CARROLL-COLUMBIANA-HARRISON COUNTY SOLID WASTE MANAGEMENT DISTRICT

2024 – 2039 REVISED DRAFT SOLID WASTE MANAGEMENT PLAN UPDATE

October, 2023

Prepared by:



TABLE OF CONTENTS

SECTIONS

Section i – Solid Waste Management District Informationi-1
CHAPTERS
Chapter 1 – Introduction1-1
Chapter 2 – District Profile2-1
Chapter 3 – Waste Generation
Chapter 4 – Waste Management 4-1
Chapter 5 – Waste Reduction and Recycling5-1
Chapter 6 – Budget
APPENDICES
Appendix A – Reference Year, Planning Period, Goal Statement, Material Change in Circumstances, Explanations of Differences in DataA-1
Appendix B – Recycling Infrastructure InventoryB-1
Appendix C – Population Data C-1
Appendix D – Disposal Data D-1
Appendix E – Residential/Commercial Reduction and Recycling DataE-1
Appendix F – Industrial Sector Reference Year RecyclingF-1
Appendix G – Waste GenerationG-1
Appendix H – Strategic EvaluationH-1
Appendix I – Conclusions, Priorities, and Program Descriptions I-1
Appendix J – Reference Year Opportunity to Recycle and Demonstration of Achieving Goal 1J-1
Appendix K – Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2K-1

Appendix L – Minimum Required Education Programs: Outreach and Marketing Plan and General Education RequirementsL-1
Appendix M – Waste Management Capacity Analysis
Appendix N – Evaluating Greenhouse Gas Emissions N-1
Appendix O – Financial Data
Appendix P – DesignationP-1
Appendix Q – District RulesQ-1
Appendix R – Blank Survey Forms and Related Information R-1
Appendix S – Siting StrategyS-1
Appendix T – Miscellaneous Plan DocumentsT-1
Appendix U – Ratification ResultsU-1
Appendix V – Inventory of Open Dumps and Other Disposal FacilitiesV-1
Appendix W – District MapW-1

Section i. Solid Waste Management District Information

SWMD Name	Carroll-Columbiana-Harrison Joint Solid Waste Management District	
Member Counties	Carroll County, Columbiana County, Harrison County	
Coordinator's Name (main contact)	Missy Burchfield	
Job Title	Solid Waste District Director	
Street Address	1130 Cobbler Road NE	
City, State, Zip Code	Carrollton, OH 44615	
Phone	330-596-5000	
Fax		
E-mail address	missy@carrollcountyohio.us	
Webpage	https://carrollcountyohio.us/agencies-and- departments/cch-solid-waste-district/	

Table i-1. Solid Waste Management District Information

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

Member Name	Representing	
Carroll County		
Christopher Modranski	County Commissioners	
Mayor Bill Stoneman	Municipal Corporations	
Brian McIntire	Townships	
Kelly Engelhart	Health District	
Dan Reis	Generators	
vacant	Citizens	
Bill Findley	Public	
Columbiana County		
Mike Halleck	County Commissioners	
Mayor John Berlin	Municipal Corporations	
Gary Williams	Townships	
Kevin Summerville	Health District	
David Dees	Generators	
Kay Washam	Citizens	
Cindy DePillo	Public	
Harrison County		
Don Bethal	County Commissioners	
Mayor John Migliore	Municipal Corporations	

Member Name	Representing
Paul Trushell	Townships
Scott Pendleton	Health District
Abigail Klamert	Generators
Scott Blackburn	Citizens
Chris Jacobs	Public

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

Name	Cindy DePillo
Street Address	41667 State Route 14
City, State, Zip Code	Columbiana, Ohio 44408
Phone	(330) 429-2639 (cell), (330) 482-2497 (home)
Fax	
E-mail address	nightsky_us@yahoo.com

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

Commissioner Name	County	Chairperson/President
Mike Halleck	Columbiana	President (2022)
Roy Paparodis	Columbiana	
Tim Weigle	Columbiana	
Donald E. Leggett II	Carroll	
Christopher R. Modranski	Carroll	
Robert E. Wirkner	Carroll	President (2022)
Amy Norris	Harrison	President
Paul Coffland	Harrison	
Dustin Corder	Harrison	

Technical Advisory Committee

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

CHAPTER 1. INTRODUCTION

A. Brief Introduction to Solid Waste Planning in Ohio

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

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

B. <u>Requirements of County and Joint Solid Waste Management Districts</u>

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

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

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

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 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. <u>District Overview</u>

Carroll-Columbiana-Harrison solid waste management district (District or SWMD) is a multi-county district. Carroll, Columbiana, and Harrison counties joined to form

one district in 1989. The District's role has always been to provide opportunities for residents to recycle and to teach best practices for waste reduction. From its inception, the District's role and function was program administrator. In 2017, the administrator role switched to become a direct service provider for service offerings where it makes sense. Capital investments were made to purchase collection equipment to allow drop-off location collection service. A plan was also set to develop a District Recycling Center that would allow for other direct service offerings.

The District provides containers and collects materials from the drop-off recycling locations in all three counties. Processing of recyclables is contracted out. The District Recycling Center was built in 2021 and serves as the centralized office located at 1130 Cobbler Rd NE in Carrollton. The plan is for this Recycling Center to fulfill multi-purposes. It serves as an office, location to house trucks and extra containers, permanent drop-off location for difficult to manage materials such as electronics, scrap tires, household hazardous waste, and appliances. The Recycling Center was also built with the multi-purpose use for consolidation and compaction of recyclables before being transferred. The District contracts with various private businesses to handle the processing and recycling of household hazardous waste, electronics, and tires.

There is one curbside recycling program in the District in the Village of Carrollton. The City of East Liverpool terminated their program in 2015 because the drop in the commodities market made it more costly than budgeted. The lack of curbside programs creates a dependency for the SWMD to offer drop-off recycling services. The SWMD historically offered once a year collection day for residents to get rid of their hard to recycle materials, such as household hazardous waste, tires, and electronics. The opening of the Recycling Center may change the structure of the once a year to more year-round opportunities through appointments or set days/hours. Evaluations will continue in this planning period to provide a high level of service at an economical cost for service.

One of the District's major accomplishments is its ability to collaborate with other government and non-profit entities to provide waste reduction and recycling services. The District implemented a compostable leaf bag program, works with local youth camps to institute a recycling program and assist them with their recycling endeavors, and with the Farm Bureau instituted an agricultural plastics recycling program. These programs continue today.

Funding for the District is received through a contract fee with the landfills that agree to accept waste from the District. These fees are then used to provide programs and services for the residents, schools and organizations throughout the District.

Historically, funding issues limited services the District could provide. Recycling collection and processing infrastructure is a struggle to our mostly rural

environment. The oil and gas industry provided the District with an influx of revenue from 2013 to 2015. This occurred because the muds created from the drilling process are required to be landfilled and the SWMD subsequently received the contract fee for drilling mud waste going into the designated landfills. This waste is subject to change any year and since 2015 fluctuates annually.

Solid Waste Management Districts are authorized by Section 343.014 of the Ohio Revised Code to designate solid waste disposal, transfer, resource recovery and recycling activities where solid wastes generated within the District shall be taken for disposal, transfer, resource recovery or recycling, provided the District has reserved the authority to designate facilities in its solid waste management plan.

The District may contract with owners of solid waste facilities both inside and outside the state of Ohio and exact a fee for the privilege to contract with the District.

The Commerce Clause of the United States Constitution prohibits any discrimination against out-of-state providers of solid waste services.

D. <u>Waste Reduction and Recycling Goals</u>

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), adopted November 2, 2019. The 2020 State Plan established ten goals as follows:

- 1. The SWMD shall provide its residents and commercial businesses with access to opportunities to recycle solid waste. At a minimum, the SWMD must provide access to recycling opportunities to 80% of its residential population in each county and ensure that commercial generators have access to adequate recycling opportunities.
- 2. The SWMD shall reduce and recycle at least 25% 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, leadacid 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.
- The SWMD will use U.S. EPA's Waste Reduction Model (WARM) or an equivalent model to evaluate the impact of recycling programs on reducing greenhouse gas emissions.
- 9. The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.
- 10. The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

SWMDs are encouraged but not required to demonstrate it 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, and no demonstration of achieving that goal is needed for the solid waste management plan.

See Chapter 5 and Appendix I for descriptions of the programs the 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 Solid Waste Management District is made up of Carroll, Columbiana and Harrison Counties. When attributing population to the District, Ohio law requires that population for a political subdivision that lies within two or more solid waste management districts shall be credited to the District where the majority of the population resides. The Village of Adena in Harrison County and the City of Magnolia in Carroll County cross boundaries to other solid waste management districts. More of Adena and Magnolia's population resides in those other districts, therefore, those districts retain these jurisdictions in their population counts. The City of Minerva is comprised of Stark, Carroll, and Columbiana counties. Since the greater population of Minerva is in Stark County, they retain the population. Additionally, a small percentage of Washingtonville, Columbiana, and Salem residents live in Mahoning County, but the majority of the population is in Columbiana County, so the District retains the population count of these jurisdictions.

2. County Overview

The three county SWMD is diverse in population, size and available infrastructure. As a mostly rural SWMD, Harrison County is by far the most rural. It consists of nine villages and fifteen townships covering 411 square miles. Carroll County consists of five villages and fourteen townships covering 399 square miles. As our largest county, Columbiana consists of three cities, ten villages, and eighteen townships covering 535 square miles.

B. Population

1. Reference Year Population

After subtracting the population of communities partially located in another SWMD, the District has a total adjusted population of 141,546 people in 2021.

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

Cou	County		ounty Largest Political Jurisdiction		isdiction
Name	Population	Community Name	Population	Percent of Total County Population	
Carroll County	24,698	Brown Township	4,490	18%	
Columbiana County	102,497	Salem City	11,821	12%	
Harrison County	14,351	Cadiz Village	3,042	21%	
Total	141,546				

Table 2-1. Population of the District in 2021

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

2. Population Distribution

The SWMD is a multi-county district in which each county is unique. The majority of the SWMD's population resides in Columbiana County, with 102,497 people residing there in comparison to the 141,546 total population of the SWMD. There are only three cities in the SWMD; all in Columbiana County.

The City of Salem is the largest city. In 2021, it had a population of 11,821 people which comprised approximately 48 percent of the county's population. East Liverpool City had a population of 9,857 in 2021. Columbiana City had a population of 5,840 in 2021. Salem and Columbiana are situated in the Northern part of Columbiana County with East Liverpool being located in the Southwest. There are ten villages in Columbiana County with the largest having 4,718 persons and the smallest having only 108. There are eighteen townships that range from 7,739 down to 647 persons.

In comparison, Carroll County's population is 24,698. There are no cities, only five villages and fourteen townships. The five villages range from 3,092 to the smallest village with 129 people. The majority of the population resides in Brown Township, which includes Lake Mohawk and is located in the northeast portion of the county, bordering Stark County. Brown Township's population is 4,490. Carrollton, the county seat, and its surrounding township (Center) has the second largest population with 1,338. East Township, located in the northwest portion of the county and bordering Columbiana County is the smallest with a population of 814.

The SWMD's smallest county is Harrison with a population of 14,351. Harrison County's largest community is their county seat, Cadiz, with 3,042 residents. Their smallest community has a population of 66. Their fourteen townships range in population from 934 down to 154.

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

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Carroll County	0%	20%	80%
Columbiana County	27%	16%	57%
Harrison County	0%	47%	53%

 Table 2-2.
 Population Distribution

3. Population Change

According to the Ohio Development Services Agency, the population in the District will decrease slightly through the year 2040. The District's population is projected to decrease by 0.16% annually throughout the planning period.

4. Implications for Solid Waste Management

The influx of oil and gas industry increased population as well as waste disposal in the landfills from drilling operations. Tracking the drilling waste the District is noticing a trend of mischaracterization where the waste is being identified as residential/commercial waste. This inflates the residential/commercial waste disposal resulting in higher per capita disposal rates and waste generation rates. This waste is special waste and cannot be diverted. To be able to better manage the waste that can be diverted the District needs to work with the landfills and haulers to correct this characterization.

The SWMD currently does not have an operating landfill within its boundaries. However, the District does have one transfer facility in Carrollton in Carroll County, which is owned and operated by Kimble Companies.

The SWMD assisted Carroll County and the Village of Carrollton with the closure of the Carroll County Landfill. The landfill has been closed and not accepting waste since 1993 and was capped in November 2014. Since the landfill has not been used for over 20 years, the SWMD assists the County Commissioners with costs of post-closure monitoring over the term of the post-closure period as long as funding is available.

There are currently 37 facilities throughout Ohio, Pennsylvania and West Virginia that are designated to accept waste from the SWMD. Each designated solid waste facility is contractually required to provide monthly reports regarding the amount of solid waste received from generators and haulers from Carroll, Columbiana, and Harrison counties. The SWMD believes the data provided by these facilities is the most accurate data available, especially considering that there are fifteen out-of-state facilities that are designated to accept District waste.

C. Profile of Commercial and Institutional Sector

The District includes nearly 4,196 total commercial and institutional entities. The total number of establishments within each primary category in the North American Industry Classification System (NAICS) is shown in Table 2-3. As indicated in the table, retail trade comprises the largest category, with "Other Services" also having a high number of companies or organizations. ("Other Services" is essentially a catch-all category for types of businesses, etc. not included elsewhere.)

NAICS Code	NAICS Description	# of Commercial/Institutional Establishments
42	Wholesale Trade	191
44-45	Retail Trade	823
48-49	Transportation and Warehousing	262
51	Information	46
52	Finance and Insurance	252
53	Real Estate and Rental/Leasing	123
54	Professional, Scientific, and Technical	257
55	Management of Companies and Enterprises	7
56	Administrative and Support and Waste Management and Remediation Services	259
61	Educational Services	26
62	Health Care and Social Assistance	617
71	Arts, Entertainment, and Recreation	74
72	Accommodation /Food Service	492
81	Other Services (Except Public Administration)	767

Source: U.S. Business Database

D. Profile of Industrial Sector

There were approximately 541 industrial businesses operating in the District during 2021. The Districts industrial sector is largely concentrated in the City of Salem. The following table presents the major industrial sector employers in the District.

•	
Company	Employee Size
Flex-N-Gate	700
Walmart Supercenter	500
American Standard Inc	450
Save-A-Lot	400
Mac Manufacturing Inc	361
Walmart Supercenter	300

Table 2.5-Top Industrial Sector Employers

Company	Employee Size
R+L Carriers	280

E. <u>Other Characteristics</u>

Perhaps the most unique aspect of the SWMD, which has implications with regard to solid waste management, is the number of lakes and youth camps. The District is home to Atwood Lake, Leesville Lake, Tappan Lake, Clendening Lake, Guilford Lake, and Lake Tomahawk. Also, part of Piedmont Lake is in Harrison County, but the marina is located in Belmont County. All of these lakes are under the control of the Muskingum Watershed Conservancy District. In addition to the Conservancy District lakes, Atwood Lake Park encompasses both Carrol County and Tuscarawas County, Guilford Lake State Park and Beaver Creek State Park are situated in Columbiana County.

Youth camps, such as Camp Aldersgate, FFA Camp Muskingum, Camp Falcon, Camp NEOSA, Camp Wakonda, Camp Roosevelt and Camp Firebird surround Leesville Lake. Other youth camps include Camp Gideon, Camp Echo, Elkhorn Valley Christian Service Camp, Seven Ranges Boy Scout Camp, and Camp Tippecanoe.

Tens of thousands of people visit the festivals held at District lakes, and also visit the lakes and parks for hiking, horseback riding, boating, and fishing. The Alive Festival at Atwood is a week-long Christian festival that brings in more than 20,000 people each year. The Atwood Fall Festival, which is always the first weekend of October brings in thousands of people, as well. The Fall Festival includes vendors, an American Indian Pow Wow, Civil War Reenactments, etc. There is also Shaker in the Woods and Christmas in the Woods Festivals, Great Trail Festival (Buffalo Farm), Algonquin Mill Festival, and the Johnny Appleseed Festival, to name a few.

Each of the festivals, as well as the youth camps discussed above, generate substantial amounts of solid waste. The SWMD has implemented recycling at several of the youth camps and assisted with the implementation at the Atwood Fall Festival. The Alive festival also recycles during their week-long event. However, the potential exists for significant recovery of recyclables from these remaining venues.

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 Carroll, Columbiana, and Harrison 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 Reference Year

Table 3-1 shows the amount of residential/commercial (R/C) and industrial waste generated within the District during 2021 (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.

Type of Waste	Adjusted drilling waste from R/C Tons Generated	Ohio EPA Reported Tons Generated
Residential/Commercial	97,790	227,347
Industrial	214,156	84,599
Excluded	0	0
Total	311,946	311,946

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

Note: Industrial generation is not a true calculation of generation because the District did not track or report industrial diversion data.

As seen, Table 3-1 shows two different waste generation totals. In 2021, the residential/commercial sector waste data from Ohio EPA reported an unusually high tonnage. The District believes waste activities related to oil and gas drilling projects were mischaracterized as residential/commercial instead of industrial waste. Without adjusting the waste disposal and generation for the residential/commercial sector would likely result in a skewed analysis of this sector.

1. Residential/Commercial Waste Generated in Reference Year

Adjusting for drilling waste assumed to be mischaracterized, the residential/commercial sector generated 97,790 tons of solid waste during the reference year. This estimate of generation shows that each person generates approximately 3.79 pounds per person per day (PPD). Figure 3-1 shows the District's historic waste generation without the drilling waste adjustment. Historically, per capita generation fluctuates between 5 and 9 pounds per person per day.

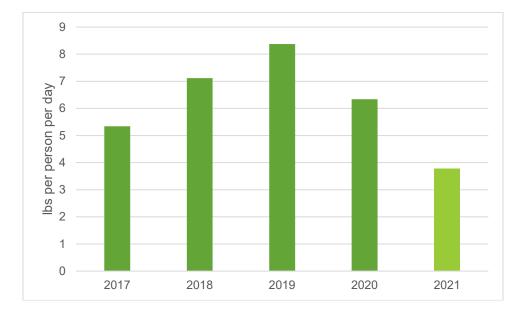


Figure 3-1. Historical R/C Waste Generation Rate (adjusted 2021)

The statewide R/C generation for 2021 was approximately 7.09 PPD, while the average generation rate for all SWMDs was 6.20 PPD. The District's adjusted 3.79 PPD capita generation rate is below the statewide average rate. The total adjusted recycling rate for the residential/commercial sector was 16%.

2. Industrial Waste Generated in Reference Year

In 2021, the District did not track or report diversion from the industrial sector. Waste generation is calculated by summing recycling plus waste disposal. Without any recycling data the waste generation is skewed as it represents only one side of the equation, waste disposal. See Table 3-1.

3. Excluded Waste Generated in Reference Year

The excluded waste generated in the reference year was 12,349 tons. This represented 4% of total waste generated. Ohio EPA Format 4.1 states that if excluded waste is less than 10% of total waste generated then it may be exempt from analysis. Thus excluded waste will not be included in the analysis.

B. Historical Waste Generated

1. Historical Residential/Commercial Waste Generated

Although it has fluctuated some over the past four years, residential/commercial waste generation decreased since 2019. Recycling trends were consistent from 2017 through 2019, with a slight decrease in 2020. Figure 3-2 shows the 2021 adjusted waste generation.

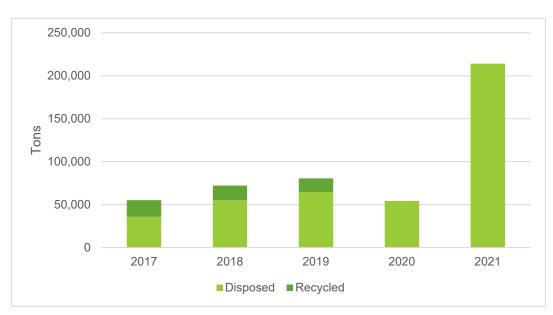


Figure 3-2. Historical R/C Generation (adjusted 2021)

2. Historical Industrial Waste Generated

Industrial waste generation fluctuated over the past five years. Figure 3-3 shows the fluctuation and industrial recycling drop off in 2020 and 2021. Figure 3-3 shows the industrial adjusted disposal.





3. Waste Generation Projections

The District expects waste generation to decrease during the first six years of the planning period as shown in Table 3-2.

Year	Residential Commercial Waste Generation (tons)	Industrial Waste Generation (tons)	Total
2024	97,266	189,472	286,737
2025	97,191	181,893	279,084
2026	97,134	174,617	271,751
2027	97,083	167,632	264,715
2028	97,036	160,927	257,963
2029	96,995	154,490	251,485

Table 3-2. Waste Generation Projections

Figure 3-4 shows the percentage of solid waste generated in the residential/commercial and industrial sectors for the first year of the planning period (2024). Projections for both of these sectors were developed by first analyzing historical disposal data, determining trends for the historical data, and then estimating future disposal amounts by incorporating any known changes which may affect the tons landfilled. The same process was used to establish the projections for waste reduction and recycling, and the sum of the disposal and waste reduction/recycling projections comprise the total waste generation projections.

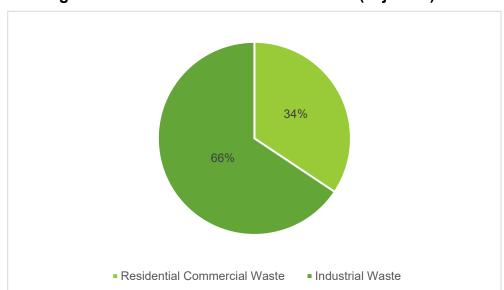


Figure 3-4. Total Waste Generation: 2024 (adjusted)

CHAPTER 4. Waste Management

Purpose of Chapter 4 (The language in this box is authored by Ohio EPA) Chapter 3 provided a summary of how much waste the SWMD generated in the reference year and how much waste the Policy Committee estimates the SWMD will generate during the planning period. This Chapter summarizes the Policy Committee's strategy for how the SWMD will manage that waste during the planning period.

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

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

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

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

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

A. Waste Management Overview

The solid waste generated within Carroll, Columbiana, and Harrison County is managed through four major categories: recycling, composting, processing at transfer facilities, and landfilling. (The waste delivered to transfer facilities is ultimately sent to landfills for disposal.) These methods of waste management are anticipated to continue handling the District's solid wastes throughout the planning period. Table 4-1 shows the projections for each management method for the reference year and the first six years of the planning period and indicates that waste disposal ("Transfer" plus "Landfill") will continue to comprise the largest category.

Year	Generate ¹	Recycle ²	Compost	Transfer ³	Landfill ⁴
2021	311,946	12,831	2,813	29,543	266,759
Plannir	ng Years				
2024	286,737	11,836	2,842	27,126	244,934
2025	279,084	11,934	2,842	26,353	237,955
2026	271,751	12,037	2,842	25,612	231,261
2027	264,715	12,145	2,842	24,899	224,829
2028	257,963	12,259	2,842	24,215	218,648
2029	251,485	12,377	2,842	23,557	212,709

Table 4-1. Methods for Managing Waste

¹ "Generate" represents the total of the other four columns.

² "Recycle" is the total amount reduced and recycled minus composting.

³ "Transfer" is the amount sent to transfer stations, prior to delivery to a landfill.

⁴ "Landfill" plus the "Transfer" amount equals the total disposal.

The proportion of each method used to manage the District's waste during the first six years of the planning period is predicted to change very little. Figure 4-1 shows the recycling is 4%, composting is 1%, and total landfilling ("Landfill" plus "Transfer") is 95% of total generation.

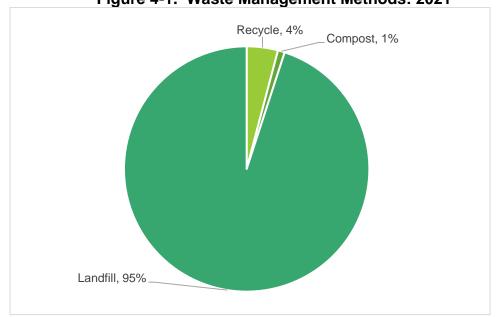


Figure 4-1. Waste Management Methods: 2021

Including drilling waste in the disposal and waste generation data skews the waste management percentages. Estimating and omitting the drilling waste-related disposal calculates different waste management method percentages. As discussed in Chapter 3, drilling waste was adjusted for mischaracterization between the residential/commercial and industrial sectors but was not removed from the waste generation calculations. The District estimates roughly 160,000 tons overall is attributed to drilling waste. Figure 4-2 shows the waste management methods when drilling waste is completely omitted.

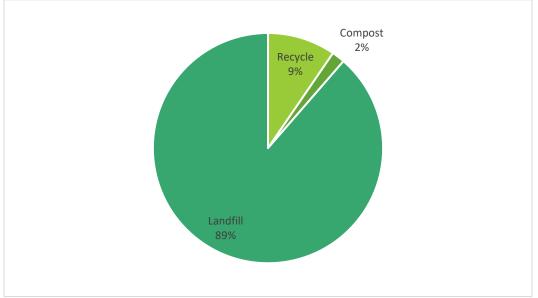


Figure 4-2. Waste Management Methods: 2021

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

1. Landfill Facilities

All the landfills which received waste directly (without first being processed at a transfer station) from the District during the reference year of 2021 are shown in Table 4-2 below. This table illustrates that more than 71% of the direct-hauled waste was disposed at Apex Landfill and Carbon Limestone Landfill. These two facilities also have many years of remaining capacity available for disposal as shown below in Table 4-2.

	Location		Waste Accepted	Percent of all	Remaining
Facility Name	County	State	from SWMD (tons)	SWMD Waste Disposed	Capacity (years)
In-District					
NA				0%	
Out-of-District					
Countywide RDF - Republic Services	Stark	ОН	357	0%	62
Pine Grove Landfill	Fairfield	ОН	0	0%	88
Geneva Landfill	Ashtabula	ОН	2	0%	65
Mahoning Landfill	Mahoning	ОН	16,013	6%	45
Hancock County Landfill	Hancock	ОН	1	0%	24
American Landfill	Stark	ОН	3,541	1%	74
Apex Landfill	Jefferson	ОН	140,227	51%	21
Kimble Sanitary Landfill	Tuscarawas	ОН	38,975	14%	20
Carbon Limestone Landfill	Mahoning	ОН	57,757	21%	47
Out-of-State					
Imperial Landfill		PA	1,123	0%	
Seneca Landfill		PA	531	0%	
Valley Landfill		PA	118	0%	
Short Creek Landfill		WV	22	0%	
Brooke/Valero Landfill		WV	3,843	1%	
Wetzel Landfill		WV	14,486	5%	
Multiple Facilities		WV	6	0%	
	Total		277,000	100%	446

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

2. Transfer and Processing Facilities

The transfer facilities receiving waste from the District during 2021 are listed in Table 4-3. Only a very small percentage of the total waste ultimately sent for disposal was processed by transfer stations, with the Kimble Transfer and Recycling Station in the District receiving 82% of transferred waste.

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

Facility Name	Location		Waste Accepted from	Percent of all District	Landfill Where Waste was Taken to be	
	County	State	District (tons)	Waste Transferred	Disposed	
In-District						
Kimble Transfer & Recycling- Carrollton	Carroll	Ohio	25,973	82%	Kimble Sanitary Landfill	
Out-of-District						
Kimble Transfer & Recycling - Cambridge	Guernsey	Ohio	546	2%	Kimble Sanitary Landfill	
Kimble Transfer & Recycling - Canton	Stark	Ohio	1,395	4%	Kimble Sanitary Landfill	
Kimble Transfer & Recycling - Twinsburg	Summit	Ohio	-	0%	Kimble Sanitary Landfill	
Girard Transfer	Trumbull	Ohio	3,725	12%	Seneca Landfill	
Apex Environmental Transfer	Belmont	Ohio	11	0%	Apex Sanitary Landfill	
Out-of-State						
NA						
	Total		31,650	100%		

3. Composting Facilities

There are two registered Class IV composting facilities that process yard waste, leaves, and brush in the District. Neither reported (see Table 4-4).

Table 4-4. Composting Facilities Used by the District

Facility Name	Location (County)	Material Composted (tons)	Percent of all Material Composted	
In-District				
Preferred Trucking Services	Columbiana County	Yard Waste, Leaves, Brush	DNR	

Facility Name	Location (County)	Material Composted (tons)	Percent of all Material Composted	
Great River Resources LLC	sources LLC Harrison County		DNR	
Out-of-District				
NA				
	Total	0	0%	

The District identified four other methods used for waste management during the reference year. The Hauler/Grocer food waste information below was provided through an Ohio EPA Composting Report survey. The report states 92 tons from Carroll County and 258 tons from Columbiana County from grocer food donations in the reference year.

Several municipalities participate in the District's compostable leaf bag program, distributing compostable leaf bags each year for residents to use instead of plastic bags. This program has saved each municipality time and money, increasing participation yearly. Several municipalities also collect leaves from their residents and transport them to various areas for land application. The District is unaware of all the locations where these leaves are applied nor of the volume.

The District also sponsors an annual Christmas Tree Recycling Program where residents take their live trees to drop-off sites throughout the three-county area. Trees are chipped into mulch and made available to residents at no cost. The District averages about 200 trees each year. Surveying of municipalities has been neglected in recent years, so estimated yardage or tonnage is not available for the reference year.

Facility or Activity Name	Activity Type	Location	Food Waste (tons)	Yard Waste (tons)
Hauler/Grocer	Food Waste Data	Carroll and Columbiana	350	0
	Curbside Yard			
Compostable Leaf Bags	Waste Service	Columbiana	0	2,813
Municipal Leaf		Carroll, Columbiana &		
Collection	Land Application	Harrison	0	0
Christmas Tree		Carroll, Columbiana &		
Recycling	Drop-off	Harrison	0	0
Total			350	2,813

4. Processing Facilities

Table 4-6 shows the recycling processing facilities and transfer facilities known to handle the District's recyclables.

	Location			Recyclables	
Name of Facility	County	State	Facility Type	Accepted from District (tons)	
In-District					
Kimble - Carrollton	Carroll	Ohio	Transfer		
Jasar Recycling	Columbiana	Ohio	MRF, single stream		
Out-of-District	•				
Kimble - Twinsburg	Summit	Ohio	Transfer/MRF	6,618	
Kimble - Canton	Stark	Ohio	Transfer		
Rumpke Center City Recycling	Hamilton	Ohio	MRF		
Girard - Ohio Valley	Trumbull	Ohio	Transfer		
Out-of-State					
NA					
	6,618				

Table 4-6. Processing Facilities Used in the Reference Year	
---	--

C. Use of Solid Waste Facilities During the Planning Period

In general, the District anticipates that facilities which were used to manage District-generated waste during the reference year will continue to be available throughout the planning period, and in aggregate, will continue to provide adequate capacity for CCH's needs. The two landfills which received the majority of District waste in 2021 are estimated to have 21 and 20 years, respectively, of remaining capacity in 2021. These landfills are expected to continue receiving District-generated waste throughout the planning period.

The existing transfer stations used by the District are expected to continue operating and receiving transferred waste.

The volume of materials composted throughout the planning period is not expected to change significantly. Although Ohio EPA's most recent composting report identified no tons of yard waste composted from Carroll, Columbiana, and Harrison Counties, the District is aware of ongoing composting activities much greater than this amount. The District expects that these activities will continue indefinitely to process yard waste from communities in the three counties.

Processing capacity for recyclables is also expected to be more than sufficient for the District throughout the planning period.

D. Siting Strategy

Purpose of the Siting Strategy

If the SWMD will not have access to enough landfills to dispose of all waste the SWMD will need to dispose of. If existing facilities cannot provide that capacity, then the policy committee must develop a plan for obtaining additional disposal capacity.

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

The Carroll-Columbiana-Harrison Solid Waste Management District Plan includes a detailed strategy for the review of proposals to construct, enlarge or modify solid waste facilities within the District, including transfer stations, sanitary landfills, recycling facilities and yard waste composting facilities. Upon ratification of this Plan Update and receipt of the approval from the Director of the Ohio EPA, the Board of Directors may adopt the proposed rule requiring the submission of general plans and specifications by any person municipal corporation, township or other political subdivision desiring to construct, enlarge, or modify a solid waste facility within the District for a determination by the Board of whether the proposed facility complies with the Plan. To facilitate the review and siting of these facilities, the Ohio EPA recommends the creation of a Siting Evaluation Committee (SEC) by the District specifically for siting evaluations. The SEC, if formed by the Board, may initiate, conduct and evaluate preliminary surveys to aid in the selection of suitable sites for these solid waste facilities and to assist the Board in its determination of compliance with the Plan. Approval authority remains with the Board of Directors.

E. Designation

Purpose of Designation

Ohio law gives each SWMD the ability to control where waste generated from within the SWMD can be taken. Such control is generally referred to as flow control. In Ohio, SWMDs establish flow control by designating facilities. SWMDs can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.¹

The policy committee decides whether the board of directors has the authority to designate facilities. The policy committee does this in the solid waste management plan.

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

Once the board of directors designates facilities, only designated facilities can receive the SWMD's waste. In more explicit terms, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is when the board of directors grants a waiver to allow an undesignated facility to take the SWMD's waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and the time period available to the board for making a decision on a waiver request.

1. Description of the SWMD's Designation Process

The SWMD first went through the designation process in 2004. Designation was amended in 2009. The SWMD is currently contracted with thirty-seven facilities with the effective beginning date of January 1, 2010, and subject to periodic renewal.

The following steps were followed in order to complete the process of amending the list of designation facilities pursuant to O.R.C. §343.014 (H):

 Adopt a resolution of preliminary amended designation of solid waste facilities and authorize the District to issue an Invitation for Designation of Solid Waste Facilities;

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

- After receiving requests for designation, adopt a resolution of intent to amend designation pursuant to ORC 343.014 (listing of proposed Solid Waste Facilities to be designated);
- c. Publish a legal notice of the resolution of intent to amend designation, specifying the dates of a 10 to 14-day public comment period;
- d. Mail notice of the resolution and the comment period to the 50 largest generators of waste in the District, the legislative authorities of each municipality and township in the District, and the Director of Ohio EPA;
- e. After the comment period, adopt a resolution of final amended designation (the designations will go into effect 60 days after adoption of the resolution of final designation);
- f. Following the adoption of the resolution of final amended designation, promptly (within one week) mail notices of award (and designation agreements to be executed) to each designated facility;
- g. At the same time as the notices of award, mail notices of the effective date of the amended designations of each solid waste collection company that conducts business within the District; and
- h. Not later than 30 days prior to the effective date of the amended designations, send a copy of the Contract Fee Submission Form with instructions to each designated facility.

Any person may submit a request for a waiver from facility designation. The request must be in writing and provide information regarding the type and amount of material, the facility to be used, the duration of the waiver, the reason for requesting the waiver and the impact on Plan implementation and financing. Then the Board may request additional information if necessary. Once the application is submitted and complete, the Board of Directors will make a determination, within 90 days from the date of the Board's receipt of the request. The Board of Directors may grant the request for waiver if the Board of Directors determines that:

1. The waiver is not inconsistent with projections contained in the SWMD's approved plan under Sections 3734.53(A)(6) and (A)(7) of the Ohio Revised Code; and

2. The issuance of the waiver will not adversely affect implementation and financing of the plan.

For this plan update, the District is hereby authorized to establish facility designations in accordance with ORC Section 343.013, 343.014 and 343.015.

2. List of Designated Facilities

The currently designated facilities are shown in Table 4-6 below.

	Lo	cation			
Facility Name	County	State	Facility Type		
Kimble Transfer (J&J Refuse)	Carroll Ohio		Transfer Facility		
Harrison County Landfill	Harrison	Ohio	Landfill (not open)		
Out-of-District					
Akron Transfer Station	Stark	Ohio	Transfer Facility		
American Landfill	Stark	Ohio	Landfill		
Apex Landfill	Jefferson	Ohio	Landfill		
Athens-Hocking Reclamation Ctr.	Athens	Ohio	Landfill		
Cambridge Transfer & Recycling	Muskingum	Ohio	Transfer Facility		
Carbon Limestone Landfill	Mahoning	Ohio	Landfill		
Cleveland Transfer Station	Cuyahoga	Ohio	Transfer Facility		
Coshocton Landfill, Inc.	Coshocton	Ohio	Landfill		
Countywide Recycling & Disposal	Stark	Ohio	Landfill		
Geneva Landfill	Ashtabula	Ohio	Landfill		
Kimble Sanitary Landfill	Tuscarawas	Ohio	Landfill		
Kimble Transfer & Recycling	Stark	Ohio	Transfer Facility		
Kimble Transfer & Recycling	Summit	Ohio	Transfer Facility		
Liberty Tire Services of Ohio LLC	Stark	Ohio	Tire Monofil		
Lorain County Landfill, LLC	Lorain	Ohio	Landfill		
Mahoning Landfill	Mahoning	Ohio	Landfill		
Noble Road Landfill	Richland	Ohio	Landfill		
Pine Grove Landfill	Fairfield	Ohio	Landfill		
Portage County SW Transfer	Portage	Ohio	Transfer Facility		
Suburban Landfill	Perry	Ohio	Landfill		
Out-of-State					
Arden Landfill		Pennsylvania	Landfill		
Evergreen Landfill		Pennsylvania	Landfill		
Imperial Landfill		Pennsylvania	Landfill		
Kelly Run Sanitation		Pennsylvania	Landfill		
Laurel Highlands Landfill		Pennsylvania	Landfill		
Seneca Landfill		Pennsylvania	Landfill		
Seneca Transfer Facility		Pennsylvania	Transfer Facility		
Shade Landfill		Pennsylvania	Landfill		
Short Creek Landfill		West Virginia	Landfill		
South Hills Landfill		Pennsylvania	Landfill		
Southern Alleghenies Landfill		Pennsylvania	Landfill		
Tri-County Transfer Station		Pennsylvania	Transfer Facility		

Table 4-6. Facilities Designated

Facility Name	Loca	ation	Facility Type	
Facility Name	County	State		
Tri-County Landfill		Pennsylvania	Landfill	
Valley Landfill		Pennsylvania	Landfill	
Valley Waste Services TF		Pennsylvania	Transfer Facility	

CHAPTER 5. Waste Reduction and Recycling

Purpose of Chapter 5 (The language in this box is authored by Ohio EPA)

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

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

Before deciding upon the programs and services that are necessary and will be provided, the Policy Committee performed a strategic, in-depth review of the District's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall operations. This review consisted of a series of 13 analyses that allowed the Policy Committee to obtain a holistic understanding of the District by answering questions

such as:

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

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

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

A. Solid Waste Management District Priorities

Priority areas to focus efforts in the 2024 Plan include:

Short Term	Action
Curbside	Continue to provide technical assistance to expand curbside programs in all three counties.
Drop-off	Continue collection service, monitor sites, evaluate operations of sites, and upgrade equipment as needed to maintain collection services
Education	Focus on website as a resource. Utilize a third-party education resource.
Industrial	Provide recycling education on SWMD website for businesses (EPA Ohio Materials Marketplace)
Commercial/Institutional	Education, outreach, and technical assistance to this sector to increase recycling rate. Develop list for type size, and outreach, work with businesses to barriers to recycling and how recycling can be implemented.
Restricted/Hard to Recycle Waste Stream	Evaluate to provide a high level of service at an economical cost for service. May include appointment, seasonal blocks of open hours, etc. Consider a Backyard Compost Initiative.
Facilities	The Recycling Center was built with the multi-purpose use for consolidation and compaction of recyclables before being transferred. Continue to monitor processing and assess need to expand operations.

B. Program Descriptions

1. Residential Recycling Infrastructure

Curbside Recycling Services

The existing non-subscription curbside recycling service available to the Village of Carrolton residents in the reference year is expected to continue. This program is shown below in Table 5-1.

Table 5.1. Curbside Recycling Services

ID#	Name of Curbside Service	Type of Curbside NS S		Service Provider			
	Service						
NSC1	Village of Carrollton	✓		Contract between Village and Kimble			
SC1			~	Households subscribes with private			
001	City of Salem			hauler			

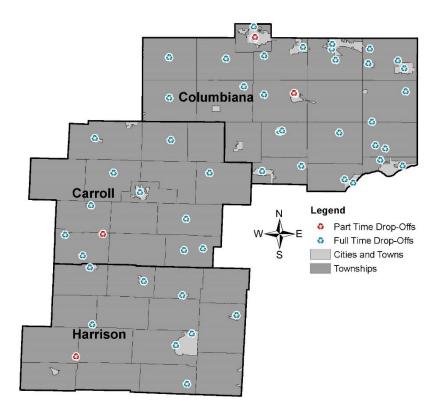
Ī	SC2			~	Households	subscribes	with	private
	362	Village of East Palestine			hauler			-
	Note: "NSC" is a non-subscription curbside program which is a type of curbside recycling program that is available							

Note: "NSC" is a non-subscription curbside program which is a type of curbside recycling program that is available to households automatically. "SC" is a subscription curbside program which is a type of curbside program through which a household must take a voluntary action to sign up for and agree to pay for the service.

The Village of Carrollton in Carroll County established a volume-based garbage program for its residents in 2000, including the curbside collection of recyclable materials. In the reference year, materials collected included cardboard, paper, magazines, phone books, glass, cans, and plastics. Since the program's inception, these services were provided through a contract with Kimble Companies. Garbage is picked up weekly, and recycling is picked up every other week.

Drop-off Recycling: Publicly-Available Sites

The drop-off recycling program for publicly-available sites will continue. Table 5-4 shows a listing of the existing drop-off locations within the District.



Map of Drop-Off Recycling Sites

Table 5-4. Drop-Off Recycling Locations

ID#	Name of Drop-off/Community Served	Service Provider	When Service was/will be Available
FTU1	Unity Township - New Waterford Village	District	Throughout planning period
FTU2	Unity Township	District	Throughout planning period

ID#	Name of Drop-off/Community Served	Service Provider	When Service was/will be Available
FTU3	Unity Township - JDS Landscaping	District	Throughout planning period
FTU4	Unity Township - East Palestine Village	District	Throughout planning period
FTU5	Center Township - Lisbon Village	District	Throughout planning period
FTU6	East Liverpool	District	Throughout planning period
FTU7	Fairfield Township - Columbiana City	District	Throughout planning period
FTU8	Fairfield Township	District	Throughout planning period
FTU9	Perry Township - Habitat Restore	District	Throughout planning period
FTU10	Perry Township - Salem City	District	Throughout planning period
FTU11	Salem Township - Leetonia Village	District	Throughout planning period
FTU12	Salem Township - KSU	District	Throughout planning period
FTU13	St. Clair Township	District	Throughout planning period
FTU14	St. Clair Township - Calcutta	District	Throughout planning period
FTU15	Fairfield Township - Columbiana City	District	Throughout planning period
PTU1	Perry Township - First Presbyterian Church	District	Throughout planning period
FTR1	Augusta Township, Augusta	District	Throughout planning period
FTR2	Center Township: Carrolton Village	District	Throughout planning period
FTR3	Fox Township - Mechanicstown	District	Throughout planning period
FTR4	Harrison Township - New Harrisburg	District	Throughout planning period
FTR5	Lee Township - Harlem Springs	District	Throughout planning period
FTR6	Loudon Township - Kilgore	District	Throughout planning period
FTR7	Monroe Township - Dellroy Village	District	Throughout planning period
FTR8	Orange Township - Leesville Village	District	Throughout planning period
FTR9	Orange Township - Sherrodsville Village	District	Throughout planning period
FTR10	Perry Township - Perrysville	District	Throughout planning period
FTR11	Brown Township - Lake Mohawk	District	Closed in 2021
FTR12	Brown Township - Malvern Village	District	Throughout planning period
FTR13	Middleton Township - Rogers Village	District	Throughout planning period
FTR14	Wayne Township - JT Pitt Stop	District	Throughout planning period
FTR15	Butler Township	District	Throughout planning period
FTR16	Franklin Township - Summitville Village	District	Throughout planning period
FTR17	Hanover Township - Guildford Lake	District	Throughout planning period
FTR18	Hanover Township - Hanoverton Village	District	Throughout planning period
FTR19	Knox Township	District	Throughout planning period
FTR20	Madison Township	District	Throughout planning period
FTR21	Middleton Township - Beaver Creek	District	Throughout planning period
FTR22	Middleton Township	District	Throughout planning period
FTR23	Yellowcreek Township - Village of Wellsville	District	Throughout planning period
FTR24	Washington Township - Highlandtown	District	Throughout planning period
FTR25	Washington Township - Salineville Village	District	Throughout planning period
FTR26	West Township	District	Throughout planning period
FTR20	Liverpool Township	District	Throughout planning period

ID#	Name of Drop-off/Community Served	Service Provider	When Service was/will be Available
FTR28	Monroe Township - Bowerstown Village	District	Throughout planning period
FTR29	Athens Township - New Athens	District	Throughout planning period
FTR30	Cadiz Township - Cadiz Village	District	Throughout planning period
FTR31	Cadiz Township - Sally Buffalo Park	District	Throughout planning period
FTR32	Freeport Township - Freeport Village	District	Closed in 2021
FTR33	Green Township - Hopedale Village	District	Throughout planning period
FTR34	North Township - Scio Village	District	Throughout planning period
FTR35	Rumley Township - Jewett Village	District	Throughout planning period
FTR36	Franklin Township - Deersville Village	District	Throughout planning period
PTR1	Clendening Muskingum Watershed Freeport	District	Throughout planning period

The District provides containers, collection, and processing for recycling drop-off containers. Containers are 6-cubic yards and available for use 24/7. Materials were collected in a commingled or single stream until 2022. When new container signs were purchased and added, most of the drop-off locations collect in a multi-stream where users separate their recyclables. The District services a total of 53 drop-off locations and seven non-advertised commercial, government, schools, and youth camps. All the publicly available District drop-off locations accept:

- Mixed paper
- Cardboard
- Plastic bottles and jugs
- Metal cans
- Glass bottles and jars

Name	Service Provider	When Service was/will be Available
School Drop-Off Recycling (19)	District	Throughout planning period
Kimble Commercial Pickups	District	Throughout planning period
St. Clair Twp. EDI South	District	Throughout planning period
Center Twp. DJFS Office	District	Throughout planning period
Center Twp. County Jail	District	Throughout planning period
Center Twp. MRDD	District	Throughout planning period
Youth Camps (4)	District	Throughout planning period

Full-Time Other Drop-off Recycling:

EDI South, DJFS Office, County Jail, and MRDD are all government sites that are not advertised to the public and are used solely by them. In addition, the District provides bins to four youth camps and 19 schools.

2. Commercial/Institutional Sector Reduction and Recycling Programs

Name	Description
School Recycling	The District provides and services drop-off recycling dumpsters for 19 schools throughout the three Counties.

Target for Next 5 Years: Perform waste assessment for one school district. Focus on reducing trash and increasing diversion. Determine estimated volume of materials in the waste stream. Continue through the planning period.

Name	Description
Small Business & Government Collection	The District's drop-off collection services 4 government offices and 4 youth camps.

Target for Next 5 Years: Continue District collection to those currently serviced. Assist businesses with setting up recycling programs.

Name	Description
Source Reduction and	The Districts Community Outreach Specialist created a
Recycling Awareness –	Waste Reduction Guide and put together a business
Kimble Commerical	packet to assist businesses with their programs and offer
Pickups	waste audits upon request.

Target for Next 5 Years: Add Materials Marketplace to SWMD website, advertise commercial waste audits on SWMD website, continue through planning period.

Name	Description
Large Venue Recycling -	The District does not sponsor large venue recycling
Public Venue and Special	programs other than fairs and festivals. They collect
Events	cardboard, aluminum cans, and water bottles.

Name

Ag Plastics Recycling Program	The Districts Ag Plastics Recycling Program aimed to recycle agricultural plastics, such as bale wrap and feed sacks, which were previously disposed of in landfills or through burning. It involved outreach, education, and local drop-off locations, funded by a grant, but was discontinued in 2018 due to a lack of processing capacity.
----------------------------------	--

3. Industrial Sector Reduction and Recycling Programs

Name	Description
Waste Assessments/Waste Audits	The waste assessment/waste audit program discussed above under the commercial/institutional sector provides those same services to the industrial sector and will continue to do so.

Target for Next 5 Years: Reimplement information for industrial businesses (resource guide and list of recycling facilities), Ohio EPA and USA EPA programs (WasteWise) on the District's website. Use social media to also advertise the available resources.

4. Restricted/Difficult to Manage Wastes

Name	Description
Yard Waste Collection	Yard waste management education includes "Don't Bag It" and home composting. The District offers Christmas tree recycling where trees are dropped off and grinded to create mulch. Leaf collection programs are offered in some political jurisdictions. The Compostable Leaf Bag program discontinued in 2022.

Target for Next 5 Years: Objective during the planning period is to continue promoting Christmas tree recycling and "Don't Bag It" programs and begin a backyard composting initiative.

Name	Description
HHW Collection	The District provides education and collection opportunities to properly dispose of household hazardous wastes. The District Recycling Center opened in Carroll County in 2022 and offers a central permanent location for drop-off or by appointment.

Target for Next 5 Years: The District plans to continue its waste collection efforts during the planning period, including the potential expansion of year-round dropoff opportunities and hosting one event in other counties annually, dependent on available funding. The decision to host an event will be based on factors such as financial feasibility, cost-saving options using District facilities, surplus funds from other programs, and evaluating the viability of a budget-friendly one-day mobile event, with transparency and board approval being integral to the decision-making process.

Name	Description
Electronics Collection	The District continually explores and evaluates how to provide the most convenient and frequent diversion opportunities for electronics. District collection events, private businesses drop-off and take-back, and other collection events. The District Recycling Center opened in Carroll County in 2022 and offers a central permanent location for drop-off or by appointment during District business hours. Materials collected include computers, televisions, VCRs, DVDs, copiers, printers, and other electronic items. The District reserves the right to charge user fees.

Name	Description
Scrap Tire Management	The District maintains a list of businesses accepting scrap tires year-round. Scrap tire collection events are also an option for proper management of scrap tires. Also, for one month a year, municipalities, townships, and other governmental agencies, such as parks, can collect tires along the roadways and deliver them to a licensed scrap tire facility.

Target for Next 5 Years: Continue through the planning period and apply for Ohio EPA grants to offset collection costs.

Name	Description
Recycling Awareness Program	Since 2014, pharmaceutical drop-off locations have been established by local law enforcement. All three County Sheriff's Departments and several City and Village Police
(Pharmaceuticals)	Departments have drop-off boxes for pharmaceuticals. The District supports with education and outreach.

