during the 30 minute meeting**

VI. **Meeting adjourned at 5:00 p.m.**

Submitted by Bonnie Martens, Program Manager

Bonnie Martens

POLICY ADVISORY COMMITTEE
OF THE
CLARK COUNTY SOLID WASTE MANAGEMENT DISTRICT

The Policy Advisory Committee of the Clark County Solid Waste Management District met in regular session on July 25th, 2024. Upon motion by Mr. Estrop, seconded by Mr. Ricketts the Committee considered the following resolution

A RESOLUTION OF THE POLICY ADVISORY COMMITTEE TO ADOPT THE DRAFT SOLID WASTE MANAGEMENT PLAN AND FORWARD THE PLAN FOR RATIFICATION

WHEREAS, the Clark County Solid Waste Management District 2019 District Plan update was approved by the Director of Environmental Protection in April 2019; and

WHEREAS, the approved plan must be reviewed and revised after five years, and resubmitted to the Director of Environmental Protection for comment; and

WHEREAS, a revised plan, assuring capacity for the fifteen year period commencing in 2025 and ending in 2039 has been developed by the Committee; and

WHEREAS, notice of a revised plan was published in newspapers of general circulation within the District and a 30-day public comment period was established; and

WHEREAS, the fifty largest generators of solid waste within the District were notified in writing of the availability of the revised-draft solid waste management plan for review during the 30-day public comment period; and

WHEREAS, within 15 days of the completion of the public comment period, on July 25th, 2024, a public hearing was held to solicit additional comments from the public; and

WHEREAS, the Policy Committee has considered the comments submitted during the comment period and at the public hearing meeting;

NOW THEREFORE, be it resolved by the Policy Committee of the Clark County Solid Waste Management District, that:

Section 1. This Committee hereby adopts the draft plan.

Section 2. The District Coordinator is further authorized to secure the services necessary to print sufficient copies of the plan and deliver a separate copy of the plan to each political subdivision within the District, including each Board of County Commissioners, City or Village Council, and Board of Township Trustees, and to request each political subdivision to adopt a resolution ratifying the draft plan.

Section 3. It is found and determined that all formal actions of this Committee concerning and relating to the adoption of this resolution were adopted in an open meeting of this Committee, and that all deliberations of this Committee and any of its subcommittees that resulted in such formal action were in a meeting open to the public in compliance with all legal requirements including Section 121.22, Ohio Rev. Code.

Upon a call of the vote, the resolution was approved by a vote of 5 yeas, and ϕ nays.

Resolved this 25th day of July 2024

Signature of Appropriate Officer: Jim W. McDaniel

POLICY ADVISORY COMMITTEE
OF THE
CLARK COUNTY SOLID WASTE MANAGEMENT DISTRICT

The Policy Advisory Committee of the Clark County Solid Waste Management District met in regular session on November 14, 2024. Upon motion by David Estrop, seconded by Tim Foley the Committee considered the following resolution

A Resolution declaring the amended Solid Waste Management Plan for the Clark County Solid Waste Management District (District) has been ratified in accordance with Section 3734.55 of the Ohio Revised Code.

WHEREAS, the District held a public hearing on July 24, 2024, and the Solid Waste Management District Policy Committee adopted the amended Solid Waste Management Plan on July 25, 2024;

WHEREAS, this Solid Waste Management District Policy Committee has received copies of resolutions and ordinances approving the amended Plan from the Clark County Board of County Commissioners, the legislative body of the largest municipality (City of Springfield), and from legislative jurisdictions representing at least 75 percent of the population within the District;

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

This resolution shall be in effect immediately upon its adoption.

Upon a call of the vote, the resolution was approved by a vote of 6 yeas, and 0 nays.

Resolved this 14th day of November 2024

Signature of Appropriate Officer: Tim W. McDonnell

APPENDIX U

RATIFICATION RESULTS

Appendix U.
Ratification Results

Table U-1 Ratification Results

Clark County				
Board of County Commissioners Approval			**Check if Yes** ➡	**X**
Community	**Approved**	**Rejected**	**Date Resolution Adopted**	**2024 Population**
Cities				
New Carlisle city				5,440
Springfield city	X		8/27/2024	57,776
Townships				
Bethel township	X		8/12/2024	11,948
German township	X		9/10/2024	7,062
Green township	X		9/17/2024	2,635
Harmony township	X		9/12/2024	3,170
Madison township	X		9/9/2024	806
Mad River township	X		9/16/2024	8,367
Moorefield township	X		9/10/2024	12,352
Pike township	X		8/20/2024	3,197
Pleasant township	X		9/3/2024	2,823
Springfield township	X		8/13/2024	12,041
Villages				
Catawba village				237
Clifton Village (exclude)	Excluded			-46
Donnelsville village	X		9/9/2024	252
Enon village	X		9/10/2024	2,393
North Hampton village				446
South Charleston village				1,668
South Vienna village	X		10/28/2024	399
Tremont City village				341
Total	125,222	0		133,309
2024 County Population			**133,309**	
Ratification percentage			94%	

APPENDIX V

INVENTORY OF OPEN DUMPS AND OTHER DISPOSAL FACILTIES

Appendix V.
Inventory of Open Dumps and Other Disposal Facilities

The Clark County Combined Health District provides an annual report on open dumps, disposal facilities, contaminated areas, and other known dumping locations. The report for 2021 is attached below. All were resolved, but only 25 were resolved using Ohio Revised Code for open dumping/open burning. Should Ohio EPA need the specifics for each location, please contact Clark County's Health Department.

APPENDIX W

DISTRICT MAP

Appendix W.
District Maps

In accordance with Ohio Revised Code 3734.53(A)(2) and (A)(6) the District must provide a map that shows the locations of the following:

- All existing facilities where solid wastes are being disposed of: **See Appendix H, Section 10.**
- All resource recovery facilities: **See Appendix H, Section 10**
- All recycling activities within the district: **See Appendix H, Section 1.**
- Solid waste open dumping sites, including scrap tires: **See Appendix V**
- Disposal facilities for fly ash and bottom ash, foundry sand, and slag: **See Appendix V**

SOLID WASTE
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
February 18, 2025
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
ATTACHED HERETO