Target for Next 5 Years: Continue through the planning period.

Name	Description
Recycling Awareness Program	The District provides information on its Facebook page and flyers which list numerous businesses that accept lead-acid batteries. Lead-acid batteries are also accepted
(Lead-Acid Batteries)	at the HHW collection.

Target for Next 5 Years: Continue through the planning period.

Name	Description
Appliance Recycling Program	This program is a combination of collection and information dissemination regarding scrap metal recycling facilities. Two scrap yards, one each in Columbiana and Carroll counties, can extract Freon from those large appliances containing Freon. District staff are properly certified as well. The District Recycling Center opened in Carroll County in 2022 and offers a central permanent location for drop-off or by appointment during District business hours.

Name	Description
Household Battery Drop- Off Program	The SWMD operates a drop-off program for household batteries. The containers are placed at various hardware and Radio Shack stores. This allows residents to recycle and reduce waste without waiting until annual collection events. Most Radio Shack stores also take rechargeable batteries for recycling.

Target for Next 5 Years: Continue through the planning period.

5. Other Material Specific Programs

Food Waste

Name	Description
Food Waste Program	The SWMD does not have a food waste program and does not foresee having one during the planning period. There are no licensed Class I or Class II facilities in the District or in close proximity to the District. Any food waste information obtained is provided through surveying various entities.

Target for Next 5 Years: Work more closely with businesses (not just through surveys) to assess potential infrastructure, needs, and future food waste recovery programs.

Glass

61866	
Name	Description
None	The SWMD does not have a separate glass recycling program for our commercial businesses. We accept glass at all of the residential drop-off locations. Most government/school drop-off sites have very little to no glass.

6. Enforcement & Clean-Up

Litter and Clean-Up

Name	Description
Community Clean-Up Program	The SWMD began working closely with townships and municipalities to tackle an ongoing problem of illegal dumping of large, bulky items along county and township roads by assisting with community clean-up programs.

Name	Description
Environmental Law Enforcement Program	The SWMD faces illegal dumping at recycling sites and has received support from various entities, including the Board, police departments from different areas, and the sheriff's departments. Some cases have been referred for investigation and potential prosecution, resulting in initial improvements, but further action is needed for lasting change.

Target for Next 5 Years: Continue through the planning period.

7. Economic Incentives

Name	Description
Buy-Recycled Program	The Clerk in the Commissioners' office of each county is responsible for ordering paper for every department in the courthouse. As an incentive to purchase recycled content paper, the SWMD offered to compensate them for the difference between the costs of regular paper versus recycled content paper, as it is most always more expensive. The District provides \$2.00 per case of recycled paper ordered.

"Buy-Recycled" Program

Target for Next 5 Years: Continue through the planning period.

8. District Facilities

Materials Recovery Facilities/Recycling Centers/Recycling Facility (Special Wastes)

Name	Description
District Office Recycling Center	The District Recycling Center opened in 2022 and serves multi-uses. It serves as an office, location to house trucks and extra containers, permanent drop-off location for difficult to manage materials such as electronics, scrap tires, household hazardous waste, and appliances. The Recycling Center was also built with the multi-purpose use for consolidation and compaction of recyclables before being transferred. The Center is located in Carroll County, the more centralized location for a drop-off type of facility.

Name	Description
Closed Facility Maintenance	The Carroll County Landfill has not accepted waste since the late 1980's early 1990's, and finally capped in the fall of 2014. Beginning in 2013, the SWMD assisted Carroll County with funding installments of gas and water monitors and other preparation needed before capping. Carroll County is negotiating the number of years of post- closure activities since the landfill has not been used for over twenty years before capping.

Target for Next 5 Years: The District is not projecting any funding towards landfill post-closure care.

Transfer Facilities

Name	Description
Kimble Transfer & Recycling - Carrollton	The District does not own or operate a transfer facility. One privately owned facility is located in the District in Carroll County.

Composting Facilities

Name	Description
None	The District does not own or operate a composting facility. There are two registered Class IV compost facilities in the District.

9. Data Collection

Name	Description
Data Collection Surveys	The District's Survey Strategy assesses commercial and industrial businesses, municipalities, haulers, processors, brokers, and compost facilities. The SWMD surveys these entities every three years. Ohio EPA conducts yearly data collection and shares those numbers with all SWMDs.

Target for Next 5 Years: Continue through the planning period.

10. Outreach, Education, Awareness, and Technical Assistance

Minimum education requirements prescribed by Goal 3:

• District maintains a website at https://carrollcountyohio.us/agencies-and-departments/cch-solid-waste-district/.

- Target for Next 5 years: Develop the webpage into a useful tool providing information and resources for all target audiences. This will begin in 2023 and is expected to be developed over two years.
- The SWMD's solid waste plan is updated every five years with the resources for outlets to divert materials. The SWMD is in the process of re-developing a website that will maintain promotional material for collection events and contain the most up-to-date information on District programs.
 - Target for the Next 5 years: The SWMD's webpage will include landing pages for each targeted audience for the most up-to-date information regarding recycling outlets for hard to recycle items.
- The SWMD's Community Outreach Specialist promotes recycling, source reduction and pre-cycling education and awareness through presentations at area schools, civic and community groups, multi-family housing, and businesses. The topics of the presentations vary from one presentation to the next, depending on the audience. The goal is to educate participants, whether they are students, adults, or business leaders, about the financial and environmental benefits of waste reduction.
 - Target for next 5 years: Outsource to assist with education and outreach speaking engagements.

The District will continue to offer a number of programs designed to provide education, technical assistance, and raise awareness of solid waste and recycling issues. The education and outreach programs for each target audience are listed in **Table 5.5**.

	Target Audience						
Education/Outreach Programs	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials		
Social Media	\checkmark	\checkmark		\checkmark			
Residential Recycling Education & Outreach	\checkmark				\checkmark		
School Education and Outreach		\checkmark					
Industrial Education, Outreach, and Technical Assistance							
Annual Business Workshops			\checkmark				
Commercial/Institutional Education, Outreach and Technical Assistance				\checkmark			
Government Outreach and Education					\checkmark		
Waste Reduction & Recycling Guide				\checkmark			
"Don't Bag It" Compost Program	\checkmark						
Recycling at Camp Program		\checkmark					
Total Program per Group	3	3	3	3	3		

Table 5-5. Existing Education and Outreach Programs

Outreach Priority

Name	Start Date	End Date	Goal
Cardboard Recycling and Breakdown Outreach Campaign	2024	Ongoing	3 and 4

Goal/Purpose: The District will focus on promoting cardboard recycling and break down at District drop-off locations.

Targeted Audience: Residents

Strategy: The outreach campaign targeting drop-off users will encompass the creation of a comprehensive outreach and communication strategy with the website and social media to promote the outreach campaign. This strategy will encompass the following key components:

- Establishing a Call to Action: Outlining the desired actions that the target audience should take.
- Setting Measurable Communication Objectives: Clearly defining measurable goals that will gauge the effectiveness of the campaign.
- Planning Tactics and Timelines: Developing a strategic plan that includes the methods and schedule for implementation.

In executing this outreach initiative, the District anticipates implementing various strategies such as establishing a measurable baseline, harnessing social norms, encouraging proactive engagement, maintaining an online presence through Facebook and the official website, monitoring metrics, and implementing follow-up actions contingent upon the campaign's results.

The District's outreach campaign, which emphasizes behavior change principles, represents a strategic and comprehensive approach to encourage positive actions within the community. By focusing on these principles, the District aims to not only raise awareness but also actively motivate individuals to participate in cardboard recycling by breaking down materials at drop-off locations. (For more information, please refer to Appendix L, page L-16)

C. Waste Reduction and Recycling Rates

Even though it has chosen to demonstrate compliance only with Goal 1 of the State Plan, the District will strive to achieve Goal 2 as well, which states that the District will recycle or reduce at least 25% of the solid waste generated by the residential/commercial sector. The SWMD did not meet the 25% residential/commercial waste reduction rate goal in the reference year, 2021. The main barrier to achieving Goal 2 is the lack of reporting and data capturing from businesses recycling.

Year	Projected Tons Collected	Residential/ Commercial Waste Reduction Rate					
2024	14,677	15%					
Planning P	Planning Period						
2025	14,775	15%					
2026	14,879	15%					
2027	14,987	15%					
2028	15,100	16%					
2029	15,219	16%					

Table 5-6. Residential/Commercial Waste Reduction and Recycling Rate

Table 5-7. Industrial Waste Reductionand Recycling Rate

Year	Projected Tons Collected	Industrial Waste Reduction and Recycling Rate				
2024	0	0%				
Planni	Planning Period					
2025	0	0%				
2026	0	0%				
2027	0	0%				
2028	0	0%				
2029	0	0%				

CHAPTER 6. BUDGET

Purpose of Chapter 6 (The language in this box is authored by Ohio EPA)

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

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

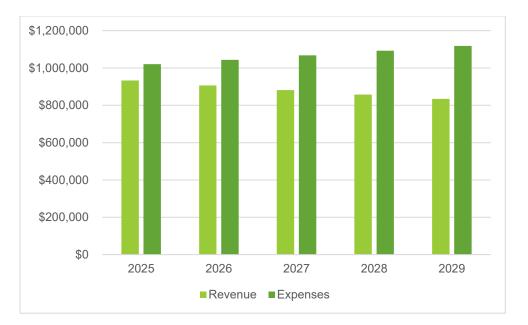
If projections show that the SWMD will not have enough money to pay for all planned expenses or if the SWMD has reason to believe that uncertain circumstances could change its future financial position, then the plan must demonstrate how the SWMD will balance its budget. This can be done by increasing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

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

A. Overview of the District's Budget

The activities and services described in Chapter 5 are supported through designation fees, and miscellaneous other revenues. The District projects to receive an annual average of \$895,630 in revenues over the first six years of the planning period (2024-2029). The first six years of District expenses are projected to average an annual of \$1,056,686. Expenses projected higher than revenues, expects a drawing down of the reserve balance.

Figure 6-1. Projected Revenues and Expenses



B. Revenue

Overview of How Solid Waste Management Districts Earn Revenue

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

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

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

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

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

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

Generation Fees (see Ohio Revised Code Section 3734.573)

Generation Fees are collected on each ton of solid waste that is generated within the levying SWMD and accepted at either a transfer facility or landfill located in Ohio. The

fee is collected at the first facility that accepts the SWMD's waste. There are no minimum or maximum limits on the per ton amount for generation fees.

Rates and Charges (see Ohio Revised Code Section 343.08)

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

<u>Contracts</u> (see Ohio Revised Code Sections 343.02 and 343.03)

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

Other Sources of Revenue

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

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

1. Disposal Fees

In accordance with Ohio Revised Code Section 3734.57(B), the SWMD's Disposal Fee Schedule is \$1.00 per ton for In-District Waste, \$2.00 per ton for Out-of-District Waste, and \$1.00 per ton for Out-of-State waste. This means that, under the ORC, a policy committee of a solid waste district may levy these fees as stated above. However, these "tipping fees" as they are also known, refer to landfills situated within a solid waste district's boundaries. This SWMD has no operating landfills within its boundaries and, therefore, does not have disposal fee revenue.

2. Designation Fees

The designation fee is the primary funding source for the District. The District levies a contract disposal designation fee to all solid waste facilities, either in-state or outof-state that are designated by the District to receive District solid waste.

Designation provides all disposal facilities that desire to accept waste from Carroll, Columbiana and Harrison counties the opportunity to do so provided they sign a contract with the SWMD, agree to provide accurate documentation of the waste going into their facility, and pay the same fee that all other facilities are contracted to pay. This leveled the playing field for haulers and disposal facilities in and outof-state. The SWMD currently contracts with landfills throughout Ohio, Pennsylvania, and West Virginia. The District's designation fee is \$3.50 per ton. A list of the designated facilities can be found in Appendix P.

If expenses and revenues remain as projected, then an increase in designation fees is needed in 2031 to make it through the planning period, which is 2039. However, it is the SWMD's intent to do everything to prevent an increase. The SWMD will continue to monitor the financial situation and re-evaluate the course of action during the 2024 Plan Update. An increase in 2031 is not being ratified in this plan update, the increase is shown to demonstrate a balanced budget.

3. Other Sources of Revenue

Other sources of revenue include:

- **Grants** Grants obtained by the District are competitive and not a guaranteed source of revenue therefore are not projected in the planning period. The District received grant revenue every year for the past 5 years.
- **Recycling Revenue** Commodity markets fluctuate and can be volatile. Average revenue received over 2019 through 2021 is \$2,657. Revenue is from user fees assessed on tires and televisions. The District picks up scrap metal and receives money from the sale of scrap.
- **Miscellaneous Revenue** Miscellaneous revenue represents revenue resulting from untraditional and unforeseen sources. Miscellaneous monies are received from the sale of roll-off containers, teacher workshop regulation fees, electronics security deposit, commercial recycling account services, and refunds from the Bureau of Workers' Comp.

4. Summary of Revenue

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

				Other Revenue					
Year	Disposal Fees	Generation Fees	Designation Fees	Recycling Revenue	Grants	Reimbursements	Other	Total Revenue	
Refere	ence Year								
2021	\$0	\$0	\$933,158	\$3,195	\$106,896	\$0	\$22,484	\$1,065,734	
Plann	Planning Period								
2024	\$0	\$0	\$952,210	\$3,195	\$0	\$0	\$4,544	\$959,949	
2025	\$0	\$0	\$925,079	\$3,195	\$0	\$0	\$4,544	\$932,818	

Table 6-1 Summary of Revenue

Year	Disposal Fees	Generation Fees	Designation Fees	Recycling Revenue	Grants	Reimbursements	Other	Total Revenue
2026	\$0	\$0	\$899,054	\$3,195	\$0	\$0	\$4,544	\$906,793
2027	\$0	\$0	\$874,048	\$3,195	\$0	\$0	\$4,544	\$881,787
2028	\$0	\$0	\$850,020	\$3,195	\$0	\$0	\$4,544	\$857,759
2029	\$0	\$0	\$826,931	\$3,195	\$0	\$0	\$4,544	\$834,671

Source(s) of information: Plan Tables O-2A, O-3A and O-5A

C. Expenses

Overview of How Solid Waste Management Districts Spend Money

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

- 1. Preparing, monitoring, and reviewing implementation of a solid waste management plan.
- 2. Implementing the approved solid waste management plan.
- 3. Financial assistance to approved boards of health to enforce Ohio's solid waste laws and regulations.
- 4. Financial assistance to counties for the added costs of hosting a solid waste facility.
- 5. Sampling public or private wells on properties adjacent to a solid waste facility.
- 6. Inspecting solid wastes generated outside of Ohio and disposed within the SWMD.
- 7. Financial assistance to boards of health for enforcing open burning and open dumping laws, and to law enforcement agencies for enforcing antilittering 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, most of a SWMD's budget is used to implement the approved solid waste management plan (allowable use 2). There are many types of expenses that a solid waste management district incurs to implement a solid waste management plan. Examples include:

• Salaries and benefits;

- Purchasing and operating equipment (such as collection vehicles and dropoff containers);
- Operating facilities (such as recycling centers, solid waste transfer facilities, and composting facilities);
- Offering collection programs (such as for yard waste, HHW and scrap tires);
- Providing outreach and education;
- Providing services (such as curbside recycling services); and
- Paying for community clean-up programs.

Table 6-2 presents a summary of expenses for the 2021 reference year and for the first 6 years of the planning period (2024 to 2029) broken into specific expense categories.

	Year							
Expense Category	Reference		Planning Period					
	2021	2024	2025	2026	2027	2028	2029	
District Administration	\$158,302	\$172,981	\$178,170	\$183,515	\$189,021	\$194,691	\$200,532	
Facility Operation	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	
Recycling Collection	\$527,881	\$651,829	\$669,134	\$686,958	\$705,317	\$724,227	\$743,703	
Special Collections	\$23,456	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000	
Education / Awareness	\$10,503	\$29,989	\$30,123	\$30,262	\$30,405	\$30,552	\$30,704	
Recycling Market Development	\$0	\$63,605	\$63,713	\$63,825	\$63,939	\$64,057	\$64,179	
Service Contracts	\$16,575	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	
Waste Assessments / Audits	\$2,143	\$0	\$0	\$0	\$0	\$0	\$0	
Total Expenses	\$763,859	\$1,001,404	\$1,024,141	\$1,047,560	\$1,071,682	\$1,096,527	\$1,122,118	

Table 6-2. Summary of Expenses

Source(s) of information: Plan Table O-7A

Expense categories in Table 6-2 include the following:

- District Administration Represents expenditures for working with consultants to develop solid waste plan updates, expenses for assistance with annual reporting and plan implementation monitoring, and expenses for legal assistance. The budget also includes expenditures for payroll, payroll taxes, and benefits for SWMD staff (including PERS, Medicare, and insurance) and office overhead.
- **Facility Operation** Reflects expenditures to hire an architect to design the new District offices and recycling center for special wastes.

- **Recycling Collection** Expenses reflect the cost of the drop-off collection recycling program.
- **Special Collections** Includes expenses for the HHW, scrap-tire, appliances, electronics and yard waste collection program.
- Education/Awareness Reflects funding to supplement the salaries of individuals that perform education, awareness and outreach functions and expenditures for advertisement and promotion costs.
- **Recycling Market Development** The SWMD utilizes these funds in conjunction with the Courthouse "Buy-Recycled" paper program and pass-through Market Development grants.
- **Service Contracts** Expenses were costs for the construction of the District's new offices and special collections facility.
- Waste Assessments/Audits This line item reflects the budget for waste assessments and audits performed on behalf of the District.

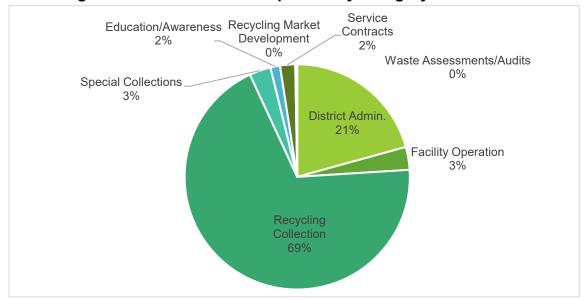
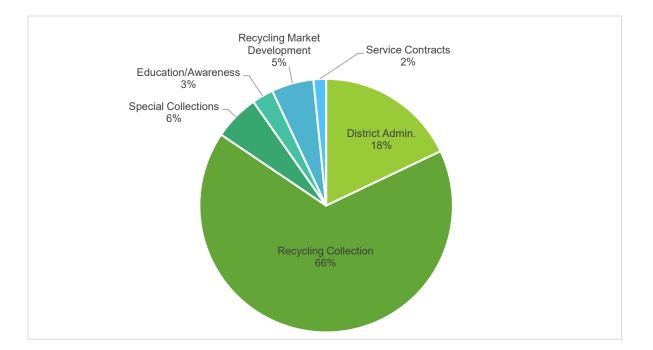


Figure 6-2 Distribution of Expenses by Category: 2021

Throughout the first five years of the planning period, the distribution of expenses among categories varies. In 2029, the sixth year of the planning period, the top three expense categories include recycling collection at 66%, district administration at 18% and special collections at 6%, shown in Figure 6-3 below.

Figure 6-3 Distribution of Expenses by Category: 2029



D. Budget Summary

Table 6-3 presents a summary of the budget for the 2021 reference year and the first 6 years of the planning period (2021 to 2029). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue is projected to decrease from \$1 million in 2021 to \$834,671 in 2029; expenses increase from \$763,859 in 2021 to \$1,117,939 in 2029. The District's ending balance during the first 6 years of the planning period decreases from \$2.0 million to \$1.1 million. Ample funding should be available to operate the programs outlined throughout this plan.

Table 6-3 Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Referen	ce Year			
2021	\$1,065,734	\$763,859	\$301,874	\$1,897,455
Plannin	g Period			
2024	\$959,949	\$1,001,404	(\$41,455)	\$2,082,198
2025	\$932,818	\$1,024,141	(\$91,323)	\$1,990,876
2026	\$906,793	\$1,047,560	(\$140,767)	\$1,850,109
2027	\$881,787	\$1,071,682	(\$189,895)	\$1,660,214
2028	\$857,759	\$1,096,527	(\$238,768)	\$1,421,446
2029	\$834,671	\$1,122,118	(\$287,448)	\$1,133,998

APPENDIX A

MISCELLANEOUS INFORMATION

Appendix A Miscellaneous Information

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

A. Reference Year

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

B. Planning Period (First and Last Years)

The planning period for this solid waste management plan is: **2024 to 2039.** Since the plan is scheduled to be approved by Ohio EPA in September of 2024, the District is adding another year in the planning period to extend the 15-year plan sixteen years to 2039.

C. Goal Statement

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

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

1. <u>Differences in quantities of materials recovered between the annual district</u> report and the solid waste management plan

Table A.1 Historical Residential/Commercial	Sector Data Differences
--	-------------------------

Year	Totals	ADR REPORTS	Notes:
2017	14,210	14,210	Match
2018	14,600	14,600	Match
2019	15,618	8,619	Data in ADR did not include some of the Ohio EPA collected data. When added the data does not match the ADR as reported in Re- Trac.
2020	9,764	5,753	Data in ADR did not include some of the Ohio EPA collected data. When added the data does not match the ADR as reported in Re- Trac.

Material	Diversion in this 2024 Plan Update Reference Year 2021 data (tons)	2021 ADR (tons)	Difference (tons)
Appliances/ "White Goods"	236	236	0
Household Hazardous Waste	0	5	5
Used Motor Oil	0	0	0
Electronics	25	25	0
Scrap Tires	2,149	2,149	0
Dry Cell Batteries	0	0	0
Lead-Acid Batteries	1	1	0
Food	350	0	350
Glass	0	0	0
Ferrous Metals	2	2	0
Non-Ferrous Metals	2	2	0
Corrugated Cardboard	4,131	4,625	494
All Other Paper	500	500	0
Plastics	40	40	0
Textiles	0	0	0
Wood	109	109	0
Rubber	0	0	0
Commingled Recyclables (Mixed)	4,921	0	4,921
Yard Waste	2,813	0	2,813
Other (Aggregated)	365	220	145
Total	15,644	7,916	(7,729)

Table A.2 Residential/Commercial Sector Data Differences

This report calculated a total residential/commercial survey recovery of 15,644 tons compared to the ADR's reported tons of 7,916. No HHW collection events were held in 2021 due to recovering from Covid-19; therefore, five reported tons were omitted from this Plan. Food tonnage was not added from Ohio EPAs Compost Facility Report Data. The District did not account for commingled recycling and yard waste collection tons.

2. <u>Differences in financial Information reported in quarterly fee reports and</u> the financial data used in the solid waste management plan

See the explanation provided in Appendix O.

E. Material Change in Circumstances/Contingencies

In accordance with ORC 3734.56(D), the Plan must be revised if the SWMD Board of Directors 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 SWMD Board of Directors to: (1) assure waste disposal capacity during the planning period; (2) maintain compliance with applicable waste reduction or access goals; or (3) adequately finance implementation of the Plan. The Ohio EPA's Plan Format requires that the Plan Update must include a description of the process the SWMD Board of Directors will use to determine when a material change in circumstances has occurred, and as a result, requires an amended Plan.

1. Assurance of Waste Disposal Capacity

a. Decrease in Waste Generation

A material change in circumstances may occur if the temporary or permanent closure of a designated facility reduces the available landfill disposal capacity below the projected disposal requirements for solid waste generated within the SWMD. The SWMD Board of Directors may conclude that a material change in circumstances has not occurred if the SWMD Board of Directors is able to secure commitments to landfill the waste previously received at a temporarily or permanently closed facility.

The Chairman of the SWMD Board of Directors will determine whether it is necessary to convene a special meeting of the SWMD Board of Directors in the event a designated facility is temporarily or permanently closed to determine whether disposal capacity is available to the SWMD from other designated landfills or whether a material change in circumstances has occurred.

b. Increase in Waste Generation

Future capacity needs of the SWMD as outlined in the Plan are based on waste generation estimates. A significant increase in solid waste generation within the SWMD may affect the demand for solid waste disposal capacity at designated solid waste facilities. A material change in circumstances may occur if waste generation increases and the increase consumes more solid waste disposal capacity and reduces the available disposal capacity below the projected disposal requirements for solid waste generated within the SWMD. The SWMD Board of Directors may conclude that a material change in circumstances has not occurred if the SWMD Board of Directors is able to secure commitments to landfill the increased waste volume.

SWMD staff and management shall review waste generation figures quarterly and report to the SWMD Board of Directors any significant increase or decrease in solid waste generation within the SWMD. The SWMD Board of Directors shall review the report and the availability of landfill disposal capacity for SWMD solid waste and determine whether sufficient capacity is available to the SWMD from designated landfills or whether a material change in circumstances has occurred.

2. <u>Compliance with Applicable Waste Reduction or Access Goals</u>

<u>Delay in Program Implementation or Discontinuance of</u> <u>Essential Waste Reduction or Recycling Activities</u>

Pursuant to the Ohio Revised Code, the Ohio Administrative Code, and the State Plan, the SWMD has established specific goals regarding waste reduction and recycling within the SWMD. As established in the Plan, the access goal will be utilized by the SWMD. However, the SWMD Board of Directors will continue its efforts to achieve the alternate waste reduction goal. The SWMD Director will prepare an annual report for review by the SWMD Policy Committee and for the SWMD Board of Directors. The annual report will identify any significant delays in program implementation; changes to waste reduction strategies; recycling strategies; or changes to the implementation schedule of the SWMD Plan for the preceding year. A significant delay in program implementation or the unanticipated termination of essential programs may result in the inability of the SWMD to achieve either goal. If the SWMD Board of Directors is able to implement new programs or modify existing programs to meet the access goal, the SWMD Board of Directors may determine that a material change has not occurred.

3. Financing of Plan Implementation: Decrease in Waste Generation

The District relies on revenue from fees paid pursuant to agreements with designated solid waste facilities when the designated facilities receive solid waste generated within the SWMD. A significant reduction in the generation of solid waste within the SWMD could result in a significant decrease in revenue and adversely affect the ability of the SWMD Board of Directors to finance implementation of the Plan. The SWMD Director will monitor revenues and will inform the SWMD Board of Directors if a significant decrease in revenues has occurred. The SWMD Board of Directors may request that the SWMD Director prepare a financial assessment explaining the cause and effect of a significant decrease in revenues, within ninety (90) days of the date of notification to the SWMD Board of Directors that a significant decrease in funds to finance implementation of the SWMD Plan has occurred. The financial assessment report will identify programs and budgeted expenditures that may be adversely affected by the reduction in revenue. A material change in circumstances may have occurred if the reduction in revenue adversely affects the SWMD Board of Director's ability to finance or implement the SWMD Plan in accordance with the approved Plan. The SWMD Board of Directors may determine that no material change in circumstances has occurred if the SWMD Board of Directors is able to maintain funding for SWMD programs through re-allocation of SWMD funds, or if the SWMD Board of Directors approves an increase in the contract fees paid by the designated solid waste facilities in an amount sufficient to fund implementation of the SWMD Plan.

4. Procedures Where Material Change in Circumstances Has Occurred

If at any time the SWMD Board of Directors determines that a material change in circumstances has occurred and a revision to the Plan is necessary, the SWMD Board of Directors shall direct the Policy Committee to prepare a Draft Amended Plan. The SWMD Board of Directors 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 SWMD Board of Directors shall notify the Ohio EPA of a material change in circumstance within thirty (30) days of making any such determination.

The SWMD's Director shall notify the Chairman of the SWMD Board of Directors within sixty (60) days of the:

a) receipt of notice from a designated landfill owner or operator that there is a decrease in solid waste disposal capacity at the solid waste landfill that reduces the solid waste disposal capacity below the capacity required for solid waste generated within the SWMD;

b) the SWMD Director's determination that solid waste disposal capacity that provided a basis for the 3734.53(A) certification is no longer available;

c) there is a decrease in solid waste generation within the SWMD that reduces the revenue to fund implementation of the SWMD Plan; or

d) solid waste facilities with designation agreements with the SWMD do not pay the required designation or contract fee in an amount sufficient to fund implementation of the SWMD Plan.

Within sixty (60) days of the receipt of the SWMD Director's notice that a material change in circumstances may exist, the Chairman of the SWMD Board of Directors shall review the SWMD Director's notice with the SWMD Board of Directors and request that the SWMD Board of Directors determine whether a material change in circumstances has occurred. If the SWMD Board of Directors determines that a material change in circumstances has occurred, the SWMD Board of Directors will notify the Chair of the SWMD Policy Committee and request that the SWMD Policy Committee prepare an amendment of the SWMD Solid Waste Management Plan as required by 3734.56(D) of the Revised Code.

The SWMD Board of Directors will determine whether there is sufficient solid waste disposal capacity at landfills within a reasonable distance of the SWMD through a review of solid waste landfill disposal capacity records maintained by the Ohio Environmental Protection Agency, by the appropriate governmental agencies that maintain such information for designated landfills located outside the SWMD or through solid waste disposal capacity assurance from the designated landfills. A material change in circumstances has not occurred if the SWMD Board of Directors is able to secure solid waste landfill disposal capacity commitments from landfills within a reasonable distance of the SWMD that replace the solid waste disposal capacity that is otherwise unavailable to the SWMD.

No material change in circumstances exists if the SWMD Board of Directors increases the amount of the designation or contract fee, as provided in the designation agreements by and between the SWMD and solid waste facilities, in an amount sufficient to fund implementation of the SWMD Plan.

APPENDIX B

RECYCLING INFRASTRUCTURE INVENTORY

Appendix B. Recycling Infrastructure Inventory

This appendix reviews the recycling infrastructure available in the reference year (2021), which includes curbside recycling programs, recycling drop-off sites, collection service providers, and compost facilities/activities.

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 Availablein 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)
NSC1	Village of Carrollton	Kimble Companies	Carroll County	Contract between political jurisdiction and private hauler	Bi-Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single Stream Cart	Y	DNR	Y
		DNR								

Source: 2021 Annual District Report

Notes: DNR = did not report

Materials Collected: Mg = Magazines, MxP = Mixed Paper, ONP = Newspaper, OCC = Corrugated Cardboard, GL = Glass Bottles, PL = Plastic Bottles and Jugs, AC = Aluminum Cans, SC = Steel Cans, As = Aseptic Containers

One non-subscription curbside recycling program operated in the reference year. The Village of Carrollton in Carroll County established a volume-based garbage program for its residents in year 2000, including the curbside collection of recyclable materials. This program features an every-other-week curbside collection of recyclable materials, including cardboard, paper, magazines, phone books, glass, cans, and plastics.

The curbside program began as a Pay-As-You-Throw ("PAYT") program, wherein residents paid a small, flat quarterly fee and were required to pay by the bag for their trash. In addition, an 18-gallon open tote was provided for recyclables, free of charge. This type of program encourages recycling as a saving for residents. The more they recycle, the less they pay for garbage services.

In 2015, the Carrollton curbside program switched to a 65-gallon cart system for recyclables and garbage. Garbage is picked up weekly, and recycling is picked up every other week. Village of Carrollton's curbside service is single stream; meaning materials are commingled together.

Carrollton Village's non-subscription curbside recycling serviced 823 households in the reference year. However, due to the route taken and services provided, Kimble cannot accurately separate the recycling totals for these areas.

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)
SC1	City of Salem	Columbiana	Households subscribe to private haulers	Bi-weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Bi-weekly	N	0	Y

Source: 2021 Annual District Report

There was one operating subscription recycling program in the reference year; the City of Salem.

2. Drop-off Recycling Locations

From the District's inception, the District contracted the service and transportation of the drop-off sites, except for 21 temporary mobile sites that the District serviced with recycling trailers, F-350 pick-up trucks, and Disrict staff until 2005. After extensive cost analysis and careful research, it was decided that the best course of action would be for the District to take over the service and transportation of its own drop-off recycling sites. In 2017, the District began servicing the collection and pays Ohio Valley Waste in Youngstown \$70.00 a ton and Kimble Companies \$77.50 a ton (2021 costs). However, due to the COVID-19 pandemic, they both offered to extend their contract at this price for another year.

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

ID#	Name of Drop- off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected(1)	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTU1	Unity Township - New Waterford Village	District		District provides 8- yard containers and collects using Front-Load trucks		AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTU2	Unity Township	District		District provides 8- yard containers and collects using Front-Load trucks		AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	25.53	Y
FTU3	Unity Township - JDS Landscaping	District		District provides 8- yard containers and collects using Front-Load trucks		AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	25.53	Y

ID#	Name of Drop- off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected(1)	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTU4	Unity Township - East Palestine Village	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	331.90	Y
FTU5	Center Township - Lisbon Village	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	255.30	Y
FTU6	East Liverpool	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTU7	Fairfield Township - Columbiana City	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks District provides 8-	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	76.59	Y
FTU8	Fairfield Township	District	Columbiana County	yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	76.59	Y
FTU9	Perry Township - Habitat Restore	District	Columbiana County	Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTU10	Perry Township - Salem City	District	Columbiana County	Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	25.53	Y
FTU11	Salem Township - Leetonia Village	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	561.70	Y
FTU12	Salem Township - KSU	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	255.30	Y
FTU13	St. Clair Township	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTU14	St. Clair Township - Calcutta	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	76.59	Y
FTU15	Fairfield Township - Columbiana City	District	Columbiana County	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	280.83	Y
Total			,					2,757.33	

(1) Materials Collected: Mag = Magazines, MxP = Mixed Paper, ONP = Newspaper, OCC = Corrugated Cardboard, GL= Glass Bottles, PL = Plastic Bottles and Jugs, AC = Aluminum Cans, SC = Steel Cans, As = Aseptic Containers

Fifteen full-time urban drop-off recycling locations were available to residents of the District in the reference year. These services are all multi-stream waste flows. Multi-stream must be separated by material by the resident, whereas single-stream flow allows the residents to dispose of all recycling in one bin. Materials used to be collected single stream and switched to multi-stream in 2022 when the District installed new labels on the containers. 2,757.33 tons of recyclables were recovered in the reference year.

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

 Year

ICUI									
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)
PTU1	Perry Township - First Presbyterian Church	District	Columbiana County	District provides 8-yard containers and collects using Front- Load trucks	n/a	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	6.38	Y
		6.38							

Source: 2021 Annual District Report

The District serviced one part-time urban-off site in the reference year, recovering 6.38 tons from this site. Materials used to be collected single stream and switched to multi-stream in 2022 when the District installed new labels on the containers.

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 ⁽¹⁾	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
				District provides 8-		AC, GL, PL,			
	Augusta			yard containers and		ONP, OCC,			
	Township,		Carroll	collects using Front-	- · ·	SC, Mag, OffP,			
FTR1	Augusta	District	County	Load trucks	24/7	MxP	Y	19.15	Y
	Center			District provides 8-		AC, GL, PL,			
	Township:			yard containers and		ONP, OCC,			
FTDO	Carrolton	District	Carroll	collects using Front-	04/7	SC, Mag, OffP,	Y	200.02	V
FTR2	Village	District	County	Load trucks	24/7	MxP	ř	280.83	Y
	Fox			District provides 8-		AC, GL, PL,			
	Township - Mechanicst		Carroll	yard containers and collects using Front-		ONP, OCC, SC, Mag, OffP,			
FTR3	own	District	County	Load trucks	24/7	MxP	Y	19.15	Y
T TK3	Harrison	District	County	District provides 8-	24/1	AC, GL, PL,	I	19.15	1
	Township -			vard containers and		ONP, OCC,			
	New		Carroll	collects using Front-		SC, Mag, OffP,			
FTR4	Harrisburg	District	County	Load trucks	24/7	MxP	Y	51.06	Y
	Lee			District provides 8-		AC, GL, PL,			
	Township -			yard containers and		ONP, OCC,			
	Harlem		Carroll	collects using Front-		SC, Mag, OffP,			
FTR5	Springs	District	County	Load trucks	24/7	MxP	Y	12.77	Y
				District provides 8-		AC, GL, PL,			
	Loudon			yard containers and		ONP, OCC,			
	Township -		Carroll	collects using Front-		SC, Mag, OffP,			
FTR6	Kilgore	District	County	Load trucks	24/7	MxP	Y	19.15	Y
	Monroe		Carroll	District provides 8-		AC, GL, PL,			
FTR7	Township -	District	County	yard containers and	24/7	ONP, OCC,	Y	63.83	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
	Dellroy Village			collects using Front- Load trucks		SC, Mag, OffP, MxP			
	Orange			District provides 8-		AC, GL, PL,			
	Township - Leesville		Carroll	yard containers and collects using Front-		ONP, OCC, SC, Mag, OffP,			
FTR8	Village	District	County	Load trucks	24/7	MxP	Y	12.77	Y
FTDO	Orange Township - Sherrodsvill	D : 4 · 4	Carroll	District provides 8- yard containers and collects using Front-	0.1/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP,	X		X
FTR9	e Village	District	County	Load trucks District provides 8-	24/7	MxP AC, GL, PL,	Y	38.3	Y
FTR1 0	Perry Township - Perrysville	District	Carroll County	yard containers and collects using Front- Load trucks	24/7	ONP, OCC, SC, Mag, OffP, MxP	Y	12.77	Y
FTR1	Brown Township - Lake Mohawk	District	Carroll County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	114.89	N
FTR1	Brown Township - Malvern		Carroll	District provides 8- yard containers and collects using Front-		AC, GL, PL, ONP, OCC, SC, Mag, OffP,			
2	Village	District	County	Load trucks	24/7	MxP	Y	63.83	Y
FTR1	Middleton Township - Rogers	District	Columb iana	District provides 8- yard containers and collects using Front-	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	76 50	Y
3	Village	District	County	Load trucks District provides 8-	24/7	AC, GL, PL,	ř	76.59	ř
FTR1 4	Wayne Township - JT Pitt Stop	District	Columb iana County	yard containers and collects using Front- Load trucks	24/7	ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTR1	Butler		Columb iana	District provides 8- yard containers and collects using Front-		AC, GL, PL, ONP, OCC, SC, Mag, OffP,			
5	Township Franklin Township -	District	County Columb	Load trucks District provides 8- yard containers and	24/7	MxP AC, GL, PL, ONP, OCC,	Y	63.83	Y
FTR1 6	Summitville Village	District	iana County	collects using Front- Load trucks	24/7	SC, Mag, OffP, MxP	Y	19.15	Y
FTR1	Hanover Township - Guildford		Columb iana	District provides 8- yard containers and collects using Front-		AC, GL, PL, ONP, OCC, SC, Mag, OffP,			
7 FTR1	Lake Hanover Township - Hanoverton	District	County Columb iana	Load trucks District provides 8- yard containers and collects using Front-	24/7	MxP AC, GL, PL, ONP, OCC, SC, Mag, OffP,	Y	114.89	Y
8	Village	District	County	Load trucks District provides 8- yard containers and	24/7	MxP AC, GL, PL, ONP, OCC,	Y	114.89	Y
FTR1 9	Knox Township	District	iana County	collects using Front- Load trucks	24/7	SC, Mag, OffP, MxP	Y	63.83	Y
9	TOWNSHIP	District	County	District provides 8-	24/1	AC, GL, PL,	1	00.00	1
FTR2 0	Madison Township	District	Columb iana County	yard containers and collects using Front- Load trucks	24/7	ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTR2	Middleton Township - Beaver Creek	District	Columb iana County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	19.15	Y
FTR2	Middleton Township	District	Columb iana County	District provides 8- yard containers and	24/7	AC, GL, PL, ONP, OCC,	Y	51.06	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
				collects using Front- Load trucks		SC, Mag, OffP, MxP			
FTR2	Yellowcreek Township - Village of Wellsville	District	Columb iana County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	38.30	Y
FTR2 4	Washington Township - Highlandto wn	District	Columb iana County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, <u>MxP</u>	Y	114.89	Y
FTR2 5	Washington Township - Salineville Village	District	Columb iana County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	51.06	Y
FTR2 6	West Township	District	Columb iana County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, <u>MxP</u>	Y	25.53	Y
FTR2 7	Liverpool Township	District	Columb iana County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, <u>MxP</u>	Y	63.83	Y
FTR2 8	Monroe Township - Bowerstow n Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	19.15	Y
FTR2 9	Athens Township - New Athens	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	19.15	Y
FTR3 0	Cadiz Township - Cadiz Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	38.30	Y
FTR3 1	Cadiz Township - Sally Buffalo Park	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	38.30	Y
FTR3 2	Freeport Township - Freeport Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	16.97	N
FTR3 3	Green Township - Hopedale Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MXP	Y	16.97	Y
FTR3 4	North Township - Scio Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	44.68	Y
FTR3 5	Rumley Township - Jewett Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	25.53	Y
FTR3 6	Franklin Township - Deersville Village	District	Harriso n County	District provides 8- yard containers and collects using Front- Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	9.57	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
Total								1.856.24	

Source: 2021 Annual District Report

There were 36 full-time rural drop-off recycling locations available to residents of the District in the reference year. All of the sites are multi-stream collection sites serviced through the District. Materials used to be collected single stream and switched to multi-stream in 2022 when the District installed new labels on the containers. The Brown Township – Lake Mohawk site closed in 2021 due to contamination issues, and the containers were moved to the Malvern Village Site. Additionally, the Freeport Township – Freeport Village site closed in July 2021 due to overflow and non-recycling issues. The District opened a new location at Clendening Marina.

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)
PTR1	Clendening Muskingum Watershed Freeport	District	Harrison County	District provides 8-yard containers and collects using Front- Load trucks	n/a	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Y	2.56	Y
Total								2.56	

Source: 2021 Annual District Report

The District serviced one part-time rural drop-off site in the reference year, recovering 2.56 tons from this site. As stated above, the containers from Freeport Village closed and opened the Clendening site.

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

Name of Drop- off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)
School Drop- Off Recycling Programs (19)	District	All 3	District provides 8- yard	not advertised to the public	AC, GL, PL, ONP, OCC, SC,	Ν	119.13

Name of Drop- off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)
			containers and collects using Front-Load trucks		Mag, OffP, MxP		
Kimble Commercial Pick-Ups	District	All 3	District provides 8- yard containers and collects using Front-Load trucks	not advertised to the public	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Ν	12.58
St. Clair Twp. EDI South	District	Columbiana	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Ν	6.38
Center Twp. DJFS Office	District	Columbiana	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Ν	6.38
Center Twp. County Jail	District	Columbiana	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Ν	9.57
Center Twp. MRDD	District	Columbiana	District provides 8- yard containers and collects using Front-Load trucks	24/7	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	N	6.38
Youth Camps	District	Carroll / Harrison	Roll-Off	not advertised to the public	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Ν	20.56
	al District Report						180.99

Source: 2021 Annual District Report

The District collects comingled material from 19 school drop-off sites. These sites are used mainly by the schools with possibly some use by parents of the students at the school. Even though the containers are available year-round and data shows that they

get used by parents in the summer months, the school is not in use during the summer, the sites are not advertised for public service.

In 2013, the District began its recycling program with the youth camps in the District. Kids and adults come from all over the state and, sometimes, the country to attend these camps. The camps have taken the responsibility to promote and educate those attending their camps about recycling and the environment. Each year since, they have steadily increased their recycling tonnages. We consider these locations part-time because the general public does not use them, and most are open from May through September.

The District also services containers from four government organizations and eight businesses. In addition, the District collected 180.99 tons of recyclables in the reference year from other drop-off sites.

3. Mixed Municipal Solid Waste Material Recovery Facility

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

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

Source: 2021 Annual District Report

The SWMD does not send waste to a mixed municipal solid waste material recovery facility.

B. Curbside Recycling and Trash Collection Service Providers

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

Name of	Otine O		Trash Collection Services			Curbside Recycling Services		
Provider	Counties Served	PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Kimble Companies	Village of Carrollton, Carroll County	Y	Y	Y	N	Y	Y	N
CCH Solid Waste District	Carroll County, Columbiana County, Harrison County	Ν	Y	Y	N	Y	Y	N
American Waste Mgt.	Carroll & Harrison							
Arrow Disposal	Columbiana		Y	Y	Y			
Burwell Refuse	Carroll		Y	Y				
CSI Environmental	Columbiana/Village of E. Palestine/E.P. Schools		Y	Y	Y	Y	Y	
Cardinal Waste Services	Carroll & Harrison		Y					
Columbiana Sanitation	Columbiana		Y	Y				

Name of		Trash Collection Services			Curbside Recycling Services			
Provider	Counties Served	PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Dailey Refuse	Columbiana		Y	Y				
Envirowaste Services	Columbiana		Y					
G&B Refuse	Harrison		Y					
Ernie Mansfield Hauling	Harrison		Y					
Miller & Company	All 3 Counties		Y					
Republic Services	All 3 Counties		Y	Y	Y			
Tri-County Industries	All 3 Counties		Y	Y	Y			
Waste Management	Carroll & Columbiana		Y	Y	Y			
Wolford's Refuse	Columbiana		Y					
Zobenica Hauling	Carroll & Harrison		Y					

Source(s): 2021 Annual District Report, 2016 SWMP Update Notes: PAYT = Pay-As-You-Throw

Kimble services the Village of Carrollton's non-subscription curbside services. The SWMD operates and hauls the District drop-off containers, and Kimble processes the material. The list of haulers was obtained through District records.

C. Composting Facilities

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

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
Preferred Trucking Services	Class IV	Ν	Columbiana County			0
Great River Resources LLC	Class IV	Ν	Harrison County			0

Source(s): 2021 Ohio EPA Compost Facility Report

No registered compost facilities reported receiving organic material during the reference year.

D. Other Food Waste 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	Carroll and Columbiana	350	0

Total			350	2,813
Municiple Leaf Collection	Land Application	Harrison	0	0
		Carroll, Columbiana &		
Christmas Tree Recycling	Drop-off	Harrison	0	0
		Carroll, Columbiana &		
Compostable Leaf Bags	Waste Service	Columbiana	0	2,813
	Curbside Yard			

Source(s): 2021 Retrac Report and 2021 Ohio EPA Composting Report

Four "other" food waste and yard waste programs were identified in the District for the reference year. Several municipalities collect leaves from their residents and transport them to various areas for land application. The District is unaware of all the locations where these leaves are applied nor of the volume. The District also sponsors an annual Christmas Tree Recycling Program where residents take their live trees to drop-off sites throughout the three-county area. Trees are chipped into mulch and made available to residents at no cost. The District averages about 200 trees each year. Surveying of municipalities has been neglected in recent years, so estimated yardage or tonnage is not available for the reference year.

Several municipalities have also participated in the compostable leaf bag program, distributing compostable leaf bags each year for residents to use instead of plastic bags. This program has saved each municipality time and money, increasing participation yearly.

The communities that participated in the compostable leaf bag collection program in 2021 collected 2,812.50 tons of yard waste.

No licensed Class I or Class II facilities are close to the District. The food waste information above was provided through an Ohio EPA Composting Report survey. The report states 91.84 tons from Carroll County and 258.60 tons from Columbiana County from grocer food donations in the reference year.

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

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

 Reference Year

Facility Name	County	State	Type of Facility	Weight of Material Accepted from SWMD (tons)	
Kimble - Twinsburg	Summit	Ohio	MRF/Transfer	6,617.62	
Kimble - Carrollton Kimble - Canton	Carroll Stark	Ohio Ohio	Transfer Transfer	0 0	
Rumpke Center City Recycling	Hamilton	Ohio	MRF	1.25	
Valley Waste Service	Beaver	Pennsylvania	MRF	DNR	
	Total				

Source(s): Ohio EPA 2021 Material Recovery Facility Report DNR: Did not report.

As indicated in **Table B-7** above, several facilities are available and manage recyclable materials from the District however not all report. A total of 6,619 tons of material were sent to material handling facilities in the reference year.

The District previously contracted with Kimble Companies to service the District's dropoff recycling sites and process the material through the end of July 2017. As of August 1, 2017, the District services the drop-off recycling sites and contracts with two facilities to process the material. The recyclables from Carroll and Harrison Counties are taken to Kimble's Carrollton transfer facility, off-loaded into a semi-trailer, and hauled to the Twinsburg facility for processing. The materials from Columbiana County drop-off recycling sites are taken directly to Ohio Valley Waste Services in Youngstown. Ohio Valley transports that material to their MRF in Pennsylvania.

There are several other processing facilities in Ohio, including Slesnick's Recycling in Canton, Stark County, Ohio; Associated Paperstock in North Lima, Mahoning County; JaSar in East Palestine, Columbiana County, Ohio; and Waste Management's facility in Lowellville, Mahoning County, Ohio where they transfer recyclables to their Pittsburgh, Pennsylvania processing facility. There is also Valley Waste Services in Mars, Pennsylvania.

APPENDIX C

POPULATION DATA

Appendix C Population Data

A. Reference Year Population

Table C-1a. Reference Year Population Adjustments

		Carroll County
Before Adjustment		26,691
Additions		0
Subtractions		
	Magnolia	278
	Minerva	1,715
After Adjustment		24,698

	Columbiana County
Before Adjustment	101,310
Additions	
Columbiana City	854
Salem City	4
Washington Village	333
Subtractions	
Minerva Village	4
After Adjustment	102,497

	Harrison County
Before Adjustment	14,477
Additions	0
Subtractions	
Adena Village	126
After Adjustment	14,351

Source(s): "2019 Population Estimates for Cities, Villages, and Townships" prepared by Ohio Development Services Agency, Office of Research.

After adjustments the District's population in 2021 (reference year) was 141,546. Ohio law requires that the population for a political subdivision that lies within two or more solid waste management districts shall be credited to the District where the majority of the population resides. Population in the reference year was derived from the Ohio Development Services Agency and include adjustments made in accordance for political subdivisions located partially within the District and partially within surrounding solid waste districts. Adena in Harrison County, and Magnolia and Minerva in Carroll County are the only villages where the majority of the population resides outside their respective counties. The populations of these villages that reside within Carroll and Harrison counties have been removed from the total District population. Additionally, a small percentage of Washingtonville, Columbiana

and Salem residents live in Mahoning County. These residents were added to the Columbiana County population. The adjustments are shown in Table C-1a.

Table C-1b: Total Reference Year Population

Unadjusted Population	Adjusted Population		
142,478	141,546		

Table C-1b shows the adjusted population.

B. Population Projections

Table C-2: Population Projections

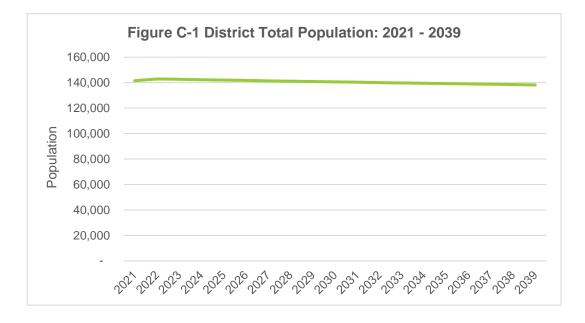
Year	Carroll County	Columbiana County	Harrison County	Total District Population
2021	24,698	102,497	14,351	141,546
2022	26,178	102,398	14,328	142,904
2023	26,002	102,300	14,304	142,606
2024	25,826	102,201	14,281	142,308
2025	25,650	102,103	14,258	142,010
2026	25,496	102,004	14,234	141,735
2027	25,342	101,906	14,211	141,459
2028	25,188	101,808	14,188	141,184
2029	25,034	101,710	14,165	140,908
2030	24,880	101,612	14,142	140,633
2031	24,720	101,514	14,119	140,352
2032	24,560	101,416	14,096	140,072
2033	24,400	101,318	14,073	139,791
2034	24,240	101,221	14,050	139,510
2035	24,080	101,123	14,027	139,230
2036	23,942	101,026	14,004	138,972
2037	23,804	100,929	13,981	138,713
2038	23,666	100,831	13,958	138,455
2039	23,528	100,734	13,935	138,197

Source: The Ohio Development Services Agency

The District's population projections from the reference year through the end of the planning period are presented in Table C-2 below. The Ohio Development Services Agency's ("ODSA") publication (Ohio County Profiles), presents population projections by each county in 10 year intervals from 2010 to 2040. The District's population was projected across intermediate years using a straight-line projected percentage. The incremental change from these projections was applied to the reference year population.

Population projections gauge future demand for services, but in projection calculations there are room for errors given the difficulty associated with forecasting. Figure C-1 shows a steady decrease in the Districts population throughout the planning period. The

District's population is expected to decrease by 2.4% from 2021 to 2039, averaging a 0.16% decrease yearly.



APPENDIX D

DISPOSAL DATA

Appendix D. Disposal Data

A. Reference Year Waste Disposed

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

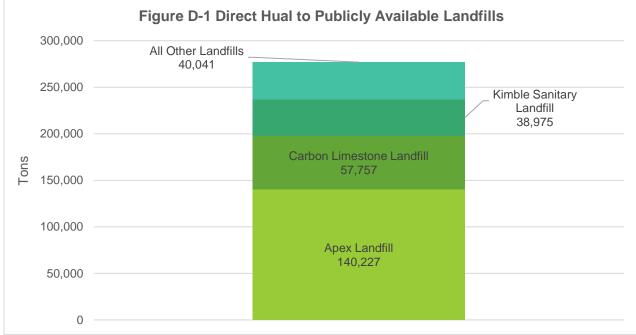
` ,	Location		Waste Accepted from the SWMD				
Facility Name	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	
In-District Facilities							
None							
Out-of-District Facilities	Out-of-District Facilities						
Countywide RDF - Republic Services	Stark	ОН	48.22	234.16	74.43	356.81	
Pine Grove Landfill	Fairfield	ОН	0.40	0.00		0.40	
Geneva Landfill	Ashtabula	ОН	0.00	1.99		1.99	
Mahoning Landfill	Mahoning	ОН	13,839.32	2,096.07	77.83	16,013.22	
Hancock County Landfill	Hancock	OH	0.66	0.00		0.66	
American Landfill	Stark	ОН	2,525.89	753.10	261.76	3,540.75	
Apex Landfill	Jefferson	OH	139,921.91	0.00	304.68	140,226.59	
Kimble Sanitary Landfill	Tuscarawas	ОН	8,861.86	29,388.14	725.45	38,975.45	
Carbon Limestone Landfill	Mahoning	OH	16,794.92	36,904.35	4,057.66	57,756.93	
Out-of-State Facilities							
Imperial Landfill		PA	12.39	1,110.14		1,122.53	
Seneca Landfill		PA	6.20	524.30		530.50	
Valley Landfill		PA	117.90	0.00		117.90	
Short Creek Landfill		WV	21.80	0.00		21.80	
Brooke/Valero Landfill		WV	6.57	0.00	3,86.52	3,843.09	
Wetzel Landfill		WV	0.00	13,585.33	900.75	14,486.08	
Multiple Facilities		WV	3.63	0.00	2.05	5.68	
Total			182,162	84,598	10,241	277,000	

Source(s): Ohio Environmental Protection Agency, "2021 Ohio EPA Waste Flow Report."

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

A wide variety of waste is disposed of in municipal solid waste landfills and includes waste from households, businesses, institutions, and industrial activities. In addition, if permitted, asbestos construction and demolition debris, dewatered sludge, soil, and incinerated ash may also be disposed of in landfills.

Table D-1a above presents the amount of direct hauled waste by the District in the reference year. Direct-hauled waste does not go through any transfer facilities or similar facilities before being disposed of in a landfill; instead, it gets taken directly to the landfill. Most (51%) of the District's direct hauled waste was taken to the Apex Landfill. Carbon Limestone Landfill also accepts a large percentage (21%) of waste from the District as well as Kimble Sanitary Landfill (14%). The remaining 14 landfills account for 14% of the total waste disposed of by the District.



Source(s): Ohio EPA 2021 Waste Flow Report

The District has no in-district landfills within the three county boundaries. There were a total of 15 publicly available landfills the District used to dispose waste in 2021. Nine landfills were located in state, and seven were located out of state. **Figure D-1** presents the landfills used by percentage below.

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

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

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

The District does not have any operating captive landfills. (See Table D-1b.)

	Locat	tion	Waste Received from the SWMD			
Facility Name	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Kimble Transfer & Recycling- Carrollton	Carroll	Ohio	24,102.29	1.48	1,869.11	25,972.88
Kimble Transfer & Recycling - Cambridge	Guernsey	Ohio	525.38	0	20.56	545.94
Kimble Transfer & Recycling - Canton	Stark	Ohio	1,180.65	0	214.67	1,395.32
Kimble Transfer & Recycling - Twinsburg	Summit	Ohio	0	0	0	0
Girard Transfer	Trumbull	Ohio	3,721.85	0	3.07	3,724.92
Apex Environmental Transfer	Belmont	Ohio	11.32	0	0	11.32
Total			29,541.49	1.48	2,107.41	31,650.38

 Table D-2. Reference Year Waste Transferred

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

Transfer facilities are facilities where solid waste deliveries from collection companies and residents are consolidated, temporarily stored, and loaded for transport. The waste is then delivered to a processing facility or disposal site. In instances where waste is 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 from other counties. As a result, it is difficult to track and record which landfill received a county's waste. For planning purposes, the waste hauled through transfer facilities is listed separately identifying destination landfills.

Facility Name	Destination Landfill
Kimble Transfer & Recycling- Carrollton	Kimble Sanitary Landfill
Kimble Transfer & Recycling - Cambridge	Kimble Sanitary Landfill
Kimble Transfer & Recycling - Canton	Kimble Sanitary Landfill
Kimble Transfer & Recycling - Twinsburg	Kimble Sanitary Landfill
Girard Transfer	Seneca Landfill
Apex Environmental Transfer	Apex Sanitary Landfill

Transfer facilities make solid waste collection more efficient and reduce overall transportation costs. The District's waste flowed through six transfer facilities in the reference year. All transfer facilities handling District waste are privately owned. The facility located in Carroll County, Kimble Transfer and Recycling Center – Carrollton, handled the majority (82%) of the District's transferred waste. Approximately, 12% was transferred by the Girard Transfer facility, 4% to Kimble's Canton facility, and the remaining 2% to Kimble's Cambridge facility. Less than 1% of the transferred waste is coming from the industrial sector, the remainder is residential/commercial.

		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

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

The District did not use incineration as a management method in the reference year.

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

182,162	84,598	10,241	277,000
29,541	1	0	29,543
0	0	0	0
211,703	84,599	10,241	306,543
	29,541 0	29,541 1 0 0	29,541 1 0 0 0 0

Percent of Total	69%	28%	3%	100%

Per Ohio EPA guidelines, if the quantity of excluded waste disposed of in the reference year was less than 10% of the total waste disposed of in that year, then the solid waste management plan does not need to account for excluded waste. As shown in Supplement to Table D-4 excluded waste represents 3% of total waste disposal. Therefore, excluded waste is not further reported in this 2024 Plan Update.

Table D-4. Reference Year Total Waste Disposed

Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
182,162	84,598	0	266,759
29,541	1	0	29,543
0	0	0	0
211,703	84,599	0	296,302
	Commercial (tons) 182,162 29,541 0	Commercial (tons) Industrial (tons) 182,162 84,598 29,541 1 0 0	Commercial (tons)Industrial (tons)Excluded (tons)182,16284,598029,54110000

29%

% of Total Waste Disposed
90%
10%
0%
100%

Percent of Total

Source(s): Ohio EPA "2021 Analytics Waste Flow Report" Ohio EPA "2021 Facility Data Report"

71%

Approximately 90% of the total waste was direct hauled, meaning a disposal truck picked up waste from clients and directly hauled that waste to a landfill for disposal. The remaining 10% of the waste was sent to a transfer facility before reaching the landfill for

0%

100%

disposal. Roughly 71% of the District's waste disposal was from the residential/commercial sector. The remaining 29% was from the industrial sector.

Β. **Historical Waste Analysis**

		Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
Year	Population	Rate (ppd)	Weight (tons)	Weight (tons) ²	Weight (tons) ³	Weight (tons) ⁴
2017	146,803	4.81	128,860	35,803	13,994	178,657
2018	146,018	6.57	175,035	55,099	5,970	236,104
2019	144,429	7.78	205,117	64,576	27,021	296,714
2020	147,210	5.97	160,469	54,209	6,499	221,177
2021	141,546	8.20	211,703	84,599	Not included	296,302

Table D-5. Historical Disposal Data

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

Year	Residential / Commercial	Industrial	Excluded	Total
2017				
2018	36%	54%	0%	32%
2019	17%	17%	0%	26%
2020	-22%	-16%	0%	-25%
2021	32%	56%	0%	34%

Table D-5b Annual Change in Tons Disposed

Year	Residential / Commercial	Industrial	Excluded	Total
2017				
2018	46,175	19,296	0	65,471
2019	30,082	9,477	0	39,559
2020	-44,648	-10,367	0	-55,015
2021	51,234	30,390	0	81,624

Table D-5c Average Annual Percentage Change

Average Annual Percentage Change										
Residential/Commercial	15.80%									
Industrial	27.78%									
Excluded	0.00%									

Table D-5d Average Annual Change in Tons Disposed

Average Annual Change in Tons Disposed										
Residential/Commercial	20,711									
Industrial	12,199									
Excluded	0									

Table D-5e Average Per Capita Disposal Over Time

Average Per Capita Over Tim (5 Years)	e
Residential/Commercial	6.08

The District is not seeing typical, or what would be expected, waste disposal tonnages. Prior to the Utica and Marcellus Shale drilling total waste disposal averaged roughly 100,000 tons annually. The waste from Utica and Marcellus Shale drilling industry is disposed in municipal solid waste landfills which is impacting landfill disposal tonnages. What the District is observing are elevated waste disposal tonnages.

From 2017 to 2021, total waste disposal peaks in 2019 and then again in 2021 at nearly 297,000 tons. The District is speculating the decrease in 2020 resulted from Covid stay at home orders and business temporary closings.

The table below shows actual disposal reported at landfills is higher than predicted in the 2018 Plan. It is very difficult to predict the amount of drilling-related waste disposal expected for the planning period. At the time of preparing the 2018 Plan the District believed there was a great deal of potential for activity however, the level of activity is dependent upon the prices of oil, gasoline, and natural gas. The 2018 Plan chose a conservative approach to project a decline in the drilling waste disposal resulting in less waste disposal. Comparing the actual to projected shows the waste increased and the 2018 Plan projections were very conservative.

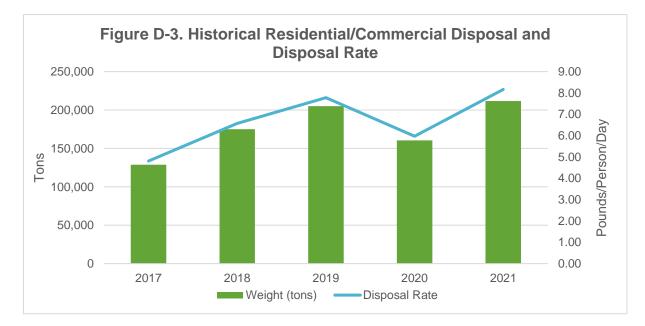
	Total Tons Disposed										
Year	Actual	Projected in 2018 Plan									
2017	178,657	143,562									
2018	236,104	143,010									
2019	296,714	142,462									
2020	221,177	141,917									
2021	296,302	141,376									

The disposal tonnages for residential/commercial and industrial sectors are shown graphically above in **Figure D-2**.



Residential/commercial waste accounts for most (roughly 70%) of the total waste disposed of in the District historically. The remaining waste disposal comes from the industrial sector. Omitting the dip in 2020, residential/commercial waste increased on average 28% each year, and industrial 42% each year.

The District's total disposed waste steadily increased by an average of 32% of the historic five-year period, excluding the 2020 decrease.

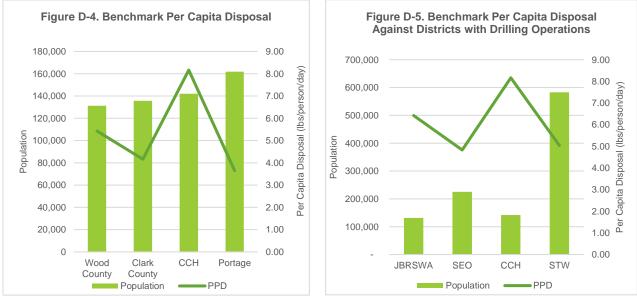


1. <u>Residential/Commercial Disposal</u>

Figure D-3 shows the annual total residential/commercial amount of waste disposal and the per capita disposal rate. As seen in this graphic residential/commercial disposal is increasing at a pace greater than expected for

the population. From about 2012, waste disposal tonnages reflect Utica and Marcellus Shale drilling projects and related activities. Carroll and Harrison Counties are not the highest producing counties in Ohio for Utica and Marcellus Shale oil and gas projects but continue to have a substantial number of operating wells. The 2018 Plan didn't anticipate the waste generated from drilling and pipeline construction activities to grow as it has.

There is a lot of unknowns in forecasting waste disposal tonnages from the drilling activities. How many wells will keep producing. How active the wells are. What will the demand be. This impacts the reliability in projecting waste tonnages. Research indicates fracking wells may produce anywhere from 20 to 40 years. Also, even though Ohio EPA has instructed landfill operators to record drilling wastes as industrial waste, wastes from drilling activities are being mischaracterized at the landfill as residential/commercial wastes.



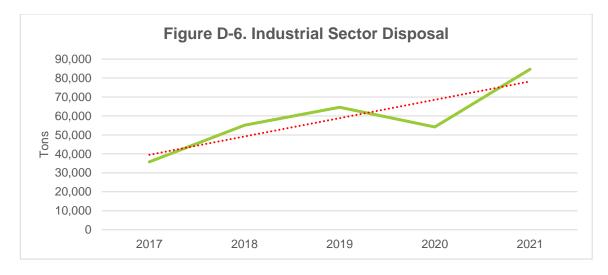
Source(s): Ohio EPA 2021 SWMD Disposal, Recycling, and Generation Report

Figures D-4 and **D-5** compare the District's residential and commercial disposal rate to other districts in Ohio. Figure D-4 benchmarks against Districts with similar populations and Figure D-5 against Districts with known drilling operations¹.

In the reference year, 2021, on average, the similar sized population District's demonstrate lower per capita disposal rates. Compared to District's with known drilling operation the per capita disposal rate is comparative but still lower than calculated in the District. The mischaracterization of the drilling waste as residential/commercial is a misrepresentation of the waste disposal for the residential/commercial sector and inflates the per capita disposal. Based on the

¹ ODNR Drilling Well Locator, https://gis.ohiodnr.gov/MapViewer/?config=oilgaswells

2021 data, the disposal rate shows roughly 8 pounds per person per day of trash is disposed.



2. Industrial Sector Disposal

Source(s): Ohio EPA Annual District Reports 2017 - 2021

Industrial waste accounts for roughly 29% of the waste disposed of in the reference year. **Figure D-6** above shows up and down fluctuations but an overall linear trend of increasing disposal. To better understand the industrial disposal trends, a 10-year historical analysis was conducted in **Figure D-7**.



Source(s): Ohio EPA Annual District Reports 2011 – 2021

Industrial waste recorded by landfills receiving District waste was approximately 26,000 tons in 2011 and almost 245,000 tons in 2013. Followed by a steady decline in industrial disposal from 2014 through 2016. Due to a continued historical decline in industrial employment, the District believes that the increase

in industrial disposal is attributed to drilling related waste. In 2019, 2020, and 2021 the disposal tonnages are beginning to elevate.

3. Excluded Waste Disposal

Per EPA guidelines, if excluded waste is 10% or less of total disposal in the reference year, then the District is not required to account for excluded waste in the solid waste management plan. The Districts excluded waste accounted for 4% therefore, excluded waste has been omitted from this analysis.

C. Disposal Projections

Year	Residential/ Commercial Solid Waste Weight (tons)	Industrial Solid Waste Weight (tons)	Excluded Waste Weight (tons)	Total Waste Weight (tons)
2021 Unadjusted (per landfill reports)	211,703	84,599	Not included	296,302
2021 Adjusted	82,146	214,156	Not included	296,302

Sample Calculations:

Residential/Commercial

2021 Adjusted tons = (population x per capita disposal rate x 365 days per year) / 2000 pounds per ton 82,146 tons = 141,546 x 3.18 pounds/person/day²

Industrial

2021 Adjusted tons = 2021 Unadjusted industrial + (2021 Unadjusted residential/commercial - 2021 Adjusted residential/commercial)

214,156 tons = 84,599 tons + (211,703 tons - 82,146 tons)

Drilling operations impact both the residential/commercial and industrial sector tonnages landfilled. As described in this Appendix D, historical data shows elevated waste disposal tonnages throughout the last ten years. Drilling waste decreases landfill capacity and skews the District's ability to reach diversion goals. Drilling waste is not a waste that is able to be reduced or recycled. Thus, there is a certain amount of waste landfilled that needs to be adjusted when reflecting on diversion rate calculations and materials management planning because that waste stream is not applicable to District programs. On the other hand, the elevated waste disposal tonnages increase the revenues as well as impacts landfill capacity. In this 2024 Plan, the District needs to plan for the management of that waste.

² Residential/commercial per capita disposal of 3.18 pounds per person per day is used to determine predrilling waste tonnage for the residential/commercial sector. Reference the 2018 Plan for the analysis and rationale.

To show a realistic residential/commercial planning period waste disposal the District prepared **Table D-6a**. This table shows what the District expects would be a residential/commercial sector disposal without drilling waste. This is a base for calculating the waste generation and recycling projections needed for the 2024 Plan and program development for the residential/commercial sector. Correcting for the mischaracterization in the residential/commercial sector results in removing that tonnage of waste from the residential/commercial sector and adding it to the industrial sector landfill tonnages. Essentially the District is balancing the total and re-allocating between the two sectors.

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 (tons)	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)	Percent 10%
2021	82,146	214,156	0	296,302	29,543	
2022	82,934	205,590	0	288,524	28,767	
2023	82,761	197,366	0	280,127	27,930	
2024	82,588	189,472	0	272,060	27,126	
2025	82,416	181,893	0	264,308	26,353	
2026	82,256	174,617	0	256,873	25,612	
2027	82,096	167,632	0	249,728	24,899	
2028	81,936	160,927	0	242,863	24,215	
2029	81,776	154,490	0	236,266	23,557	
2030	81,617	148,310	0	229,927	22,925	
2031	81,454	142,378	0	223,831	22,317	
2032	81,454	142,378	0	223,831	22,317	
2033	81,454	142,378	0	223,831	22,317	
2034	81,454	142,378	0	223,831	22,317	
2035	81,454	142,378	0	223,831	22,317	
2036	81,454	142,378	0	223,831	22,317	
2037	81,454	142,378	0	223,831	22,317	
2038	81,454	142,378	0	223,831	22,317	
2039	81,454	142,378	0	223,831	22,317	

Table D-6b. Waste Disposal Projections

Source(s): Ohio JFS 2028 Ohio Job Outlook Northeast and Southeast Ohio Projections.

Note: In this projection for residential/commercial solid waste the estimated fracking waste was re-allocated over to the industrial solid waste.

Table D-6b shows the adjusted waste disposal for both sectors and projected for the planning period.

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 is projected in **Table D-6b**.

Waste transferred annually was determined by first calculating the percentage of waste that was transferred in the reference year, see **Table D-4** above. That percentage, 10%, is the percentage of total waste in the reference year that was taken to a transfer facility prior to being disposed of at a landfill. Based on analysis of available capacity, the District does not identify any reasons the amount of transferred waste will change. Therefore, annual transferred waste projections are calculated as a percentage of total waste disposed.

4. <u>Residential/Commercial Sector</u>

In the 2018 Plan, the District determined a 3.18 pounds per person per day predrilling waste disposal rate. The District used this per capita rate to project future waste tonnages through the planning period. The flat per capita disposal rate results in a declining waste disposal since it is multiplied by population projected to decline. Declining waste disposal for this sector does not follow the historical trends. However, it does correlate with a declining population. From 2023 to 2029 the disposal is projected to decline roughly 985 tons.

Sample Calculation:

2024 Adjusted Residential/Commercial Disposal = (population x per capita disposal rate x 365 days per year) / 2000 pounds per ton

2024 Adjusted value = (142,308 * 3.18) / 2,000 = **84,514**

5. Industrial Sector

Ohio Department of Jobs and Family Resources projected industry decreases of 4% in manufacturing over the next ten years. Annualizing this over ten years calculates to a 0.04% 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.

Sample Calculation:

2024 Adjusted Industrial Disposal = 2023 Adjusted Value + (Manufacturing Rate * 2023 Adjusted Value)

Adjusted 2024 value = 197,366 + (-0.04% * 197,366) = **189,472 tons**

6. Excluded Waste

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 4% of the total disposal in 2021 and therefore will not be included in the solid waste management plan.

D. Waste Imports

The District does not have an active landfill located inside its county, therefore there is no data on waste imports. Furthermore, there are no plans currently to create a landfill in the District boundaries. There are no projections for waste imports because of this.

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX E

RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA

APPENDIX E. Residential/Commercial Reduction and Recycling Data

This Appendix presents the reduction and recycling data for the residential and commercial sectors in the 2021 reference year. Adjustments were made to tonnages reported by different types of entities, such as programs, brokers, and scrap yards, to avoid double-counting tonnages. An item is "double counted" if the quantities from both respondents are calculated in the total recovery. In addition, a historical analysis of the residential/commercial sector's recycling is included in this Appendix. Information in this section and information from other sources was used to calculate the recycling projections from 2021 to 2039, which are included at the end of this Appendix.

The difference between what we're using in the plan and what's in ReTrac is the adjustment of removing one industrial business that was recorded as commercial in the Retrac data.

A. <u>Reference Year Recovery Data</u>

Iai																						
NAICS	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables	Yard Waste	Dry-Cell Batteries	Used Motor Oil	Other: Anti- Freeze	Other: Reusables	Other: Metal Rotors	Other: Styrofoam	Totals
42																						
44																						
45																						
44 45 48																						
49																						
51																						
52																						
51 52 53 54 55 56 61 62 71																						
54																						
55																						
56																						
61																						
62																						
71																						
72																						
81																						
92																						
81 92 Unadjusted Total																						
TOLAI																						
Adjustments																						
Adjusted Total																						

Table E-1. Commercial Survey Results

NAICS stands for The North American Industry Classification System and is used by the United States, Canada, and Mexico to classify businesses by industry.

Table E-1 shows commercial data contained from the District's survey efforts. The District did not issue a survey to capture 2021 diversion data for the commercial sector.

			1.00	yonn	g i dointic	5							
Source of Materials	LAB	GL	FM	NFM	000	MxP	PL	СоМ	YW ST		от	Total	
Buybacks													
-													
Scrap Yards													
-													
Brokers													
Slesnick Company					1,421.05	493.27					145.09		
Processor/MRF's													
PR-1		0.21	0.04	0.03	0.29	0.56	0.12						
Total		0	0	0	1,421	494	0					2,061	
Adj.													
Adj.Total					1,421	494					145	2,061	

Table E-2. Data from Other Recycling Facilities

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

Table E-2 contains tonnage information collected from the buyback surveys and Ohio EPA reports. Processors, buybacks, and MRFs capture recyclables and process them to prepare them for recycling. A total of 2,061 tons were collected, with no adjustments needed.

Ohio EPA Data Source	Glass	Plastic	Newspaper	Cardboard	Mixed Paper	Non-ferrous	Ferrous	Other	ροοΜ	Food	Commingled	Total
Dollar General	0	8.40	0	893.95	4.08	0	0	0	0	0	0	906
Advance Auto Parts	0	0.25	0	6.29	0	0	2.44	112.66	0	0	0	122
Walmart	0	29.39	0	1,588.17	2.15	2.24	0.00	95.19	0	0	0	1,717
Home Depot	0	0.31	0	75.63	0	0	0	12.35	108.99	0	0	197
Aldi Inc.	0	1.59	0	145.34	0	0	0	0	0	0	0	147
Unadjusted Total	0	40	0	2,709	6	2	2	220	109	0	0	3,089
Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted Total	0	40	0	2,709	6	2	2	220	109	0	0	3,089

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

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: Totals 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. A total of 3,089 tons were collected, with no adjustments needed.

	. Other	Recy		rogran	115/0	uner S	ource	5010	αια			
Other Programs or Sources of Data	Appliances "White Goods"	Electronics	Scrap Tires	Food	Glass	Lead Acid Batteries	Corrugated Cardboard	Mixed Paper	Plastics	Comingled Recyclables (Mixed)	Yard Waste	Total
Drop-Off Recycling										4,752		4,752
Yard Waste Programs											2,812.50	2,813
Ohio EPA Scrap Tire Data			2,148.92									2,149
Ohio EPA Compost Data				350.44								350
Electronics Collection		25.26										25
Appliance Collection Event	235.55											236
School Drop Off Recycling Program										119.13		119
Small Business & Government Collection Services						0.62				49.28		50
Kimble Commercial Pick-Ups										12.58		13
Unadjusted Total	236	25	2,149	350	0	1	0	0	0	4,933	2,813	10,507
Adjustments	0	0	0	0	0	0	0	0	0	13	0	13
Adjusted Total	236	25	2,149	350	0	1	0	0	0	4,921	2,813	10,494

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

Table E-4 presents tonnages diverted through programs and services the District offers in the reference year. This table includes all residential and commercial programs/services through which materials being credited to total diversion were recovered. There was one adjustment to account for double counting in the commingled material stream.

Material	Tons	ADR Tons	Difference
Appliances/ "White Goods"	236	236	
Household Hazardous Waste	0	5	5
Used Motor Oil	0	0	
Electronics	25	25	
Scrap Tires	2,149	2,149	
Dry Cell Batteries	0	0	
Lead-Acid Batteries	1	1	
Food	350	0	350
Glass	0	0	
Ferrous Metals	2	2	
Non-Ferrous Metals	2	2	
Corrugated Cardboard	4,131	4,625	494
All Other Paper	500	500	
Plastics	40	40	
Textiles	0	0	
Wood	109	109	
Rubber	0	0	
Commingled Recyclables (Mixed)	4,921	0	4,921
Yard Waste	2,813	0	2,813
Other (Aggregated)	365	220	145
Grand Total	15,644	7,916	7,729

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

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

The District diverted 15,644 tons from the residential/commercial sector. **Table E-5** reports quantities of each material diverted—most of the waste diverted from mixed recyclables, cardboard, yard waste, and scrap tires.

Table E-5 has two additional columns: "ADR tons" and "Difference." The ADR Tons column shows what was recorded in the reference year ADR; the difference column presents the difference between the 2024 Plan workbook calculation spreadsheets and the ADR. The discrepancy between the ADR numbers and the 2021 Plan workbook calculations is because some material was not recorded from the ADR program event tonnages and therefore credited in this analysis. In addition, there were no HHW events in the reference year and thus omitted from the table.

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	0
Data from Other Recycling Facilities	2,061
Ohio EPA Commercial Retail Data	3,089
Carroll County Curbside Recycling Services	0
Drop-off Recycling Locations	4,752
Yard Waste Programs	2,813
Ohio EPA Compost Data	350
Ohio EPA Scrap Tire Data	2,149
Scrap Tire Collection	0
Electronics Collection	25
Appliance Collection Event	236
School Drop-Off Recycling Program	119
Small Business & Government Collection Services	50
Kimble Commercial Pick-Ups	0
Grand Total	15,644

Table E-6. Quantities Recovered by Program/Source

Source(s): 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.

B. Historical Recovery

In the reference year, the three most significant sources of recycling data were the data from drop-offs, Ohio EPA commercial retail data and yard waste programs. Together, these three sources accounted for 68% of all recycling data reported. The remaining information came from various other sources, as shown below in **Figure E-1**.

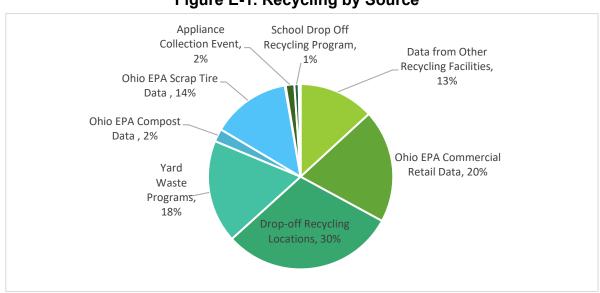


Figure E-1. Recycling by Source

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

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	Carroll County Curbside Recycling	Drop-off Recycling Locations	Yard Waste Programs	Ohio EPA Compost Data	Ohio EPA Scrap Tire Data	Scrap Tire Collection	Electronics Collection	Appliance Collection Event	School Drop Off Recycling Program	Small Business & Government Collection	Kimble Commercial Pick-ups	HHW Collection	Totals
2017	4,067	0	2,658	0	4,405	0	245	2,347	188	76	16	182	0	20	6	14,210
2018	355	1	2,691	513	4,434	2,813	193	3,056	238	36	0	146	86	30	7	14,599
2019	0	0	3,128	907	4,002	2,900	197	3,840	225	24	22	197	93	40	41	15,618
2020	0	0	2,909	821	3,668	0	227	1,984	0	20	0	110	26	0	0	9,764
2021	0	2,061	3,089	0	4,752	2,813	350	2,149	0	25	236	119	50	0	0	15,644

				Т	able E-7a	1 Annua	I Percer	nt Chang	je in Ton	s Recov	ered					
2017																
2018	-91%	#DIV/0!	1%	0%	1%	#DIV/0!	-21%	30%	27%	-52%	-100%	-20%	#DIV/0!	51%	4%	3%
2019	-100%	-100%	16%	77%	-10%	3%	2%	26%	-6%	-34%	#DIV/0!	35%	9%	33%	535%	7%
2020	#DIV/0!	#DIV/0!	-7%	-10%	-8%	-100%	15%	-48%	-100%	-19%	-100%	-44%	-72%	-100%	-100%	-37%
2021	#DIV/0!	#DIV/0!	6%	-100%	30%	#DIV/0!	55%	8%		29%	#DIV/0!	8%	89%	-101%	#DIV/0!	60%

			Та	ble E-7	a2 Averag	e Percer	ntage C	hange in	Tons Re	covered					•
#DIV/0!	#DIV/0!	4%	34%	3%	#DIV/0!	13%	4%	-26%	-19%	#DIV/0!	-5%	9%	-6%	#DIV/0!	8%

					Tabl	e E-7a3 Ar	nnual C	hange in	Tons Red	overed						
2017																
2018	-3,712	1	33	513	29	2,813	-52	709	51	-39	-16	-36	86	10	0	389
2019	-355	-1	437	394	-432	88	4	784	-13	-12	22	51	8	10	35	1.019
2020	0	0	-219	-87	-334	-2,900	29	-1,857	-225	-5	-22	-87	-67	-40	-41	-5,854
2021	0	2,061	180	-821	1,084	2,813	124	165	0	6	236	9	23	0	0	5,880

Population					Table E	-7a4 Aı	nnual Pe	er Capita	Recove	ery Rate	(pound	s/perso	n/day)				
146,803	2017	0.15	0.00	0.10	0.00	0.16	0.00	0.01	0.09	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.53
146,018	2018	0.01	0.00	0.10	0.02	0.17	0.11	0.01	0.11	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.55
144,429	2019	0.00	0.00	0.12	0.03	0.15	0.11	0.01	0.15	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.59
147,210	2020	0.00	0.00	0.11	0.03	0.14	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
142,067	2021	0.00	0.08	0.12	0.00	0.18	0.11	0.01	0.08	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.61

Table E-7a5 Average Per Capita Recovery Rate

				Iable	L-raj A	verage	r ei oap		very ita	le					
 0.03	0.02	0.11	0.02	0.16	0.06	0.01	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.53

Table E-7a6 Average Tons of Material Recovered
--

	884	412	2.895	448	4 252	1,705	243	2.675	130	36	55	151	51	18	11	13,967
	004	412	2,095	440	4,202	1,705	243	2,075	130	30	55	151	51	10	11	13,907
ources: 2017	2018	2019 20	020 2021	Annual	District Re	port										

Sources: 2017, 2018, 2019, 2020, 2021 Annual District Report Commercial Survey Results

Ohio EPA Material Recovery Facility Report

Ohio EPA Scrap Tire Report

Tables E-7 through E-7a6 show historical data collected from the District.

One of the primary hurdles in working with programmatic data is the inconsistency in how information is recorded from one year to another. These variations can arise from changes in data collection methodologies, evolving reporting requirements, or shifts in

the personnel responsible for data compilation. For instance, residential/commercial total recovery decreased from 14,599 tons in 2018 to 5,753 tons in 2020 and spiked to 15, missed reporting a portion of the Ohio EPA collected data. Another layer of complexity emerges from external factors that exert influence on the data. In this context, the spikes in recovery observed in 2019 and 2020 can be attributed to the constraints imposed by the COVID-19 pandemic. The pandemic had widespread effects on economic activity and behavior, including variations in waste generation and recycling practices. Thus, it is vital to recognize the pandemic's role in distorting data trends during these years. These implications impact the overall data and cause differences between years. In sum, the analysis of programmatic data beset by annual differences in data recording is a multifaceted endeavor. It requires astute recognition of the contributing factors, including inconsistent recording practices, data discrepancies, and external influences like the COVID-19 pandemic.

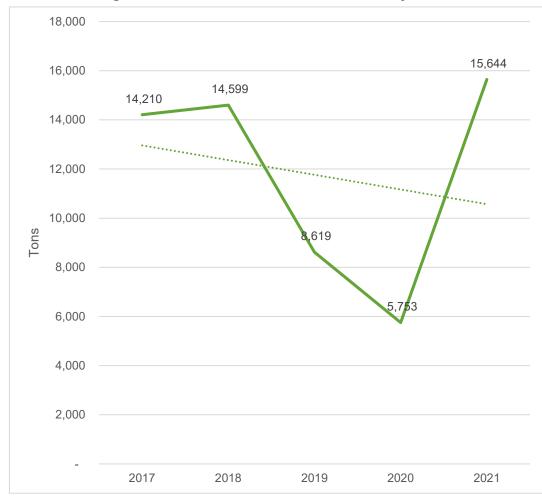


Figure E-2: Historical R/C Total Recovery

C. Residential/Commercial Recovery Projections

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	Carroll County Curbside Recycling Services	Drop-off Recycling Locations	Yard Waste Programs	Ohio EPA Compost Data	Ohio EPA Scrap Tire Data	Scrap Tire Collection	Electronic Collection	Appliance Collection Event	School Drop Off Recycling Program	Small Business & Government Collection Services	Source Reduction and Recycling Awareness Program	HHW Collection	Totals
2021	0	2,061	3,089	0	4,752	2,813	350	2,149	0	25	236	119	50	0	0	15,644
2022	0	0	3,089	747	4,798	2,842	243	2,234	217	36	91	125	54	0	18	14,494
2023	0	0	3,089	747	4,788	2,842	243	2,323	217	36	91	131	59	0	18	14,584
2024	0	0	3,089	747	4,778	2,842	243	2,415	217	36	91	138	64	0	18	14,677
2025	0	0	3,089	747	4,768	2,842	243	2,510	217	36	91	145	69	0	18	14,775
2026	0	0	3,089	747	4,759	2,842	243	2,610	217	36	91	152	75	0	18	14,879
2027	0	0	3,089	747	4,750	2,842	243	2,713	217	36	91	160	82	0	18	14,987
2028	0	0	3,089	747	4,740	2,842	243	2,821	217	36	91	168	89	0	18	15,100
2029	0	0	3,089	747	4,731	2,842	243	2,932	217	36	91	176	97	0	18	15,219
2030	0	0	3,089	747	4,722	2,842	243	3,049	217	36	91	185	105	0	18	15,343
2031	0	0	3,089	747	4,712	2,842	243	3,049	217	36	91	185	105	0	18	15,334
2032	0	0	3,089	747	4,703	2,842	243	3,049	217	36	91	185	105	0	18	15,324
2033	0	0	3,089	747	4,694	2,842	243	3,049	217	36	91	185	105	0	18	15,315
2034	0	0	3,089	747	4,684	2,842	243	3,049	217	36	91	185	105	0	18	15,305
2035	0	0	3,089	747	4,675	2,842	243	3,049	217	36	91	185	105	0	18	15,296
2036	0	0	3,089	747	4,666	2,842	243	3,049	217	36	91	185	105	0	18	15,287
2037	0	0	3,089	747	4,657	2,842	243	3,049	217	36	91	185	105	0	18	15,279
2038	0	0	3,089	747	4,649	2,842	243	3,049	217	36	91	185	105	0	18	15,270
2039	0	0	3,089	747	4,640	2,842	243	3,049	217	36	91	185	105	0	18	15,261

Table E-8 Residential/Commercial Recovery Projection

Sources: Year 2021 Data Sources: Commercial Survey from District survey efforts, Data from other recycling facilities 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

As discussed in Section B, there were a few challenges in data in assessing the historical recovery data for the District. These challenges also affect the projections listed above as the historical data is analyzed and used to make projections.

Commercial Survey Projections:

No recovery tonnage projections are planned for the planning period. Much of the data from this sector is incorporated into other category projections. The District will attempt surveying this sector.

Data From Other Recycling Facilities Projections:

The District does not have a historical record of obtaining data from buybacks, processors, or brokers. Recovery data was received in 2021. Due to the lack of historic data, projections are not anticipated for the planning period.

Ohio EPA Commercial Survey 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.

Carroll County Curbside Recycling Projections:

Carroll County curbside recycling weights weren't reported in 2021. The curbside recycling tonnage average from 2017 to 2020 (747 tons) is held constant through the planning period.

Drop-Off Recycling Projections:

The reference year per capita recovery rate in 2021 is 0.18 pounds per person per year. This recovery rate was applied to the projected planning period population.

Sample Calculation 2023: (0.18 lb/person/day * 365 day/year * 142,606 persons) / 2,000 = 4,798 tons.

Yard Waste Program Projections:

The 2017 to 2021 five-year average calculates to 2,842 tons. The District flatlined the average for the projections through the planning period.

Ohio EPA Compost Data Projections:

The 2017 to 2021 five-year average calculates to 243 tons. The District flatlined the average for the projections through the planning period.

Ohio EPA Scrap Tire Data Projections:

The 2017 to 2021 five-year average percent change in tons recovered is 4%. The District applied this rate of change to calculate annual recovery tonnages through the planning period. These projections were flatlined after the sixth year of the planning period.

Sample Calculation 2023: (2,234 * 0.04%) + 2,234 = 2,323 tons

Scrap Tire Collection Projections:

Due COVID-19 pandemic causing this program to be inactive during the reference year, the District is holding the 2019 value constant through the planning period.

Electronics Collection Projections:

The 2017 to 2021 five-year average tons recovered is 36 tons. The District is holding this value constant throughout the planning period.

Appliance Collection Projections:

COVID-19 pandemic caused this program to be inactive during the reference year. the District will hold the 2019 value constant through the planning period.

School Drop Off Recycling Projections:

COVID-19 pandemic resulted in a drop in recovery tonnage in 2020. The District is anticipating the recovery will rebound through 2030 and then hold constant. An annual 5% increased recovery rate is applied through 2030.

Sample Calculation 2023: (125 * 0.05%) + 125 = 131 tons

Small Business & Government Collection Projections:

COVID-19 pandemic resulted in a drop in recovery tonnage in 2020. The District is anticipating the recovery will rebound through 2030 and then hold constant. An annual 9% increased recovery rate is applied through 2030.

Sample Calculation 2023: (54 * 0.09%) + 54 = 59 tons

HHW Collection Projections:

COVID-19 pandemic resulted in a suspension of this program. The District anticipates the program to start in 2002 and flatlined the 2017 to 2021 five-year average of 18 tons through the planning period.

APPENDIX F

INDUSTRIAL SECTOR REFERENCE YEAR RECYCLING

APPENDIX F. Industrial Reduction and Recycling Data

Appendix F contains an inventory of materials recovered from the industrial sector in the reference year. The District did not report industrial diversion in the reference year; therefore this analysis has been omitted.

APPENDIX G

WASTE GENERATION

APPENDIX G. Waste Generation

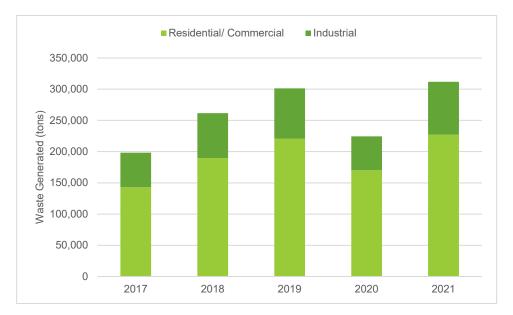
A. Historical Year Waste Generated

		Residential/ Commercial					Industrial	Fueluded	Total	
Year	Population	Disposed (tons)	Recycled (tons)	Generated (tons)	Per Capita Generated (ppd)	Disposed (tons)	Recycled (tons)	Generated (tons)	Excluded	Total (tons)
2017	146,803	128,860	14,210	143,070	5.34	35,803	19,438	55,241	13,994	212,305
2018	146,018	175,035	14,599	189,634	7.12	55,099	16,992	72,091	5,970	267,695
2019	144,429	205,117	15,618	220,735	8.37	64,576	15,941	80,517	27,021	328,273
2020	147,210	160,469	9,764	170,233	6.34	54,209	0	54,209	6,499	230,941
2021	141,546	211,703	15,644	227,347	8.80	84,599	0	84,599	0	311,946
Demo	nstration with	estimated o	drilling wast	e adjusted fr	om residentia	l/commercia	al waste to i	ndustrial.		
2021	141,546	82,146	15,644	97,790	3.79	214,156	0	214,156	0	311,946

Table G-1 Reference Year and Historical Waste Generated

Source(s): Disposal Data from Appendix D, Recycle Data from Appendix E and F, 2017 - 2021 Annual District Reports

Figure G-1. Historical Waste Generated (unadjusted 2021)



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 resulting from the District's disposal and recycling from 2017 to 2021 are shown in **Table G-1**. Historically, waste generation has steadily increased despite a dip in 2020, reaching a high in 2021 of 311,946 tons.

Drilling operation waste disposal is impacting the waste generation. Elevated waste disposal skews the residentia/commercial and industrial sector. The District assumes roughly 160,000 tons is from drilling waste operations. A portion of this waste is also being mischarcterized as residential/commercial rather than industrial at the landfill. Table G-1 shows two different waste generation totals for 2021. The drilling waste is not omitted but rather adjusted to remove the inflated residential/commercial waste into the industrial sector.

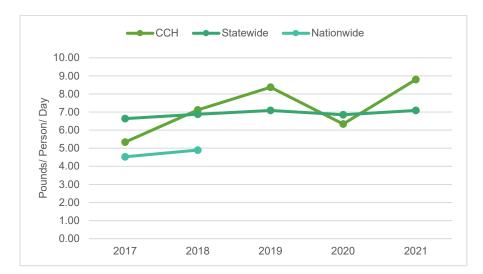


Figure G-2. Residential/Commercial Per Capita Generation (unadjusted 2021)

Source(s):

National Áverage 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 – 2021 Note: National average per capita generation 2019 and 2020 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 per capita generation remained close to the national average in 2017 but grew larger in 2018. In this year the national average rose to 4.90 PPD and the District's rose to 7.12 PPD. The District saw a sharp rise in 2021 reaching the highest of 8.80 PPD. The drilling waste characterized as residential/commercial is pushing the District's residential/commercial waste generation higher. The District reached its five-year historic peak in the reference year at 8.84 PPD. Note, the national average per capita data from 2019 through 2021 was not published as of this report.

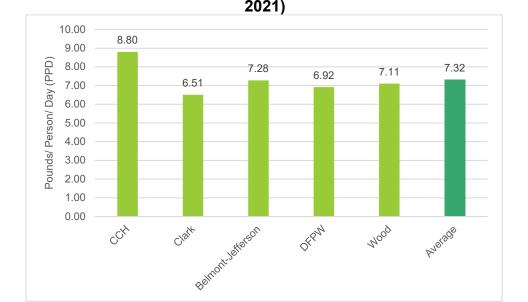


Figure G-3. Benchmark Residential/Commercial Per Capita Rates (unadjusted 2021)

Source(s) of Information: Ohio EPA SWMD Disposal, Recycling, and Generation Report – 2021 Note: DFPW= Defiance-Fulton-Paulding-Williams Join SWMD

Figure G-3 above details the comparison between four other Districts of similar population size and averages of all five districts in the reference year. Comparing CCH with similar population-sized districts reveals the District's per capita generation rate is above the average of 7.32 PPD and the highest among the districts. Both Figure G-2 and Figure G-3 show evidence that the residential/commercial waste generation is elevated and needs adjusted to remove the mischaracterized drilling waste.

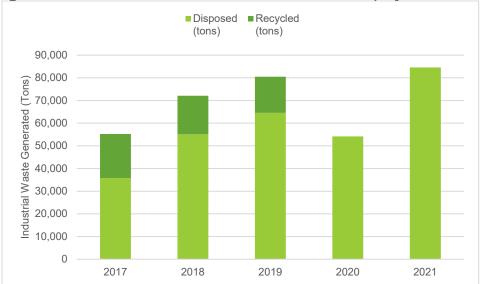


Figure G-4. Historical Industrial Waste Generated (adjusted 2021)

Note: 2019 values are an outlier and, therefore, not included in this historical data.

Adjusted the industrial waste generation to include the estimated mischaracterized drilling waste, Figure G-4 shows the historical trend. Minus the dip in 2020, the District's industrial waste generation increased from 2017 to 2021. The District had no industrial waste diversion in 2020 and 2021. In 2021, the District did not track or report diversion from the industrial sector. Waste generation is calculated by summing recycling plus waste disposal. Without any recycling data the waste generation. The Districts industrial waste recycling rate ranged from 35% in 2017 to a low of 0% in 2021 during the historical period.

B. Generation Projections

Table G-2 Generation Projections										
			Residenti	al/ Commerci	al		Industria	I		
Year	Population	Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycle (tons)	Generation (tons)	Excluded Waste (tons)	Total (tons)
2021	141,546	211,703	15,644	227,347	8.80	84,599	0	84,599	0	311,946
Adjusted 2021	141,156	82,146	15,644	97,790	3.79	214,156	0	214,156	0	311,946
2022	142,904	82,934	14,494	97,428	3.74	205,590	0	205,590	0	303,018
2023	142,606	82,761	14,584	97,345	3.74	197,366	0	197,366	0	294,711
2024	142,308	82,588	14,677	97,266	3.75	189,472	0	189,472	0	286,737
2025	142,010	82,416	14,775	97,191	3.75	181,893	0	181,893	0	279,084
2026	141,735	82,256	14,879	97,134	3.76	174,617	0	174,617	0	271,751
2027	141,459	82,096	14,987	97,083	3.76	167,632	0	167,632	0	264,715
2028	141,184	81,936	15,100	97,036	3.77	160,927	0	160,927	0	257,963
2029	140,908	81,776	15,219	96,995	3.77	154,490	0	154,490	0	251,485
2030	140,633	81,617	15,343	96,960	3.78	148,310	0	148,310	0	245,270
2031	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2032	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2033	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2034	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2035	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2036	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2037	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2038	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165
2039	140,352	81,454	15,334	96,787	3.78	142,378	0	142,378	0	239,165

Table G-2 Generation Projections

Source(s) of Information:

Disposal from Appendix D

Recycled from Appendices E and F

Populations: Ohio Development Services Agency, "2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected

Note: 2021 shows the Ohio EPA data is not adjusted for mischaracterized drilling waste. The adjustment is made in 2022 and projected through the planning period.

For planning purposes, the District adjusted the residential/commercial disposal allocating more of the waste to the industrial sector. This is waste disposal estimated as drilling waste that is belived to be characterized as residential/commercial waste. **Table G-2** shows the projected waste generation through the planning period.

Table G-3 below, presents the residential/commercial waste generated totals from **Table G-2** and the estimated percent of total generation by material. Each material is projected during the planning period using the quantities of waste generated and the estimated percent of total generation.

C. Waste Composition

	Percent of	•								
Material	Total Generation ¹	2021	2022	2023	2024	2025	2026	2027	2028	2029
Paper and										
Paperboard	23.10%	52,517	19,158	19,118	19,078	19,038	19,001	18,964	18,927	18,890
Glass	4.20%	9,549	3,483	3,476	3,469	3,461	3,455	3,448	3,441	3,435
Ferrous	6.60%	15,005	5,474	5,462	5,451	5,439	5,429	5,418	5,408	5,397
Aluminum	1.30%	2,956	1,078	1,076	1,074	1,071	1,069	1,067	1,065	1,063
Other Nonferrous	0.90%	2,046	746	745	743	742	740	739	737	736
Plastics	12.20%	27,736	10,118	10,097	10,076	10,055	10,035	10,016	9,996	9,977
Rubber and Leather	3.10%	7,048	2,571	2,566	2,560	2,555	2,550	2,545	2,540	2,535
Textiles	5.80%	13,186	4,810	4,800	4,790	4,780	4,771	4,762	4,752	4,743
Wood	6.20%	14,096	5,142	5,131	5,120	5,110	5,100	5,090	5,080	5,070
Other	1.50%	3,410	1,244	1,241	1,239	1,236	1,234	1,231	1,229	1,227
Food	21.60%	49,107	17,914	17,876	17,839	17,802	17,767	17,733	17,698	17,664
Yard Trimmings	12.10%	27,509	10,035	10,014	9,993	9,972	9,953	9,934	9,914	9,895
Misc inorganic										
wastes	1.40%	3,183	1,161	1,159	1,156	1,154	1,152	1,149	1,147	1,145
R/C wa	aste generated	227,347	82,934	82,761	82,588	82,416	82,256	82,096	81,936	81,776

Table G-3. Composition of Residential/Commercial Waste

	% Total										
Material	Generation ¹	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Paper and											
Paperboard	23.10%	18,853	18,816	18,816	18,816	18,816	18,816	18,816	18,816	18,816	18,816
Glass	4.20%	3,428	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421
Ferrous	6.60%	5,387	5,376	5.376	5.376	5.376	5,376	5,376	5,376	5,376	5,376
renous	0.0070	5,507	5,570	5,570	3,370	5,570	5,570	5,570	3,370	3,370	3,370
Aluminum	1.30%	1,061	1,059	1,059	1,059	1,059	1,059	1,059	1,059	1,059	1,059
Other Nonferrous	0.90%	735	733	733	733	733	733	733	733	733	733

Material	% Total Generation ¹	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Plastics	12.20%	9,957	9,937	9,937	9,937	9,937	9,937	9,937	9,937	9,937	9,937
Rubber and Leather	3.10%	2,530	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525	2,525
Textiles	5.80%	4,734	4,724	4,724	4,724	4,724	4,724	4,724	4,724	4,724	4,724
Wood	6.20%	5,060	5,050	5,050	5,050	5,050	5,050	5,050	5,050	5,050	5,050
Other	1.50%	1,224	1,222	1,222	1,222	1,222	1,222	1,222	1,222	1,222	1,222
Food	21.60%	17,629	17,594	17,594	17,594	17,594	17,594	17,594	17,594	17,594	17,594
Yard Trimmings	12.10%	9,876	9,856	9,856	9,856	9,856	9,856	9,856	9,856	9,856	9,856
Misc inorganic wastes	1.40%	1,143	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140
	aste generated	81,617	81,454	81,454	81,454	81,454	81,454	81,454	81,454	81,454	81,454

R/C waste generated81,61781,45481,45481,45481,45481,45481,45481,45481,45481,45481,454Source(s):Percent of Total Generation:Advancing Sustainable Materials Management:2018 Tables and FiguresWaste Generated:Table G-2

APPENDIX H

STRATEGIC EVALUATION

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. Programs and strategies approved by Ohio EPA in the 2019 Plan are evaluated in this Appendix.

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

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

Table of Contents

Appen	ndix H. Strategic Analysis	1
1.	Residential Recycling Infrastructure Analysis	2
2.	Commercial/Institutional Sector Analysis	8
3.	Industrial Sector Analysis	14
4.	Residential/Commercial Waste Composition Analysis	16
5.	Economic Incentive Analysis	24
6.	Restricted and Difficult to Manage Waste Streams Analysis	
7.	Diversion Analysis	30
8.	Special Program Needs Analysis	34
9.	Financial Analysis	36
10.	Regional Analysis	40
11.	Data Collection Analysis	43
12.	Education/Outreach Analysis	43
13.	Recyclable Material Processing Capacity Analysis	50

1. Residential Recycling Infrastructure Analysis

This evaluation of the District's existing residential recycling infrastructure determines whether the needs of the residential sector are being met and if the infrastructure is adequately performing in Carroll, Columbiana, and Harrison Counties. Many materials can be recycled. This section demonstrates that the District has a robust recycling infrastructure with 59 drop-off recycling locations during the reference year. In addition, the District has one non-subscription curbside community and one curbside subscription community.

A. Curbside Evaluation

This evaluation analyzes the residential infrastructure to identify service gaps and further evaluate the performance and service costs.

The first metric analyzed is recycling collection infrastructure. Curbside recycling is available in 1 out of 80 communities. Carrollton Village is non-subscription curbside, serviced by Kimble Recycling and Disposal.

The second largest community in Carroll County (Carrollton Village) provides non-subscription to households, accounting for 13% of the population of the County, leaving 21,606 individuals with the only option being drop-off recycling. With 4,490 individuals (18%), Brown Township is the largest community in Carroll County and has an opportunity for curbside recycling. Therefore, the two largest communities with access to curbside recycling can increase to 31% with the addition of Brown Township.

In Columbiana County, communities have access to subscription curbside recycling. However, with over 11,000 individuals, Salem City is the largest city in the County and an opportunity for non-subscription curbside recycling. If Salem offered a non-subscription curbside recycling program, the population to access curbside would increase to approximately 12% of the County population.

Harrison County also does not offer curbside recycling in the County. The community with the largest population is Cadiz village, with 21% of the county population. Cadiz Village is an opportunity for curbside recycling in Harrison County.

Carroll County, Columbiana County, and Harrison are all predominately rural, with an average of 4.22% developed land. Therefore, if curbside recycling is offered, the challenge is higher per-household collection costs associated with the lower population density.

Another metric analyzed is the total recyclables collected and pounds of recyclable materials collected per household.

Curbside Programs	2016	2017	2018	2019	2020	2021
Non-Subscription (1) tons reported	168	154	513	907	821	DNR

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

Source of information: CCH Annual District Reports (2016-2021)

Table H-1.1 shows the trends of curbside recycling from non-subscription and subscription communities. From 2016 through 2021, the diverted tonnage fluctuated. The most significant increase is seen between 2017 and 2018.

		iteeyening i ei	Household	
Programs	Households	2020 Tons	Pounds / Household / Day	Pounds / Household / Year
Village of Carrollton	1,312	821	3.43	1,251

Table H-1.3 Curbside Recycling Per Household

Source of information: CCH Annual District Reports 2020

Evaluation of the curbside recycling services per community is essential in understanding how well the program serves the community. **Table H-1.3** above shows the breakdown of the pounds per capita recycling generated per household per day and year. Kimble did not report 2021 tonnage; therefore, this analysis shows the year before 2020.

In a study by The Recycling Partnership, the surveyed communities averaged 440 pounds per household collected annually¹. Comparatively, the Village of Carrollton collects higher than the surveyed communities' average at 1,251 pounds per household.

Community	Households	2020 Tons	Pounds / Household / Year
Yellow Springs Village (Greene County, Ohio)	1,806	563	623
Wapakoneta (Auglaize County, Ohio)	4,148	601	290
Village of Loudonville (Ashland County, Ohio)	1,177	210	357

Table H-1.4 Benchmarked Rural Communities Curbside Recycling

Sources of information:

Greene County ADR (2020 data)

Auglaize County ADR (2020 data)

Ashland County ADR (2021 data – 2020 data was not available)

¹ "2020 State of Curbside Recycling Report", The Recycling Partnership. https://recyclingpartnership.org/wpcontent/uploads/dlm_uploads/2020/02/2020-State-of-Curbside-Recycling.pdf

As shown in **Table H-1.4**, the Village of Carrollton, within the District, has a significantly higher curbside recycling collection rate compared to the benchmarked rural communities listed. In fact, the Village of Carrollton collects more than double the amount of recycling per household per year compared to Yellow Springs Village, which has the highest recycling rate among the benchmarked communities (623 pounds per household per year). This data raises suspicion whether the data is accurate. Regardless, it underscores the Village of Carrollton's strong commitment to recycling and the effectiveness of its curbside recycling program.

B. Drop-Off Evaluation

The District directly services the drop-off recycling program.

In the reference year, fifty-one full-time and two part-time drop-offs were publicly available in the District. Full-time drop-offs are open for at least 40 hours per week. Part-time drop-offs are available a few days each month. In addition, there were seven "other" drop-off sites in the District. The District services 19 schools, eight commercial businesses, four government organization & two youth camps.

Most of the Drop-offs collected the same types of materials, which were cardboard, mixed paper, aluminum and steel cans, plastic containers, magazines, and office paper.

Drop-off	2018	2019	2020	2021
Full-Time	54	52	51	51
Part-Time	0	0	2	2
Other	7	7	7	7
Total	61	59	60	60

Table H-1.5 Recycling Drop-Off Sites

Over the years, the drop-off program has been consistent with minimal changes. **Table H-1.5** shows the historical four-year count of drop-off programs. Center Twp. DJFS Office, Center Twp. MRDD and Ohio FFA Camp Muskingum were listed as part-time and/or full-time; however, due to public availability, these locations were allocated to "other."

	2018	2019	2020	2021	Average
Tons Recovered	4,434	4,002	3,668	4,752	Percent Change
Annual % Change in Tons Recovered		-10%	-8%	30%	4%

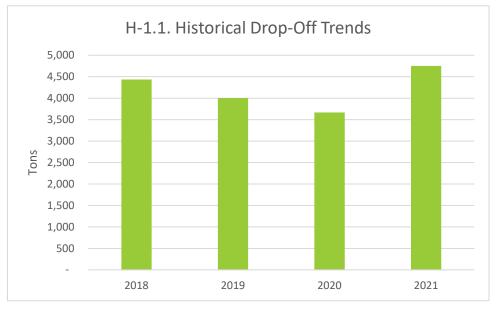
Table H-1.6 Recycling Drop-Off Sites

Table H-1.6 calculates the drop-off tonnage trends from 2018 to 2021. The total recycling numbers for each year represent the combined total of all the drop-offs collected together. The recovery rate saw a decrease from 2018 to 2020, followed by a notable 30% upswing in the reference year. Over the last four years, there has been an average annual increase of 4% in recycling at drop-off locations. When comparing year to year data it is important to remember COVID 19 impacted the district operations in 2020 resulting in an un-historically low diversion tonnage.

The following three communities showed increased tonnages from 2020 to 2021:

- Columbiana: increase of 350 tons.
- Salem Township Leetonia Village: increase of 185 tons.
- Unity Township East Palestine Village: increase of 120 tons.

Figure H-1.1 shows the decreasing trends of the recycling that the drop-off locations have recovered from 2018 to 2020, reaching the highest recovery rate in year 2021.



Source of information: CCH Annual District Reports 2018-2021

C. Conclusions/Findings

The District is averaging about a 17% residential/commercial diversion rate (calculated by adjusting and removing drilling waste estimated to be mischaracterized as residential/commercial waste). One area to focus on improvements is participation in the available opportunities. Education/outreach is a considerable part of any program's success and needs an evaluation for best practices. There are several methods to use to get information out about the recycling program: radio and tv spots, newspaper ads

and articles, and billboard ads; visiting and giving presentations to neighborhood associations, schools, churches, and civic organizations to promote and explain the program; issuing quarterly flyers, leaflets and/or newsletters in the water/sewer bill, bank statement or by separate mailing by the water/sewer department; training community volunteers on the program, so they educate neighbors and others; produce video on local waste management/recycling program; and displaying information booth on weekends at stores and/or food centers.

Whatever the means of getting the information out, ensure that the material explains 1) what is being collected, 2) preparation instructions, 3) the time and day when the materials will be collected, and 4) who to contact if you have questions. The printed material's simple, active language and line graphics are fundamental. Continuous education is critical if the recycling program is to be successful.

Curbside recycling is the most convenient and demonstrates higher per capita recovery returns. However, the District has room to improve and expand curbside programs. Beginning conversations and brainstorming between the District and the curbside community stakeholders would be a great start to exploring the recycling programs in reaching more significant diversion.

Additionally, exploring adding at least one curbside into each of the three counties would be beneficial in increasing r/c diversion. The largest municipality in Carroll County is Brown Township, with 4,490 residents. The second largest is Carrollton Village which has 3,092 residents and has non-subscription curbside. The District can potentially add curbside services to Brown Township for additional diversion. The largest city in Columbiana County is East Liverpool City, with 9,857 residents in 2021. Columbiana has 31 total drop-off sites, the largest among the three counties. Adding curbside for East Liverpool City residents would give access to the largest population in this County. Finally, the largest municipality in Harrison County is Cadiz Village, with 3,042 residents. The County has the fewest drop-off sites, with 10 locations. Adding curbside for Cadiz Village residents would give access to the largest population in this County. The drop-off program provides access to rural residents, but improving curbside recycling options for those that live in highly populated communities could yield higher recycling tonnages.

Another option to encourage diversion is to incorporate incentives for recycling, such as variable rate garbage collection fees. Example: The household can use a 30-, 60- or 90-gallon trash can, with the service cost for each being \$20, \$30, and \$40, respectively. If you recycle, you may only need the smallest trash bin, thereby saving on your monthly trash disposal bill. The District could help communities perform rate analysis to determine costs for service and a rate schedule to encourage incentives.

Opportunities to explore as programs for this 2024 Plan Update:

 Curbside Recycling Technical Assistance (ongoing program) – Setting a goal to engage one curbside program a year, the District could implement the following steps:

- Engage community stakeholders and determine the barriers they see in their curbside recycling programs.
- Offer technical assistance (education, cost analysis, contract assistance, grant writing assistance, face-to-face meetings, etc.) to seek third-party grant funding to help overcome challenges. For instance, The Recycling Partnership offers grants for single-stream curbside lidded carts. Additionally, Ohio EPA offers Community Grants which could be applied for curbside recycling programs.
- Explore volume-based billing rate structures.
- Conduct a community survey of citizens/households to build a baseline understanding of program understanding.
- Education/Outreach (ongoing program) Setting a goal to increase materials recovered per capita.
 - Develop an outreach plan to encourage recycling.
 - Develop a resource guide to donating.
 - Develop an SWMD website with educational material.
 - Develop a District social media outreach plan.
 - Use various methods to reach different audiences, including an engaging and interactive website, regular column entries in newspapers, cable, and television ads, press releases, and brochures.

2. Commercial/Institutional Sector Analysis

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

A. Geographical

Defining rural and urban 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-2.1a shows

Carroll County's land use with ~55% forest, and ~29% pasture/hay. The population density per square mile in 68 persons.

Figure H-2.1b shows Columbiana County's land use with ~46% forest, and ~25% pasture/hay. The population density per square mile in 192 persons.

Figure H-2.1c shows Harrison County's land use with ~59% forest, and ~24% pasture/hay. The population density per square mile in 36 persons.

The largest city in the District is Salem City with a

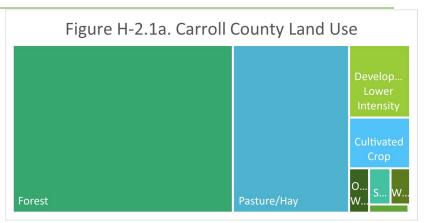
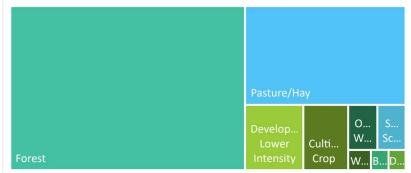


Figure H-2.1b. Columbiana County Land Use



Figure H-2.1c. Harrison County Land Use



population of 11,821 residents and holds roughly 8% of the District population. The next more populated communities are the City of East Liverpool at 7% and St. Clair Township at 5%.

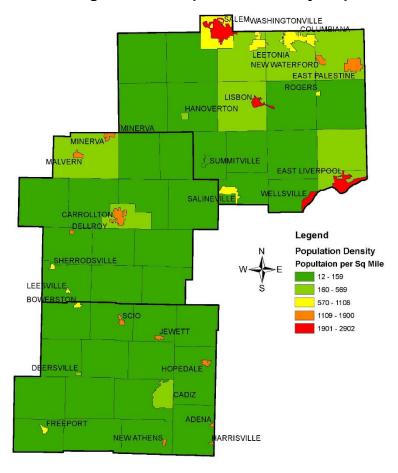


Figure H-2.2 Population Density Map

For comparison, the District's employment, land use, and residential/commercial diversion rates were compared to four other rural solid waste districts. **Figure H-2.3** below shows the comparison. Across all four SWMDs they are all very closely matched for employment rates and percentage of developed land.

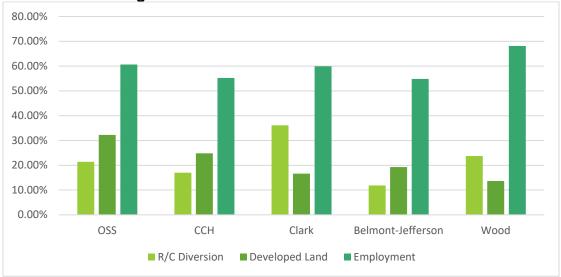


Figure H-2.3 Correlation with other SWMD

OSS= Ottawa, Sandusky, Senaca SWMD

In this comparison the District researched Clark County's solid waste district plan to gather any best practices they may be implementing towards the commercial sector resulting in a higher diversion rate. The District provides community based social marketing strategies for a variety of sectors to promote and educate residents and commercial businesses on waste reduction strategies. Also, yard waste composting continues to represent high diversion by material in the District.

B. Diversion

Figure H-2.4, graphs the residential/commercial diversion in the 2021 reference year. The most notable materials diverted are commingled recyclables, cardboard, and yard waste.

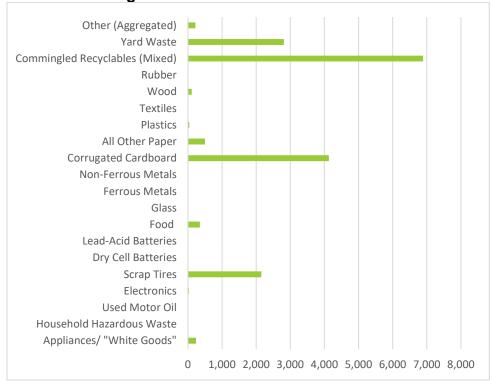


Figure H-2.4 CCH Materials Diverted

Tracking and reporting of residential and commercial recycling makes separating commercial data from residential data challenging. Measurables obtained from this sector include recorded diversion data obtained from commercial surveys, brokers, haulers, and Ohio EPA sourced data from commercial businesses and material recovery facilities (MRFs).

B. Commercial/institutional Establishments

The top sectors for employment for CCH are Retail Trade, Other Services (Except Public Administration), and Health Care and Social Assistance².

NAICS Code	NAICS Description	Number of Commercial/Institutional Establishments
42	Wholesale Trade	191
44-45	Retail Trade	823
48-49	Transportation and Warehousing	262
51	Information	46
52	Finance and Insurance	252
53	Real Estate and Rental/Leasing	123

Table H-2.2 Commercial/Institutional Establishments

² Ohio Department of Job and Family Services Office of Workforce Development. <u>Ohio Economic Profile</u> <u>Huron County</u>. July 2021.

NAICS Code	NAICS Description	Number of Commercial/Institutiona Establishments	
54	Professional, Scientific, and Technical	257	
54	Management of Companies and	251	
55	Enterprises	7	
	Administrative and Support and Waste		
56	Management and Remediation Services	259	
61	Educational Services	26	
62	Health Care and Social Assistance	617	
71	Arts, Entertainment, and Recreation	74	
72	Accommodation /Food Service	492	
	Other Services (Except Public		
81	Administration)	767	

Source: 2019 County Business Patterns. U.S. Census Data.

There were roughly 4,196 commercial/institutional establishments in CCH during the reference year 2021. **Table H-2.2** shows the number of commercial/institutional establishments within the North American Industry Classification System (NAICS) code.

Commercial sector recycling programs are a big challenge for the District. Recycling is not mandatory and there is a cost for service. Other challenges besides the cost of service are being able to connect with these small businesses to implement programs.

C. Functionality

Commercial businesses, schools and universities, government agencies, and event venues all rely on private sector haulers for their recycling programs. Businesses can request recycling services from local brokerage companies. The District does not keep an updated list of local haulers that provide recycling services. The haulers will then transport the diverted materials to material recovery facilities where the material will then be processed to sell to manufacturers. The District offers free waste audits and assessments to commercial businesses upon request. This is not advertised on the District's website or through any other platform at the District. Eight commercial businesses pay the SWMD to supply them with a container for recycling. There were no waste audits that were performed during 2021.

Events/Venues and Parks

Recycling in public spaces such as parks and event venues is currently a gap for the District. The District's number of parks is rather small and not a major priority currently for focusing diversion tactics.

Commercial Businesses

Commercial businesses have the opportunity to contract with a private hauler for recycling services. The District provides businesses with the option to have a waste audit of their facility performed. This is a program that the District has not advertised widely among the commercial businesses.

Schools and Institutions

There are 17 different school districts within CCH. The District works with these school districts to provide education on recycling and environmental education to the students.

The District provides weekly service to the following school districts: Carroll Hills School, Carrollton High School, Columbiana Elementary School, Columbiana Jr/Sr High School, Conotton Valley, Crestview Schools, Harrison Central-Cadiz, Leetonia School, Lisbon Jr/Sr High School, Lisbon McKinley, Malvern Schools, Salem Elm Buckeye, Salem High School, Salem-Reilly Elementary School, Salem-Southeast, Southern Local, and Untied Local Schools.

Government Agencies and Office Buildings

Many of the government offices in the District serve as recycling drop-off collection sites. An opportunity for the commercial sector is to connect with these administration buildings to help set internal recycling procedures and protocols for employees working in the buildings.

D. Conclusions/Findings

Commercial sector participation in recycling programs is challenging mainly due to the cost of service and that recycling is voluntary.

Opportunities to explore as programs for this 2024 Plan Update:

- Waste Audits (ongoing program) Continue to offer waste audits for commercial businesses.
- Business and Industry Outreach (ongoing program) continue to offer educational materials for businesses such as how to set up a recycling program.

3. Industrial Sector Analysis

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

A. Evaluation

There were approximately 541 industrial businesses operating in Carroll-Columbiana-Harrison Joint County during the reference year (2021). **Table H-3.1** lists the top employed industrial businesses by employee size.

Company	Employee Size		
Flex-N-Gate	700		
Walmart Supercenter	500		
American Standard Inc	450		
Save-A-Lot	400		
Mac Manufacturing Inc	361		
Walmart Supercenter	300		
R+L Carriers	280		
Colfor Manufacturing			
Inc	200		
L J Smith Stair			
Systems	195		
Summitville Tiles Inc	150		

Table H-3.1 Top Industrial Companies

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

The District's industrial sector businesses are largely concentrated in the City of Salem (102 out of 541). The top five communities with the largest presence of industrial businesses are listed below in **Table H-3.2**.

Community	County	Number of Industries		
Salem	Columbiana	102		
East Liverpool	Columbiana	76		
Columbiana	Columbiana	48		
Carrollton	Carroll	44		

Table H-3.2 Largest Industrial Communities

Source: U.S. Business Database. Rep. Reference USA. Web. 1 August 2022

B. Landfill Diversion

In 2021 the District disposed of 84,599 tons of industrial waste. The District no longer surveys the industrial sector for diversion numbers and therefore is not explored in this analysis.

The District has three programs in place to assist industrial businesses and their recycling needs. Engagement with this sector is challenging because much of the waste generated is specialized and specific to the business. Many businesses operate with proprietary information that they do not wish to disclose to the District in the annual surveys.

C. Conclusions/Findings

The District has not prioritized the industrial sector in previous years for increasing recycling efforts. The District provides at least three programs to the industrial sector to meet Ohio 2020 State Plan requirements.

4. Residential/Commercial Waste Composition Analysis

This evaluation of the SWMDs waste composition analysis describes and evaluates the waste that makes up the largest portions of the waste stream. It also describes what programs are currently being used by the District to address the waste streams and what programs should be evaluated to further address the waste stream.

A. Residential/Commercial Sector

Waste Generation = Total Wastes Disposed + Total Wastes Diverted

The District generated 99,656 tons of residential/commercial waste (adjusted for drilling waste) in the reference year and diverted 17% of this waste. The historic average diversion for the four prior years to the reference year (2017-2021) was 6.55%. In the reference year roughly 82% of the total generated waste was sent to a landfill. To better understand the composition of the material not being diverted (the amount being landfilled), waste characterization data from the Ohio EPA was applied to the District's 82,146 tons generated.

As discussed in Appendix G, an analysis of the estimated composition of residential/commercial waste was conducted for the reference year using the EPA's Advancing Sustainable Materials Management: 2018 Trends and Figures report. This report detailed the EPA's estimates for the composition of waste that was disposed of in landfills. The District used this report and assumes the percentages listed for its own estimations and projections. **Figure H-4.1** below lists the estimated waste composition for the District in the reference year.

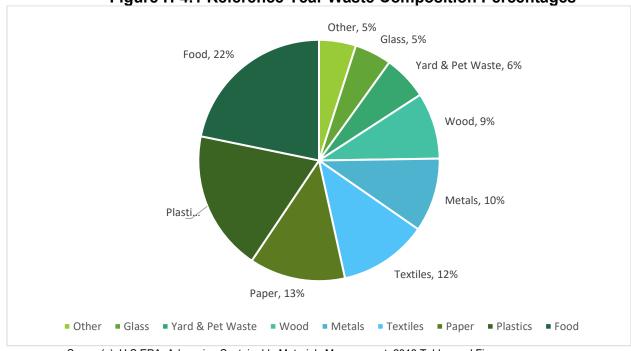


Figure H-4.1 Reference Year Waste Composition Percentages

Source(s): U.S EPA, Advancing Sustainable Materials Management: 2018 Tables and Figures

As seen above, the major contributors to waste generation in the reference year are paper and paperboard (13%), food (22%), and plastics (19%). By assessing the composition of material landfilled, the District can evaluate which materials to target for increased diversion efforts. For example, as shown in **Figure H-4.1**, the top categories of paper, food, yard trimmings, and plastic are all able to either be recycled or composted instead of thrown into landfills. 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.

Figure H-4.2 below shows the breakdown of waste composition by weight.

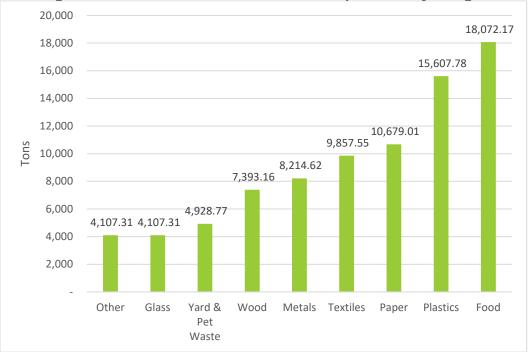


Figure H-4.2 Reference Year Waste Composition by Weight

Paper and Paperboard Waste Stream

Using the waste estimates described above, the 13% of paper and paperboard in the overall waste composition results in about 10,679 tons of paper being disposed. The District diverted about 4,631 tons of paper and paperboard in the reference year, a 30% diversion rate for this material category. The District has the potential to divert even more. According to the American Forest and Paper Association, the U.S. recovery rate for paper and paper board was approximately 68% in 2018.

Figure H-4.3 below shows the amount of paper and paperboard disposed of in landfills and diverted. The residents of the District have sufficient access to paper and paperboard recycling opportunities. The District operates 51 full time drop off sites and 3 part time drop off sites year-round for residents. These drop off sites accept newspapers and inserts, magazines, catalogs, junk mail, envelopes, phone books, paper grocery bags, cereal, and snack boxes (paperboard), and cardboard. The major issues with these sites are getting residents to participate and dropping off their recyclable waste as well as educating residents how to use them properly/what is and is not accepted.

Source(s): US EPA Waste Composition 2017 Facts and Figures

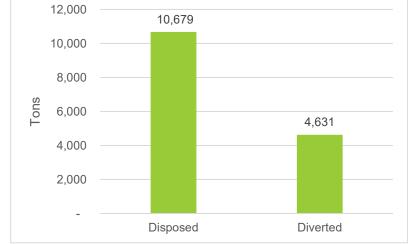


Figure H-4.3 Paper and Paperboard Disposed versus Diverted

Source(s):

U.S. EPÁ, Advancing Sustainable Materials Management: 2018 Tables and Figures Appendix E

Food and Yard Waste Stream

Using the waste composition estimates above, there is 23,001 tons of food and yard waste being sent to the landfill annually by the District. The District generated a total of approximately 26,164 tons of organic waste. One issue with yard waste disposal is that many residents manage their yard waste at the curb and if this waste gets mixed with household waste, both categories will be disposed of at a landfill.

Figure H-4.4 shows the breakdown of the total organic waste disposed and the total organic waste diverted. Approximately 12% of total organic waste was diverted while 96% was landfilled (adjusted for drilling waste). Of the diverted organic waste, 350 tons were from food diversion and 2,813 tons were from yard waste diversion.

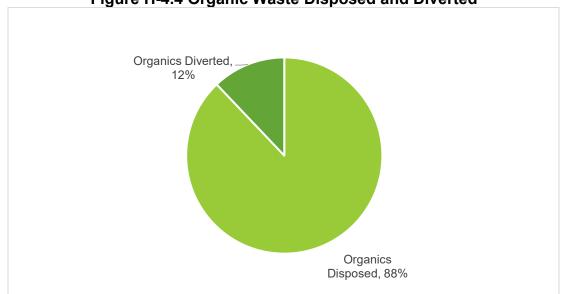


Figure H-4.4 Organic Waste Disposed and Diverted

Source(s): U.S. EPA, Advancing Sustainable Materials Management: 2018 Tables and Figures Appendix E

Less than 1% of the total food waste was diverted in the reference year while approximately 11% of the total yard waste was diverted. The District has an opportunity to increase food waste recovery by encouraging and educating residents to compost their food waste. Residents with at home composting systems for food waste does not get tracked or recorded. As such, the data does not reflect this and could be inaccurate to the true food diversion.

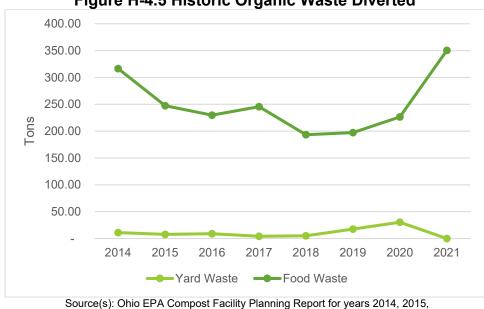


Figure H-4.5 Historic Organic Waste Diverted

As can be seen in **Figure H-4.5** historical organic waste diverted has fluctuated over the last few years.

^{2016, 2017, 2018, 2019, 2020, 2021}

Without sufficient infrastructure for composting discarded food, the District could first focus on reducing food waste and increasing food rescue. Residential food waste represents a significant opportunity for reduction and food rescue, which are the U.S. EPA's most preferred methods of dealing with food waste. The Natural Resources Defense Council (NRDC) found that the residential sector accounted for 30-50% of a cities' total food waste generated and that of the food discarded by residents nearly 70% of the food wasted was edible.³ At the same time, roughly 1 in 8 people in the U.S. experience food insecurity.⁴ The SWMD could seek to increase food rescue and donation to reduce landfilling edible food while also supporting the SWMD's more vulnerable populations.

Another opportunity is the development of infrastructure such as anaerobic digesters or composting facilities both of which could be designed at small or large scale.

Plastic Waste Steam

Residential/commercial estimated waste composition expects plastics to be one of the larger percentages of waste streams being landfilled. Based on the waste composition, 15,608 tons of plastics were landfilled in the reference year. 40 tons were diverted from the landfill, giving this commodity an opportunity to improve recovery rates.

The District accepts polyethylene plastics with a resin code of #1 or #2 at drop off recycling locations. These materials include plastic bottles and containers for soda, water, milk, shampoo, conditioner, and other similar bottles. **Figure H-4.6** describes the various types of resin codes for plastics below.

Plastic resin codes may confuse residents as they do not describe if something is recyclable and/or accepted in the area, they only relate to the type of plastic the item is made of. More recent packaging has #1 and #2 in different shapes, what are called non-bottle and rigids. Material recovery facilities do not always have end markets to sell the various resin grades. The District should monitor the recycling collected at drop off sites and determine the level of plastic contamination and the most common items that are mistakenly recycled.

Symbol	Code	Description	Examples		
	#1 PET(E)	Polyethylene terephthalate	Soda & water bottles, salad dressing bottles		
PE-HD	#2 PEHD or HDPE	High-density polyethylene	Milk jugs, shampoo & conditioner bottles		
	#3 PVC	Polyvinyl chloride	Window frames, bottles for chemicals, flooring		
PE-LD	#4 PELD or LDPE	Low-density polyethylene	Plastic bags, buckets soap dispenser bottles, plastic tubes		
	#5 PP	Polypropylene	Bumpers, car interior trim, industrial fibers, yogurt tubs		
	#6 PS	Polystyrene	Toys, flower pots,, ashtrays, trunks, "Styrofoam"		
â	#7 O(ther)	All other plastics	Bio-based plastics		

Figure H-4.6 Plastic Resin Codes

³ Food Matter: What We Waste and How We Can Expand the Amount of Food We Rescue, Oct 2017, NRDC. <u>https://www.nrdc.org/sites/default/files/food-matters-ib.pdf</u>

⁴ Food Waste, NRDC. <u>https://www.nrdc.org/food-waste</u>

B. <u>Conclusions/Findings</u>

The District's estimated waste composition data reveals that there are opportunities to increase diversion rates for paper and paperboard, organic waste, and plastic waste. The District diverted about 17% of the total residential/commercial waste generated in the reference year. Below the state goal of 25%. The District has adequate resources and infrastructure to reach the stated goal. Because of this, the District could focus on education and advertisement.

Opportunities to explore for this 2024 Plan Update:

The District could highlight education and advertisement to increase their diversion rates. Opportunities include:

- Develop District media presence such as social media posts, flyers, advertisements, or radio to increase knowledge of existing programs, events and locations.
- Enhance and promote District Solid Waste website to include recycling resources and educational material regarding diversion methods, and drop off locations & events.
- Incorporate opportunities for residents to engage and learn about recycling efforts through raffles and games at local community events
- Promote paper reduction by encouraging junk mail reduction through electronic statements.

The District does not have a centralized in-district infrastructure, such as a Class II compost facility or anerobic digester, to divert food waste from the landfill. These types of technologies will require a significant financial investment and programs/strategies to ensure feedstock and market demand for the finished product. Types of strategies the District could utilize to increase food donation and reduce food waste in the 2025 Plan include:

- Education/Outreach Setting goals to 1) change behavior and cultural of citizens to reduce waste 2) educate source reduction practices to appropriate businesses.
 - Consumer in-home messaging campaign The most significant impact on food waste generated within homes will result from consumer behavior change. Change must be affected by increasing consumer awareness and readiness to change baseline behavior related to purchasing, storage and handling, and preparation of food in homes.
 - Increase awareness of food waste and associated costs
 - Provide tips to reduce food waste
 - Promote materials such as USEPA's developed 'Food: Too Good to Waste' toolkit to residents
 - Promote 'imperfect' produce
 - Promote food donation

- School and cafeteria campaign Foodservice managers need data to be able to measure the amount of food they are purchasing and best match that inventory to the food they are serving. Lack of information and data is a core impediment to reduction at foodservice establishments in back of house.
 - One-on-one engagement to share information on food waste tools and tracking systems (like LeanPath 360) that institutions can implement on site to help prevent food waste.
 - Write case studies and highlight local cafeterias implementing success.
 - Explore policies and economic incentives the SWMD can provide to boost food waste reduction in the institutional and commercial sectors (e.g., making grants available for large institutions to install fridges to preserve donated food longer)
- A more active role such as food waste collection, drop-off, or assistance for private development of composting facilities are all activities that could be planned and implemented.

5. Economic Incentive Analysis

Economic incentives aim to encourage and increase participation in recycling programs. Under Goal 6 of the 2020 State Solid Waste Management Plan, the SWMD requires exploring ways to incorporate economic incentives into source reduction and recycling programs. This analysis aims to assess the programs in place and additional programs that may encourage different programs.

A. Evaluation

The SWMD offers economic incentives to influence waste and recycling behavior change. These may include volume-based trash collection programs, grants, rebates, rewards, etc.

Volume-Based Fees:

Volume-based, also called Pay-As-You-Throw (PAYT), is a type of economic incentive program for curbside residents to pay per amount of Municipal Solid Waste (MSW) disposed of per household. Residents are charged on the amount and/or size of waste containers they use for disposal. This program incentivizes residents to decrease their trash consumption and look for more ways to recycle their waste material. This structure is cheaper for recycling than trash disposal. Not only is there an increase in recycling with this program, but it also saves on tipping fees depending on the community. PAYT programs are economically viable and sustainable as well as advantageous for residents as they only pay for what they throw away.

The Village of Carrollton in Carroll County established a volume-based garbage program for its residents in 2000 that includes the curbside collection of recyclable materials. This program currently features an every-other-week curbside collection of recyclable materials that include cardboard, paper, magazines, phone books, glass, cans and plastics.

The curbside program began as a Pay-As-You-Throw ("PAYT") program, wherein residents paid a small, flat quarterly fee and then also required to pay by the bag for their trash. An eighteen (18) gallon open tote was provided for recyclables, which was free of charge. This type of program encourages recycling as a savings to residents. The more they recycle, the less they pay for garbage services.

In 2015, the Carrollton curbside program switched to a 65 gallon cart system for both recyclables and garbage. Garbage is picked up weekly and recycling is picked up every other week. Residents can request the bag system if the cart is too cumbersome; very few utilize this disposal method because it's not publicized.

Rebates:

Consumer behavior is often influenced by rewards, points, or rebates for their purchases. A trend recently becoming popular in the waste industry is rewarding residents for participating in recycling programs in their community. RecycleBank, for example, is a company that promotes recycling by providing a reward system to participants, and other local systems do this. The idea of this program is that people receive points for the amount (tons) of recycling they get collected. These points are redeemable in the form of coupons at participating retail stores.

The District does not offer any rebate programs, but it may be a viable option for future initiatives as incentives play an important role in establishing and maintaining recycling habits.

Market Development:

The District created a Buy Recycled market development program to encourage each County Courthouse to purchase recycled content office paper for their printers and copiers. Each County is responsible for the purchase of the paper. The District reimburses them for the difference between the cost of virgin paper and recycled paper plus an additional \$2.50 per case incentive to purchase recycled paper. Carroll and Columbiana Counties participated in this program in 2021.

B. Conclusions/Findings

The PAYT curbside recycling programs were designed to incentivize diversion by having residents pay for what they throw out. The next step is to examine if restructuring the trash container size and price will increase diversion for participating communities. Additionally, increasing the number of cities with a PAYT fee structure and incorporating an educational program around this program will benefit diversion rates in the District.

6. Restricted and Difficult to Manage Waste Streams 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-line electronic devices. This analysis evaluates the SWMD strategies and considers other materials and programs for hard-to-manage waste.

A. Evaluation

Scrap Tires:

The Ohio EPA estimates that more than 12 million scrap tires are generated annually in the State of Ohio. Unfortunately, when not properly disposed of, these often end up in illegal dumps that create hazards to public health and the environment. In addition, the number of tires and the cost associated with managing them can be challenging to track and properly manage.

The District acquires scrap tire data from collection events. In 2020 and the reference year, the District did not hold any scrap tire collection events due to Covid-19 restrictions. In 2019, the last year of a collection event, the District collected 225.18 tons of scrap tires, averaging 229 tires over four years.





Figure H-6.1 above demonstrates a decline in the historical scrap tires collected. 2018 was the only year that resulted in an increase in tons collected. Since then, every year has seen a decline in tons collected. The data above is representative of collection events by the District, commercial businesses, and industrial businesses. With the downward trend of tonnage, it's suspected that households and farmers may be

Source(s): Annual District Reports 2016 – 2019

holding their scrap tires until the District can host another collection event to avoid the Transfer Facility per tire fees. The gap in recovery data in 2020 or 2021 due to Covid-19 restrictions makes it challenging to track program performance and develop trendlines for analysis.

The District's website does not provide locations accepting scrap tires nor the cost associated with the disposal of each type of tire. The District will provide going forward a list of locations, such as automotive shops, that accept scrap tires within the District.

Yard Waste:

For yard waste analysis, refer to Section 4—Residential/Commercial Waste Composition Analysis.

Batteries

In 2008, regulations prohibiting the disposal of lead-acid batteries became effective. These batteries have a high recyclability value, and Ohio has a retailer take-back law.

To better promote battery recycling, the District will include the list of facilities and businesses that accept batteries and the contact information on their website. The District will also be able to provide information on how to recycle dry-cell batteries on its website. At the time of this report, the District does not include batteries on its website.

Household Hazardous Waste:

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

The SWMD has offered HHW collections annually in all three counties since 2013 as well at the new District facility beginning in 2022. No HHW collection events were held in 2020 or 2021 due to Covid-19 restrictions. Therefore, the highest recovery was in 2019, the District's last event, of 41 tons.

The District does not provide HHW disposal or educational opportunities on its website, however collection events and educational resources are posted on the Facebook page. To better promote HHW recycling, the District will include the list of facilities and businesses that accept HHW year-round aside for their collection events and the contact information on their website. Provided that funds remain available, the District intends to continue sponsoring collection events, and anticipates that the commercial entity which has hosted a collection event will continue to do so as well.

Table H-6.1 was compiled by collecting data from District solid waste management plans and describes basic programs, costs and collected tons for some other type of HHW programs.

District	Service Provided	Total Costs	Households	Cost / Household	Tons	Cost/Tons
Preble	HHW trailer at the Preble County Sanitary Landfill.	\$17,913	41,794	\$0.43	10.2	\$1,756
Greene	Monthly special collection event	\$21,266	162,427	\$0.12	15.6	\$1,363
ССН	Annual collections	\$15,130	58,361	\$0.26	41.41	\$365

Table H-6.1 HHW Benchmark Costs and Tons

Source:

Solid Waste Management District Approved Plans

Preble County's program is available Monday through Friday from 8:30 AM to 4:00 PM, and also from March through November on Saturdays from 8:30 AM to 12:00 PM. Residents can bring a variety of HHW items including oil-based paints, pesticides, household batteries and used oil at no cost. The program does not accept latex paint. Greene County conducts HHW collection events once per month starting at 9:00 AM and concluding in the early afternoon (times vary). Previously, the County only offered the collection events on Saturdays; however, to accommodate more residents, Greene County moved to holding the events alternating between Tuesdays and Saturdays. Materials are collected at the District's campus. Greene County accepts HHW along with scrap metal, appliances with Freon, e-waste, and light bulbs.

The District appears to be notably outperforming the benchmarked Districts in the context of Household Hazardous Waste (HHW) programs. The SWMD demonstrates remarkable cost efficiency in its HHW program. While other Districts in the benchmark spend varying amounts per household, CCH manages to maintain a relatively low cost per household. This indicates a strategic allocation of resources, resulting in cost savings for both the organization and the households it serves. Although the District did not hold collection events in 2020 and the reference year (2021), the District's 2019 collection event tonnage significantly surpasses that of the benchmarked Districts. The Districts exceptional performance in HHW program management can be attributed to its cost-effective approach, robust tonnage collection, community engagement efforts, and accessibility.

Electronics:

Electronics contain hazardous materials that, if improperly disposed of, can pose health and environmental risks. The best way to recycle electronics is by donating if the item still works or recycling items that do not. Any businesses taking electronics from donations or take-back programs should be contacted for their acceptance list.

The District recognizes e-waste is a growing material stream and wants to be of assistance in diverting these materials from the landfill. Therefore, the District hosts an annual electronic collection for televisions, VCRs, computers, and other assorted electronic items in each County, combined with appliance and scrap metal recycling events. The District also collects electronics at the District office every day. 25.26 tons of electronics were recycled in 2021. They receive numerous tube televisions, which are very costly to the District. The major obstacle is cost.

Pharmaceuticals

Pharmaceuticals can cause significant harm if they are not disposed of correctly. Improper disposal can cause pharmaceuticals to leech into the groundwater supply and infiltrate the drinking supply causing substantial health effects. The District recognizes the dangers and provides residents with disposal outlets. All three County Sheriff 's Departments and several City and Village Police Departments have drop-off boxes for pharmaceuticals. Although the SWMD cannot track pharmaceutical weight composition, it is essential to dispose of it properly.

B. Conclusions/ Findings:

There are outlets for several difficult-to-manage waste materials in the District. The Covid-19 pandemic prohibited events and the frequency of events from being held in 2020 and 2021. The District has been able to resume collection events in 2022.

The benefit of utilizing the private sector for managing restricted waste is the private sector can generally provide year-round collection opportunities for residents. In contrast, collection efforts organized by the County are often limited to every-other-year or yearly events. Another benefit to this model is that it frees up District funds to provide more services in other waste management areas, such as the recycling drop-off program. At the same time, there are drawbacks to relying on the private sector. For example, businesses can close quickly, leaving residents without disposal access. Additionally, businesses often charge residents for disposal, which can be a prohibitive barrier for some residents.

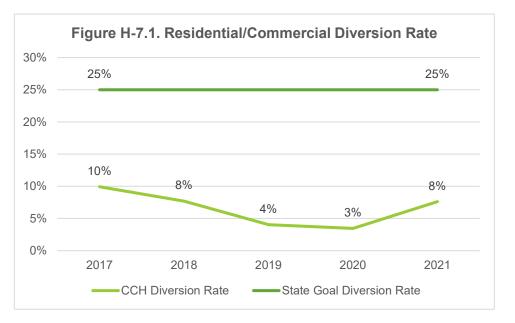
Regardless of the collection approach, households produce hazardous wastes containing chemicals that pose an environmental risk. Informing the public about these dangers and providing outlets for proper disposal or recycling can be a priority. In addition, education on using less-harmful

ingredients and more environmentally friendly products can be increased on the webpage and social media outlets.

The District will work to update the lists of outlets that residents can take restricted or difficult to manage waste to on their Facebook and include this list on their website. By providing more resources and making them accessible to residents, the District can increase diversion rates of these restricted waste streams. The website will also explore, including educational pieces on why it is essential to dispose of these materials. Although a passive strategy, this could help educate and spread awareness of proper recycling and disposal of hard-to-manage waste streams.

7. Diversion Analysis

Waste diversion is the amount of waste recycled, also called diverted, from entering the waste stream through source reduction activities. These include waste minimization, reuse, recycling, and composting. This analysis looks at the diversion programs, infrastructure, and trends to evaluate the District's diversion rate over the planning period and assess any significant impacts that the District has had regarding fluctuations over the years. Finally, this analysis looks at how to assess those impacts better.



A. Evaluation

Figure H-7.1 presents the District's residential/commercial diversion rate over the past five years in comparison to the Ohio EPA's Goal 2 (Note this analysis looks at the unadjusted total where waste was not adjusted for drilling waste). As shown above, the District's residential/diversion is below the Ohio EPA's goal diversion rate. Over the past five years, the average diversion rate was 7%, well below the goal rate.

Overall, the diversion rate has been decreasing over the last five years. However. the District observed а substantial increase in residential/commercial diversion rate in the reference year. The increase in diversion rate in 2021 seems to be most closely linked to the increases in drop-off recycling and collection event tonnages. Both services reported receiving almost 3.000 tons than the previous year in 2020. This can also stem from programs recovering after Covid-19. Also, commercial data results yielded an almost 2,000 increases from the previous year due to one reported business.

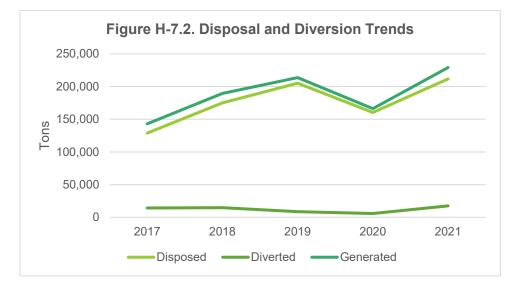


Figure H-7.2 presents the historic amount of waste disposed, diverted, and generated over the past four years. As shown above, the total amount disposed and generated has increased steadily from 2017 through 2021 besides a dip in 2020.

However, the amount diverted took a significant drop in 2019 to 2020 but increased by 11,688 tons in the reference year. This stems from nonreporting program tonnages due to the restrictions of Covid-19. The District was not able to hold any collection events or yard waste collection which led to a significant decrease in reported residential/commercial tons in 2019 and 2020. Now that programs are back up and running, 2021 saw a significant increase in recovery and is on the right path.

The diversion rate is also low due to drilling waste being credited as residential/commercial waste.

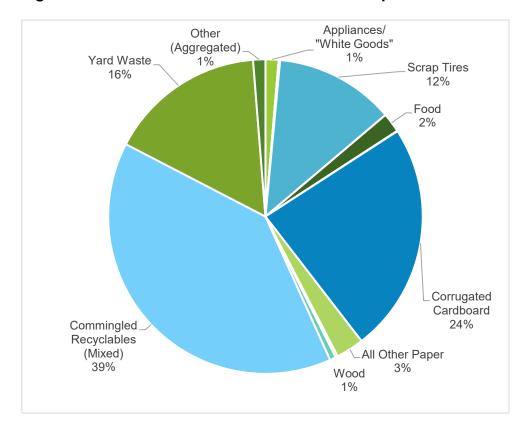


Figure H-7.3 Residential/Commercial Diversion per Material 2021

Figure H-7.3 presents the residential/commercial diversion by material for the District in the reference year. The top three materials diverted were commingled recyclables (39%), corrugated cardboard (24%), and yard waste (16%). The following categories had reported values in the survey results but were too small of a percentage to be shown graphically: Electronics, Lead Acid Batteries, Ferrous Metals, Non-Ferrous Metals, and Plastics. See Appendix E for further information.

The data collection process is very important to help analyze diversion rates for the District. The information above is collected from a variety of sources. The largest sources of information are from the drop-off recycling locations (38%), EPA Commercial Survey (18%), yard waste programs (16%), and Ohio EPA scrap tire data (12%). The Ohio EPA residential/commercial sources reported diverting 5,589 tons of material in the reference year.

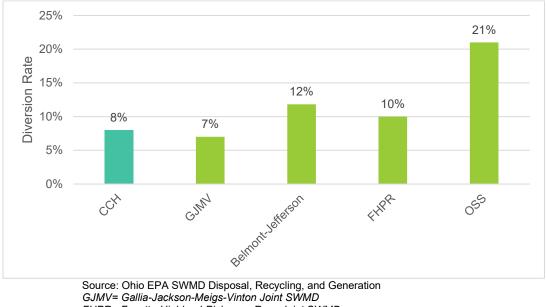


Figure H-7.4 Benchmark Residential/Commercial Diversion Rate

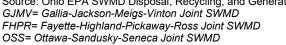


Figure H-7.4 compares the District's residential/commercial diversion rate with that of similar District's diversion rates. (Note this analysis looks at the unadjusted total where waste was not adjusted for drilling waste). The four District's being compared are all similar composition and population size. SWMD unadjusted population in the reference year was 142,478 residents. The four comparison Districts had populations of 131,746 in Belmont-Jefferson, 153,725 in OSS, 208,484 in FHPR and 96,508 in GJMV.

When comparing the five Districts diversion rates, the District had the second to lowest at 8%, just above GJMV at 7%. The average diversion rate among the five districts was 12%. All five Districts are below the State Goal 2 residential/commercial diversion rate of 25%.

Β. **Conclusions/Findings**

The District's total diversion rate took a steep drop from 2019 to 2020 but is slowly increasing from 2021. Despite this, the District still did not reach the 25% diversion rate to meet State Goal 2. The overall waste generation and disposal follows a similar pattern as the diversion rate. There was a steep drop in the overall generation and disposal in 2020. These fluctuations can be attributed to the effects Covid-19 had on businesses and operations during 2019 and 2020.

Moving forward, as the District is recovering from Covid-19, it may look to pursue opportunities to increase waste diversion. Increasing education and outreach is a strong step the District may take. Education efforts on what is recyclable, what programs exist, and where to drop off recyclables will help to increase diversion rate. Increasing outreach and response rate for residential/commercial and industrial surveys would also be successful in improving waste diversion rates.

8. Special Program Needs Analysis

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

Potential allowable uses evaluation: to consider include:

- Cleaning up solid waste and scrap tire dumps (particularly if the SWMD has a large number of open dumps). The District does not have a large number of open dumps.
- Health department support [pursuant to ORC Section 3734.57(G)(3) and (G)(7)]. [NOTE: SWMDs can provide financial support to only those health departments that have been approved by Ohio EPA to enforce the solid waste laws and rules.]
- Enforcement agency support [pursuant to ORC Section 3734.57(G)(7)].
- Financial assistance for counties for the costs of hosting a solid waste facility [pursuant to ORC Section 3734.57(G)(4)]. No host fees are implemented.
- Paying the costs incurred by a board of health for collecting and analyzing samples from public or private water wells on lands adjacent to solid waste facilities [pursuant to ORC Section 3734.57(G)(5)]. The District did not support well testing.
- A program for inspecting solid wastes generated outside of Ohio and disposed of at solid waste facilities located within the SWMD [pursuant to ORC Section 3734.57(G)(6)]. The District did not inspect out-of-state waste.
- Financial assistance to municipal corporations and townships for the costs of hosting a composting, energy or resource recovery, incineration, or recycling facility [pursuant to ORC Section 3734.57(G)(9). The District did not provide financial assistance to municipal corporations and townships for hosting a facility.

A. Evaluation

The District has expressed interest in funding the Columbiana County Health Department to help mitigate illegal dumping and littering activities throughout the County. There has not been any further action, but the program presented below are a potential program which was identified in the previous Plan Update but has not yet been implemented.

The District analyzed another District solid waste management plan and their program including funding for an open dumping and litter enforcement officer. Lawrence-Scioto provides funding for a full-time Environmental Officer to investigate and prosecute environmental crimes such as open dumping and littering. The Environmental Officer is commissioned by the Sheriff in both Lawrence and Scioto counties, which gives the officer full jurisdiction in both counties.

As an employee of the District, the Environmental Officer drives a vehicle that belongs to the District, which is labeled "Solid Waste District Enforcement Officer." The vehicle is equipped with lights and a siren. Lawrence County donated the radio that allows the officer to be in contact with the sheriff departments. The enforcement officer also has handheld radios that allow contact with the District office. If the District receives an environmental complaint, the officer can be notified immediately. Other equipment includes three motion detectors with wireless cameras that allow the officer to download pictures to a laptop, a tape recorder, a handheld evidence camera, binoculars, and a firearm. The enforcement officer usually handles two to three calls a day for enforcement issues. All cases are called in by the public; the officer does not patrol looking for infractions.

After a complaint is made, typically the Environmental Officer will investigate the site. Following the investigation, a citation may be issued. Citations will result in the case going through the Prosecutor's office. Cases are tried in a combination of municipal and common pleas courts. Littering and clean air violations are tried in the municipal court, while open dumping is a felony and is tried in common pleas court. The most common offences are open dumping, such as litter and trash in residential backyards and trash burning. Residents are not mandated to have a trash hauler within the two-county area, which may contribute to the frequency that these issues arise. In most cases, violators are fined and placed into a community service program.

B. Opportunities

The potential program includes:

• Funding the Columbiana County Health Department

Previously the Columbiana County Health Department was exploring hiring a "nuisance officer" through the county commissioners as outlined in Ohio Revised Code Section 3767.32(E), which reads as follows:

"This section may be enforced by any sheriff, deputy sheriff, police officer of a municipal corporation, police constable or officer of a township, or township or joint police district, wildlife officer, park officer, forest officer, preserve officer, conservancy district police officer, **inspector of nuisances of a county**, or any other law enforcement officer within the law enforcement officer's jurisdiction."

This officer would report to the Health Department and investigate illegal dumping and littering activities throughout the County. It was possible that money from the C&DD fund through the County Commissioners may be used to fund part of the salary and fringes of the nuisance officer. The SWMD, under "allowable use #7" and if funding is available, could fund part of the cost of a nuisance officer, especially if that officer helped investigate illegal dumping at the

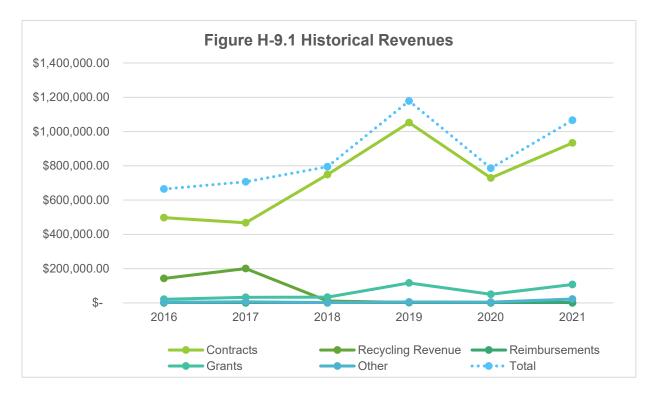
SWMD's thirty plus sites in Columbiana County. The District and County Commissioners agreed this initiative will not be implemented and will not be included throughout the planning period in this Plan.

9. Financial Analysis

This analysis aims to examine the District's current financial position and assess the financial requirements and revenue sources throughout the next planning period. The District is funded mainly through revenue from disposal fees, rates, and charges. Additionally, the District receives some revenue from user fees and reimbursements.

Revenue

In accordance with ORC Section 3734.53(B), the District has set its disposal fees at \$1.00 per ton for waste generated in-district, \$2.00 per ton out-of-district, and \$1.00 out-of-state. However, these "tipping fees," as they are also known, refer to landfills situated within a solid waste district's boundary. This SWMD has no operating landfills within its boundaries and does not have disposal fee revenue.



Historical revenues from 2016 to 2021 are shown in **Figure H-9.1**. Over that time frame, total revenue has fluctuated fairly significantly, averaging \$866,008. In 2019 total revenue increased by 48%, following a 33% decrease the following year. The District received a grant from Ohio EPA in 2019, which can be attributed to this significant increase in 2019 revenue.

Over half of the revenue for the District comes from contracts, as seen in Figure H-9.2. Furthermore, 88% of the District's income depends on designated waste facilities. Grant revenue accounts for 10% of the District 2021 revenue. In 2021, the District received an \$87,500 Ohio EPA Recycling grant (\$70,000 EPA funded, \$17,500 match money). The remaining 2% comes from other revenue sources, such as front-load selling six drop-off containers.

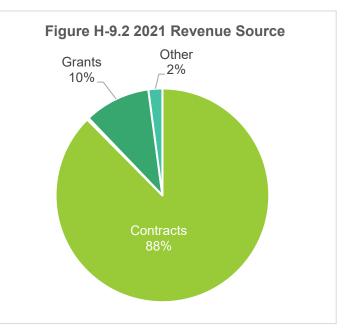


Table H-9	9.1 Actual versus	2019	Plan Pro	ojected Re	evenues

Year	Contract Fees	Recycling Revenue	Grants	Other	Total revenue (\$)
0004 Astual	¢000.450	¢0.405	¢400.000	#00.404	¢4,005,700,70
2021 - Actual	\$933,158	\$3,195	\$106,896	\$22,484	\$1,065,733.70
2021 – 2019					
Plan		Not	Not		
projections	\$494,816	projected	projected	\$31,200	\$526,016
Percent					
Change	89%			-28%	103%

As shown in **Table H-9.1**, the 2021 revenues received were 82% higher than the 2019 Plan projected. This increase is attributed to the rise in contract fees and grants.

Table H-9.2 Benchmarked District Revenues

District	Type of Revenue	Fee	Revenue	Population	Per capita revenue
Ottawa- Sandusky-	Disposal Fees	\$1.50/\$3.00/\$1.50	\$11,830,873	153,725	\$11.90
Seneca	Contract Fees	\$1.50 out-of-district \$0.50 out-of-state			
Carroll- Columbiana- Harrison	Disposal Fees (No LF) Contract Fee	\$1.00/\$2.00/\$1.00 \$3.50	\$1,065,734	142,067	\$7.50
Clark	Disposal Fees (No LF) Generation Fees	\$2.00/\$2.00/\$2.00 \$8.50	\$947,844	135,633	\$7.19
Belmont- Jefferson	Disposal Fees Contract Fee	\$1.00/\$2.00/\$1.00	\$3,160,196	131,746	\$23.99

District	Type of Revenue	Fee	Revenue	Population	Per capita revenue
Wood	Disposal Fees Contract Fee	\$2.00/\$4.00/\$2.00 \$2.00	\$579,660	131,248	\$4.42

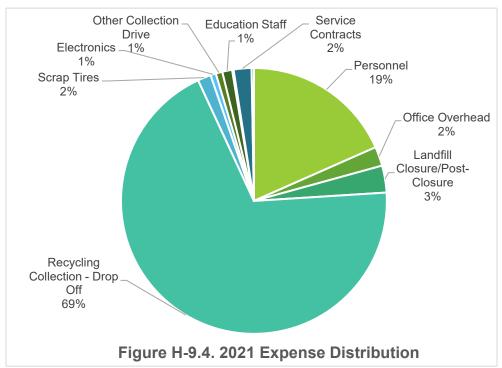
Source: Solid Waste Management District Fee Summary: 2021

Population Source: Solid Waste Management District Disposal, Recycling, and Generation Ohio EPA Report: 2021

Table H-9.2 benchmarks the revenue of similar population-sized districts. The referenced districts' primary funding sources vary between generation, disposal, and contract fees. Belmont-Jefferson, Ottawa-Sandusky-Seneca, and Wood all have District landfills, while Carroll-Columbiana-Harrison and Clark do not. CCH and Clark County have set disposal fees but no landfills. OSS has a diversified revenue stream with set disposal and contract fees for out-of-district and out-of-state facilities, with the highest revenue among districts. This comparison also shows that most regional districts heavily rely on waste disposal in their district landfills.

Compared to similar solid waste management districts, CCH reports the secondhighest population but the third-highest per capita revenue, as seen in Table H-9.2. While Ashtabula has the third highest per capita revenue, most revenues are sourced outside the District through designation fees. For every ton of waste sent to a designated facility, the District receives \$3.50.

Expenses



The District's program expenditures are depicted in **Figure H-9.4** above. The most significant expenses include Recycling Drop-Off (~69%) and Personnel (~19%). Drop-off recycling is a recycling program where residents take recyclables to designated locations and place recyclables in the provided containers. Each bin is separated by material type, where residents sort recycles into various containers.

Landfills, transfer facilities, MRFs, and recycling centers can also be sites for dropoff programs. In 2020, a \$50,000 facility operation (MRF/Recycling Center) was used for the Ohio EPA grant match money which was awarded in 2021. Therefore, there were no facility operation expenses in the reference year.

District historical expenses from 2016 to 2021 are shown in Figure H-9.5 Over time frame, that expenses averaged \$162,083.38. However. in 2016. 2018. and 2021 expenses dropped below the historical average expenditures.

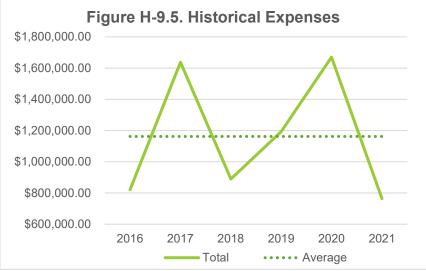


Table H-9.3 Benchmarked District Expenses

			Per Capita
District	Population	Expenses	Expenditure
Ottawa-Sandusky-Seneca	153,725	\$1,650,505	\$10.74
Carroll-Columbiana-Harrison	142,067	\$763,859	\$5.38
Clark	135,633	\$843,528	\$6.22
Belmont-Jefferson	131,746	\$2,333,769	\$17.71
Wood	131,248	\$536,504	\$4.09

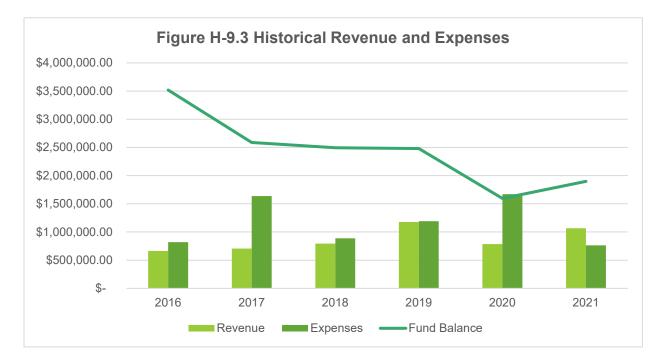
Revenue Source: Solid Waste Management District Fee Summary: 2021

Population Source: 2021 SWMD Disposal, Recycling, and Generation Ohio EPA report

A comparison of neighboring SWMD program expenses is shown in **Table H-9.3**. The District is below the average spend of \$8.83 per person at \$5.38 per person. Belmont-Jefferson Joint County has the highest per capita spending at \$17.71 per person, while Wood County has the lowest at \$4.09 per person.

Year	Total Expenses
2021 - Actual	\$763,859
2021 – 2019 Plan projections	\$812,777
Percent Change	-6%

The District's 2019 Plan projected expenditures at \$812,777 expenses. As shown in **Table H-9.4**, the actual expenses were 6% less than forecasted in the 2019 Plan.



District revenue shown in **Figure H-9.3** increased steadily from 2016, reaching a peak in 2019, and is rebounding from the Covid-19 effects in 2020. However, district expenses increased dramatically in 2017 and hit a high in 2020 due to expanded drop-off programs and service contract expenses.

10. Regional Analysis

A. Evaluation

Waste Impacts

The District has 7 landfills and 2 transfer facilities within a 75-mile radius of the center of the Carroll-Columbiana-Harrison Joint Solid Waste District. Within Carroll County, there is a single transfer station, Kimble Transfer & Recycling – Carrollton Transfer Facility. The District used all 7 landfills within the radius in the reference year. The Apex Landfill is where most of the waste generated is landfilled, receiving 52% of the waste. Carbon Limestone and Kimble Sanitary Landfill received 20% and 14% respectively.

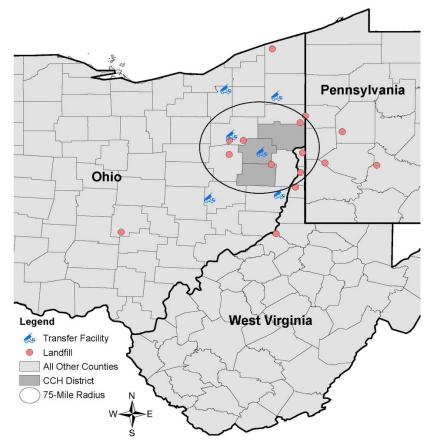


Figure H-10.1 Regional Disposal Facilities

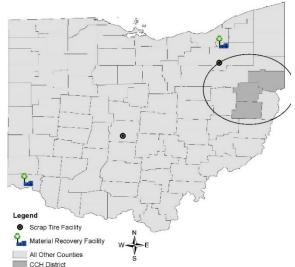
Apex Landfill, Carbon Limestone Landfill and Kimble Sanitary Landfill collectively receive 87% of the total waste generated by the District. They are located in Jefferson, Mahoning, and Tuscarawas Counties Respectively.

Diversion Impacts

The District used 1 scrap tire facility located within a 75-mile radius of the center of the CCH Solid Waste Management District. Lack of material recovery processing facilities is a challenge for the District's waste management system and diversion goals. No material recovery facilities (MRF) or compost facilities were used within 75 miles in the reference year.

There is no licensed Class |, || or ||| compost facilities in the District or near the District. Collection of

Figure H-10.2 Regional Recovery Facilities



organic waste is integral to any composting system and economics is generally more than twice the processing cost on a per ton basis.

Scrap tire processing is located a greater transport distance, one is located just in the 75 miles radius. This may limit transport or impact costs of this material. The District should continue to hold annual scrap tire collection events to increase scrap tire diversion.

B. Conclusions/Findings

The region has adequate capacity and infrastructure for managing trash but lacks diversion infrastructure. Regionally, available recycling infrastructure is dominated by Kimble, operating in Northeast and Southeast Ohio's population. As one of the most rural solid waste management districts in the region, the SWMD may lack leverage for recycling contracts and hauling that larger districts have.

The transfer facility is a necessary element in the District's waste management system because of the distance to available municipal solid waste landfills. These benefits include support for many ancillary recycling programs and the implementation of the solid waste plan.

Organics collection economics is prohibitive for expanding diversion of organic materials. The District could look to focus on additional reduction strategies for managing this waste stream.

11. Data Collection Analysis

The State of Ohio classifies solid waste by three generation sectors: residential, commercial, and industrial. Solid waste districts are required to quantify the amount of solid waste that all generators reduce, recycle, compost, incinerate, and dispose in order to establish a baseline and to demonstrate achieving Ohio's landfill diversion goals. Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Regardless, the primary objective of the District is to divert materials from landfills, therefore data collection is important to measure results. The data collection process from beginning to end for each type of generator is described below.

The District was not able to demonstrate achieving Goal #2 of the State Plan, which requires a waste reduction and recycling rate of at least 25% for residential/commercial waste. In the reference year, the District's residential/commercial sector achieved a waste reduction and recycling rate of 17%. The District did not survey in the reference year; therefore data analyzation is omitted.

12. Education/Outreach Analysis

The 2009 State Plan goals restructured the education and awareness goals with the intention of creating minimum standards for outreach programming but still allow for flexibility for localized outreach and education. The 2009 State Plan refocused the general "awareness" of recycling to changing behavior through outreach. This was maintained in the 2020 State Plan.

The following analysis evaluates the District's existing education, outreach, and technical assistance efforts to determine:

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

A. Minimum Education Requirements - Evaluation

In accordance with Goal 3 of the 2020 State Plan, each District is required to provide four minimum education programs: website, comprehensive resource guide, infrastructure inventory and speaker/presenter.

Website

The District maintains a website at <u>https://carrollcountyohio.us/agencies-and-departments/cch-solid-waste-district/</u>. District solid waste and recycling webpages tout a simple, attractive format. Although there is a lack of solid waste, easy to follow links and educational content for residents, the webpage does follow best practices for the minimal text and images.

The website is managed by Carroll County, but the District has direct access to post or change information on the webpage. The website is a resource which provides much of the information that residents and educational institutions would seek. The homepage is key to user navigation and has the ability to be updated regularly to reflect recycling services, seasonal program info, and simple opportunities.

At the time of writing this plan, the webpage provides SWMD contact information, three district staff information, board of directors, and a link to the SWMD's Facebook page. The reason for this is that The District experienced security issues compromising the webpage in 2020. After pulling in the county support team the decision was made to shut down the site. To get back online, the website hosting and thus security would be handled by Carroll County Commissioners web team. The District's webpage data and design were not recoverable. Switching webpage hosts requires a new page and development time and effort.

Best practices for websites include organizing the most frequent pages to the top navigation, ease of navigation, District branding, and user and mobile friendly. Best practice content reaches all target audiences including households, businesses, schools and institutions, industries, and government officials. Resources may include lists and location maps of drop-off and curbside programs with the materials accepted, waste reduction tips, outlets for hard to recycle materials, etc.

Developing an informative and interactive SWMD website targeting all audiences (residents, businesses, industries, and elected officials) is beneficial. The District serves three counties so the best practice would be to have the District represented on all three county pages. The District is a resource for households and businesses, with limited information found on the county sites it is difficult to tell programs, services, and benefits.

During the pandemic, social media, especially Facebook, played a crucial role in connecting with the community. It facilitated easy connections and information sharing for individuals and allowed businesses to engage with existing and new followers efficiently, all at a cost-effective rate. Although Facebook page is a helpful platform for up-to-date information, it is not a webpage and should not be used as webpage. Facebook is a two-way communication tool to interact with users. Static information will get lost on Facebook.

Opportunities:

• Investigate the utilization of software tools like ReCollect Systems, enabling the District to monitor user behavior, such as visitor analytics, frequently searched materials, and visited pages.

- Develop an inventory of infrastructure including drop-off locations, special events, hard to recycle outlets, District programs, and educational offerings. Compile a catalog of restricted or hard-to-recycle outlets.
- Establish a web-page identity where residents and businesses can find information; transforming the website into a dynamic resource as the primary destination for recycling and reuse information among residents and businesses.
- Create a comprehensive Frequently Asked Questions (FAQ) section based on frequent user queries, accompanied by detailed answers.

Website Best Practices to Consider:

- 1. Residents: Offer residential recycling education and outreach, covering diversion methods, curbside and drop-off recycling information (including images of acceptable materials and locations in all three counties), details on upcoming collection and educational events, guidance on illegal dumping and handling hard-to-recycle materials. Include a District Recycling Programs subtab to allow residents to stay up to date on programs and a Waste Reduction Guide encompassing composting, food waste, and District-specific composting programs.
- 2. Businesses: Extend recycling education and outreach opportunities tailored for businesses, including promotion of Ohio EPA's Material Marketplace and information on the District waste audits and assessments program.
- 3. Schools: Extend recycling education and outreach opportunities tailored for businesses, including promotion of school recycling programs.
- 4. Industries: Provide industrial education and outreach, featuring guidance on proper disposal of hard-to-recycle materials and a list of facilities capable of processing industrial waste streams. Promote the Industrial Education, Outreach, and Technical Assistance program, and include links to relevant state and federal programs like Ohio Materials Marketplace and WasteWise for supplemental industrial recycling education.
- 5. Disposal: Compile a list of waste haulers operating within the District, enabling residents to easily access trash and recycling services.
- 6. District Information: Present details concerning the Carroll County, Columbiana County, and Harrison County Districts, including their respective locations, contact details, and information pertaining to the District Solid Waste Management Plan.

The District has the potential to transform its website into a valuable tool that, in conjunction with the Facebook page, will expand its outreach to a wider audience. By having each County's website link to the District's website, the District will enhance its visibility. Currently, Columbiana County's website lacks a

link to the District's webpage, and although Harrison County does have a link, it requires several clicks to locate and is not regularly maintained or up to date.

Comprehensive Resource Guide

As required by the 2020 State Plan, the resource guide is meant to be an inventory of reduction and recycling outlets for specific materials. The intent of the guide is to refer residents and businesses to management options for specific materials. At the time of writing this Plan, the SWMD website does not have an inventory of reduction and recycling outlets for specific materials. The District will develop a website that will maintain promotional material for collection events and a website containing the most up-to-date information on District programs.

Opportunities:

- Include information for businesses and households to find outlets for recycling materials. Include list of resources and links to outside information as well as contacts and facilities.
- Implement a "drop off flyer" that includes a list of the drop off sites and the materials that are accepted. It may also be helpful to include a map on the homepage of all the drop off locations to see sites in close proximity to residents.
- Consider adding videos of correct recycling habits for supplemental material to educate residents on common recycling misconceptions.
- Consider including links to the Ohio EPA's solid waste management site for additional information.
- Include a District Recycling Programs tab on the SWMD website to allow residents to stay up to date on programs and collection events.

Infrastructure Inventory

The inventory of solid waste management infrastructure is located in the District's plan update and is updated every five years.

Opportunities:

- Include the District's drop-off recycling locations and curbside recycling information on the SWMD website.
- Include the District SWMP on the webpage.

Speaker and Presentations

The SWMD employs a community outreach specialist who provides educational presentations, as well as assisting businesses with waste assessments and audits.

Opportunities:

- Look to outsource a third party to assist with education and outreach.
- Hosting webinars regarding composting, recycling, sustainability, and have a "Ask the Recycler" to help cover some general recycling questions.

A trivia night over general recycling questions is a great way to introduce recycling to the general public and offering a free giveaway for the most questions answered will help bring people in.

B. Goal 4 Outreach and Education - Evaluation

In accordance with Goal 4 of the State Plan, the District is required to provide education, outreach, marketing, and technical assistance to identified target audiences.

All types of behavior change initiatives, even mass-media based campaigns, can successfully employ the tools of social marketing, which include social norms, goals/commitments, feedback, prompts, and one-on-one interactions. The District offers the following outreach and education strategies:

- Waste assessments and waste audits (source reduction and recycling awareness program) for commercial businesses
- Community education efforts for correct use of recycling drop off bins with new signage and frequent postings on SWMD Facebook page
- NASA educational program for teachers
- Work with concessionaires and vendors to encourage recycling at the Carroll County Fair, Atwood Fall Festival and Alive Festival
- Technical assistance on hard to manage and organic wastes
- Township and municipality illegal dumping and community clean-ups

The District uses various forms of outreach and education to teach and inform residents how to properly manage and divert waste. Programs are crucial for measuring and ensuring recycling programs are effective. Inadequate outreach and education will lead to improper use, or lack thereof, of District funded programs and initiatives designed to reduce waste. The District's primary source of educational material is on their Facebook page connected to the SWMD's website.

Target audience – Residential Sector

The District has several programs targeted towards this audience sector. The below activities are all from the reference year (2021).

- Hard-to-Recycle continue to manage a variety of activities regarding HHW, electronics, scrap tires, appliances, yard waste, lead acid batteries, bulky items, and pharmaceuticals such as hosting events and taking phone calls about hard to recycle items. It would be helpful to include a list of locations that accept these materials on the Districts website.
- Public awareness continue to use a variety of methods to reach residents including the use of the SWMD's Facebook page to keep residents informed on collection events, recycling drop off updates, etc.

• Environmental Events Program - continue interacting with the community through special events. The District usually attends multiple events every year to provide recycling and education to concessionaires and vendors such as the Carroll County Fair, Atwood Fall Festival and Alive Festival

Current education for this target audience provides a general awareness for the various types of services in the District. To better reach the target audience, the District should consider implementing recycling and disposal educational material on the District's website. Keeping the website up to date with drop off locations and materials accepted, and locations for hard-to-recycle items. Also, including a FAQ on the Districts website is a helpful tool for residents that have recycling and disposal questions. Making the information easily accessible and digestible for residents is essential.

In person engagements are designed to promote best practices in managing waste for residents and to inform residents of common misconceptions, mistakes, and solutions. It's important to stay connected and engaged with the public, and as mentioned above the District works with large venue recycling. The District could focus on expanding their participation in different educational activities. Tracking the number of engagements and participation count at each are great practices for measurement.

The District could benefit by one simple unified message for recovery such as was used in Cuyahoga County with the "Recycle More, Recycle Better" campaign. To expand beyond general awareness the District should consider implementing community based social marketing approaches in the outreach to the residential sector. Behavior change tactics include norm appeals, obtaining commitments, and prompts. The District's education programs lack these type of tactics.

Target Audience: Commercial sector

Commercial sector entities are defined as commercial businesses, multifamily facilities, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals and non-profit organizations that receive dumpster or compactor service for garbage.

• Waste assessments, audits and recycling assistance is provided by the District upon request for commercial businesses. The SWMD has a Waste Reduction Guide and put together a business packet to assist businesses with their programs. Five commercial businesses and 11 youth camps participated in this program in 2021.

The District gives recycling opportunities and assistance for commercial business. Providing a toolkit link for commercial recycling on the Districts website would be beneficial for commercial business looking to improve their program and diversion. Additionally, adding the Ohio's Material Marketplace to the

Districts website for businesses to supplement their practices and understanding would be beneficial.

Target Audience: Industrial Sector

• Waste assessments, audits and recycling assistance is offered by the District for industrial businesses upon request. The SWMD has not successfully worked with any industrial businesses since the start of the program.

Industries did not report any recovery in 2021. In the 2020 State Plan, it does not require Districts to survey businesses.

Despite the nonreporting industrial businesses, the District will add Ohio EPA's Materials Marketplace to the District's website for industries looking for reuse and recycling solutions.

Target Audience: Schools

 The District provides paper containers for the following schools districts: Carroll Hills School, Carrollton High School, Columbiana Elementary, Columbiana Jr/SR High School, Conotton Valley, Crestview schools, Harrison Central Cadiz, Leetonia School, Lisbon Jr/Sr Highschool, Lisbon McKinley, Malvern Schools, Salem Elm Buckeye, Salem High School, Salem – Reilly Elementary School, Salem Southeast, Southern Local, and United Local Schools.

The SWMD's program can be enhanced to educate school-age children, to inform, encourage and excite them to make lifestyle changes that they will implement as adults, to outreach to administrators to implement on-site school recycling programs, to provide recognition, and to support through grants if needed. There are many opportunities to incorporate behavior change tactics in schools. The District could work with administrators to implement and change recycling programs. Training a recycling ambassador for each school building will build a bridge for school programs both direct participation as well as school-aged education sessions. The Districts Transfer Facility provides an opportunity for field trips for students to see first-hand waste management and the importance of diversion.

Introducing national recycling pledges and events such as America Recycles Day and the seasonal EcoChallenge event can be beneficial for students. America Recycles day is a nationally recognized day dedicated to promoting recycling programs. KAB's "Take the Pledge" is a commitment to recycle more. The District can hold pledge drives where teachers and students are asked to make a pledge and then commit to that pledge.

The America Recycles Day and EcoChallenge pledges incorporates social marketing principles of commitments and behavior change. The focus is on

getting the audience to perform an action. Take home cards or in-home prompts to recycle in the form of pledge cards to start recycling at home. Offering an incentive to the pledge with the opportunity to win a prize can encourage commitment and engagement for students and teachers and the opportunity to educate their peers.

13. Recyclable Material Processing Capacity Analysis

The purpose of this analysis is to evaluate existing capacity for processing recovered materials. The analysis evaluates material recovery facilities (MRFs) in the SWMD and surrounding areas. A MRF is a specialized facility that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers. In 2021, the District sent recyclables to Kimble – Carrollton Transfer Facility. The SWMD services the drop-off recycling sites and contracts with two different facilities to process the material. The recyclables from Carroll and Harrison Counties are taken to Kimble's Carrollton transfer facility, off-loaded into a semi-trailer and hauled to the Twinsburg facility for processing. The materials from our Columbiana County drop-off recycling sites and taken directly to Ohio Valley Waste Services in Youngstown. That material will be transported by Ohio Valley to their MRF in Pennsylvania.

Any of the following facilities could be used for processing the District's materials:

Name	County
Kimble - Carrollton	Carroll
Kimble - Twinsburg	Summit
Girard – Ohio Valley	Trumbull
Rumpke Center City Recycling	Hamilton

APPENDIX I

CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

APPENDIX I. Conclusions, Priorities, and Program Descriptions

The District's 2018 Plan was developed to meet the State of Ohio 2009 State Plan goals. To fulfill the directives in Ohio Revised Code Section 3734.50, the SWMD's Plan must demonstrate having strategies and programs in place to address all the required goals. This 2024 Plan is prepared to meet compliance with the State of Ohio's 2020 State Plan. In accordance with the 2020 State Solid Waste Management Plan, a SWMD must prepare a solid waste management plan that ensures the SWMD makes progress toward achieving the following ten 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.

A. Actions and Priorities

1. Actions

Appendix H evaluates the SWMDS'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.

The Policy Committee feels that the SWMD does a good job of providing recycling and waste reduction services to the public with the current infrastructure and resources available. Prior to 2017, the SWMD had a \$3 million fund balance, due to oil and gas industry drilling muds that were landfilled from 2012 to 2015. Program investments to build a new District office with drive thru special collection capacity and collection equipment drew down this balance to \$1.5 million at the end of 2020.

It is the desire of the Policy Committee to continue to provide the current programs established by the SWMD, but also to provide additional services and/or improve upon current programs and services and sustain them throughout the planning period. Providing the high-level of services is a balance based on revenues received. Dropoff recycling costs continue to rise. The additional revenue from oil and gas drilling wastes is unknown. As shown in Appendix O, the SWMD's annual expenses are exceeding annual revenue which is demonstrating drawing the reserve fund down at a rate where the District will need to increase designation fees after the fifth planning year. The actions the Policy Committee wishes to take and the priority for which they can be provided are in conflict because of funding. To implement all of the actions and priorities, the budget may not be able to sustain all programs through 2039.

The suggested areas of improvement do not bind the SWMD to commit to every action listed. SWMD program decisions during the planning period require valuable input and are depicted in Appendix H. To draw conclusions, the policy committee used the program evaluations detailed in Appendix H. These conclusions represent the understanding of the Districts structure, strengths and weaknesses, operations, existing programs, outstanding needs, and available resources. See Appendix H for actions that could be implemented.

2. Priorities

Program	Descriptions
Curbside	Continue to provide technical assistance to expand curbside programs in all three counties.
Drop-off	Continue collection service, monitor sites, evaluate the operations of the sites and upgrade equipment as needed to

Program	Descriptions
	maintain collection services. Cardboard Recycling and Breakdown Outreach Campaign (Outreach Priority)
Education	Focus on website as a resource. Utilize a third-party education program resource.
Industrial	Provide recycling education on SWMD website for businesses (EPA Ohio Materials Marketplace)
Commercial/Institutional	Education, outreach, and technical assistance to this sector to increase recycling rate. Develop list for type size, and outreach, work with businesses to barriers to recycling and how recycling can be implemented.
Restricted/Hard to Recycle Waste Stream	Evaluate to provide a high level of service at an economical cost for service. May include appointment, seasonal blocks of open hours, etc. Consider a Backyard Compost Initiative.
Facilities	The Recycling Center was built with the multi-purpose use for consolidation and compaction of recyclables before being transferred. Continue to monitor processing and assess need to expand operations.

B. Program Descriptions

Residential Recycling Infrastructure

Non-Subscription Curbside Recycling

ID	Name	Start Date	End Date	Goal
NSC1	Village of Carrollton	Ongoing	Ongoing	1 and 2

In 2015, the City of East Liverpool discontinued their non-subscription curbside program. The City is continuing to explore adding curbside recycling at some point.

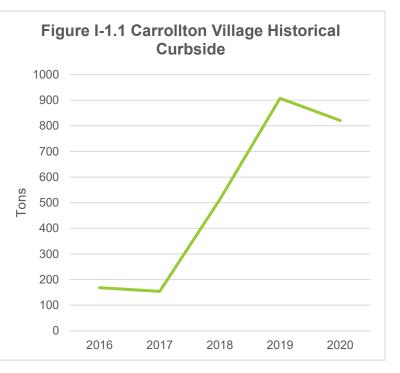
The Village of Carrollton in Carroll County established a volume-based garbage program for its residents in 2000, including the curbside collection of recyclable materials. In the reference year, a curbside collection of recyclable materials was picked up weekly, including cardboard, paper, magazines, phone books, glass, cans, and plastics. Since the program's inception, these services were provided through a contract with Kimble Companies.

The curbside program began as a Pay-As-You-Throw ("PAYT") program, wherein residents paid a small, flat quarterly fee and were then required to pay by the bag for their trash. Initially, residents were provided with one eighteen (18) gallon open tote for

recyclables, free of charge. From 2000 through 2015, this was a Pay-As-You-Throw ("PAYT") program. In 2015, Kimble switched to the cart system, and now only seniors can still purchase the bags on the PAYT program. Carrollton's curbside program switched to a 65-gallon cart system for recyclables and garbage. Garbage is picked up weekly, and recycling is picked up every other week.

Figure I-1.1 shows the history of commingle curbside recycling recovery for Carrollton Village. Tonnages were not reported in the reference year. As shown, recovery took a sharp increase from 2017 to 2019, where it fell in 2020 due to Covid-19. The programs are recovering, but it's hard to tell with no data for 2021.

Target for Next 5 Years: Continue through planning period.



Subscription Curbside Recycling

ID	Name	Start Date	End Date	Goal
SC1	City of Salem	Unknown	Ongoing	1 and 2
SC2	Village of East Palestine	2013	2019	1 and 2

The City of Salem had six haulers offering curbside recycling services but did not openly advertise or communicate the service. The only hauler offering curbside recycling service is Ohio Valley Waste. There is an ordinance that curbside recycling must be offered by the six haulers in the City.

The Village of East Palestine also discontinued curbside recycling services to consumers. The Village of East Palestine was working with a hauler that was providing curbside service at no charge. The hauler was taking material to JaSar. Unfortunately, this arrangement ended, and the subscription service is no longer available. In the reference year, the District had no subscription recycling programs. Therefore, historical collection data is not available.

In 2022, subscription curbside service expanded to all of Columbiana County households. Ohio Valley Waste offers the service. The District promotes the service on Facebook encouraging households to subscribe.

Target for the Next 5 Years: Increase subscription services throughout the three counties. Schedule meetings with the City of Salem and the Village of East Palestine to evaluate curbside service with their waste contracts.

Drop-offs

The total drop-off program collected 6,618 tons of material from recycling in 2021. The SWMD Drop-Off Recycling Program has been in place since 1994. The District offers 60 drop-off locations, with the exception of the schools and government and commercial organizations discussed later in this Appendix. Drop-offs are not as convenient as curbside but it is a collection offering providing opportunity where curbside is either not available or more costly for households. The drop-off sites listed are all sites available in the reference year.

The SWMD advertises the drop-off locations in newspapers, flyers, brochures, SWMD Facebook, and through presentations by the Districts' outreach coordinator. The materials collected at all SWMD sites include aluminum cans, bimetal cans, mixed paper, cardboard, plastics #1 and #2, and brown, clear, and green glass bottles and jars.

Historically, the District contracted services for the residential curbside and drop-off programs through Kimble Companies. As of August 1, 2017, the SWMD began servicing all drop-off recycling sites. The District operates and services the drop-off containers with 3 front loading trucks, two full-time drivers, and one part-time driver.

The District drop-off sites have experienced high contamination issues in the past five years. In 2016, the District launched a new campaign to eliminate illegal dumping at the recycling sites. New signs were placed at all drop-off sites. Five cameras were purchased with solar battery packs to catch illegal dumpers. In the reference year, the District still had contamination issues and has investigated changing signs on the bins to try to help this. The SWMD has been in contact with STW Solid Waste District, and they said their new signage had helped tremendously, so the District anticipates doing the same.

The District rolled out the new signage with the help of an Ohio EPA grant. As the District evaluated the signage and best use, the decision was made to source-separate the recyclables into separate drop-off containers for those sites with at least five containers. The new signs helped curb contamination.

ID #	Name	Start Date	End Date	Goal
FTU-1	Unity Township - New Waterford Village	Ongoing	Ongoing	1 and 2
FTU-2	Unity Township - JDS Landscaping	Ongoing	Ongoing	1 and 2

Full-Time, Urban Drop-Offs

ID #	Name	Start Date	End Date	Goal
FTU-3	Unity Township - JDS Landscaping	Ongoing	Ongoing	1 and 2
FTU-4	Unity Township - East Palestine Village	Ongoing	Ongoing	1 and 2
FTU-5	Center Township - Lisbon Village	Ongoing	Ongoing	1 and 2
FTU-6	East Liverpool	Ongoing	Ongoing	1 and 2
FTU-7	Fairfield Township - Columbiana City	Ongoing	Ongoing	1 and 2
FTU-8	Fairfield Township	Ongoing	Ongoing	1 and 2
FTU-9	Perry Township - Habitat Restore	Ongoing	Ongoing	1 and 2
FTU-10	Perry Township - Salem City	Ongoing	Ongoing	1 and 2
FTU-11	Salem Township - Leetonia Village	Ongoing	Ongoing	1 and 2
FTU-12	Salem Township - KSU	Ongoing	Ongoing	1 and 2
FTU-13	St. Clair Township	Ongoing	Ongoing	1 and 2
FTU-14	St. Clair Township - Calcutta	Ongoing	Ongoing	1 and 2
FTU-15	Fairfield Township - Columbiana City	Ongoing	Ongoing	1 and 2

Source: 2021 CCH ADR

In the reference year, the above 15 full-time urban drop-off sites were serviced by the SWMD.

Target for Next 5 Years: Continue District collection service and monitor sites for contamination. Evaluate the operations of the sites and upgrade equipment as needed to maintain collection services.

Part-Time, Urban Drop-offs

ID #	Name	Start Date	End Date	Goal
PTU-1	Perry Township - First Presbyterian Church	Ongoing Changed to part-time in 2020	Ongoing	1 and 2

Source: 2021 CCH ADR

In the reference year, one part-time urban drop-off site was serviced by the SWMD. This site switched to part-time in 2020.

Target for Next 5 Years: Continue District collection service and monitor sites for contamination.

Full-Time, Rural Drop-offs

ID #	Name	Start Date	End Date	Goal
FTR-1	Augusta Township, Augusta	Ongoing	Ongoing	1 and 2
FTR-2	Center Township: Carrolton Village	Ongoing	Ongoing	1 and 2
FTR-3	Fox Township - Mechanicstown	Ongoing	Ongoing	1 and 2
FTR-4	Harrison Township - New Harrisburg	Ongoing	Ongoing	1 and 2

FTR-6LoudeFTR-7MonrFTR-8OrangFTR-9OrangFTR-10PerryFTR-11BrowFTR-12BrowFTR-13MiddlFTR-14WayrFTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-23YellovFTR-24WashFTR-25Wash	Name iownship - Harlem Springs on Township - Kilgore oe Township - Dellroy Village ge Township - Dellroy Village ge Township - Leesville Village ge Township - Sherrodsville Village Township - Perrysville n Township - Lake Mohawk n Township - Malvern Village eton Township - Rogers Village eton Township - JT Pitt Stop Township uin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Start Date Ongoing Ongoing	End Date Ongoing Ongoing Ongoing Ongoing Ongoing 2021 Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	Goal 1 and 2 1
FTR-6 Loud FTR-7 Monr FTR-8 Orang FTR-9 Orang FTR-10 Perry FTR-11 Brow FTR-12 Brow FTR-13 Middl FTR-14 Wayr FTR-15 Butle FTR-16 Frank FTR-17 Hano FTR-18 Hano FTR-20 Madis FTR-21 Middl FTR-20 Madis FTR-21 Middl FTR-22 Middl FTR-23 Yellov FTR-24 Wash FTR-25 Wash	on Township - Kilgore De Township - Dellroy Village ge Township - Leesville Village ge Township - Sherrodsville Village Township - Perrysville In Township - Lake Mohawk In Township - Lake Mohawk In Township - Malvern Village eton Township - Malvern Village eton Township - Rogers Village e Township - JT Pitt Stop Township In Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing	Ongoing Ongoing Ongoing Ongoing Ongoing 2021 Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2
FTR-7 Monr FTR-8 Orang FTR-9 Orang FTR-10 Perry FTR-11 Brow FTR-12 Brow FTR-13 Middl FTR-14 Wayr FTR-15 Butle FTR-16 Frank FTR-17 Hano FTR-18 Hano FTR-20 Madia FTR-21 Middl FTR-22 Middl FTR-23 Yellow FTR-24 Wash FTR-25 Wash	be Township - Dellroy Village ge Township - Leesville Village ge Township - Sherrodsville Village Township - Perrysville n Township - Lake Mohawk n Township - Lake Mohawk n Township - Malvern Village eton Township - Malvern Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing	Ongoing Ongoing Ongoing 2021 Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2
FTR-8OrangeFTR-9OrangeFTR-10PerryFTR-11BrowFTR-12BrowFTR-13MiddlFTR-14WayrFTR-15ButleFTR-16FrankeFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadiaFTR-21MiddlFTR-23YellovFTR-24WasheFTR-25Washe	ge Township - Leesville Village ge Township - Sherrodsville Village Township - Perrysville n Township - Lake Mohawk n Township - Malvern Village eton Township - Malvern Village eton Township - Rogers Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing	Ongoing Ongoing Ongoing 2021 Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2
FTR-9OranFTR-10PerryFTR-11BrowFTR-12BrowFTR-13MiddlFTR-14WayrFTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	ge Township - Sherrodsville Village Township - Perrysville n Township - Lake Mohawk n Township - Malvern Village eton Township - Rogers Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing	Ongoing Ongoing 2021 Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2
FTR-10 Perry FTR-11 Brow FTR-12 Brow FTR-13 Middl FTR-14 Wayr FTR-15 Butle FTR-16 Frank FTR-17 Hano FTR-18 Hano FTR-20 Madia FTR-21 Middl FTR-22 Middl FTR-23 Yellov FTR-24 Wash FTR-25 Wash	Township - Perrysville n Township - Lake Mohawk n Township - Malvern Village eton Township - Rogers Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	Ongoing 2021 Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2
FTR-11BrowFTR-12BrowFTR-13MiddlFTR-14WayrFTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-23YellorFTR-24WashFTR-25Wash	n Township - Lake Mohawk n Township - Malvern Village eton Township - Rogers Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	2021 Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2 1 and 2 1 and 2 1 and 2 1 and 2 1 and 2
FTR-12BrowFTR-13MiddlFTR-14WayrFTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadiaFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	n Township - Malvern Village eton Township - Rogers Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	Ongoing Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2 1 and 2 1 and 2 1 and 2
FTR-13MiddlFTR-14WayrFTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	eton Township - Rogers Village e Township - JT Pitt Stop Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing Ongoing Ongoing Ongoing	Ongoing Ongoing Ongoing Ongoing	1 and 2 1 and 2 1 and 2 1 and 2
FTR-14WayrFTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	e Township - JT Pitt Stop ⁻ Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing Ongoing Ongoing Ongoing	Ongoing Ongoing Ongoing	1 and 2 1 and 2 1 and 2
FTR-15ButleFTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadiaFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	Township lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing Ongoing	Ongoing Ongoing	1 and 2 1 and 2
FTR-16FrankFTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	lin Township - Summitville Village ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing Ongoing	Ongoing	1 and 2
FTR-17HanoFTR-18HanoFTR-19KnoxFTR-20MadiaFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	ver Township - Guildford Lake ver Township - Hanoverton Village	Ongoing	ŭ ŭ	
FTR-18HanoFTR-19KnoxFTR-20MadisFTR-21MiddlFTR-22MiddlFTR-23YellorFTR-24WashFTR-25Wash	ver Township - Hanoverton Village		Ongoing	
FTR-19KnoxFTR-20MadisFTR-21MiddlFTR-22MiddlFTR-23YellorFTR-24WashFTR-25Wash	· · · · ·	Ongoing		1 and 2
FTR-20MadiaFTR-21MiddlFTR-22MiddlFTR-23YellovFTR-24WashFTR-25Wash	Townshin		Ongoing	1 and 2
FTR-21MiddlFTR-22MiddlFTR-23YellowFTR-24WashFTR-25Wash	Township	Ongoing	Ongoing	1 and 2
FTR-22MiddlFTR-23YellowFTR-24WashFTR-25Wash	son Township	Ongoing	Ongoing	1 and 2
FTR-23YellowFTR-24WashFTR-25Wash	eton Township - Beaver Creek	Ongoing	Ongoing	1 and 2
FTR-24 Wash FTR-25 Wash	eton Township	Ongoing	Ongoing	1 and 2
FTR-25 Wash	wcreek Township - Village of Wellsville	Ongoing	Ongoing	1 and 2
	ington Township - Highlandtown	Ongoing	Ongoing	1 and 2
	ington Township - Salineville Village	Ongoing	Ongoing	1 and 2
FTR-26 West	Township	Ongoing	Ongoing	1 and 2
FTR-27 Liver	pool Township	Ongoing	Ongoing	1 and 2
FTR-28 Monr	pe Township - Bowerstown Village	Ongoing	Ongoing	1 and 2
FTR-29 Ather	is Township - New Athens	Ongoing	Ongoing	1 and 2
FTR-30 Cadiz	Township - Cadiz Village	Ongoing	Ongoing	1 and 2
FTR-31 Cadiz	Township - Sally Buffalo Park	Ongoing	Ongoing	1 and 2
	ort Township - Freeport Village	Ongoing	2021	1 and 2
	n Township - Hopedale Village	Ongoing	Ongoing	1 and 2
	Township - Scio Village	Ongoing	Ongoing	1 and 2
		Ongoing	Ongoing	1 and 2
FTR-36 Frank	ey Township - Jewett Village	- 5 3	Ongoing	1 and 2

Source: 2021 CCH ADR

The District provided and serviced 36 full-time rural drop-off locations in the reference year. These locations are available full-time, 40 hours per week.

Brown Township - Lake Mohawk and Freeport Township - Freeport Village both closed down in 2021 due to overflow and contamination issues. The District relocated the Lake Mohawk containers to the Malvern Village site and opened a new site at Clendening Marina.

Target for Next 5 Years: Continue District collection service and monitor sites for contamination.

Part-Time, Rural Drop-offs

ID #	Name	Start Date	End Date	Goal
PTR-1	Clendening Muskingum Watershed Freeport	2021	Ongoing	1 and 2
	1 CCH ADR	2021	Ongoing	T and Z

As stated above, the District closed the Freeport Township – Freeport Village site in July 2021 due to overflow and non-recycling issues and opened up the Clendening Muskingum Watershed Freeport site.

Target for Next 5 Years: Continue District collection service and monitor sites for contamination.

Full-Time, Other Drop-offs

Name	Start Date	End Date	Goal
School Drop-Off Recycling (19)	Ongoing	Ongoing	1 and 2
Kimble Commercial Pickups	Ongoing	Ongoing	1 and 2
St. Clair Twp. EDI South	Ongoing	Ongoing	1 and 2
Center Twp. DJFS Office	Ongoing	Ongoing	1 and 2
Center Twp. County Jail	Ongoing	Ongoing	1 and 2
Center Twp. MRDD	Ongoing	Ongoing	1 and 2
Youth Camps (4)	Ongoing	Ongoing	1 and 2

EDI South, DJFS Office, County Jail, and MRDD are all government sites that are not advertised to the public and are used solely by them. In addition, the District provides bins to four youth camps and 19 schools. These sites operate full-time, 40/hours a week and collects cardboard, paper, aluminum and steel cans, glass, and plastic bottles and jugs. These commercial sites are serviced and paid for through the SWMD along with the residential sites. These school drop-off sites above represent several schools in the Columbiana County area only in session 9 months out of the year and are not advertised for public use.

Target for Next 5 Years: Continue District collection service. Continue to monitor sites for additional service dates and/or additional containers.

Commercial/Institutional Sector Reduction and Recycling Programs

Name	Start Date	End Date	Goal
School Recycling	2012	Ongoing	2

Source: 2021 CCH ADR

The school drop-off sites are listed in other drop-offs. Those sites listed were in operation in the reference year. The SWMD first implemented a school recycling drop-off program in 2012. At the time, the contractor, Lewis Refuse, offered to put containers at the schools in Columbiana County that requested them, free of charge. As of 2021, 19 schools have recycling containers.

Target for Next 5 Years: Perform waste assessment for one school district. Focus on reducing trash and increasing diversion. Determine estimated volume of materials in the waste stream. Continue through the planning period.

Name	Start Date	End Date	Goal
Small Business & Government Collection	Ongoing	Ongoing	2

The District currently provides drop-off recycling services to four government offices and four youth camps. As stated above, these entities are serviced by the District in conjunction with the drop-off program and are not advertised to the public. EDI South facility sold, and bins were relocated to St. Clair Township building in 2016.

The District does not provide drop-off services for individual small businesses. Most of the small businesses and government offices utilize the SWMD's drop-off locations. However, in conjunction with the education and outreach program, the District has worked with some small businesses and assisted them in setting up their recycling programs.

Target for Next 5 Years: Continue District collection to those currently serviced. Assist businesses with setting up recycling programs.

Name	Start Date	End Date	Goal
Source Reduction and Recycling Awareness - Kimble Commercial Pickups	Ongoing	Ongoing	4

The Districts Community Outreach Specialist created a Waste Reduction Guide and put together a business packet to assist businesses with their programs and offer waste audits upon request. In addition, the District's Source Reduction and Recycling Awareness program provides for business educational activities. SWMD staff is available

to meet with businesses to show them the benefits of recycling and waste reduction. When requested, waste prevention, reduction and recycling brochures are distributed to companies, showing them how to set up a profitable recycling program. This approach allows businesses to set up a recycling program that meets their needs.

Since the program's inception, the District has not completed any commercial waste audits as they have found that most businesses do not know about the services. Conversely, the District's Community Outreach Specialist has worked with several businesses on their waste reduction and recycling efforts. The District has used the Materials Marketplace as a "way in" to work with companies. Historically, this webpage was posted on the SWMD's website but has been taken down. Although the District has not performed waste audits, five commercial businesses pay the SWMD to supply them with recycling containers.

Target for Next 5 Years: Add Materials Marketplace to SWMD website, advertise commercial waste audits on SWMD website, continue through planning period.

Name	Start Date	End Date	Goal
Large Venue Recycling - Public Venue and Special Events	Ongoing	Ongoing	2 and 4

The SWMD does not sponsor large venue recycling programs other than fairs and festivals. They collect cardboard, aluminum cans, and water bottles. The SWMD has also worked closely with the Atwood Area Fall Festival Committee to set up a recycling program for their festival. Residents from all over northeast Ohio attend this three-day festival with over 20,000 in attendance. The festival committee negotiated a deal with their hauler (Kimble) to provide recycling services. The Carroll County Fair Atwood Fall Festival and Alive Festival recycled in the reference year.

Target for Next 5 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Ag Plastics Recycling Program	2013	2018	1 and 2

Several local county Farm Bureau agencies approached the SWMD regarding recycling agricultural plastics, such as bale wrap, silage cover, feed sacks, baler twine, bale netting, etc. At the time, all this material was being landfilled and, in some cases, burned. The problem we faced was infrastructure and transportation, which the SWMD has been dealing with since our inception. However, with the help of a grant from ODNR in 2012-2013, the District put together a program for the farmers. Volunteers from the local Farm

Bureau agencies provided outreach and education and set up drop-off locations at local Ag businesses. Grant money was used for outreach materials, signage, and the purchase of Super Sacks. The District's Ag Plastics Program was shut down in June 2018 due to the loss of a processor. The District feels the only way to get this program back up and running is to have a location to bale the material for transportation to multiple facilities.

Industrial Sector Reduction and Recycling Programs

Name	Start Date	End Date	Goal
Waste Assessments/Waste Audits	1994	Ongoing	2 and 5

The SWMD worked with businesses to establish or expand waste reduction and recycling programs at their request. As part of this program, the SWMD provides businesses with information and material regarding the financial benefits associated with waste reduction, such as reduced disposal costs and greater plant efficiency. The SWMD developed a brochure that identifies simple steps that businesses can do to reduce waste.

The District did not work with any industrial businesses from 2016 to 2021. It is still a priority for the District's community outreach specialist.

Target for Next 5 Years: Reimplement information for industrial businesses (resource guide and list of recycling facilities), Ohio EPA and USA EPA programs (WasteWise) on the District's website. Use social media to also advertise the available resources.

Restricted/Difficult to Manage Wastes

Yard Waste

Name	Start Date	End Date	Goal
Yard Waste Collection	2000	Ongoing	6

The SWMD implemented Christmas tree recycling since 1993. Due to the drop-off locations for the Christmas tree recycling program, this part benefits all the District residents. In addition, the District is primarily rural, and residents living in rural areas may choose to manage their trees on their property. The District's Christmas Tree Recycling Program yields about the same amount of trees each year. In the reference year, 333 trees were collected.

The SWMD also implements the "Don't Bag It" program and provides home composting information and the educational outreach portion of this program. The "don't bag it" and home composting portion of the program also benefits the entire District because the SWMD actively promotes these two items at county fairs and festivals. In addition, the

local Extension offices also promotes the "Don't Bag It" program and the Christmas Tree Recycling Program.

Since 2013, the SWMD has implemented a Compostable Leaf Bag Program. The District pays for the bags and the municipalities or communities provide the collection. Home Depot sells the compostable bags. In the reference year the district paid for 67,855 bags and tracked 2,812.50 tons of yard waste diverted. Individual municipalities implement leaf collection programs; not every municipality in the SWMD has a leaf collection program. However, many communities offer the service as a benefit to their residents.

The Compostable Leaf Bag program initially operated as a cost-sharing initiative. However, since 2013, the SWMD has fully funded the program, incurring an annual cost of approximately \$29,000 over the past four years. The SWMD established a guideline stating that it would provide 10 bags per household per entity, with any additional bags being the responsibility of the entity to finance. Unfortunately, the District encountered challenges in finding a sustainable end market for the compost, leading to the discontinuation of the program in 2021. Future plans do not include this service offering. The District instead will redirect its efforts towards promoting backyard composting.

Target for Next 5 Years: Objective during the planning period is to continue promoting Christmas tree recycling and "Don't Bag It" programs and begin a backyard composting initiative.

Considerations for a Backyard Compost Initiative:

- 1. Implement a monthly initiative, totaling 12 events per year to conduct raffles for backyard composting equipment. Raffles will be open to households and can be organized through platforms like Facebook or in-person events (such as fairs), with winners receiving one free backyard compost bin.
- 2. If there are unallocated funds from the \$25,000 education budget, consider utilizing them to purchase 12 compost bins, which can then be distributed to promote backyard composting.

Name	Start Date	End Date	Goal
HHW Collection	2000	Ongoing	6

Household Hazardous Waste (HHW)

Source: 2021 CCH ADR

The SWMD holds annual HHW collection events for residents. Historically, the District held HHW collection events in all three counties. However, collection data has fluctuated over the years due to reduced collection locations and Covid-19 implications.

Heritage WTI conducted annual HHW collection events for residents of the City of East Liverpool and Liverpool Township since 2003. Material collected at these events includes, but is not limited to, fluorescent bulbs, household batteries, oil-based paints, pesticides, antifreeze, and gasoline. Heritage also holds its annual City Sweep in April of each year. The District did not hold collection events in 2020 or 2021 due to the pandemic. In 2022, the District held two events. One at the Columbiana County fairgrounds and the other at the District's offices. The drive-thru capability at the new District's offices allows for unloading in a covered area. The first event went smoothly.

The District's offices support more frequent collection opportunities if funding allows.

Target for Next 5 Years: During the planning period, the District plans to continue its efforts, utilizing its offices for waste collection and potentially increasing year-round dropoff opportunities. They aim to host one event in other counties annually, contingent on available funding. Key criteria for this decision include ensuring sufficient funds to cover event costs, exploring cost-saving possibilities using the District's facilities, considering surplus funds from other programs, and evaluating the feasibility of a budget-friendly oneday mobile event. The final choice to host an event hinges on aligning these factors, underlining the need for a balanced approach involving financial resources, costeffectiveness, and resource allocation. Precisely defining these criteria and involving board approval enhances transparency and oversight in the decision-making process.

Electronics

Name	Start Date	End Date	Goal
Electronics Collection	2002	Ongoing	6

Source: 2021 CCH ADR

The SWMD holds annual electronics collections since 2002; these events are combined with the appliance and scrap metal collections. The District also accepts material at the District office daily. Materials collected include computers, televisions, VCRs, DVDs, copiers, printers, and other electronic items. With the ever-increasing volume of electronics generated and the current trend of rapid electronics replacement, the SWMD has been actively promoting electronics recycling to residents. The District saw an increase in CRT television recycling due to high definition and new, lighter flat screens.

In 2021, the SWMD held three collection events, one in each county and recycled 25 tons of electronics. Prior to 2021 all electronics were accepted for no charge. In 2021, the District began charging \$5 for televisions with tubes and CRT monitors. In 2022, the District increased fees to \$10 for televisions with tubes and CRT monitors. With the opening of the District's new offices and drive-thru collection center, the District changed collection to drop-off only by appointment at the District recycling offices.

Target for Next 5 Years: Continue through the planning period.

Scrap Tires

Name	Start Date	End Date	Goal
Scrap Tire Management	2005	Ongoing	6

Source: 2021 CCH ADR

The District holds annual scrap tire collection events with the HHW and electronics collections. The SWMD contracts with a licensed scrap tire hauler to provide semi-trailers for the events and is responsible for transporting those tires to a scrap tire recovery facility. To help offset costs, the SWMD charges a small fee for tires brought to the collection events.

The SWMD realized that municipalities and townships have problems with illegally dumping scrap tires along roadways within their jurisdiction. With the proximity of a licensed scrap tire facility to the SWMD, we decided to implement a program that would help these governmental entities curtail the growing problem of scrap tires along their roadways. For one month each year, usually during the spring, the SWMD allows municipalities, townships, and other governmental agencies, such as parks, to collect tires along the roadways and deliver them to a licensed scrap tire facility. The Ohio Administrative Code authorizes governmental entities to haul an unlimited number of tires without obtaining a scrap tire transportation license to clean up scrap tires in public areas within their jurisdiction. Each governmental entity is responsible for all costs related to collecting and transporting these scrap tires to the facility, including employee time, fuel and truck expenses. In turn, the SWMD pays the processing fee for these tires. This program has been very cost-effective for the District, and the municipalities and townships have successfully removed many tires from area roadways. In addition, some townships and municipalities accept tires from residents in conjunction with their spring Community Clean-Up events, which are held to coincide with our spring tire program. This provides additional opportunities for residents to recycle their scrap tires.

The District could not hold a collection event in the reference year due to COVID-19. The District will resume holding scrap tire collection events in the following years as the District rebounds after the pandemic.

Target for Next 5 Years: Continue through the planning period and apply for Ohio EPA grants to offset collection costs.

Name	Start Date	End Date	Goal
Recycling Awareness Program	1994	Ongoing	6

Pharmaceuticals

Source: 2021 CCH ADR

The SWMD established a Recycling Awareness Program in 1994. However, until recently, proper disposal of pharmaceuticals was left to flushing them down the toilet. Since 2014, pharmaceutical drop-off locations have been established by local law enforcement. All three County Sheriff's Departments and several City and Village Police Departments have drop-off boxes for pharmaceuticals. Unfortunately, the District does not have the tonnage because they are usually picked up by BCI when they come to pick up confiscated narcotics during arrests made. In addition, the SWMD has been

providing outreach via the Alternative Waste Flyers distributed during collection events and fairs/festivals.

Target for Next 5 Years: Continue through the planning period.

Lead-Acid Batteries

Name	Start Date	End Date	Goal
Recycling Awareness Program	1994	Ongoing	6

Source: 2021 CCH ADR

The SWMD provided education and outreach to residents and businesses as to where they can dispose of their lead-acid batteries properly in 2021. This information is provided via brochures and on the SWMD's Facebook.

Target for Next 5 Years: Continue through the planning period.

Appliances

Name	Start Date	End Date	Goal
Appliance Recycling Program	1996	Ongoing	6

The SWMD has conducted one-day appliance and scrap metal recycling events in Harrison Count<u>y</u> since 2012. Columbiana and Carroll Counties have sufficient scrap yards to handle the scrap and make it convenient for residents to recycle. Two scrap yards, one in each of the two counties, can extract Freon from those large appliances containing Freon. Harrison County does not have a scrap metal recycling facility.

The District could not hold a collection event in the reference year due to Covid-19.

SWMD staff obtained proper certifications to extract Freon now accepts appliances at the District's offices by appointment.

Target for Next 5 Years: Continue through the planning period.

Household and Rechargeable Batteries

Name	Start Date	End Date	Goal
Household Battery Drop-Off Program	2013	Ongoing	6

The SWMD operated a drop-off program for household batteries. The SWMD purchased recyclable containers from an HHW company that included free return FedEx shipping. The containers are placed at various hardware and Radio Shack stores. When the containers are full, they contact the SWMD. The District picks up the container, gives

them an empty container, and sends the full container via FedEx back to the HHW company. This allows residents to recycle and reduce waste without waiting until annual collection events. Most Radio Shack stores also take rechargeable batteries for recycling.

With the construction of the District offices, batteries are also accepted at this location.

Since the District did not have any HHW Collection Events in 2021 due to Covid-19, they anticipate many batteries to be recovered.

Target for Next 5 Years: Continue through the planning period.

Other Material Specific Programs

Food Waste

Name	Start Date	End Date	Goal
Food Waste Program	2026	ongoing	2

The SWMD does not have a food waste program and does not foresee having one during the planning period. There are no licensed Class I or Class II facilities in the District or in close proximity to the District. Any food waste information we obtain is provided through surveying various entities.

Target for Next 5 Years: Work more closely with businesses (not just through surveys) to assess potential infrastructure, needs, and future food waste recovery programs.

 Glass

 Name
 Start Date
 End Date
 Goal

 None

The SWMD does not have a separate glass recycling program for our commercial businesses. We accept glass at all of our residential drop-off locations. Most government/school drop-off sites have very little to no glass.

Enforcement & Clean-Up

Litter and Clean-Up

Name	Start Date	End Date	Goal
Community Clean-Up Program	2016	Ongoing	n/a

Source: 2021 CCH ADR

The SWMD began working closely with townships and municipalities to tackle an ongoing problem of illegal dumping of large, bulky items along county and township roads. Numerous townships were already providing collection days for scrap tires. They also agreed to allow residents to bring in large, unwanted items such as furniture, carpet, and mattresses for proper disposal. The SWMD agreed to pay for one 40-yard roll-off for each entity. If the entities decided to work together, they could take advantage of one roll-off at their collection event. Most townships and municipalities can get away with only needing one roll-off. Still, a small number of them pay out of their township budget to provide any extra roll-offs they may need to accommodate their residents. We saw the need for this type of collection with the illegal dumping at our recycling sites and the fact that most haulers will not pick up large bulky items unless they are under a contract for curbside service. The District has no landfills, and only one county (Carroll) has a transfer facility.

In 2018, 115.81 tons and in 2019, 223.56 tons of bulky items were collected. Unfortunately, the SWMD could not hold an annual clean-up event in 2020 or 2021 due to Covid-19.

Target for Next 5 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Environmental Law Enforcement Program	2025	Ongoing	n/a

The SWMD has been experiencing a great deal of illegal dumping and at our recycling sites, as well. The District received support from the Board, townships and municipalities, village, city, and township police departments, and our sheriff's departments. Several cases have been turned over to law enforcement for investigation and hopefully prosecution. Improvement has been seen since the implementation of this program, but more are needed to see change.

Target for Next 5 Years: Continue through the planning period.

Economic Incentives

Name	Start Date	End Date	Goal
Buy-Recycled Program	2013	Ongoing	9

In 2013, the SWMD offered county courthouses a "Buy-Recycled" program. The Clerk in the Commissioners' office of each county is responsible for ordering paper for every department in the courthouse. As an incentive to purchase recycled content paper, the SWMD offered to compensate them for the difference between the costs of regular paper versus recycled content paper, as it is most always more expensive. The District also provides \$2.00 per case of recycled paper ordered.

Target for Next 5 Years: Continue through the planning period.

District Facilities

Name	Start Date	End Date	Goal
District Office Recycling Center	2021	Ongoing	n/a

In order to provide additional opportunities for households to recycle the "hard to recycle" materials the SWMD purchased and built a office/warehouse space in the Carroll County area. Carroll County is the more centralized location for a drop-off type of facility. The capital outlay was \$718,000 and utilities (to be started) are estimated at \$10, 937.82.

The District envisions one day events as well as by appointment to provide more frequent opportunities. Anyone from the District can bring materials, the assumption is that most of the material will be coming from Carroll County. The facility opened in 2022. The collection model was open to take the following materials by appointment: electronics, appliances, scrap tires. HHW was offered in 2022 as a one-day event. The District is evaluating more frequent collection models with the contractor.

Target for Next 5 Years: Continue operating through the planning period. The site was selected in part because the property size is sufficient to also add a MRF or more sorting capabilities. These capabilities would be further explored should the Policy Committee and Board of Directors decide that this would be in the best interest of the SWMD.

At the time of this plan update preparation, the current commodity market is such that the SWMD is currently paying for processing the SWMD's recyclables. Also, in light of the current processing facility locations, the SWMD must travel significant distances to reach a MRF. The SWMD is currently taking its recyclables to two different transfer facilities and the processors must recoup their transportation costs to get the materials to their MRFs. The SWMD will analyze the cost of processing recyclables at the District's Recycling Center. The handling of materials will be assessed but could be compacted, and then transported to a MRF. The District will assess optimizing operations at the District Recycling Center if the costs for transportation and processing increase to where costs are drawing the budget down faster than projected in the plan.

The District is building an equipment fund in this plan update. If additional equipment such as a compactor or baler would add optimization the District will seek grant funding to help with capital costs. If, however, the investment to optimize is greater than one or two pieces of equipment and directs the District towards serving as a processing and selling of commodity type of structure, the District may need to ratify a change to the Plan.

Closed Facility Maintenance/Post-Closure Care

Name	Start Date	End Date	Goal
Closed - Carroll County Landfill	2013	Ongoing	n/a

The Carroll County Landfill has not accepted waste since the late 1980's early 1990's, and finally capped in the fall of 2014. Beginning in 2013, the SWMD assisted Carroll County with funding installments of gas and water monitors and other preparation needed before capping. Carroll County is negotiating the number of years of post-closure activities since the landfill has not been used for over twenty years before capping.

The SWMD assisted Carroll County with funding of post-closure activities for the Carroll County Landfill in 2021. The Policy Committee will re-evaluate programs and financing during the next planning cycle and, if needed, may continue to assist in the Carroll County Landfill post-closure activities.

Target for Next 5 Years: The District is not projecting any funding towards landfill postclosure care.

Transfer Facilities

Name	Start Date	End Date	Goal
Kimble Transfer & Recycling – Carrollton	Unknown	Ongoing	n/a

The SWMD does not own or operate a transfer facility. However, one privately held Transfer Facility in the District is owned by Kimble Transfer & Recycling and located in Carrollton, Carroll County.

Composting Facilities

Name	Start Date	End Date	Goal
None			

No available composting facilities were operating in the District in 2021. The SWMD provides education and outreach to residents through a Recycling and Awareness Program. "Don't Bag It" and home composting print brochures are made available to the public and promoted through educational presentations.

Data Collection

Name	Start Date	End Date	Goal
Data Collection Surveys	Unknown	Ongoing	2

The District's Survey Strategy assesses commercial and industrial businesses, municipalities, haulers, processors, brokers, and compost facilities. The SWMD surveys these entities every three years. The EPA conducts yearly data collection and shares those numbers with all SWMDs. Due to funding issues, the SWMD will complete surveys every three years of all entities throughout the planning period. If funding is available, surveying will be conducted annually during the planning period.

Target for Next 5 Years: Continue through the planning period.

APPENDIX J

REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL I

APPENDIX J. Reference Year Opportunity to Recycle and Demonstration of Achieving Goal 1

A. Residential Sector Opportunity to Recycle

The 2020 State Solid Waste Management Plan requires SWMD's to demonstrate adequate infrastructure to provide at least 80% of the residential population in a County with convenient opportunities to recycle. The SWMD must demonstrate one of the following:

- a. Demonstrate that there was adequate infrastructure in the reference year to provide at least 80% of the residential population within each county of the SWMD the opportunity to recycle.
- b. Demonstrate that the SWMD will implement new and/or upgraded recycling infrastructure sufficient to provide at least 80% of the residential population within each county of the SWMD the opportunity to recycle.
- c. Apply for a waiver from Ohio EPA to provide less than 80% of the residential population with opportunities to recycle.

The SWMD must ensure that there will be adequate infrastructure throughout the entire planning period covered by the solid waste management plan to give at least 80% of the residential population in each county of the SWMD the opportunity to recycle.

Additionally, the SWMD must:

- 1) Demonstrate that the SWMD will meet the applicable standards established in the Format for the remainder of the planning period.
- 2) Calculate the solid waste reduction and recycling rate for the residential/commercial sector. If less than 25% in the reference year, then demonstrate achieving annual increases in the solid waste reduction and recycling rate for the residential/commercial sector.
- 3) Demonstrate that commercial and institutional generators of solid waste have adequate opportunities to recycle solid waste.
- 4) Demonstrate that the SWMD will encourage participation in available recycling infrastructure.
- 5) Demonstrate that the SWMD will maintain the required infrastructure throughout the entire planning period.

Technical elements of the demonstration include:

- 1) Components of the residential infrastructure must collect at least 5 materials from a specified list in Format 4.1.
- 2) The SWMD must demonstrate that the commercial sector has adequate opportunities to collect at least 5 materials from a specified list in Format 4.1.

- Format 4.1 will specify the "credits" for various types of infrastructure. The amount of the credit assigned is dependent upon the type of recycling service being provided.
 - Non-Subscription Curbside: Credit the entire population of each community.
 - Subscription Curbside: Credit 25% of the community population.
 - Full-Time Urban Drop-off: Credit 5,000.
 - Full-Time Rural Drop-off: Credit 2,500.
 - Part-Time Urban Drop-off: Credit 2,500.
 - Part-Time Rural Drop-off: Credit 2,500.
- 4) The following minimum standards apply to drop-offs:
 - Residents can easily find and access the site.
 - All drop-off sites must provide a minimum of 6-cubic yards of capacity.
 - There are signs that are adequate to, at a minimum:
 - i. Direct the public to the site or indicates the location of the site;
 - ii. Lists the materials that are accepted; and
 - iii. Provide days and hours of operation
 - The SWMD has made a reasonable attempt to meet the demand of the population for use of the drop-off site.
- 5) "Credit" for infrastructure in a community is limited to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve 100% of the residential population with access to recycling infrastructure.

Table J-1. Opportunity to Recycle

	Carroll County	202	21	2039	
ID #	Name of Community (City, Village, Township)			Community Population Population Credit	
Non-sub	scription curbside				
NSC1	Village of Carrollton	3,092	3,092	2,732	2,732
Subscrip	otion curbside				
	None	-	-	-	-
Full-time	e, urban drop-off				
	None	-	-	-	-
Part-time	e, urban drop-off				
	None	-	-	-	-
Full-time	e, rural drop-off	-		•	
FTR1	Augusta Township, Augusta	1,487	2,500	1,314	2,500

	Carroll County	202	21	20	039
ID #			Population Credit	Community Population	Population Credit
FTR2	Center Township: Carrolton Village	4,430	Not Credible	3,914	Not Credible
FTR3	Fox Township - Mechanicstown	966	2,500	854	Not Credible
FTR4	Harrison Township - New Harrisburg	2,313	2,500	2,044	2,500
FTR5	Lee Township - Harlem Springs	1,033	2,500	913	2,500
FTR6	Loudon Township - Kilgore	922	2,500	815	Not Credible
FTR7	Monroe Township - Dellroy Village	1,921	2,500	1,697	2,500
FTR8	Orange Township - Leesville Village	1,149	2,500	1,015	2,500
FTR9	Orange Township - Sherrodsville Village	1,149	Not Credible	1,015	Not Credible
FTR10	Perry Township - Perrysville	894	2,500	790	2,500
FTR11	Brown Township - Lake Mohawk	7,309	2,500	6,458	0
FTR12	Brown Township - Malvern Village	7,309	2,500	6,458	2,500
Part-tim	e, rural drop-off				
	None	-	-	-	-
Mixed m	unicipal waste material rec	overy facility			
	None	-	-	-	-
	unty Population	ion 24,698 21,823			
•	oulation Credit	28,092		25,232	
Percent of	of Population	100%		100%	

	Columbiana County	2021		2039					
ID #	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit				
Non-sub	Non-subscription curbside								
	None	-	-	-	-				
Subscrip	Subscription curbside								

	Columbiana County	202	21	2039		
ID #	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	
	None	-	-	-	-	
Full-time	e, urban drop-off		·			
FTU1	Unity Township - New Waterford Village	9,644	5,000	9,476	5,000	
FTU2	Unity Township	9,644	5,000	9,476	5,000	
FTU3	Unity Township - JDS Landscaping	9,644	Not Credible	9,476	Not Credible	
FTU4	Unity Township - East Palestine Village	9,644	Not Credible	9,476	Not Credible	
FTU5	Center Township - Lisbon Village	5,810	5,000	5,709	5,000	
FTU6	Liverpool Township - East Liverpool	3,837	5,000	3,770	5,000	
FTU7	Fairfield Township - Columbiana City	9,897	5,000	9,725	5,000	
FTU8	Fairfield Township	9,897	5,000	9,725	5,000	
FTU9	Perry Township - Habitat Restore	16,201	5,000	15,919	5,000	
FTU10	Perry Township - Salem City	16,201	5,000	15,919	5,000	
FTU11	Salem Township - Leetonia Village	5,081	5,000	4,993	5,000	
FTU12	Salem Township - KSU	5,081	Not Credible	4,993	Not Credible	
FTU13	St. Clair Township	7,739	5,000	7,604	5,000	
FTU14	St. Clair Township - Calcutta	7,739	5,000	7,604	5,000	
FTU15	Fairfield Township - Columbiana City	9,897	5,000	9,725	5,000	
Part-time	e, urban drop-off		•			
PTU1	Perry Township - First Presbyterian Church	16,201	2,500	15,919	2,500	
Full-time	e, rural drop-off					
FTR13	Middleton Township - Rogers Village	3,300	2,500	3,243	2,500	
FTR14	Wayne Township - JT Pitt Stop	806	2,500	792	2,500	
FTR15	Butler Township	3,542	2,500	3,480	2,500	

	Columbiana County	202	21	2039		
ID #	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	
FTR16	Franklin Township - Summitville Village	755	2,500	742	2,500	
FTR17	Hanover Township - Guildford Lake	3,440	2,500	3,380	2,500	
FTR18	Hanover Township - Hanoverton Village	3,440	2,500	3,380	2,500	
FTR19	Knox Township	3,997	2,500	3,927	2,500	
FTR20	Madison Township	2,864	2,500	2,814	2,500	
FTR21	Middleton Township - Beaver Creek	3,300	2,500	3,243	2,500	
FTR22	Middleton Township	3,300	2,500	3,243	2,500	
FTR23	Yellowcreek Township - Village of Wellsville	1,923	2,500	1,890	2,500	
FTR24	Washington Township - Highlandtown	1,974	2,500	1,940	2,500	
FTR25	Washington Township - Salineville Village	1,974	Not Credible	1,940	Not Credible	
FTR26	West Township	3,140	2,500	3,085	2,500	
FTR27	Liverpool Township	3,837	Not Credible	3,770	Not Credible	
Part-time	e, rural drop-off	•	·		·	
	None	-	-	-	-	
Mixed m	unicipal waste material rec	covery facility				
None		-	-	-	-	
Total Co	unty Population	102,497		100,734		
Total Po	pulation Credit	95,000		95,000		
Percent	of Population	93%		94%		

	Harrison County	202	21	2039					
ID #	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit				
Non-sub	Non-subscription curbside								
	None	-	-	-	-				
Subscrip	Subscription curbside								
	None	-	-	-	-				
Full-time	Full-time, urban drop-off								

	Harrison County	202	21	2039		
ID #	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	
	None	-	-	-	-	
Part-time	e, urban drop-off		I	1	L	
	None	-	-	-	-	
Full-time	, rural drop-off					
FTR28	Monroe Township - Bowerstown Village	1,065	2,500	1,034	2,500	
FTR29	Athens Township - New Athens	373	2,500	362	2,500	
FTR30	Cadiz Township - Cadiz Village	3,378	2,500	3,280	2,500	
FTR31	Cadiz Township - Sally Buffalo Park		Not Credible	3,280	Not Credible	
FTR32	Freeport Township - Freeport Village	737	2,500	716	Not Credible	
FTR33	Green Township - Hopedale Village	1,713	2,500	1,663	2,500	
FTR34	North Township - Scio Village	1,603	2,500	1,557	2,500	
FTR35	Rumley Township - Jewett Village	1,283	2,500	1,246	2,500	
FTR36	Franklin Township - Deersville Village	541	2,500	525	2,500	
Part-time	e, rural drop-off	•				
PTR1 Freeport Township - Clendening Muskingum Watershed Freeport		737	2,500	716	2,500	
Mixed m	unicipal waste material rec	covery facility	1	L		
	None	-	-	-	-	
Total Co	unty Population	14,351	1	13,935		
Total Po	pulation Credit	22,500		20,000		
Percent	of Population	100%		90%		

Note: County population adjusted per Ohio EPA Format 4.1 Guidelines (see Appendix C for explanation).

"Credit" for infrastructure in a community is limited to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve 100% of the residential population with access to recycling infrastructure. Some locations have values denoted as "not creditable" and are not included in the total calculation because the total population credits are higher than the population total. However, due to the population. This follows the guidelines set by the Ohio EPA that

state a location may use the entire population credit despite the result being greater than 100% of the population credited. Any sites at the same location after are not creditable as the location has already achieved 100% of the population.

During the reference year, two of the District drop off sites experienced high contamination issues. The Brown Township – Lake Mohawk site closed in 2021 due to contamination issues, and the containers were moved to the Malvern Village Site. Additionally, the Freeport Township – Freeport Village site closed in July 2021 due to overflow and non-recycling issues. The District opened a new location at Clendening Marina. These locations were credited in the reference year but were denoted "not credible" in the following 2039 year.

Overall, the SWMD demonstrates at least 80% of the residential population in the SWMD opportunity to recycle. With a projected decrease in population, the percentage of residents who have the opportunity to recycle is projected to increase.

B. Commercial Sector Opportunity to Recycle

Service Provider	Type of Recycling Service Provided	Cardboard	Newspaper	Mixed Paper	Steel Containers	Aluminum Containers
Kimble Companies	Hauler Collection	Х	х	х	Х	Х

Table J-2 Demonstration of Commercial Opportunity to Recycle

The SWMD obtains data for commercial infrastructure to meet Goal 1 from recycling services that offer collection to commercial/industrial generators throughout the county. The service provider above met the minimum material requirements: cardboard, newspaper, mixed paper, steel containers, aluminum cans.

C. Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate

To achieve Goal 1 the SWMD must show that the District achieved a 25% residential/commercial waste reduction and recycling rate or that the District will achieve annual reduction rate increases during the planning period. Appendix K calculates the residential/commercial solid waste reduction and recycling rate for the reference year and planning period. The reference year rate is 18%. Appendix K calculates that the future rate will decrease throughout the planning. The diversion rate is not the only indicator of waste reduction and recycling efforts. The drop-off program provides a high recycling compliance for access averaging 89% access. Diversion is projected to decrease, and the tonnage landfilled is projected to increase. Carroll-Columbiana-Harrison County's leading employment sector is retail trade. The total number of business establishments in the county is 4,196¹.

¹ U.S. Census Bureau. County Business Patterns: 2021.

The commercial sector is smaller and it's challenging to capture more data. During this planning period a targeted survey effort will be made to capture additional commercial sector business information. Programs are described in Appendices I and L.

2. Encouraging Participation

The District will continue to encourage residents and commercial generators to participate in existing recycling infrastructure. Appendices I and L provide more detail on education and outreach programs anticipated within the planning period.

APPENDIX K

WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL

APPENDIX K. Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2

Goal 2: Waste Reduction and Recycling Rates states the SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector. This appendix demonstrates the SWMD's progress toward achieving the waste reduction and recycling rates established in Goal 2 of the 2020 State Plan.

Table K-1 below shows the waste reduction and recycling (WRR) rates for the residential/commercial sector in the reference year and projected for the planning period. The District does not exceed the state's WRR goal for the residential/commercial sector for each year of the planning period.

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate (%)	Per Capita Waste Reduction & Recycling Rate (ppd)
2021	141,546	15,644	82,146	97,790	16.00%	0.61
2022	142,904	14,494	82,934	97,428	14.88%	0.56
2023	142,606	14,584	82,761	97,345	14.98%	0.56
2024	142,308	14,677	82,588	97,266	15.09%	0.57
2025	142,010	14,775	82,416	97,191	15.20%	0.57
2026	141,735	14,879	82,256	97,134	15.32%	0.58
2027	141,459	14,987	82,096	97,083	15.44%	0.58
2028	141,184	15,100	81,936	97,036	15.56%	0.59
2029	140,908	15,219	81,776	96,995	15.69%	0.59
2030	140,633	15,343	81,617	96,960	15.82%	0.60
2031	140,352	15,334	81,454	96,787	15.84%	0.60
2032	140,072	15,324	81,454	96,778	15.83%	0.60
2033	139,791	15,315	81,454	96,768	15.83%	0.60
2034	139,510	15,305	81,454	96,759	15.82%	0.60
2035	139,230	15,296	81,454	96,749	15.81%	0.60
2036	138,972	15,287	81,454	96,741	15.80%	0.60
2037	138,713	15,279	81,454	96,732	15.79%	0.60
2038	138,455	15,270	81,454	96,723	15.79%	0.60
2039	138,197	15,261	81,454	96,715	15.78%	0.61

Table K-1. Annual Rate of Waste Reduction: Residential/Commercial Solid Waste

Sources of Information: Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix E, Table E-4 (for reference year) and Table E-5 (for planning period)
- Waste Disposed: Appendix D, Table D-3 (for reference year) and Table D-5 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)
- Population: Appendix C, Table C-1 (for reference year) and Table C-2 (for planning period)

Sample Calculations:

2021 Waste Generated = 2021 Waste reduced and recycled + 2021 waste disposed 97,790 tons = 15,644 tons + 82,146 tons

2021 Waste Reduction & Recycling Rate = (2021 Waste Reduced & Recycled ÷ 2021 Waste Generated) x 100 16% = (15,644 tons ÷ 97.790 tons) x 100

2021 Per Capita Waste Reduction & Recycling Rate = (2021 tons recycled x 2,000) \div 365) \div population 0.61 PPD = ((15,644 tons x 2,000) \div 365 days/year) \div 141,546 residents

Table K-1 demonstrates that the District does not meet the requirements of Goal 2 of the State Plan. The goal rate is 25% diversion, the District had a diversion rate of 16% in the reference year and is expected to decrease and increase over the planning period. (If an adjustment to the waste disposal is not made, the District's diversion rate would be 7.6%.)

The 2015 Plan Update projected waste reduction rate would be significantly higher, reaching nearly 25% in 2021. Instead, total waste diverted decreased. The District observed increases in waste disposal over the last 5 years. This increase stems from both the residential/commercial sector and the industrial sector because of drilling waste. In 2017, the District disposed of just under 130,000 tons of material compared to the roughly 211,000 tons (unadjusted disposal tons) in the reference year. This is an increase of 64% in five years. Over the same time, the District diverted approximately 3,000 more tons, a 22% increase. Proportionally, the disposal amount is increasing three times as fast as the diverted material amount.

The District did not survey its industrial sector for the past two years. As such, the District was not able to show any recovery for this sector and **Table K-2** is omitted from this demonstration. The District could consider surveying this sector again during this planning period. Without conducting the industrial survey, the District is unable to gain insight into this sector's recycling habits. Completing the industrial survey would also help to raise the total waste diversion rate.

The combined WRR rate for residential/commercial and industrial sectors is shown in **Table K-3**. The District does not survey the industrial sector and therefore cannot show any diversion. The total waste reduction rate is heavily impacted by this and is likely not accurate to the actual rate.

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2021	15,644	296,302	311,946	5.01%
2022	14,494	288,524	303,018	4.78%
2023	14,584	280,127	294,711	4.95%
2024	14,677	272,060	286,737	5.12%
2025	14,775	264,308	279,084	5.29%
2026	14,879	256,873	271,751	5.48%
2027	14,987	249,728	264,715	5.66%
2028	15,100	242,863	257,963	5.85%
2029	15,219	236,266	251,485	6.05%
2030	15,343	229,927	245,270	6.26%
2031	15,334	223,831	239,165	6.41%
2032	15,324	223,831	239,156	6.41%
2033	15,315	223,831	239,146	6.40%
2034	15,305	223,831	239,137	6.40%
2035	15,296	223,831	239,127	6.40%
2036	15,287	223,831	239,119	6.39%
2037	15,279	223,831	239,110	6.39%
2038	15,270	223,831	239,101	6.39%
2039	15,261	223,831	239,093	6.38%

Table K-3.	Annual Rate of	Waste Reduction:	Total Solid Waste
------------	----------------	------------------	-------------------

Sources: Tables K-1 and K-2

Sample Calculations:

2021 Waste Generated = 2021 Waste reduced and recycled + 2021 waste disposed 311,946 tons = 15,644 tons + 296,302 tons

2021 Waste Reduction & Recycling Rate = (2021 Waste Reduced & Recycled \div 2021 Waste Generated) x 100 5.01% = (311,946 tons \div 15,644 tons) x 100

The District's diversion rate over the past five years decreased. During the reference year of the previous plan, the District diverted about 36% of material across all sectors. In this plan's reference year, the District diverted 5% of materials from landfills. The last plan projected an immediate decrease in residential diversion followed by steady increases throughout the planning period, in 2021 it was projected the District would have a 34% diversion rate. The actual rate was 5.01%.

The main barrier to achieving Goal 2 is the lack of reporting from commercial surveys and a lack of conducting industrial business surveys. Survey responses are critical to achieving Goal 2, without proper representation of the commercial and industrial recycling efforts the District will not have accurate numbers on recycling rate. Greater diversion

rates can be achieved if more data can be collected. The residential sector can help increase diversion rates, but the greatest impact will come from the commercial and industrial sectors.

Specific programs to target in order to increase diversion rates are as follows:

- 1) Data collection efforts
- 2) Industrial Surveys
- 3) Drop-off recycling
- 4) Curbside recycling

APPENDIX L

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

APPENDIX L. Outreach and Marketing Analysis

This section discusses State Plan Goals 3 and 4 and the District's strategies to satisfy the requirements of meeting each goal. The following bullet points summarize each goal, as presented in Ohio EPA's Plan Format v4.1:

Goal 3: Waste Reduction and Recycling Rates

- The SWMD shall provide the following required programs:
 - A website
 - A comprehensive resource List
 - An inventory of available infrastructure
 - A speaker or presenter

Goal 4: Outreach and Education - Outreach Plan and General Requirements

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

A. Minimum Required Education Programs

In accordance with Goal 3 of the 2020 State Plan, the District is required to provide four minimum education programs including: (1) a website, (2) a comprehensive resource list, (3) an inventory of available infrastructure, and (4) a speaker or presenter. The District met these requirements in the reference year.

Website

Name	Start Date	End Date	Goal
District Website	Ongoing	Ongoing	Goal 2,3,4, and 5

Across the state of Ohio solid waste districts use their webpage to provide resources to users. Webpages serve all target audiences and house information as to where to find recycling opportunities, disposal facilities, waste reduction tips, district information, guides for hard to recycle materials, etc. Stats tracked in 2016, show the District's webpage had 1,466 users, 1,820 sessions and 5,141 page visits. The website had 79.3% new visitors and 20% return visitors. The District's website received 1,325 visits and 3,721 page views in 2018 and 1,412 page reviews in 2019.

The District experienced security issues compromising the webpage. After pulling in the county support team the decision was made to shut down the site. To get back online, the website hosting and thus security would be handled by Carroll County Commissioners web team. The District's webpage data and design were not recoverable. Switching webpage hosts requires a new page and development time and effort. The District does not have direct access to update and submits request for changes using the County protocols. The District's website is found at https://carrollcountyohio.us/agencies-and-departments/cch-solid-waste-district/.

In 2023, the District's website was basic with very limited information and updates. The webpage has a link to the SWMD Facebook page. Historically, the website contained information regarding drop-off site locations, recycling information, upcoming events, and other tools to help residents find hard to recycle locations, such as household batteries and used motor oil. It also contained the Districts Waste Reduction & Recycling Guide and list of recycling facilities available for commercial businesses and industries.

Target for Next 5 years: Develop the webpage into a useful tool providing information and resources for all target audiences. This will begin in 2023 and is expected to be developed over two years.

The District will develop and enhance the current webpage to include recycling infrastructure and other important information. This will not require a separate budget expense as the District Director plans to work with the County to update and add to the webpage.

The steps involved include:

- 1. Needs Assessment (Fall 2023):
 - a. Identify the specific needs and objectives of the webpage enhancement project. Determine what information will be added or updated.

2. Content Planning (Begins Fall 2023 and continues throughout planning period):

a. Define the content that needs to be added or updated. This will include at the least, information on recycling facilities, recycling guidelines, waste collection schedules, drop-off locations, hard-to-Recycle items and outlets, and any other relevant information.

3. Webpage Design and Layout (Spring/Summer 2024):

- a. Revamp the webpage's design and layout to accommodate the new content effectively. Ensure the webpage is user-friendly and accessible.
- 4. Testing (Fall 2024:

a. Thoroughly test the updated webpage to ensure that all links work, content displays correctly, and interactive features function as intended.

5. Launch (Winter 2024):

a. Once the updates are finalized and approved, launch the enhanced webpage for public access.

6. Ongoing Maintenance:

a. Establish a plan for regular maintenance and updates to keep the webpage current and relevant. This may involve periodic reviews and content additions.

7. Monitoring and Evaluation:

a. Regularly monitor the webpage's performance, including visitor traffic and engagement metrics, to assess its effectiveness.

Collaboration with County offices and ongoing maintenance are critical elements for the sustained success of the enhanced webpage.

Comprehensive Resource List and Inventory of Available Infrastructure

Name	Start Date	End Date	Goal
Comprehensive Resource Guide	Ongoing	Ongoing	3 and 4

The SWMD's solid waste plan is updated every five years with the resources for outlets to divert materials. At one point, the website also provided this information. The SWMD is in the process of re-developing a website that will maintain promotional material for collection events and contain the most up-to-date information on District programs. Additionally, brochures can be found at the District office.

Speaker/Presenter

Meeting the goal of the 2020 Ohio State Plan the District's strategy in this 2024 Plan Update is to use the District Director, OSU Extension, Health Department, and a contracted community outreach specialist.

Name	Start Date	End Date	Goal
Community Outreach Specialist	2005	Ongoing	3 and 4

The SWMD's Community Outreach Specialist promoted recycling, source reduction and pre-cycling education and awareness through presentations at area

schools, civic and community groups, multi-family housing, and businesses. The topics of the presentations varied from one presentation to the next, depending on the audience. The goal is to educate participants, whether they are students, adults or business leaders, about the financial and environmental benefits of waste reduction.

The topics of the presentations vary from one presentation to the next, depending on the audience. The goal is to educate participants, whether they are students, adults, or business leaders, about the financial and environmental benefits of waste reduction. The Community Outreach Specialist works closely with NASA to continue to implement environmental programs for the Teacher's Academy Workshops. Technical assistance and outreach is targeted to elected officials and businesses to promote diversion.

In 2022, the part-time Community Outreach Specialist position was unfilled. During this transition all engagements were conducted by the Solid Waste Director. In 2022, the primary focus was delivering messages directly to users visiting the drop-off sites. The District answered questions regarding general recycling questions and handed out brochures.

Target for Next 5 years:

Education provided by the Community Outreach Specialist will continue but will be structured differently from years past. The District intends to create a contracted position serving in a part-time capacity. The OSU Extension Office and health department will also serve as a resource. The District Director will round out the education.

The annual budget for a part-time outreach specialist throughout the planning period is set at \$25,000. If the full budget is not expended, the District has the option to initiate an additional campaign alongside the primary outreach priority campaign.

The part-time outreach specialist will promote recycling, source reduction and precycling education and awareness through presentations and meetings at area schools.

Both OSU Extension Office and the health department will provide outreach by distributing information and engaging with the public at fairs, festivals, and community events.

The District Coordinator will conduct meetings and speaking engagements to multi-family housing, community elected officials, and businesses (commercial and industrial).

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

The District currently has existing programs which address the five required target audiences. The following discussion is organized by the target audience.

1. Audience: Residents

Name	Start Date	End Date	Goal
Social Media	Ongoing	Ongoing	Goal 4

The District feels social media is a great way to reach. The District has a Facebook page and uses it to share information such as collection events. The District maintains a Facebook page at: https://www.facebook.com/profile.php?id=100064619714583. The District keeps content up to date with seasonal and special event info. Inquiries occur periodically via Facebook messenger and the District responds directly to disposal and recycling queries. The District's Facebook page averages about 1,337 visits and 228 likes annually. Due to security issues with the website the District focused on reaching residents through Facebook. Frequently, at least weekly, Facebook posts related to drop offs, SWMD collection events, and other recycling tips.

In the reference year, the District's Facebook followers increased by 42% from the year prior. This is a result of consistently updated Facebook posts, covering topics related to recycling and events, and schedule changes affected by cancellations or postponements. Questions from Facebook followers are addressed within a reasonable time frame.

During the pandemic, social media, especially Facebook, played a crucial role in connecting with the community. Facebook, the largest global social platform with billions of daily users, was invaluable for driving website traffic, enhancing brand credibility, and promoting audience engagement. It facilitated easy connections and information sharing for individuals and allowed businesses to engage with existing and new followers efficiently, all at a cost-effective rate.

Target for Next 5 years: The District will continue to use the website and Facebook as a tool to provide information to residents.

In the District's creation of a carboard recycling and breakdown outreach campaign, specific actions will be addressed for residents to undertake and highlighted on social media. Further detail is provided in the Outreach Priority below.

• Metrics: 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
Residential Recycling Education & Outreach Program	Ongoing	Ongoing	2, 4, and 5

Behavior change tools should focus on increasing the knowledge necessary to recycle properly and making recycling more physically convenient.

One objective in this program is to provide information to households – increase the knowledge to recycle properly. The District uses several media and platforms for listing where recycling opportunities are and how to properly recycle.

Collection events, township and municipality clean-up events, Christmas Tree recycling, as well as general recycling information and what they accept are located on the following media platforms:

- Newspapers
- Facebook for all collection's events.

Phone Inquiry Response:

The SWMD receives numerous calls throughout the year regarding diversion outlets and questions for handling materials. Queries are directed to an available outlet such as scrap yards in their area. Listing of the available diversion outlets are also listed on flyers and brochures.

Direct Engagement:

In the reference year (2021), due to COVID concerns, visiting drop off locations proved to be difficult. A few individuals were reached once the bans were lifted during the middle of the year, until the bans were reinstated in the latter part of 2021. The drop-off sites were and will be a focal point on reaching out to individuals and explain to what can be recycled and what cannot. New signage is being placed on the bins to help in the effort to cut down on the illegal dumping that became very prominent during the COVID pandemic.

In 2022, the District rolled out new labels for drop-off containers which allowed a more targeted engagement with households. The District engaged one-on-one with household users as labels were updated and handed out updated brochures. The District also pushed out collateral on Facebook too. While the one-on-one engagement reached a small number the outreach is believed to be impactful.

Handouts/Brochures/Flyers:

In the reference year (2021) the District's Recycling Awareness brochures were updated to emphasize "non-recyclable" items that should not be placed inside the drop-off containers. The focus is mainly on "no bags" and "plastic bottles and jugs only". The brochures also include locations of recycling sites, annual collection

event information, and what they "can" recycle. The District maintained up to date HHW and scrap tire brochures/flyers.

The District met with small community group, one-on-one at fairs, and one-on-one at the drop-offs. The District does not have quantitative metrics of before and after from these type of outreach engagements. Visual observation after direct engagement shows contamination is low which leads the District to believe the outreach methods work. Households, for the most part, are recycling properly. Outreach is conversational which allows for deeper discussion and examples of behaviors/habits that could be changed.

Target for Next 5 years: The District plans to seek one-on-one engagement opportunities to speak with households regarding correct recycling and what materials are accepted at the drop-offs. This also gives an opportunity to inform households about upcoming hard to recycle special collections.

• Metrics: Interact and educate 5 drop-off users in each county annually about what materials they are bringing to the recycling sites. This engagement can be shared on social media.

Name	Start Date	End Date	Goal
Don't Bag It – Home Composting Program	Ongoing	Ongoing	2, 4, and 5

The District works with Soil and Water and OSU Extension office to promote composting and "Don't Bag it" to the residents. The "Don't Bag it" and home composting portion of the program is promoted at county fairs and festivals. Additionally, the OSU Extension promotes the Christmas Tree Recycling Program.

Target for Next 5 years: Continue through planning period.

2. Audience: Schools

Name	Start Date	End Date	Goal
School Education and Outreach	1994	Ongoing	1 and 2

Recycling education and awareness was available in most of the schools in the three-county area. Education in the schools has always been a priority for the SWMD. Additionally, the Community Outreach Specialist explored alternative communication methods such as emails, newsletters, Wakelet, and Google to connect with teachers. Schools received emails with attached newsletters, informing them about the various types of lessons developed. However, with the

COVID 19 pandemic the ability to physically get into schools for education was not available. Schools didn't begin opening up restrictions until 2022.

SWMD Partnership with NASA

The school program consists of a SWMD partnership with NASA to provide an Environmental Teacher's Academy. (Started this in 2013.) This academy has three separate sessions that the teachers must attend. Topics addressed are found within the new student performance standards with S.T.E.M serving as a foundational backdrop for K-12. This opportunity is unique in that it's an effort to develop collaborative partnerships across disciplines, school districts and agencies with teachers conducting new and exciting activities that can later be used in their classroom. The focus is on the environment as a whole and waste reduction and recycling play a significant part.

The Community Outreach Specialist works with NASA instructor to conduct this program and assist with the workshops. The goal is to "train the teachers" to take the burden off the part-time outreach specialist. This program reached all 19 different school districts throughout the three counties. In the reference year, during the NASA winter workshop, four teachers from Carrollton Schools learned about micro-organisms and where they are found even in the wintertime. They learned about the Globe Observer app that can be used to identify mosquito habitats, cloud formations, and trees.

School Technical Assistance

In the reference year (2021) the Community Outreach Specialist visited or communicated with school administration, teachers, and/or maintenance quarterly to offer assistance and evaluation with recycling programs. The District reached out to schools that have recycling containers to ensure that their programs are still viable, and nothing has slipped through the cracks. Wellsville School also contacted the specialist to request a recycling container since their waste hauler didn't offer recycling services.

Classroom presentations were carried out upon request and tailored to two distinct age groups: older youth and adults. Eight presentations covered a range of topics, including:

- General Recycling
- Different types of plastics
- Paper recycling
- Hazardous Waste

The District has 27 lesson boxes for youth ages preschool through twelfth grade covering topics such as:

- Litter prevention
- Recycling games (Classroom Jeopardy, Recycling Dice, Word Scramble, Relay and Mazes)
- Hazardous Waste Clean-up

- Watersheds and Flood plains
- Environmental Impacts of textiles, animals, and poor management of these resources
- How long does trash last?
- Landfill in a Bottle
- Sustainability

All the lesson boxes correlate with the Ohio Learning Standards and can be borrowed by teachers. Libraries, or civic groups (4-H, girl scouts, boy scouts, etc.). In 2020 and 2021, several programming opportunities were cancelled with libraries, schools, afterschool programs, Waffle Dinners, the district Envirothon, fairs, festivals, NASA workshops Carroll County Egg-stravaganza and the 3rd Annual Kent STEAM event. Only a few engagements with groups occurred before the counties shut down.

In 2021, Wellsville Middle/High School invited the District's education specialist to discuss soil composition with their students after receiving an email about the Lesson Box newsletter. Initially, three classes were scheduled, but a fourth class was added upon the specialist's arrival. The specialist engaged the students in discussions related to soil, connecting it to forensic science, environmental science, biology, and sustainability. A total of 47 students conducted hands-on activities, measuring pH levels and calcium content in soil samples they brought from home.

Carrollton 5th Grade Elementary joined the specialist at Bluebird Farm to learn about recycling and the MRF conveyor sorting line. The students used a homemade conveyor belt to separate recyclables from trash, enhancing their understanding of what's accepted in recycling bins. A total of 23 students participated in these programs, emphasizing the importance of reducing, reusing, and recycling.

Lisbon Exempted School District Elementary organized an ongoing after-school program for 1st-5th graders, with the specialist visiting monthly. Younger students learned about composting through a story and pumpkin decorating, while older students explored decomposition rates using items like apple cores, compostable straws, cloth, and plastic bottles. The specialist also conducted a Recycle Relay to celebrate America Recycles Day. Future visits are planned for January, February, March, and April, pending school approval.

Due to COVID concerns in 2020 and 2021, outreach and education plans were put on hold and created a challenging situation for the community outreach specialist to accomplish all the goals. The District's outreach specialist set goals to reach out to more business and schools, but due to restrictions that were put into place, physically visiting a site was not in the cards. Target for Next 5 years: The District will contract an outreach specialist to continue these school education and outreach program. Focus will be placed on re-building relationships with schools via email and in person visits. To obtain metrics the outreach specialist will pilot using a school evaluation feedback form for school programs.

- Metrics:
 - Track number of schools and students reached at school presentations.
 - If evaluation forms are adopted collect evaluation forms from 60% of school programs each year.

Name	Start Date	End Date	Goal
Recycling at Camp Program	Ongoing	Ongoing	2, 4, and 5

Camp outreach targets the staff and could fall in several audience groups. The District is organizing this in the Schools audience group. The District works with the camp staff to set up the recycling program engaging one-on-one with the business to work through the logistics and program development. Engagement is ongoing as the District services the program. The District also provides general recycling information to camps and staff which includes proper signage needed to properly conduct the program.

In 2021, the outreach specialist attended camp director meetings to discuss recycling efforts that could occur. Data was presented to show how much could be diverted the landfill by recycling. Unfortunately, COVID cancelled camps. The camps were eager to recycle. Feedback indicated it is a valuable lesson to the children. The plan is to revisit the camps once the restrictions are lifted to help enforce better recycling habits at the camps. The outreach specialist priority is to provide recognizable material to be recycled during the youths' stay at the camp, but also reinforce what they can recycle once they get back home. In 2021, the District serviced 9 camps that recycled 25 tons.

Target for Next 5 years: Focus on re-starting this program post-COVID. Add in discussion and evaluation of source reduction with camp purchasing staff.

• Metrics: Double the tonnage recycled and track source reduction efforts.

3. Audience: Industries

Name	Start Date	End Date	Goal
Industrial Education, Outreach, and Technical Assistance Program	1994	Ongoing	3 and 4

The SWMD works with businesses to establish or expand waste reduction and recycling programs *at their request*. As part of this program, the SWMD provides businesses with information and material regarding the financial benefits associated with waste reduction, such as reduced disposal costs and greater plant efficiency. The SWMD developed a brochure that identifies simple steps that businesses can do to reduce waste and continually provides information on recycling through the brochures, Facebook, and the Outreach Specialist.

In 2017, the District completed changes to the Waste Reduction Guide for businesses and had them printed for distribution in early 2018.

In 2018, the District noted the Industrial Resource Guide is outdated and set a goal to update.

In 2019, the District outreach specialist created an excel sheet documenting all industrial businesses in the area. Additionally, the specialist reached out to several to see if they were interested in business waste audits and informed them of the Ohio Materials Marketplace.

In 2020 and the reference year (2021), there was no outreach due to the COVID-19 pandemic and the restrictions that were in place.

Target for next 5 years: The District Director will conduct this outreach. Facilitate conversations and appointments with industrial businesses to implement program. Assist with setting up recycling programs and connect with appropriate infrastructure. Gather contact information and email addresses and generate an industrial business database for regular follow-ups with the companies. Promote Ohio EPA Materials Marketplace.

 Metrics: Set up and complete 2 waste audit assessments each year of the planning period with successful implementation in at least one business a year.

Name	Start Date	End Date	Goal
Annual Business Workshops	2019	Ongoing	3 and 4

The District offers annual Business Workshops to showcase successful recycling programs and encourage other business recycling and waste reduction programs.

In 2019, the food waste awareness workshop targeted all business types that had food on premises. The District partnered with local Farm Bureau, FFA Muskingum Camp, and Stark-Tuscarawas-Wayne SWMD and held a Food Waste Awareness Workshop that had 28 local business attendees.

In 2020 and the reference year (2021), there were no updates due to the COVID-19 pandemic and the restrictions that were in place - the outreach specialist was unable to host a workshop. The few businesses that called in, received information about the commercial recycling program and what was included.

Target for next 5 years: The District Director will conduct this outreach. The plan is to continue compiling contact information of the local businesses within the three counties and contact them to find out if they would be interested in learning more about how they can reduce their waste and/or their cost on waste disposal. The local area Chamber of Commerce's will be contacted to get to know them better. Continue compiling business contact information and facilitating conversations and appointments with industrial businesses to continue the program.

• Metrics: Increase the participation and engagement in business workshops by 30% in the first three years of the planning period.

4. Audience: Institutions & Commercial Businesses

Name	Start Date	End Date	Goal
Commercial/Institutional Education, Outreach and Technical Assistance Program	1994	Ongoing	3 and 4

The District provides technical assistance and educational resources regarding waste audits and guidance in setting up recycling programs. The Waste Reduction Guide is a tool to help businesses look critically at waste generation, develop waste reduction/recycling programs, evaluate those programs, and close the recycling loop by purchasing economical recycled products. In addition, the District's Waste Reduction and Recycling Awareness program provides for businesse educational activities. SWMD staff is available to meet with businesses to show them the benefits of recycling brochures are distributed to companies, showing them how to set up a profitable recycling program. This approach allows businesses to set up a recycling program that meets their needs.

In the reference year, the Environmental Team at the First Presbyterian Church in Salem contacted the District for recycling guidance. The outreach specialist

engaged with 10 members, providing information on what items can be recycled and discussing market-related changes. The church also expressed interest in hosting a Household Hazardous Waste event for their Earth Day celebration. Furthermore, the Salem Regional Hospital invited the outreach specialist to discuss general recycling practices and the impact of paper shredding on recyclability. They were curious about the acceptance of paper in recycling bins but not shredded paper. Alternative options for shredding personal informationcontaining documents were explored during the conversation.

Target for Next 5 years: The District Director plans to engage with local businesses through various methods, including participation in chamber meetings and events, attending business expos, and conducting on-site visits. Specific focus is on commercial businesses with food waste, such as restaurants, bars, grocery stores, and schools. The District will maintain a database with business details, contact information, food waste volume, and disposal methods. This data will be shared with other businesses to inform the establishment of a food waste recovery program during the planning period.

 Metrics: Reach out to 5 businesses within the first year of the planning period with successful implementation in at least two businesses.

Name	Start Date	End Date	Goal
Waste Reduction & Recycling Guide	Ongoing	Ongoing	3 and 4

The District's Waste Reduction & Recycling Guide was developed to provide Carroll, Columbiana, and Harrison County businesses and institutions with cost-effective options for reducing solid waste disposal. This guide helps businesses look critically at waste generation, develop waste reduction/recycling programs, evaluate those programs, and close the recycling loop by purchasing economical recycled products. This guide's resource section identifies markets for the recyclable material generated by businesses. This guide illustrates methods for conducting a "waste assessment," an in-depth examination of the types and quantities of waste generated. Worksheets and sample forms are included to help organize the waste assessment process. This guide then details methods for reducing and recycling materials as well as avoiding potential problems. Additionally, each section of this guide contains the tools needed to create and maintain useable statistics to measure the progress of your program. Purchasing, the final step in the process, impacts the first stage of any production or business task. Incorporating recycled products into purchasing plans helps to establish markets for recycled material, benefits the business, and demonstrates commitment to the waste reduction program.

Other features of this guide include a list of vendors that provide recycling services, government and private agencies that offer assistance, tips on waste hauling negotiation, advice on how to tell employees and customers of waste reduction

success, and a complete glossary of waste management and recycling terminology. This guide is an outstanding tool for organizations of all sizes and types. The economic and social benefits of waste reduction are convincing businesses to redefine waste as a potentially profitable resource. This guide is utilized by the District staff and the outreach specialist to assist with waste audits and assessments and will continue to be utilized throughout the planning period.

Target for Next 5 years: The District Director will serve as the primary staff utilizing this guide with the outreach specialist assisting as needed and agreed upon.

• Metrics: Every two years review the guide and update if needed.

5. Audience – Communities & Elected Officials

Name	Start Date	End Date	Goal
Government Outreach & Education Program	1994	Ongoing	3 and 4

The SWMD worked closely with its political leaders. The Outreach Specialist regularly attended Commissioners' meetings to keep them apprised of upcoming recycling events. The District aims to attend at least one meeting of each of all 74 townships and municipalities to ensure that they are aware of the programs we offer to them every year. The District attends quarterly township association meetings, but it is not always easy to speak to everyone present. Through the associations, such as the Organization of Solid Waste Districts of Ohio ("OSWDO"), in conjunction with the County Commissioners Association of Ohio ("CCAO"), the SWMD often reaches out to State Representatives and Congressmen to keep them apprised of what is happening within the SWMD.

In the reference year, the District coordinator and the outreach specialist met with the new East Liverpool Mayor and discussed recycling in the area to get a better understanding of what a solid waste district is and how it became about.

Target for Next 5 years: A target set in the 2018 Plan which did not get implemented will also be a target for this 2025 Plan update. The SWMD will put together a presentation from the tools and best practices learned from Ohio EPA and the Recycling Partnership and set up meetings with mayors, service directors, and administrators. The District will schedule time to be on the agenda for council meetings to make a "pitch" for the benefits of curbside recycling. If there is doubt among council, which there usually is in a political setting, the District is available to provide outreach to residents in the municipality's next water bill. A short residential survey regarding curbside recycling could be conducted via mail or website. This short survey would give residents an anonymous voice and may help convince the council that residents want curbside service. The District is available to proceed to assist with the logistics of setting up a curbside program, work with the municipality throughout the process, and assist in any way to enable a successful curbside program. The District Director will serve as the primary outreach person to this audience.

• Metrics: Speak/present to two audiences a year.

D. Outreach Priority

Name		End Date	Goal
Carboard Recycling and Breakdown Outreach Campaign	2024	Ongoing	3 and 4

Goal/Purpose: The District will focus on promoting cardboard recycling and break down at District drop-off locations.

Targeted Audience: Residents

Strategy: The outreach campaign targeting drop-off users will encompass the creation of a comprehensive outreach and communication strategy with face-to-face interaction and social media to promote the outreach campaign. This strategy will encompass the following key components:

- Establishing a Call to Action: Outlining the desired actions that the target audience should take.
- Setting Measurable Communication Objectives: Clearly defining measurable goals that will gauge the effectiveness of the campaign.
- Planning Tactics and Timelines: Developing a strategic plan that includes the methods and schedule for implementation.

In executing this outreach initiative, the District anticipates implementing various strategies such as establishing a measurable baseline, harnessing social norms, encouraging proactive engagement, maintaining an online presence through Facebook and the official website, monitoring metrics, and implementing follow-up actions contingent upon the campaign's results.

Milestones:

- 1. **Identifying the Desired Behavior:** Encouraging households to break down cardboard.
- 2. Establishing a Baseline: Utilizing observations with camera photos at dropoff locations and visual capacity measurements to gauge the percentage of cardboard that remains unbroken in the containers (e.g., 10%, 100%).

- 3. Leveraging Social Norms: Creating short videos showcasing neighbors breaking down cardboard at drop-off locations and sharing them on the website and Facebook platform.
- 4. **Persuading Action:** Providing incentives, such as gift cards, to individuals caught breaking down cardboard on-site. This incentive program will occur three times a year across three different county locations, resulting in a total of nine gift cards distributed.
- 5. **Follow-up on Social Media**: Promoting and celebrating exemplary recyclers as "cardboard champions" on Facebook and the website.
- 6. **Monitoring Metrics:** Posting metrics on the District platforms of observations from camera photos at drop-off sites and visual capacity measurements to highlight progress and promote campaign.
- 7. **Implementing Reminder Prompts:** Developing reminder prompts and determining their frequency based on campaign outcomes. Potential actions may include repeating the campaign or introducing additional signage at drop-off locations.

Opportunity: Explore the possibility of applying for the OEPA Community Development Grant, particularly for the Education & Outreach Priority. This grant can cover expenses related to printed materials, signage, and similar needs.

Metrics: Post campaign measure percentage of cardboard that remains unbroken. Target a 75% improvement in cardboard being broken down.

The District's outreach campaign, which emphasizes behavior change principles, represents a strategic and comprehensive approach to encourage positive actions within the community. By focusing on these principles, the District aims to not only raise awareness but also actively motivate individuals to participate in cardboard recycling by breaking down materials at drop-off locations.

APPENDIX M

WASTE MANAGEMENT CAPACITY ANALYSIS

APPENDIX M. Waste Management Capacity Analysis

This appendix provides the District's strategy for ensuring that it has access to solid waste management landfill capacity.

A. Access to Publicly Available Landfill Facilities

Table M-1	Domaining	Operating	Life of Bublich	Available Landfille
	Remaining	Operating	Life of Fublicity	v Available Landfills

Facility	Location	Years of Remaining Capacity	Status (enter no change, planned expansion, pending expansion, or closing)	Applicable Dates
Countywide RDF - Republic Services	Stark	62	Countywide RDF - Republic Services	31-Dec-21
Pine Grove Regional Facility	Coshocton	88	Pine Grove Regional Facility	31-Dec-21
Geneva Landfill	Ashtabula	65	Geneva Landfill	31-Dec-21
Mahoning Landfill	Mahoning	45	Mahoning Landfill	31-Dec-21
Hancock County Landfill	Hancock	24	Hancock County Landfill	31-Dec-21
American Landfill	Stark	74	American Landfill	31-Dec-21
Apex Landfill	Belmont	21	Apex Landfill	31-Dec-21
Kimble Sanitary Landfill	Stark	20	Kimble Sanitary Landfill	31-Dec-21
Carbon Limestone Landfill	Mahoning	47	Carbon Limestone Landfill	31-Dec-21
Imperial Landfill	PA	unavailable	Imperial Landfill	31-Dec-21
Seneca Landfill	PA	unavailable	Seneca Landfill	31-Dec-21
Valley Landfill	PA	unavailable	Valley Landfill	31-Dec-21
Short Creek Landfill	WV	unavailable	Short Creek Landfill	31-Dec-21
Brooke/Valero Landfill	WV	unavailable	Brooke/Valero Landfill	31-Dec-21
Wetzel Landfill	WV	unavailable	Wetzel Landfill	31-Dec-21
Multiple Facilities	WV	unavailable	Multiple Facilities	31-Dec-21

Source(s) of Information:

Ohio EPÁ 2021 Ohio Facility Data Report Tables

Note: The years of remaining capacity are based on the most recent annual report for the facility. Thus, if the owner/operator of a facility obtained a permit to expand the facility after the reference year, then the additional permitted capacity is included in the years of remaining life.

Table M-1 presents the municipal solid waste landfills where waste was disposed from the District in the reference year. The landfills listed are both ones that accepted direct hauled waste and that accepted transferred waste.

Over the reference year, the District sent material to be disposed of to 16 landfills, 9 in state and 7 out of state.

Apex Landfill and Carbon Limestone Landfill listed in Table M-1 combined accepted more than 71% of the District's waste that was disposed in landfill facilities in 2021. The largest portion, 51%, was disposed at the Apex Landfill in Belmont County. The next largest portion, 21%, was disposed at the Carbon Limestone Landfill, in Mahoning County. Apex and Carbon Limestone Landfills have adequate remaining capacity to continue accepting waste throughout the planning period.

B. Access to Captive Landfill Facilities

Table M-2 Remaining Operating Life of Privately Available Landfills

Facility	Location	Years of Remaining Capacity
None		
Source(c) of Information: 2021 Obio Eacility Report		

Source(s) of Information: 2021 Ohio Facility Report.

The District did not send any waste to captive landfill facilities in the reference year.

APPENDIX N

EVALUATING GREENHOUSE GAS EMISSIONS

APPENDIX N. Evaluating Greenhouse Gas Emissions

The Waste Reduction Model (WARM)

WARM is a tool that US EPA developed to quantify the effects of waste management decisions on greenhouse gas emissions. The model demonstrates the benefits of alternative management technologies over traditional management methods. The WARM model is updated regularly. A 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.

WARM is intended to compare municipal solid waste management scenarios. Therefore, data is used for only 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.

Include printouts of the results for both runs in the solid waste management plan.

A. GHG Measurement

Gases that trap heat in the atmosphere are called greenhouse gases (GHG). These gasses 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 of one same 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 in terms of carbon dioxide equivalents. Because waste reduction and management results 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 equivalent is the amount of CO₂

it that would have the same global warming potential as the waste reduction impacts when measured over a specified timescale. 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 database tool that helps decision makers predict the strategies that most reduce GHG emissions. The WARM model calculates GHG emission across six waste management modalities (source reduction, recycling, composting, anaerobic digestion, combustion, and landfilling). Modeling different combinations of waste management practices 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 a savings while positive values indicate increasing emissions. In 2021, the District disposed of 82,146 tons of waste from the residential and commercial sectors and diverted 17,509 tons (18%) from landfills. The tons diverted was input in WARM calculations to determine the GHG emission savings from the diverted materials.

Total GHG Emissions from Baseline – Year 2021	(36,372.83) MTCO ₂ e			
Total GHG Emissions from Alternative – Year 2030	(35,724.53) MTCO ₂ e			
Incremental GHG Emissions Savings	648.29 MTCO ₂ e			

Table N-1: Reference Year Waste Diversion

By the District having diversion programs, the diverted tons of residential/commercial material in the reference year resulted in 36,372.83 MTCO₂e prevented from being emitted into the atmosphere. To better illustrate the amount saved by the District, the diversion programs are equivalent to:

- Removing 8,045 passenger vehicles from the road
- Conserving 4,263,667 gallons of gasoline
- Conserving 1,578,800 cylinders of propane

With the projected decrease in diversion by 2030, there is an estimated additional reduction of 648.29 MTCO₂e of greenhouse gasses equivalent to:

- Removing 138 passenger vehicles to the road
- Conserving 72,949 gallons of gasoline
- Conserving 27,012 propane tanks

APPENDIX O

FINANCIAL DATA

Appendix O. Financial Data

This Appendix encompasses the District's funding mechanisms, revenues, and expenditures for the 2025 to 2036 planning period. 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 accrue money to finance its operations and how it will spend that money. First, the SWMP identifies revenue as the source of funding the District will use to implement its approved plan. The Plan also provides projections of funding from each source through the planning period. Then, the SWMP projects expenses of programs through the planning period. Per Ohio law, planned expenditures will be made in accordance with the ten allowable uses prescribed in ORC Section 3734.57 (G). Overall, the SWMP must demonstrate the District has adequate money for the 15 years of the planning period to implement the approved plan.

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

Disposal fees are collected on each ton of solid waste disposed at landfills in the levying SWMD. There are three tiers of the disposal fee structure. The tiers correspond to where the waste was generated – in-district, out-of-district, and out-of-state.

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

- The in-district fee must be \geq \$1.00 and \leq \$2.00;
- The out-of-district fee must be \geq \$2.00 and \leq \$4.00; and
- The out-of-state fee must be equal to the in-district fee.

In accordance with Ohio Revised Code Section 3734.57(B), the SWMD's Disposal Fee Schedule is \$1.00 per ton for in-district waste, \$2.00 per ton for out-of-district waste, and \$1.00 per ton for out-of-state waste. This means that, under the ORC, a policy committee of a solid waste district may levy these fees as stated above. However, these "tipping fees" as they are also known, refer to landfills situated within a solid waste district's boundary.

The SWMD has no operating landfills within its boundaries and, therefore, does not have disposal fee revenue and Table O-1 is omitted.

2. Generation Fee

In accordance with ORC 37344.573, a solid waste management district may levy fees on the generation of solid wastes within the SWMD. The SWMD has not imposed a generation fee since 2009 and, therefore, does not have any generation fee revenue and Table O-2 is omitted.

3. Designation Fee

In accordance with Ohio Revised Code 343.014, a solid waste management district may adopt designation fees to assure adequate financing to implement the approved solid waste plan.

Due to the SWMD's proximity to other states, the Policy Committee and Board of Directors determined the need to establish designation. Designation provides all disposal facilities that desire to accept waste from Carroll, Columbiana and Harrison counties the opportunity to do so provided they sign a contract with the SWMD, agree to provide accurate documentation of the waste going into their facility, and pay the same fee that all other facilities are contracted to pay. This leveled the playing field for haulers and disposal facilities in and out-of-state. The SWMD currently contracts with landfills throughout Ohio, Pennsylvania, and West Virginia. The District's designation fee is \$3.50 per ton. A list of the designated facilities can be found in Appendix P.

Pursuant to Section 3734.53(E)(1) of the Ohio Revised Code, the Board of Directors of the SWMD is hereby authorized to continue with facility designations as they are currently, and to establish new facility designations under Section 343.014 of the Ohio Revised Code. Table O-3 below shows revenue received from the SWMD's contract fee and projects for revenue, from contract fees, throughout the remaining planning period.

Year	Designation Fee Schedule (\$ per ton)	Total Designation Fee Revenue (\$)
2017	\$3.50	\$467,401
2018	\$3.50	\$748,307
2019	\$3.50	\$1,052,097
2020	\$3.50	\$729,574
2021	\$3.50	\$933,158
2022	\$3.50	\$1,159,236
2023	\$3.50	\$1,043,312
2024	\$3.50	\$952,210
2025	\$3.50	\$925,079
2026	\$3.50	\$899,054
2027	\$3.50	\$874,048
2028	\$3.50	\$850,020
2029	\$3.50	\$826,931
2030	\$3.50	\$804,744
2031	\$5.50	\$1,231,073

 Table O-3. Designation Fee Schedule and Revenue

Year	Designation Fee Schedule (\$ per ton)	Total Designation Fee Revenue (\$)
2032	\$5.50	\$1,231,073
2033	\$5.50	\$1,231,073
2034	\$5.50	\$1,231,073
2035	\$5.50	\$1,231,073
2036	\$5.50	\$1,231,073
2037	\$5.50	\$1,231,073
2038	\$5.50	\$1,231,073
2039	\$5.50	\$1,231,073

Sources:

Sample Calculations:

2022 Revenue calculated from ten months of actual revenue and extrapolated revenue for the remaining two months.

2023 – 2028 Projected revenue calculated assumes 2022 waste disposal declines 10% annual through 2028. 2029 – 2039 Projected revenue calculated on a flat waste disposal tonnage of 176,019 tons.

Table O-3 shows an increase in the designation fee schedule to \$5.50 per ton in 2030. For demonstration purposes this increase is needed to balance the budget. This 2024 Plan budget is not ratifying a fee increase.

4. Loans

The District does not have any outstanding debt due to existing loans. The SWMD has never had loans or debt and is not planning to incur debt or seek loans during the planning period. However, the SWMD reserves the right to seek loans at the Policy Committee and Board of Director's discretion and in accordance with the Ohio Attorney General's Opinion 2015-019, dated January 24, 2023, which outlines sources of financing a SWMD may use.

5. Other Sources of District Revenue

The District's other revenue streams include recycling revenue, grants, reimbursements and other (miscellaneous).

a. Recycling Revenue

Average revenue received over 2019 through 2021 is \$2,657. Recycling revenue in 2017 stems from contract with Kimble Companies. Kimble paid the SWMD 40% of the front-load service contract back as recycling revenue. This contract arrangement expired on July 31, 2017. From 2018 through 2021, the SWMD received minimal revenue from sale of commodities. The 2021 revenue of \$3,195 is held constant through the planning period.

b. Grants

Funding from grants is competitive and not guaranteed. The District received grant revenue every year for the past 5 years.

In 2019 the District received \$250,000 from the Ohio EPA Recycling and Litter Prevention Grant. This grant was extended for a year because of Covid-19. The District received approximately \$87,500 in 2021 from Ohio EPA Recycling Ohio Grant. This source is unpredictable and not guaranteed from year to year; therefore, only actual values are reported in tale O-5, no future values were projected.

c. Reimbursements

From time-to-time the District receives reimbursement revenue. The largest sum came in 2019 and was \$1,793. This amount is unpredictable and not guaranteed from year to year; therefore, only actual values are reported in tale O-5, no future values are projected.

d. Other

The District received miscellaneous revenue every year in the last five years. Miscellaneous monies are received from the sale of roll-off containers, teacher workshop regulation fees, electronics security deposit, commercial recycling account services, and refunds from the Bureau of Workers' Comp. The largest sum came in 2021 and was \$22,484 from the sale of 6 roll off containers. Excluding the large sale of containers in 2021 the average revenue received from 2017 through 2020 is \$4,544. The five-year average is and held constant through the planning period as shown in **Table O-5**.

Year	Recycling Revenue (\$)	Grants (\$)	Reimbursements (\$)	Other (\$)	Total Other Revenue (\$)
2017	\$200,432	\$32,309	\$0	\$6,239	\$238,981
2018	\$11,333	\$33,237	\$0	\$1,736	\$46,305
2019	\$2,744	\$116,405	\$1,793	\$5,509	\$126,451
2020	\$2,031	\$50,000	\$84	\$4,692	\$56,806
2021	\$3,195	\$106,896	\$ 0	\$22,484	\$132,575
2022	\$3,195	\$0	\$0	\$4,544	\$7,739
2023	\$3,195	\$0	\$0	\$4,544	\$7,739
2024	\$3,195	\$0	\$0	\$4,544	\$7,739
2025	\$3,195	\$0	\$0	\$4,544	\$7,739
2026	\$3,195	\$0	\$0	\$4,544	\$7,739
2027	\$3,195	\$0	\$0	\$4,544	\$7,739
2028	\$3,195	\$0	\$0	\$4,544	\$7,739
2029	\$3,195	\$0	\$0	\$4,544	\$7,739

 Table O-5. Other Revenues and Other Revenue Source

Year	Recycling Revenue (\$)	Grants (\$)	Reimbursements (\$)	Other (\$)	Total Other Revenue (\$)
2030	\$3,195	\$0	\$0	\$4,544	\$7,739
2031	\$3,195	\$0	\$0	\$4,544	\$7,739
2032	\$3,195	\$0	\$0	\$4,544	\$7,739
2033	\$3,195	\$0	\$0	\$4,544	\$7,739
2034	\$3,195	\$0	\$0	\$4,544	\$7,739
2035	\$3,195	\$0	\$0	\$4,544	\$7,739
2036	\$3,195	\$0	\$0	\$4,544	\$7,739
2037	\$3,195	\$0	\$0	\$4,544	\$7,739
2038	\$3,195	\$0	\$0	\$4,544	\$7,739
2039	\$3,195	\$0	\$0	\$4,544	\$7,739

Source(s) of Information: CCH SWMD Quarterly Fee Reports 2017through 2021 Sample Calculations:

Total Other Revenue (2017) = recycling revenue + grants + reimbursements + other

Table O-5 above presents the District's projected other sources of revenue through the planning period.

6. Summary of District Revenues

Year	Designation Fees	Other Revenue	Total Revenue
2017	\$467,401	\$238,981	\$706,381
2018	\$748,307	\$46,305	\$794,612
2019	\$1,052,097	\$126,451	\$1,178,548
2020	\$729,574	\$56,806	\$786,380
2021	\$933,158	\$132,575	\$1,065,734
2022	\$1,159,236	\$7,739	\$1,166,975
2023	\$1,043,312	\$7,739	\$1,051,051
2024	\$952,210	\$7,739	\$959,949
2025	\$925,079	\$7,739	\$932,818
2026	\$899,054	\$7,739	\$906,793
2027	\$874,048	\$7,739	\$881,787
2028	\$850,020	\$7,739	\$857,759
2029	\$826,931	\$7,739	\$834,671
2030	\$804,744	\$7,739	\$812,483
2031	\$1,231,073	\$7,739	\$1,238,812
2032	\$1,231,073	\$7,739	\$1,238,812
2033	\$1,231,073	\$7,739	\$1,238,812

Table O-6 Summary of District Revenues (in accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573)

Year	Designation Fees	Other Revenue	Total Revenue
2034	\$1,231,073	\$7,739	\$1,238,812
2035	\$1,231,073	\$7,739	\$1,238,812
2036	\$1,231,073	\$7,739	\$1,238,812
2037	\$1,231,073	\$7,739	\$1,238,812
2038	\$1,231,073	\$7,739	\$1,238,812
2039	\$1,231,073	\$7,739	\$1,238,812

Source(s) of Information: CCH SWMD Quarterly Fee Reports 2017 to 2021. All other amounts are projections (refer to Table O-2 and O-5).

Table O-6 above includes all funding mechanisms that are used, and the amount of revenue generated by each method for each year for the planning period.

B. Cost of Implementing Plan

Line							
#	Category/Program	2017	2018	2019	2020	2021	2022
1	Plan Monitoring/Prep.	\$10,104	\$0	\$0	\$0	\$0	\$0
1.a	Plan Preparation	\$5,518	\$0	\$0	\$0 \$0	\$0	\$0 \$0
1.b	Plan Monitoring	\$3,003	\$0	\$0 \$0	\$0 \$0	\$0	\$0
1.c	Other	\$1,583	\$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0
2	Plan Implementation	\$1,627,145	\$888,935	\$1,192,334	\$1,669,955	\$763,859	\$756,499
2.a	District Administration	\$135,155	\$200,674	\$145,963	\$134,092	\$158,302	\$163,051
2.a.1	Personnel	\$116,113	\$164,873	\$118,896	\$116,776	\$140,427	\$144,640
2.a.2	Office Overhead	\$19.041	\$30,153	\$24,970	\$15,765	\$17,875	\$18,411
2.a.3	Other	\$0	\$5,648	\$2,097	\$1,552	\$0	\$0
2.b	Facility Operation	\$40,000	\$25,000	\$25,000	\$60,000	\$25,000	\$0
2.b.1	MRF/Recycling Center	φ+0,000	φ20,000	Ψ20,000	\$50,000	φ20,000	ψ0
2.b.1	Compost				φ00,000		
2.b.2	Transfer						
2.b.4	Special Waste						
2.c	Landfill Closure/Post-Closure	\$40,000	\$25,000	\$25,000	\$10,000	\$25,000	\$0
2.d	Recycling Collection				\$611,843	\$527,881	\$543,717
2.u 2.d.1	Curbside	\$1,284,965 \$0	\$493,617 \$0	\$867,789 \$0	φ011,043	φ321,001	φJ43,/1/
2.d.1 2.d.2	Drop-off	پ و \$1,284,965	پر \$493,617	پ و \$867,789	\$611,843	\$527,881	\$543,717
2.d.2	Combined Curbside/Drop-off	\$1,204,900	φ493,017	<i>ф001,109</i>	Φ 011,043	φ <u></u> 327,001	\$J43,717
2.d.3	Multi-family						
2.d. 4 2.d.5	Business/Institutional						
2.d.5 2.d.6	Other						
2.u.0 2.e	Special Collections	\$111,895	\$81,983	\$81,241	\$9,728	\$23,456	\$27,000
2.e 2.e.1	Tire Collection						
2.e.1 2.e.2	HHW Collection	\$31,569	\$27,412	\$36,819	\$2,449	\$12,300	\$15,000
2.e.2 2.e.3	Electronics Collection	\$12,840 \$34,543	\$12,392 \$15,257	\$15,130	\$0 \$7,279	\$0 ¢c.000	\$0 ¢c.000
2.e.3 2.e.4				\$8,051 \$0		\$5,009	\$6,000
2.e.4 2.e.5	Appliance Collection Other Collection Drives	\$630	\$250		\$0	\$0	\$0
		\$32,314	\$26,673	\$21,240	\$0	\$6,147	\$6,000
2.f	Yard Waste/Other Organics	\$25,249	\$47,499	\$20,490	\$24,518	\$0	\$0
2.g	Education/Awareness	\$23,293	\$23,570	\$28,463	\$25,388	\$10,503	\$4,731
2.g.1	Education Staff Advertisement/Promotion	\$21,270	\$15,091	\$19,474	\$22,260	\$9,144	\$0
2.g.2		\$1,437	\$7,638	\$7,675	\$2,532	\$1,257	\$4,231
2.g.3	Other Description Manhat	\$585	\$841	\$1,314	\$596	\$102	\$500
0.1	Recycling Market	* 2 222	\$0.050	AF 404	AA 400	* •	^
2.h	Development	\$3,089	\$2,958	\$5,161	\$3,132	\$0	\$0
2.h.1	General Market Development	\$3,089	\$2,958	\$5,161	\$3,132		\$0
2.h.2 2.i	ODNR pass-through grant Service Contracts			\$10.007	\$004.055	\$10.575	\$10,000
				\$18,227	\$801,255	\$16,575	\$18,000
2.j	Feasibility Studies					*• • • • •	
2.k	Waste Assessments/Audits					\$2,143	
2.1	Dump Cleanup						
2.m	Litter Collection/Education						
0 -	Emergency Debris						
2.n	Management						
2.0	Loan Payment			* -	A		
2.p	Other	\$3,500	\$13,635	\$0	\$0	\$0	\$0
3	Health Dept. Enforcement						
4	County Assistance						
5	Well Testing						
<u> </u>	Out-of-State Waste						
6	Inspection						
7	Open Dump, Litter Law						
7	Enforcement						
8	Heath Department Training						

Table O-7 Years 2017 – 2022

9 Assistance Assistance Assistance Assistance 10 3734.35) 3734.35) 51.692.34 \$1.690.965 \$763.859 \$756.499 #**Total Expenses*** \$1.637.249 \$888.935 \$1.192.334 \$1.690.965 \$763.859 \$5756.499 #**Total Expenses*** \$1.637.249 \$888.935 \$1.192.334 \$1.690.965 \$5763.859 \$2028 10 Plan Monitoring/Prep. \$0 <td< th=""><th></th><th>Municipal/Township</th><th></th><th></th><th></th><th></th><th></th><th></th></td<>		Municipal/Township						
Compensation to Affected Community (ORC Section 374.35) St.037.240 S888.035 St.1192.334 St.0680.955 \$763.899 \$776.499 \$776.499 \$776.499 \$776.499 \$778.490 \$778.490 \$778.490 \$778.490 \$778.490 \$708.490 \$718.7701	9							
Total Expenses \$1.837,240 \$1.192,334 \$1.899,965 \$763,869 \$763,869 Table O-7 Years 2023 2024 2025 2026 2027 2028 Line Category/Program 2023 2024 2025 2026 2027 2028 1.a Plan Monitoring/Prep. 50		Compensation to Affected Community (ORC Section						
Table O-7 Years 2023 – 2028 Line # Category/Program 2023 2024 2025 2026 2027 2028 1 Plan Monitoring/Prop. 80 \$0	10		\$1 637 249	\$888 935	\$1 192 334	\$1 669 955	\$763 859	\$756 499
Line Category/Program 2023 2024 2025 2026 2027 2028 1 Plan Monitoring/Prep. 50 <t< th=""><th></th><th></th><th></th><th></th><th></th><th>.,,,</th><th>φ<i>ι</i> 00,000</th><th>Ψ100,100</th></t<>						.,,,	φ <i>ι</i> 00,000	Ψ 1 00, 1 00
# Category/Program 2023 2024 2025 2026 2027 2028 1 Plan Monitoring/Prep. \$0 \$	Line					520		
Plan Monitoring/Prop. S0 S0 </th <th>-</th> <th>Category/Program</th> <th>2023</th> <th>2024</th> <th>2025</th> <th>2026</th> <th>2027</th> <th>2028</th>	-	Category/Program	2023	2024	2025	2026	2027	2028
1a. Plan Preparation S0								
1.c. Other \$0 <t< td=""><td>1.a</td><td></td><td></td><td></td><td></td><td></td><td></td><td>\$0</td></t<>	1.a							\$0
Plan Implementation \$1,231,829 \$997,799 \$1,020,428 \$1,043,736 \$1,067,743 \$1,092,470 2.a District Administration \$167,942 \$172,801 \$178,770 \$183,548 \$198,052 \$192,793 \$1167,677 \$172,707 2.a.1 Dersonnel \$149,993 \$153,448 \$190,852 \$20,118 \$20,722 \$21,344 \$21,984 2.a.3 Other \$0 <t< td=""><td>1.b</td><td>Plan Monitoring</td><td>\$0</td><td>\$0</td><td>\$0</td><td>\$0</td><td>\$0</td><td>\$0</td></t<>	1.b	Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0
2.a District Administration \$167,942 \$172,961 \$178,170 \$183,515 \$189,021 \$194,691 2.a.1 Office Overhead \$184,979 \$153,448 \$156,052 \$167,677 \$172,707 \$172,707 \$172,707 \$172,707 \$129,94 2.a.2 Office Overhead \$0			\$0	\$0	\$0	1.5	1 -	\$0
2.a.1 Personnel \$148.979 \$153,448 \$158,052 \$162,793 \$167,677 \$172,707 2.a.2 Office Overhead \$18,963 \$19,532 \$20,118 \$20,722 \$21,344 \$21,984 2.a.3 Other \$0 <td>2</td> <td>Plan Implementation</td> <td>\$1,231,829</td> <td>\$997,799</td> <td>\$1,020,428</td> <td>\$1,043,736</td> <td>\$1,067,743</td> <td>\$1,092,470</td>	2	Plan Implementation	\$1,231,829	\$997,799	\$1,020,428	\$1,043,736	\$1,067,743	\$1,092,470
2.a.2 Office Overhead \$18,963 \$19,532 \$20,118 \$20,722 \$21,344 \$21,984 2.a.3 Other \$0	2.a	District Administration	\$167,942	\$172,981	\$178,170	\$183,515	\$189,021	\$194,691
2.a.3 Other 50 51 50 51 50 <	2.a.1	Personnel	\$148,979	\$153,448	\$158,052	\$162,793	\$167,677	\$172,707
2.b. Facility Operation \$0 \$0 \$0 \$0 \$0 \$0 2.b.1 MRF/Recycling Center .			\$18,963	\$19,532	\$20,118	\$20,722	\$21,344	\$21,984
2b.1 MRF/Recycling Center 2.b.2 Compost 2.b.3 Transfer 2.b.4 Special Waste 2.c Landfill Closure/Post-Closure \$9 \$0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>\$0</td></t<>								\$0
2.b.2 Compost Compost Compost 2.b.3 Transfer			\$0	\$0	\$0	\$0	\$0	\$0
2.b.3 Transfer 2.b.4 Special Waste 50 \$0								
2.b.4 Special Waste S0								
2.c Landfill Closure/Post-Closure \$0 \$0 \$0 \$0 \$0 \$0 \$0 2.d Recycling Collection \$960,029 \$651,829 \$669,134 \$668,958 \$705,317 \$724,227 2.d.1 Curbside 2.d.2 Drop-off \$560,029 \$576,829 \$594,134 \$611,958 \$630,317 \$649,227 2.d.3 Combined Curbside/Drop-off 2.d.4 Multi-family 2.d.5 Business/Institutional 2.d.6 Other \$400,000 \$75,000 \$75,000 \$85,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000 \$865,000<								
2.d Recycling Collection \$960,029 \$661,829 \$660,134 \$668,958 \$705,317 \$724,227 2.d.1 Curbside			0.2	¢0	¢0	* 0	0.0	¢0,
2.d.1 Curbside \$560,029 \$576,829 \$594,134 \$611,958 \$630,317 \$649,227 2.d.3 Combined Curbside/Drop-off \$500,029 \$576,829 \$594,134 \$611,958 \$630,317 \$649,227 2.d.4 Multi-family \$500,000 \$75,000 \$75,000 \$75,000 \$75,000 \$75,000 \$75,000 \$86,000 \$86,000 \$86,000 \$86,000 \$80,000 \$80,000 \$80,000 \$80,000 \$80,000 \$80,000 \$80,000 \$80,000								
2.d.2 Drop-off \$560,029 \$576,829 \$594,134 \$611,958 \$630,317 \$649,227 2.d.3 Combined Curbside/Drop-off \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ <td></td> <td>, ,</td> <td>\$900,029</td> <td>\$0J1,029</td> <td>\$009,134</td> <td>4000,900</td> <td>\$705,517</td> <td>φ124,221</td>		, ,	\$900,029	\$0J1,029	\$009,134	4000,900	\$705,517	φ124,221
2.d.3 Combined Curbside/Drop-off			\$560 029	\$576 829	\$594 134	\$611 958	\$630 317	\$649 227
2.d.4 Multi-family			\$000,020	<i>QC10,020</i>	φ001,101	<i>\\</i> 011,000	<i>\\</i> 000,011	\$010,EE1
2.d.6 Other \$400,000 \$75,000 \$75,000 \$75,000 \$75,000 \$865,000 \$815,000 \$\$10 \$\$10 \$\$10 \$\$10 \$\$10 \$\$10 \$\$1								
2.e Special Collections \$\$56,000 \$\$65,000 \$\$65,000 \$\$65,000 \$\$65,000 \$\$65,000 \$\$65,000 \$\$65,000 \$\$15,000 \$\$20,000 \$\$25,000 \$\$25,000 \$\$25,000	2.d.5	Business/Institutional						
2.e.1 Tire Collection \$15,000 \$20,000		Other	\$400,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
2.e.2 HHW Collection \$15,000 \$20,000								\$65,000
2.e.3 Electronics Collection \$6,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$15,000 \$20,000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
2.e.4 Appliance Collection \$0 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000 \$26,000								
2.e.5 Other Collection Drives \$20,000 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
2.f Yard Waste/Other Organics \$0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>								
2.g Education/Awareness \$29,858 \$29,989 \$30,123 \$30,262 \$30,405 \$30,552 2.g.1 Education Staff \$25,000 \$500								
2.g.1 Education Staff \$25,000 \$500 \$25,000 <th< td=""><td></td><td>9</td><td></td><td></td><td>1 -</td><td></td><td></td><td></td></th<>		9			1 -			
2.g.2 Advertisement/Promotion \$4,358 \$4,489 \$4,623 \$4,762 \$4,905 \$5,052 2.g.3 Other \$5000 \$5000 \$5000								
2.g.3 Other \$500 <								
Recycling Market \$3,500 \$63,605 \$63,713 \$63,825 \$63,939 \$64,057 2.h.1 General Market Development \$3,500 \$3,605 \$3,713 \$3,825 \$3,939 \$4,057 2.h.2 ODNR pass-through grant \$60,000 \$18,000 \$1								\$500
2.h.1 General Market Development \$3,500 \$3,605 \$3,713 \$3,825 \$3,939 \$4,057 2.h.2 ODNR pass-through grant \$60,000 \$60,								
2.h.2 ODNR pass-through grant \$60,000 \$18,000 \$18,000 \$18,000 \$18,000 \$18,000 \$18,000 \$18,000 \$18,000 \$18,000 \$18,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 \$10,000 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$64,057</td>								\$64,057
2.iService Contracts\$18,000\$18,000\$18,000\$18,000\$18,000\$18,0002.jFeasibility Studies </td <td></td> <td></td> <td>\$3,500</td> <td></td> <td></td> <td></td> <td></td> <td>\$4,057</td>			\$3,500					\$4,057
2.j Feasibility Studies Image: Constraint of the second seco								\$60,000
2.k Waste Assessments/Audits			\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
2.1Dump CleanupImage: Constraint of the second secon								
2.m Litter Collection/Education Image: Collection/Education Image: Collection/Education Emergency Debris Image: Collection/Education Image: Collection/Education Image: Collection/Education 2.n Management Image: Collection/Education Image: Collection/Education Image: Collection 2.p Other Image: Collection Image: Collection Image: Collection Image: Collection 3 Health Dept. Enforcement Image: Collection Image: Collection Image: Collection Image: Collection 4 County Assistance Image: Collection Image: Collection Image: Collection Image: Collection 5 Well Testing Image: Collection Image: Collection Im								
Emergency Debris2.nManagement2.oLoan Payment2.pOther3Health Dept. Enforcement4County Assistance5Well Testing								
2.n Management Image: Constraint of the second	2.111							
2.o Loan Payment Image: Constraint of the second seco	2.n							
2.p Other Image: Constraint of the second s								
3 Health Dept. Enforcement Image: County Assistance Image: County Assistance Image: County Assistance 4 County Assistance Image: County Assistance Image: County Assistance Image: County Assistance 5 Well Testing Image: County Assistance Image: County Assistance Image: County Assistance								
5 Well Testing	3							
6 Out-of-State Waste								
	6	Out-of-State Waste						

	Inspection						
	Open Dump, Litter Law						
7	Enforcement						
8	Heath Department Training						
	Municipal/Township						
9	Assistance						
	Compensation to Affected						
	Community (ORC Section						
10	3734.35)						
	Total Expenses	\$1,235,329	\$1,001,404	\$1,024,141	\$1,047,560	\$1,071,682	\$1,096,527

Table O-7 Years 2029 - 2034

Line									
#	Category/Program	2029	2030	2031	2032	2033	2034		
1	Plan Monitoring/Prep.	\$0	\$0	\$0	\$0	\$0	\$0		
1.a	Plan Preparation	\$0	\$0	\$0	\$0	\$0	\$0		
1.b	Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0		
1.c	Other	\$0	\$0	\$0	\$0	\$0	\$0		
2	Plan Implementation	\$1,117,939	\$1,144,172	\$1,144,172	\$1,144,172	\$1,144,172	\$1,144,172		
2.a	District Administration	\$200,532	\$206,548	\$206,548	\$206,548	\$206,548	\$206,548		
2.a.1	Personnel	\$177,889	\$183,225	\$183,225	\$183,225	\$183,225	\$183,225		
2.a.2	Office Overhead	\$22,643	\$23,323	\$23,323	\$23,323	\$23,323	\$23,323		
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0		
2.b	Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0		
2.b.1	MRF/Recycling Center								
2.b.2	Compost								
2.b.3	Transfer								
2.b.4	Special Waste								
2.c	Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0		
2.d	Recycling Collection	\$743,703	\$763,764	\$763,764	\$763,764	\$763,764	\$763,764		
2.d.1	Curbside								
2.d.2	Drop-off	\$668,703	\$688,764	\$688,764	\$688,764	\$688,764	\$688,764		
2.d.3	Combined Curbside/Drop-off								
2.d.4	Multi-family								
2.d.5	Business/Institutional								
2.d.6	Other	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000		
2.e	Special Collections	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000		
2.e.1	Tire Collection	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
2.e.2	HHW Collection	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
2.e.3	Electronics Collection	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0		
2.e.5	Other Collection Drives	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000		
2.f	Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0		
2.g	Education/Awareness	\$30,704	\$30,860	\$30,860	\$30,860	\$30,860	\$30,860		
2.g.1	Education Staff	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000		
2.g.2	Advertisement/Promotion	\$5,204	\$5,360	\$5,360	\$5,360	\$5,360	\$5,360		
2.g.3	Other	\$500	\$500	\$500	\$500	\$500	\$500		
	Recycling Market								
2.h	Development	\$64,179	\$64,305	\$64,305	\$64,305	\$64,305	\$64,305		
2.h.1	General Market Development	\$4,179	\$4,305	\$4,305	\$4,305	\$4,305	\$4,305		
2.h.2	ODNR pass-through grant	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000		
2.i	Service Contracts	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000		
2.j	Feasibility Studies						•		
2.k	Waste Assessments/Audits								
2.1	Dump Cleanup	1							
2.m	Litter Collection/Education								
	Emergency Debris								
2.n	Management								
2.o	Loan Payment								

2.p	Other						
3	Health Dept. Enforcement						
4	County Assistance						
5	Well Testing						
6	Out-of-State Waste Inspection						
7	Open Dump, Litter Law Enforcement						
8	Heath Department Training						
9	Municipal/Township Assistance						
10	Compensation to Affected Community (ORC Section 3734.35)						
	Total Expenses	\$1,122,118	\$1,148,477	\$1,148,477	\$1,148,477	\$1,148,477	\$1,148,477

Table O-7 Years 2035 – 2039

Line #	Category/Program	2035	2036	2037	2038	2039		
# 1	Plan Monitoring/Prep.	\$0	\$0	\$0	\$0	\$0		
1.a	Plan Preparation	\$0 \$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0		
1.a 1.b	Plan Monitoring	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	,		
1.c	Other	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0		
2	Plan Implementation	\$0 \$1,144,172	۵ 0 \$1,144,172	۵ 0 \$1,144,172	۵ 0 \$1,144,172	\$0 \$1,144,172		
2.a	District Administration	\$206,548	\$206,548	\$206,548	\$206,548	\$206,548		
2.a.1	Personnel	\$183,225	\$183,225	\$183,225	\$183,225	\$183,225		
2.a.2	Office Overhead	\$23,323	\$23,323	\$23,323	\$23,323	\$23,323		
2.a.3	Other	\$0	\$0	\$0	\$0	\$0		
2.b	Facility Operation	\$0	\$0	\$0	\$0	\$0		
2.b.1	MRF/Recycling Center							
2.b.2	Compost							
2.b.3	Transfer							
2.b.4	Special Waste							
2.c	Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0		
2.d	Recycling Collection	\$763,764	\$763,764	\$763,764	\$763,764	\$763,764		
2.d.1	Curbside							
2.d.2	Drop-off	\$688,764	\$688,764	\$688,764	\$688,764	\$688,764		
2.d.3	Combined Curbside/Drop-off							
2.d.4	Multi-family							
2.d.5	Business/Institutional							
2.d.6	Other	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000		
2.e	Special Collections	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000		
2.e.1	Tire Collection	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
2.e.2	HHW Collection	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
2.e.3	Electronics Collection	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0		
2.e.5	Other Collection Drives	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000		
2.f	Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0		
2.g	Education/Awareness	\$30,860	\$30,860	\$30,860	\$30,860	\$30,860		
2.g.1	Education Staff	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000		
2.g.2	Advertisement/Promotion	\$5,360	\$5,360	\$5,360	\$5,360	\$5,360		
2.g.3	Other	\$500	\$500	\$500	\$500	\$500		
v	Recycling Market							
2.h	Development	\$64,305	\$64,305	\$64,305	\$64,305	\$64,305		
2.h.1	General Market Development	\$4,305	\$4,305	\$4,305	\$4,305	\$4,305		
2.h.2	ODNR pass-through grant	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000		
2.i	Service Contracts	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000		
2.j	Feasibility Studies							
2.k	Waste Assessments/Audits							

2.1	Dump Cleanup					
2.m	Litter Collection/Education					
	Emergency Debris					
2.n	Management					
2.0	Loan Payment					
2.p	Other					
3	Health Dept. Enforcement					
4	County Assistance					
5	Well Testing					
	Out-of-State Waste					
6	Inspection					
	Open Dump, Litter Law					
7	Enforcement					
8	Heath Department Training					
	Municipal/Township					
9	Assistance					
	Compensation to Affected					
	Community (ORC Section					
10	3734.35)					
	Total Expenses	\$1,148,477	\$1,148,477	\$1,148,477	\$1,148,477	\$1,148,477

Sample Calculation 2023:

2023 value = (2022 expense * 0.03) + 2022 expense

2023 value Personnel = (\$144,640 * 0.03) + \$144,640 = \$148,979

Each expense applicable to the District allocated to line items in Table O-7 are explained here:

1. <u>Plan Monitoring/Prep.</u>

1.a **Plan Preparation**

2017 – Actual consultant expenses for developing Solid Waste Management Plan. Future costs are projected in line item 2.a.3.

1.b Plan Monitoring -

2017– costs outside of SWMD personnel costs to conduct surveys, assist with quarterly fee reports and other needed monitoring reports. Future costs are projected in line item 2.a.3.

1.c <u>Other –</u>

2017 – Expenses outside of SWMD personnel costs to conduct surveys, assist with quarterly fee reports and other needed monitoring reports.

2. <u>Plan Implementation</u>

2.a **District Administration**

2.a.1 Personnel

2017 – 2021 - Personnel costs for staff. Expense line items include cost for payroll, payroll taxes, and benefits for SWMD staff (including PERS, Medicare, and insurance). The costs shown for 2017 through 2021 are actual expenses.

2022 – 2039 - In 2022, the U.S. national inflation rate trended around 8.5%. The SWMD is budgeting for a 3% annual rate increase on salaries and annually on fringes and benefits.

2.a.2 Office Overhead –

2017 – 2021 – Budget includes office rent, utilities, supplies, computer software and hardware, meeting expenses, equipment rental, purchase or maintenance, liability insurance, office disposal contracts, telephone, postage, travel for SWMD staff including conferences, printing, displays, advertising done by the SWMD office (such as advertising for recycling drivers), state audits, payments to counties for administration (including commissioners, auditor, treasurer).

2022 – 2039 - Assumed annual inflation rate of 3%.

2.a.3 Admin Other –

2018 – 2020 – Costs include all expenditures for District administration that are not represented by the other line items in this subcategory such as legal fees, financial audits, etc.

2.b. Facility Operation

2.b.1 <u>MRF/Recycling Center –</u> Expenses in 2020 were costs for the design of a new District office facility. The District contracted with an Architect to design the new office facility.

- **2.b.2** <u>**Compost** –</u> no planned direct expenses
- 2.b.3 <u>Transfer no planned direct expenses</u>
- 2.b.4 <u>Special Waste no planned direct expenses</u>

2.c. Landfill Closure/Post-Closure -

2017 – 2021 – Actual funding to assist with post-closure care at the Carroll County Landfill.

2022 – 2039 – Assumed funding will not be provided for post-closure care.

2.d. Recycling Collection

2.d.1 <u>Curbside</u> – no planned direct expenses

2.d.2 <u>Drop-off</u> –

2017 – 2021 – Drop off expenses include drivers and recycling coordinator's salary and fringes, fuel, repairs and maintenance, and tires to run the program. The private contract portion covers the recycling processing costs with Kimble and Ohio Valley Waste, as well as paying a private hauler

transportation cost to service recycling roll-offs at our youth camps. In 2019 the District expenses are high because the Board chose to purchase a third truck for operation. This third truck allows the District to bypass the Kimble facility, and instead haul the materials to Ohio Valley Waste in Girard, Ohio when processing cost savings are realized. The cost of the third truck with warranties totaled \$273,854. The District also purchased a trailer to haul behind our pick-up truck to set containers and/or move containers for \$4,660.

2022 – 2039 – Assumed annual inflation rate of 3%.

- 2.d.3 <u>Combined Curbside/Drop-off</u> no planned direct expenses
- 2.d.4 <u>Multi-Family</u> no planned direct expenses

2.d.5 <u>Business/Institutional</u> – no planned direct expenses. The schools and government offices that currently have drop-off recycling sites are being paid for by the SWMD and are included with the drop-off budget. There are currently 19 schools and four government offices.

2.d.6 <u>Other - no planned direct expenses</u>

2.e. Special Collections

2.e.1. Tire Collection

2017 – 2021 – Costs of collecting tires at the one-day collection events, include labor, disposal fees, rental of containers, advertising the collection, and other related costs. The District was successful in obtaining Ohio EPA grants for collection events, however, grants are not guaranteed.

2022 – 2039 – Costs are held constant through the planning period.

2.e.2. HHW Collection -

2017 – 2021 – Costs for the three on-day HHW collection events. The budget includes all direct costs of collecting HHW, including labor, disposal fees, advertising the collection, and other event costs. COVID 19 pandemic suspended events in 2020 and 2021.

2022 – 2039 – Contingent upon funding the District is budgeting to continue annual collection events at the District offices and one remote event in either Columbiana or Harrison. Costs are held constant through the planning period.

2.e.3. Electronics Collection -

2017 – 2021 – The District held three one-day collection events for electronics, as well as our drop-off at the District office and at CSI Environmental in East Palestine. The budget includes all direct costs of

collecting electronics at district facility including: labor, disposal fees, and other program costs. In 2021, the District began charging \$5 for televisions with tubes and CRT monitors.

2022 – 2039 – In 2022, the District increased fees to \$10 for televisions with tubes and CRT monitors. The District also changed collection to drop-off only by appointment at the District recycling offices. Costs for 2023 are projected to be \$6,000 and then budgeted to increase to \$15,000 annually through the planning period.

2.e.4. Appliance Collection -

2017 – 2018 – Appliances were accepted at the three HHW one-day collection events. After Freon was evacuated, the appliances were scrapped at a local scrap yard. The contractor hauls the appliances from the collection event and keeps the money received from the scrap as payment. If the SWMD has the ability to haul the appliances, then the District receives compensation for the scrap being recycled. No costs are budgeted for the planning period. Appliances are directed to local scrap yards.

2.e.5. Other Collection Drives –

2017 – 2021 – The budget includes all direct costs of events including: labor, disposal fees, advertising the collection, and other event costs (Christmas tree recycling program, community cleanups, and the purchase of Super Sacks for Ag Plastics program). Costs for live Christmas recycling are mostly minimal advertising and coordination with the county drop-off sponsors.

2022 – 2039 – Projections are held constant through the planning period.

2.f.1. Yard Waste/Other Organics -

2017 – 2021 – Includes all costs of collecting yard waste. The "Compostable Leaf Bag" program was set up as a cost-share program. The SWMD worked with local hardware stores to provide compostable bags for residents. Home Depot provided the District with 67,855 bags in 2021.

2022 – 2039 – The Compostable Leaf Bag program discontinued in 2022, therefore no costs are budgeted for the planning period.

2.g. Education/Awareness

2.g.1 Education Staff -

2017 - 2021 - The budget includes funding to supplement the salaries of individuals that perform education, awareness and outreach functions that

are intended to aid in the fulfillment of or exceed the requirements of the SWMD's solid waste management plan.

2022 – The District did not have an outreach specialist and used instead used the District coordinator therefore no costs allocated.

2023 – 2039 – The District is budgeting for a part-time outreach specialist throughout the planning period. The annual budget for a part-time outreach specialist throughout the planning period is set at \$25,000. If the full budget is not expended, the District has the option to initiate an additional campaign alongside the primary outreach priority campaign, which focuses on cardboard recycling and breakdown. The structure of the contract for the part-time outreach specialist is to be determined. It may District may be structured on a fixed price allocated per school/civic group. Contract services on a need basis, with details specifying an upper limit of \$25,000 per year.

2.g.2. Advertisement/Promotion -

2017 – 2021 – Advertising and promotional costs for programs and strategies are budgeted annually. Costs are budgeted constant through the planning period.

2022 - 2039 – The District found the average from the five-year (2017 – 2021) historical numbers and multiplied this by an assumed annual inflation rate of 3%.

2.g.3. <u>Other</u>-

2017 – 2021 – Expenses for materials and food for the District's Food Waste Awareness Workshop and the NASA Teacher's Workshop.

2022 – 2039 – The District is holding the costs constant through the planning period.

2.h.1 General Market Development Activities -

2017 – 2020 – The SWMD utilizes these funds in conjunction with the Courthouse "Buy-Recycled" paper program.

2021 – 2039 – The District is budgeting costs of \$3,500 in 2023. A 3% inflation factor is applied annually through the planning period.

2.h.2 <u>ODNR pass-through grant</u> - no planned direct expenses. A Market Development Grant is one example of a pass-through grant. Market Development Grants are offered to Ohio businesses and non-profit organizations that propose to create equipment infrastructure for successful markets of recyclable materials and related products. Applicants must be sponsored by an eligible governmental agency who will serve as the grant

applicant and a pass-through agency for documenting and receiving funds. The applicant must include a commitment to provide 100 percent matching funds. The grant has a maximum duration of 24 months. Beginning in 2024, the District is allocating \$60,000 annually towards grant match expenses. If financial matches are not needed the District will use the funding towards other District programming or as outlined in Section C of this Appendix O.

2.i <u>Service Contracts</u> –

2020 Expenses were costs for the construction of the District's new offices and special collections facility.

2022 – 2039 – Budget held at \$18,000 throughout the planning period.

2.j <u>Feasibility Studies</u> - no planned direct expenses

2.k <u>Waste Assessments/Audits</u> – Expenses in 2021 were costs for waste assessments and audits performed by the District.

- 2.1 <u>Dump Cleanup</u> no planned direct expenses
- 2.m. Litter Collection/Education no planned direct expenses
- 2.n. <u>Emergency Debris Management</u> no planned direct expenses
- 2.o. Loan Payment no planned direct expenses

2.p. <u>Other</u> – In 2018 the Districts QFR did not report \$13,635 in expenses in the fourth quarter. Since this is 2018, the District did not reconcile the Ohio EPA quarterly reports as to which line items the expenses should be allocated in. It is reconciled in "other" line item in this 2025 Plan update to match auditor fund report.

- 3. <u>Health Dept. Enforcement –</u> no planned direct expenses
- 4. <u>County Assistance no planned direct expenses</u>
- 5. <u>Well Testing -</u> no planned direct expenses
- 6. <u>Out-of-State Waste Inspection -</u> no planned direct expenses
- 7. <u>Open Dump, Litter Law Enforcement -</u> no planned direct expenses
- 8. <u>Health Department Training no planned direct expenses</u>
- 9. <u>Municipal/Township Assistance no planned direct expenses</u>

Table O-8 presents a summary of revenues, expenses, and balance.

Table O-8 Budget Summary

Year	Revenue (\$)	Expenses (\$)	Annual Surplus/Defici t (\$)	Balance (\$)
2016			Ending Balance	\$3,518,132
2017	\$706,381	\$1,637,249	-\$930,867	\$2,587,265
2018	\$794,612	\$888,935	-\$94,324	\$2,492,941
2019	\$1,178,548	\$1,192,334	-\$13,786	\$2,479,155
2020	\$786,380	\$1,669,955	-\$883,574	\$1,595,581
2021	\$1,065,734	\$763,859	\$301,874	\$1,897,455
2022	\$1,166,975	\$756,499	\$410,476	\$2,307,931
2023	\$1,051,051	\$1,235,329	-\$184,278	\$2,123,653
2024	\$959,949	\$1,001,404	-\$41,455	\$2,082,198
2025	\$932,818	\$1,024,141	-\$91,323	\$1,990,876
2026	\$906,793	\$1,047,560	-\$140,767	\$1,850,109
2027	\$881,787	\$1,071,682	-\$189,895	\$1,660,214
2028	\$857,759	\$1,096,527	-\$238,768	\$1,421,446
2029	\$834,671	\$1,122,118	-\$287,448	\$1,133,998
2030	\$812,483	\$1,148,477	-\$335,994	\$798,005
2031	\$1,238,812	\$1,148,477	\$90,335	\$888,340
2032	\$1,238,812	\$1,148,477	\$90,335	\$978,675
2033	\$1,238,812	\$1,148,477	\$90,335	\$1,069,010
2034	\$1,238,812	\$1,148,477	\$90,335	\$1,159,346
2035	\$1,238,812	\$1,148,477	\$90,335	\$1,249,681
2036	\$1,238,812	\$1,148,477	\$90,335	\$1,340,016
2037	\$1,238,812	\$1,148,477	\$90,335	\$1,430,351
2038	\$1,238,812	\$1,148,477	\$90,335	\$1,520,686
2039	\$1,238,812	\$1,148,477	\$90,335	\$1,611,021

Historically there was an issue with fund ending balances between Ohio EPA reports and District reports. The values documented in Table O-8 are actual and match the County Auditor reports.

C. Alternative Budget

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

Unique Circumstances Affecting Budget Planning

As discussed throughout this Plan Update, the SWMD is currently in a unique situation regarding the projection of revenue and expenditures. Waste generation in the District increased significantly between 2012 and 2015 as a result of Marcellus and Utica Shale drilling and related activities. This increase is also evident as seen in Table O-3 in 2018 through 2021. The fluctuations in waste generation directly impact the revenue generated from contract fees.

Waste generated from drilling and pipeline construction activities is not anticipated to be a consistent waste stream and is expected to fluctuate, perhaps radically, at oil and gas market driven levels. The future of these activities in the District is unknown.

The SWMD utilized a conservative strategy for projecting waste disposal (and in turn, projecting contract fee revenue) to lower the risks that could negatively impact the budget and the SWMD's ability to implement programs. The strategy involved aggressively scaling back the portion of waste generated from drilling and associated activities, which produced a reasonable scenario for contract fee revenue.

There is a high potential that the high waste disposal volumes produced from drilling and pipeline construction activities will continue at current rates over the coming years, or that it may cease temporarily and resume later in the planning period. Many scenarios are possible, but the SWMD does not have reliable data to project the duration of the temporarily high waste disposal volumes.

If waste disposal volumes remain inflated, contract fee revenue will be significantly greater than projected in the Plan Update. If this occurs, guidelines and or options for managing and budgeting the additional revenue are as follows:

Some funding was budgeted for grant matching, but the availability of grants is not guaranteed. If the SWMD determines that a grant opportunity would benefit the District, the SWMD may use surplus revenue to match grant funds or if grants are not received, utilize budgeted match revenue towards other priority programs.

- The Policy Committee reserves the right to replenish the excess fund balance to levels determined by the Policy Committee to be adequate and reasonable.
- Excess revenue may be budgeted for programs if the excess fund balance is determined to be adequate and reasonable as determined by the Policy Committee.
- Excess revenue may be allocated if there is a demonstrated need for additional funding in any program planned in this Plan Update. Programs that are identified as a priority will be considered first for additional funding in the event that the District accumulates significant surplus revenue. The programs to receive additional funding, are as follows:
 - Match Money for Grant Opportunities. As explained above, some money has been allocated for match money for grants the SWMD may seek. If grants are deemed necessary by the Policy Committee, the SWMD may apply and if awarded, may use excess revenue to cover the match because the Policy Committee has determined it to be a viable expenditure in order to gain additional project funding.
 - 2. Monetary Assistance to Municipalities for Curbside Promotion. The SWMD would love to see curbside programs in all municipalities throughout the District. Working in conjunction with the municipalities,

we will be assisting with logistics, helping them apply for grant money, planning, and outreach for any municipality that wants to have a curbside recycling program. If expenditures are being met by current revenue, the SWMD would set aside grant funds for municipalities to apply for that would assist them with their outreach and promotion of their curbside programs. The amount the SWMD could offer would depend upon available funding in that year, after our other priorities are met.

- 3. Business Recycling Program Concentrate education, outreach, and technical assistance efforts on commercial and industrial businesses in order to increase the SWMD's recycling rate. It was determined that the better the businesses know the SWMD and the services it can provide as it relates to assisting with waste reduction and recycling, the better apt they would be to complete annual surveys and provide the SWMD with data about these efforts.
- 4. Continue Community Clean-Up Program. This program has been a great collaboration effort between the SWMD and our townships and municipalities. Because there are no landfills in our District and only one transfer facility, it makes it difficult for residents to discard large unwanted items. This program has provided a great outlet for our residents, but it is also costly. The SWMD has committed to continue our contribution to this program through 2023. We will continue to analyze the program and collaborate with municipalities and townships so that other economical options are not overlooked, and the program can continue indefinitely.

Other programs may be considered to receive additional funding if a need is identified and approved by the Policy Committee.

Decisions to allocate surplus revenue will be discussed by the Policy Committee and SWMD Director on an as needed basis. As discussed, unanticipated excess revenues may be applied, to the extent that is practical and allowable to Plan Update implementation activities in accordance with ORC section 3734.57(G) and the SWMD will follow requirements of Ohio laws and regulations if this provision is implemented. See Appendix H and Appendix I for additional information.

APPENDIX P

DESIGNATION

APPENDIX P. DESIGNATION

Ohio law gives each SWMD the ability to control where waste generated from within the SWMD can be taken. Such control is generally referred to as flow control. In Ohio, SWMDs establish flow control by designating facilities. SWMDs can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.¹

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

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

Once the board of directors designates facilities, only designated facilities can receive the SWMD's waste. In more explicit terms, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is when the board of directors grants a waiver to allow an undesignated facility to take the SWMD's waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and the time period available to the board for making a decision on a waiver request.

A. Statement Authorizing/Precluding Designation

1. Authorization Statement to Designate

Due to the District's proximity to other states, the Policy Committee and Board of Directors determined the need to establish designation, providing for all disposal facilities that desired to accept waste from Carroll, Columbiana and Harrison counties the opportunity to do so provided they signed a contract with the District, agreed to provide accurate documentation of the waste going into their facility and paid the same fee that all other facilities were contracted to pay. This leveled the playing field for haulers and disposal facilities in and out-of-state.

Pursuant to Section 3734.53(E)(1) of the Ohio Revised Code, the Board of Directors of the SWMD is hereby authorized to continue with facility designations as they are

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

currently and to establish new facility designations under Section 343.014 of the Ohio Revised Code.

2. Description of the SWMD's Designation Process

If a facility has not requested designation during the original designation process, they may submit a request for a waiver for facility designation. The request must be in writing and provide information regarding the type and amount of material, the facility to be used, the duration of the waiver, the reason for requesting the waiver and the impact on Plan implementation and financing. The SWMD Board of Directors may request additional information from the applicant for a waiver if the information it receives is incomplete. Once the application is submitted and complete, the SWMD Board of Directors will determine, within 90 days, whether to approve or disapprove the waiver request. The SWMD Board of Directors may grant the request for waiver if the Board of Directors determines that:

1. The waiver is not inconsistent with projections contained in the SWMD's approved plan under Sections 3734.53(A)(6) and (A)(7) of the Ohio Revised Code; and

2. The issuance of the waiver will not adversely affect implementation and financing of the plan.

B. Designated Facilities

Facility Name	County	State	Facility Type	Year Designated
In-District				
Kimble Transfer (J&J Refuse)	Carroll	Ohio	Transfer Facility	2005
Harrison County Landfill	Harrison	Ohio	Landfill (not open)	2005
Out-of-District				
Akron Transfer Station	Stark	Ohio	Transfer Facility	2005
American Landfill	Stark	Ohio	Landfill	2005
Apex Landfill	Jefferson	Ohio	Landfill	2006
Athens-Hocking Reclamation Ctr.	Athens	Ohio	Landfill	2005
Cambridge Transfer & Recycling	Muskingum	Ohio	Transfer Facility	2005
Carbon Limestone Landfill	Mahoning	Ohio	Landfill	2005
Cleveland Transfer Station	Cuyahoga	Ohio	Transfer Facility	2005
Coshocton Landfill, Inc.	Coshocton	Ohio	Landfill	2005
Countywide Recycling & Disposal	Stark	Ohio	Landfill	2005
Geneva Landfill	Ashtabula	Ohio	Landfill	2005
Kimble Sanitary Landfill	Tuscarawas	Ohio	Landfill	2005
Kimble Transfer & Recycling	Stark	Ohio	Transfer Facility	2005

Table P-1. Facilities Designated

Facility Name	County	State	Facility Type	Year Designated
Kimble Transfer & Recycling	Summit	Ohio	Transfer Facility	2009
Liberty Tire Services of Ohio LLC	Stark	Ohio	Tire Monofil	2005
Lorain County Landfill, LLC	Lorain	Ohio	Landfill	2005
Mahoning Landfill	Mahoning	Ohio	Landfill	2005
Noble Road Landfill	Richland	Ohio	Landfill	2005
Pine Grove Landfill	Fairfield	Ohio	Landfill	2005
Portage County SW Transfer	Portage	Ohio	Transfer Facility	2005
Suburban Landfill	Perry	Ohio	Landfill	2005
Out-of-State	-		•	
Arden Landfill		Pennsylvania	Landfill	2005
Evergreen Landfill		Pennsylvania	Landfill	2005
Imperial Landfill		Pennsylvania	Landfill	2005
Kelly Run Sanitation		Pennsylvania	Landfill	2005
Laurel Highlands Landfill		Pennsylvania	Landfill	2005
Seneca Landfill		Pennsylvania	Landfill	2005
Seneca Transfer Facility		Pennsylvania	Transfer Facility	2005
Shade Landfill		Pennsylvania	Landfill	2005
Short Creek Landfill		West Virginia	Landfill	2005
South Hills Landfill		Pennsylvania	Landfill	2005
Southern Alleghenies Landfill		Pennsylvania	Landfill	2005
Tri-County Transfer Station		Pennsylvania	Transfer Facility	2005
Tri-County Landfill		Pennsylvania	Landfill	2005
Valley Landfill		Pennsylvania	Landfill	2005
Valley Waste Services TF		Pennsylvania	Transfer Facility	2016

The currently designated facilities for the solid waste generators are shown in Table **P-1**. The SWMD has designated thirty-seven (37) solid waste facilities as the only facilities that may accept solid waste generated within the District. Each designated solid waste facility is contractually required to provide monthly reports regarding the generator/hauler, amount of solid waste received, and the type of material received from each of our three (3) counties.

C. Documents

Appendix Y contains the related documents including resolutions pertaining to designation.

APPENDIX Q

DISTRICT RULE

APPENDIX Q. DISTRICT RULES

A. Existing Rules

The District does not currently have any existing rules.

B. Proposed Rules

The District is not proposing any new rules in this Plan Update.

In accordance with the Ohio Revised Code, the SWMD proposes to adopt the following rules:

Defined Terms:

"Board" means the governing body of the Carroll-Columbiana-Harrison Joint Solid Waste Management District.

"Designated Solid Waste Facility" means those Solid Waste Facilities that have entered into a Uniform Designation and Solid Waste Service Agreement with the District, or have been granted a waiver therefrom.

"District" means the Carroll-Columbiana-Harrison Joint Solid Waste Management District and all of its territory.

"Hazardous Waste" means Solid Waste which, by reason of its listing, composition or characteristics is a hazardous waste (as defined in the Resource Conservation and Recovery Act, 42 U.S.C Section 6901 et seq., as amended (including, but not limited to, amendments thereto made by the Solid Waste Disposal Act Amendments of 1980)) and related federal, state and local laws and regulations, or in any additional or substitute federal, state or local laws and regulations pertaining to the identification, treatment, storage or disposal of toxic substances or hazardous wastes; and as any of the foregoing is from time-to-time amended or replaced.

"Person" means a natural person, partnership, association, firm, corporation, limited liability company, municipal corporation, township, government unit or other political subdivision.

"Plan" means the Solid Waste Management Plan of the District most recently approved by the Director of the Ohio Environmental Protection Agency on October 6, 2011 and as hereafter amended.

"Recycle" or "Recycled" or "Recycling" means the process of collecting, sorting, cleansing, treating and reconstituting Solid Waste that would otherwise be disposed in a Solid Waste Disposal Facility and returning reconstituted materials to commerce as commodities for use or exchange.

"Recyclable Material" means Solid Waste that is, or may be, collected, sorted, cleansed, treated, or reconstituted for return to commerce.

"Recyclable Material Drop-off Facility" means any site, location, tract of land, installation, or building used for Persons to drop off Recyclable Materials for collection by the District or the District's contractor.

"Rule" means the action of the Board in promulgating, adopting and publishing such action as a rule of the District as reserved in the Plan and authorized by Divisions (G)(1), (2), (3) and (4) of Section 343.01 of the Revised Code and Divisions (C)(1), (2), (3) and (4) of Section 3734.53 of the Revised Code, as now existing or hereafter amended.

"Solid Waste" means such unwanted residual solid or semisolid material as results from industrial, commercial, agricultural, and community operations, excluding earth or material from construction, mining or demolition operations, or other waste materials of the type that would normally be included in demolition debris, nontoxic fly ash, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health, and includes, but is not limited to, garbage, tires, combustible and noncombustible material, street dirt, and debris. Solid Waste does not include any material that is an infectious waste or a Hazardous Waste.

"Solid Waste Disposal Facility" means any site, location, tract of land, installation, or building used for incineration, composting, sanitary landfilling, or other approved methods of disposal of Solid Waste.

"Solid Waste Recycling Facility" means any site, location, tract of land, installation, or building used for Recycling Solid Waste.

"Source Separate" or "Source Separation" means the process of separating, or the separation of, Solid Waste, including Yard Waste and Recyclable Materials, from other Solid Waste at the location where such materials are generated for the purpose of Recycling.

"Source Separated Recyclable Materials" means Solid Waste Recyclable Materials that are separated from other Solid Waste at the location where such materials are generated for the purpose of Recycling.

"Uniform Designation and Solid Waste Service Agreement" means the contract the Board has entered into with certain Solid Waste Facilities to: (a) provide solid waste transfer and disposal services for solid waste generated within the District; (b) collect and remit fees to the Board; (c) and other requirements included in the Uniform Designation and Solid Waste Service Agreement. "Waiver Agreement" means the contract the Board has entered into with certain Solid Waste Facilities to: (a) provide solid waste transfer and disposal services for solid waste generated within the District; (b) collect and remit fees to the Board; (c) and other requirements included in the Waiver Agreement.

"Yard Waste" means all garden residues, leaves, grass clippings, shrubbery and tree pruning's less than one-quarter inch in diameter, and similar material.

RULE 1: DELIVERY OF SOLID WASTE TO DESIGNATED FACILITIES

Except as otherwise permitted by Rule, no Person shall deliver, or cause the delivery of, any Solid Waste generated within the District to any Solid Waste Disposal Facility other than a Designated Solid Waste Facility.

RULE 2: WAIVER FROM DESIGNATION

Any Person may request a waiver from the Board authorizing the delivery of all or any portion of the Solid Waste generated within the District to a Solid Waste Facility other than a Designated Solid Waste Facility. The Board may grant a waiver from the obligation to deliver Solid Waste generated within the District to a designated Solid Waste Facility if the Board finds that issuance of a waiver: (a) is not inconsistent with projections contained in the Plan; and (b) will not adversely affect the implementation and financing of the Plan pursuant to the implementation schedule contained in the Plan. Any Person who submits a waiver request pursuant to this rule shall submit documents and information as requested by the Board in support the issuance of the requested waiver. Any waiver granted by the Board shall be the subject of a Waiver Agreement between the Board and the Person setting forth the terms of such waiver.

RULE 3: SOURCE SEPARATED RECYCLABLE MATERIALS

No Person shall deliver Source Separated Recyclable Materials for disposal at a Solid Waste Disposal Facility without the prior written consent of the Board. All Source Separated Recyclable Materials shall be delivered for Recycling to a Solid Waste Recycling Facility. No Person shall combine Source Separated Recyclable Materials with other Solid Waste intended for disposal without the prior written consent of the Board.

RULE 4: DROP-OFF LOCATIONS FOR RECYCLABLE MATERIALS

Any Person, including any visitor, invitee, or licensee, when using or moving on or about any District-sponsored Recyclable Material Drop-off Facility, shall comply with the following restrictions: (a) 10 MPH speed limit; (b) no littering; (c) no scavenging; (d) yield to any vehicle operated by the District or the District's contractor; and (e) follow any other posted instructions for use of the Recyclable Material Drop-off Facility.

RULE 5: SOLID WASTE TRANSPORTERS

All transporters of Solid Waste doing business within the District shall register with the District on an annual basis, or as otherwise requested by the District, on forms

provided by the District. Transporters of Solid Waste doing business within the District shall update their registration upon any change of information.

RULE 6: ENFORCEMENT

The violation or threatened violation by any Person of any Rule promulgated by the Board may be enforced by the Board's attorney in accordance with Ohio Revised Code Section 343.01(E)(1), as authorized by Section 343.03 and in accordance with the penalty provisions set forth in Section 343.99.

RULE 7: ADOPTION OF SAVINGS CLAUSE

If any Rule, or part thereof, shall be adjudged or declared by any court of competent jurisdiction to be unconstitutional or invalid, such judgment shall not affect the validity of the remaining Rules. Should any Rule, or part thereof, be rendered invalid by reason of any existing or subsequently enacted legislation, such invalidation of any Rule, or part thereof, shall not affect the validity of the remaining Rules.

C. Rule Approval Process

Proposed rules shall be adopted and enforced by the Board of Directors as provided in Section 343.01(G).

APPENDIX R

SURVEYS

Carroll-Columbiana-Harrison Solid Waste District

1130 Cobler Rd NE, Carrollton, Ohio 44615

Commercial Recycling Survey

Instructions: Please complete the following to the best of your ability and return the survey to the District. If you have any questions regarding the completion of this survey, please contact Missy Burchfield at (330) 596-5000. You may e-mail the completed survey to the e-mail address below.

All information received from this survey is strictly confidential. This information will be used for summary purposes only to identify types of wastes that are reduced or recycled.

A. General Information

Company name				
Address			County	
City	Zip	Contact		
Phone	E-mail			

B. Recycling data

Data recored in this table should include all the recyclable materials generated by your company in 20____. The data in the recycled column is used to calculate the District's progress toward meeting the state recycling goals. Please enter data in tons (2000 lbs = 1 ton, 3 cubic yards = 1 ton, 7.5 lbs per gallon for used oil and 8 lbs for used antifreeze).

Material	Amount Recycled (tons)	Material	Amount Recycled (tons)
Paper		PETE (#1)	
Cardboard *		HDPE (#2)	
Newsprint		PVC (#3)	
Office paper		LDPE (#4)	
Other Paper (specify)		Polypropylene (#5)	
Fabrics and cloth		Polystyrene (#6)	
Wood		Other plastics (specify)	
Sawdust		Rubber	
Boardends		Stone/Clay/Sand	
pallets		Concrete	
Aluminum cans		Composites	
Steel cans		Non-Exempt foundry sand/slag	
Aluminum		Food	
Ferrous		Other (specify)	
Copper		Other (specify)	
Glass			
Other (specify)		Total Tons	

Recycling in 20

*The District realizes that commercial businesses may primarily recycled cardboard only but may not have actual weights of the cardboard based on the style of service provided (dumpster service). The District has provided the following table to document the amount of cardboard recycled annually.

Simply fill in the size of your dumpster (2, 4, 6, 8 or 10 cubic yard), how full it is when picked up on average (as a percentage) and the number of times the dumpster is emptied each week. Then use the formula in the table below to calculate your annual tonnage of cardboard. An example is given to assist you in the calculation. If you have additional dumpsters, simply perform the same exercise for each separate dumpster. Please enter cardboard total above in Section B.

		Kecycleu Calub		
Dumpster	Size of	Percentage Full	No. of Pickups per	Estimated Cardboard
	Dumpster	When	Week	Recycled (Tons)
	(cubic yards) (a)	Picked Up	(c)	(a) x (b) x (c) x 52/20
		(b)		
Example	6 cubic yards	80% full	1 time/week	(6 x .80 x 1 x 52/20) = 12.48 tons
1				
2				
3				
4				
5				
6				
Total Ca	dboard Recycled in T	ons (please enter in Se	ction B above)	

Recycled Cardboard Calculator

Please return the survey by <u>April 30, 20</u> to: CCH Solid Waste District 1130 Cobbler Rd NE Carrollton, Ohio 44615 Missy@CarrollCountyOhio.us Thank you for your help. We appreciate your commitment to waste reduction and to the environment!

Carroll-Columbiana-Harrison Solid Waste District

1130 Cobler Rd NE, Carrollton, Ohio 44615

Industrial Recycling Survey

Instructions: Please complete the following to the best of your ability and return the survey to the District. If you have any questions regarding the completion of this survey, please contact Missy Burchfield at (330) 596-5000. You may e-mail the completed survey to the e-mail address below.

All information received from this survey is strictly confidential. This information will be used for summary purposes only to identify types of wastes that are reduced or recycled.

A. General Information

Company name				
Address			County	
City	Zip	Contact		
Phone	E-mail			

B. Recycling data

Please include all of the recyclable materials generated by your company in 20. The data in the recycled column is used to calculate the District's progress toward meeting the state recycling goals. Please enter data in tons (2000 lbs = 1 ton).

Recycling in 20				
Material	Amount Recycled (tons)	Material	Amount Recycled (tons)	
Paper		PETE (#1)		
Cardboard		HDPE (#2)		
Newsprint		PVC (#3)		
Office paper		LDPE (#4)		
Other Paper (specify)		Polypropylene (#5)		
Fabrics and cloth		Polystyrene (#6)		
Wood		Other plastics (specify)		
Sawdust		Rubber		
Boardends		Stone/Clay/Sand		
pallets		Concrete		
Aluminum cans		Composites		
Steel cans		Non-Exempt foundry sand/slag		
Aluminum		Food		
Ferrous		Other (specify)		
Copper		Other (specify)		
Glass				
Other (specify)		Total Tons		

Please return the survey by <u>April 30, 20</u> to: CCH Solid Waste District 1130 Cobbler Rd NE Carrollton, Ohio 44615 Missy@CarrollCountyOhio.us Thank you for your help. We appreciate your commitment to waste reduction and to the environment!

APPENDIX S

SITING STRATEGY

APPENDIX S. SITING STRATEGY

A. Purpose and Objective

The Carroll-Columbiana-Harrison Solid Waste Management District Plan includes a detailed strategy for the review of proposals to construct, enlarge or modify solid waste facilities within the District, including transfer stations, sanitary landfills, recycling facilities and yard waste composting facilities. Upon ratification of this Plan Update and receipt of the approval from the Director of the Ohio EPA, the Board of Directors may adopt the proposed rule requiring the submission of general plans and specifications by any person municipal corporation, township or other political subdivision desiring to construct, enlarge, or modify a solid waste facility within the District for a determination by the Board of whether the proposed facility complies with the Plan. To facilitate the review and siting of these facilities, the Ohio EPA recommends the creation of a Siting Evaluation Committee (SEC) by the District specifically for siting evaluations. The SEC, if formed by the Board, may initiate, conduct and evaluate preliminary surveys to aid in the selection of suitable sites for these solid waste facilities and to assist the Board in its determination of compliance with the Plan. Approval authority remains with the Board of Directors.

The Board will not approve general plans and specifications for any proposed solid waste facility or the modification of any existing in-District solid waste facility where the construction and operation of the proposed facility, as determined by the Board, will:

- 1. have significant adverse impacts upon the Board's ability to finance and implement the Plan;
- 2. interfere with the Board's obligation to provide for the maximum feasible utilization of existing in-District solid waste facilities;
- 3. adversely affect the quality of life within 300 feet of the proposed facility; or
- 4. have significant adverse impacts upon the local community, including community businesses within 500 feet of the proposed facility and the infrastructure to serve the proposed facility.

B. Implementing Siting Strategy and Requirement for Submission and Approval of General Plans and Specifications for the Construction or Modification of Solid Waste Facilities

- a. Definitions
- 1. "Applicant" means the owner or operator of a solid waste transfer, disposal, recycling or resource recovery facility located within the District that proposes to construct, enlarge, modify or improve such facility.

- 2. "Board" means the board of directors of the Carroll-Columbiana-Harrison Joint Solid Waste Management District.
- 3. "District" means the Carroll-Columbiana-Harrison Joint Solid Waste Management District.
- 4. "Plan" means the District's amended solid waste management plan approved or ordered to be implemented by the Director of Ohio EPA pursuant to Ohio Revised Code Sections 3734.52 et seq.
- 5. "Recycling" means the systematic sorting or processing of solid waste for the purpose of returning recovered materials to commerce as commodities for use or exchange.
- 6. "Resource recovery" means the conversion of solid wastes into energy, or some material which can be used to create energy at any stage before ultimate disposal. "Resource recovery" includes, but is not limited to, "energy recovery" in which the organic fraction of waste is converted to some form of usable energy, and "waste-to-energy" in which solid waste is incinerated to produce electricity, steam or some other useful energy product.
- 7. "Rule" means a rule approved by the Board pursuant to section 343.01 of the Revised Code.
- b. Review of General Plans and Specifications and Form of Rule

No individual, public or private corporation, partnership, political subdivision or agency thereof, or any other entity shall commence the construction, enlargement, modification or improvement of any solid waste transfer, disposal, recycling or resource recovery facility, except for such facilities that are owned or operated by the Board, until general plans and specifications for the proposed construction, enlargement, modification or improvement have been reviewed and approved by the Board as complying with the District's Plan. General plans and specifications submitted to the Board for review shall include all information necessary for the Board to evaluate whether the proposed construction, enlargement, modification, or improvement complies with each of the criteria listed below. For the purpose of this Review, "modification" or "improvement" includes a physical change or change in the method of operation of a solid waste facility, or the utilization of a legitimate recycling facility as a solid waste transfer facility. The Board may obtain the assistance of outside consultants for purposes of performing the review required by this Siting Strategy.

After conducting the review, the Board shall determine whether the proposed construction, enlargement, modification, or improvement:

- i. Is consistent with the goals, objectives, projections and strategies contained in the District's Plan;
- ii. Will not adversely affect financing for the implementation of the District's Plan;
- iii. Will not adversely affect achievement of the Board's objectives for designating and entering into Agreements with existing in-District and outof-District solid waste facilities, including, but not limited to, promoting the maximum feasible utilization of existing in–District solid waste facilities, in accordance with Section 3734.52 of the Revised Code;
- iv. Will be installed, operated and maintained to be harmonious and appropriate in appearance with the existing or intended character of the area proximate to the proposed construction, enlargement, modification or improvement;
- v. Will be served adequately by essential public facilities and services;
- vi. Will not create excessive additional requirements at public cost for public facilities or services, and will not be detrimental to the economic welfare of the community;
- vii. Will not involve the excessive production of traffic, noise, smoke, fumes or odors;
- viii. Will have vehicular approaches to the property that are designed not to create an interference with traffic; and
- ix. Will not result in the destruction, loss or damage of a natural, scenic, or historic feature of major importance.

To the extent that any of the criteria listed in subparagraphs (b)(i) through (vix) above, establish a design standard that is addressed by rules of the Ohio Environmental Protection Agency for the issuance of a solid waste facility construction permit, the Board shall exclude those criteria from the Board's review and determination.

c. Development Agreement

The Board shall approve the Applicant's general plans and specifications as complying with the Plan after: (a) determining the proposed construction, enlargement, modification or improvement meets the criteria listed in subparagraphs (B)(a) through (i) above; and (b) the Applicant and the Board have entered into a development agreement memorializing the terms and conditions upon which the Board based its conclusion that the Applicant's general plans and specifications

complied with the criteria in subparagraphs (B)(a) through (i) of this Siting Strategy. The Applicant shall have a continuing obligation to comply with the Plan and the development agreement.

d. Waiver

The Board may waive application of the rule requiring the submission and Board approval of general plans and specifications, and any portion or all of the Siting Strategy or otherwise grant exceptions to the Rules of the District, or unilaterally modify or amend the Siting Strategy if the Board concludes that such waiver, modification or amendment is in the best interest of the District, its residents and businesses and will assist the Board in the successful implementation of the Plan and further District goals with respect to solid waste and waste reduction activities. Further, any decision by the Board to proceed with the construction, enlargement or modification of a District owned facility shall be deemed to be in compliance with the Plan and with this Siting Strategy.

e. Contingencies for Capacity Assurance

The SWMD has concluded that there is sufficient solid waste disposal capacity available to the SWMD and does not require a contingent strategy to assure that adequate disposal capacity is available to the SWMD during the planning period.

APPENDIX T

MISCELLANEOUS PLAN DOCUMENTS

APPENDIX T. Miscellaneous Required Information

During the process of preparing the plan, the policy committee signs three official documents certifying the plan. These documents are as follows.

1. Certification Statement for the Draft of the Solid Waste Management Plan- The policy committee signs this statement to certify that the information presented in the draft plan submitted to the Ohio EPA is accurate and complies with format 4.1.

APPENDIX U

RATIFICATION RESULTS

APPENDIX V

INVENTORY OF OPEN DUMPS AND OTHER DISPOSAL FACILITIES

APPENDIX V. Inventory of Open Dumps and Other Disposal Facilities

In accordance with Ohio Revised Code 3734.53(A)(2) and (A)(6) the District must provide an inventory of the following facilities in the District.

Solid Waste open dump sites, including scrap tires Disposal facilities for fly ash and bottom ash, foundry sand, and slag.

Solid Waste Management and Recycling Inventories Requirement

Ohio Revised Code Section 3734.53 (A)(2) requires "...an inventory of all existing facilities where solid wastes are being disposed of, all resource recovery facilities, and all recycling activities within the district. The inventory shall identify each such facility or activity and, for each disposal facility, shall estimate the remaining disposal capacity available at the facility. The inventory shall be accompanied by a map that shows the location of each such existing facility or activity.

A. Existing Open Dumps and Waste Tire Dumps

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)			
description of site location)	Sciap lites			
None				

Table V-1 Existing Solid Waste Open Dumps

B. Ash, Foundry Sand, and Slag Disposal Sites

Table V-2 Existing Ash, Foundry Sand, and Slag Disposal Sites

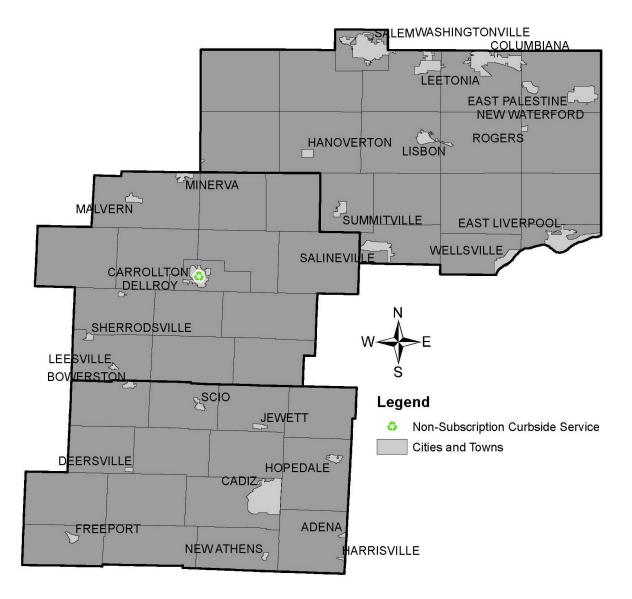
Site Location (Address, description of site location)	Materials at Site (fly ash, bottom ash, foundry sand, and/or slag)
None	

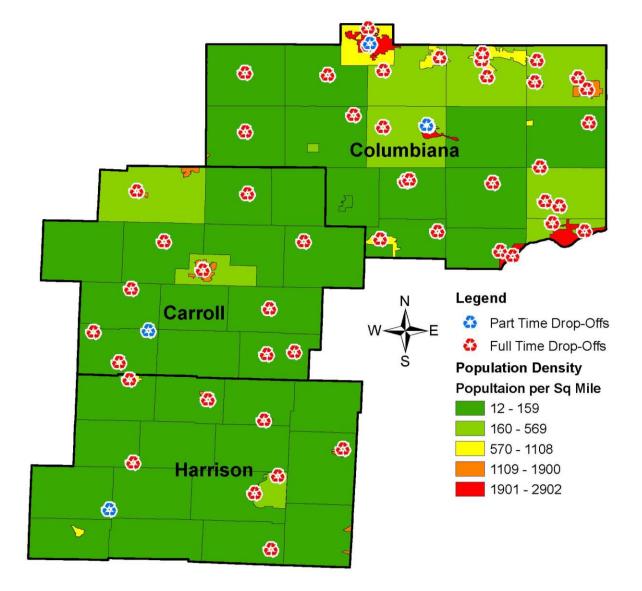
APPENDIX W

DISTRICT MAP

APPENDIX W DISTRICT MAP

Figure W-1. District Curbside Recycling





W-2. District Access to Drop-Off Recycling

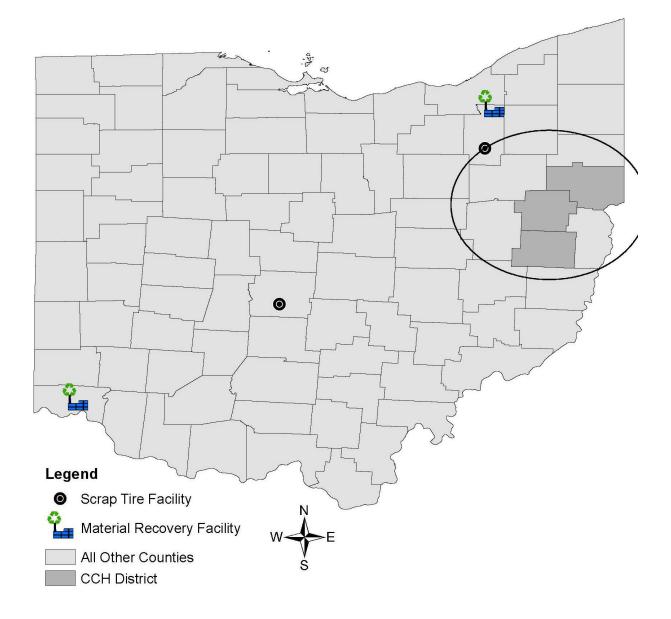


Figure W-3. Regional Recovery Facilities

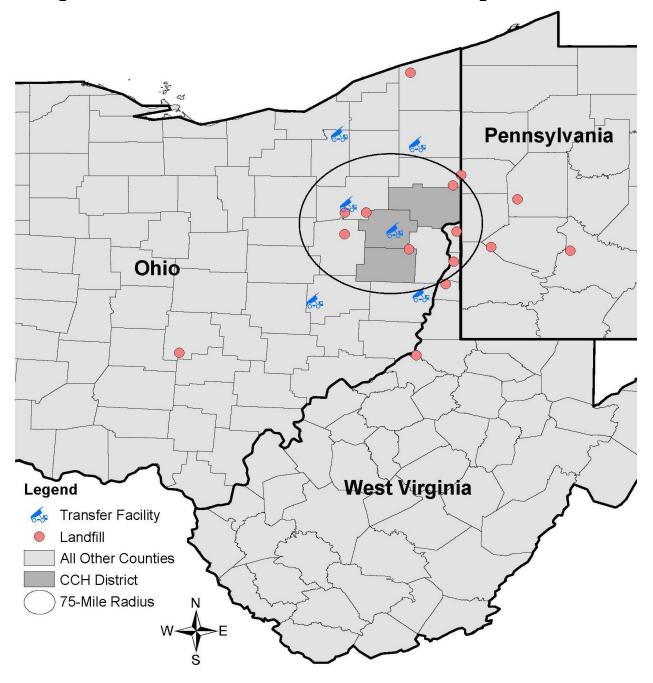


Figure W-3. Landfills and Transfer Stations Used to Manage District Waste