



North Central Ohio Solid Waste District

Serving Allen, Champaign, Hardin, Madison, Shelby and Union Counties

2024 – 2038 Draft Solid Waste Management Plan Update

As Adopted by Policy Committee

April 24, 2023

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Section i. Solid Waste Management District Information

Table i-1. Solid Waste Management District Information

SWMD Name	Allen-Champaign-Hardin-Madison-Shelby-Union Solid Waste Management District
Member Counties	Allen, Champaign, Hardin, Madison, Shelby, and Union
Coordinator’s Name (main contact)	Jack DeWitt
Job Title	Executive Director
Street Address	815 Shawnee Road, Suite D
City, State, Zip Code	Lima, Ohio 45805
Phone	419-228-8278
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E-mail address	jack@ncowaste.org
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Table i-2. Members of the Policy Committee/Board of Trustees

Allen County	
Member Name	Representing
Beth Seibert	County Commissioners
Mike Caprella	City, City of Lima
Kevin Cox	Township, Harrod, Ohio
Brian Nartker	Health District
Kevin Bruin	Public, Lima, Ohio
Norman Grigsby	Citizens, Lima, Ohio
Rich Sutton	Waste Generator, Ford Motor, Lima Engine Plant

Champaign County	
Member Name	Representing
Tim Cassady	County Commissioners
Kerry Brugger	City, City of Urbana
Ed Funderburgh	Township, Woodstock, Ohio
Andy Russell	Health District
Susan Helterbran	Public, Cable, Ohio
Larry Ferryman	Citizens, Urbana, Ohio
Michael Londo	Waste Generator, Weidmann Electrical Technology, Inc

Hardin County	
Member Name	Representing
Roger Crowe	County Commissioners
Cindy Murray	City, City of Kenton
Daryl Flowers	Township, Kenton, Ohio
Shane Lotts	Health District
Linda Wuethrich	Public, Kenton, Ohio
Ryan Yoakum	Citizens, Ada, Ohio
Sara Burnworth	Waste Generator, Graphic Packaging, Inc

Madison County	
Member Name	Representing
Mark Forrest	County Commissioners
Stan Kavy	City, City of London
Levin Hutson	Township, West Jefferson, Ohio
Jim Jordon	Health District
Don Whitmer	Public, Plain City, Ohio
Don Herman	Citizens, London, Ohio
Adam Conley	Waste Generator, Madison Correctional Institution

Shelby County	
Member Name	Representing
Bob Guillozet	County Commissioners
Jon Crusey	City, City of Sidney
Randy Bensman	Township, Sidney, Ohio
Kent Topp, RS	Health District
Dale Goubeaux	Public, Anna, Ohio
Merrill Asher	Citizens, Sidney, Ohio
David Strelow, P.E.,	Waste Generator, Honda Dev. & Mfg of America

Union County	
Member Name	Representing
Dave Lawrence	County Commissioners
Marc Dilsaver	City, City of Marysville
Bruce Davis	Township, Richwood, Ohio
Adam Schultz	Health District
Dave Amerine	Public, Marysville, Ohio

Union County	
Member Name	Representing
Open	Citizens, Marysville, Ohio
Phillip Jean	Waste Generator, Nestle Development Center

At-Large	
Member Name	Representing
Chad Pickrell	Member at Large

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

Name	Kevin Bruin
Phone	419-230-2891
E-mail address	kevinbruin@yahoo.com

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

Commissioner Name	County
Cory Noonan	Allen
Beth Seibert	
Brian Winegardner	
Tim Cassady	Champaign
Steven R. Hess	
Nino Vitale	
Roger E. Crowe	Hardin
Tim L. Striker	
Fred M. Rush	
Mark Forrest	Madison
Chris Wallace	
Dr. Tony Xenikis	
Tony Bornhorst	Shelby
Bob Guillozet – Chairman of the Board	
Julie Ehemann	
Dave Burke	Union
Dave Lawrence	
Steve Robinson	

Technical Advisory Committee

The North Central Ohio Solid Waste District (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. Requirements of County and Joint Solid Waste Management Districts

1. Structure

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

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

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 the duties of a SWMD's board of directors and policy committee.

2. Solid Waste Management Plan

In its solid waste management plan, the policy committee must, among other things, demonstrate that the SWMD will have access to at least 10 years of landfill capacity to manage all of the SWMD's solid wastes that will be disposed. The solid waste management plan must also show how the SWMD will meet the waste reduction and recycling goals established in Ohio's state solid waste management plan and present a budget for implementing the solid waste management plan.

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

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

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

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

C. District Overview

The District was formed on March 20, 1989. The District is comprised of the following counties: Allen, Champaign, Hardin, Madison, Shelby and Union. The District’s configuration has remained the same since the submittal of the District’s first Solid Waste Management Plan. The District was created to provide for the management of solid waste in a safe, environmentally sound, and effective manner.

The District’s administration consists of one centralized office, which is located at 815 Shawnee Road, Suite D, Lima, Ohio 45805.

D. Waste Reduction and Recycling Goals

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

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. The industrial sector goal has been eliminated.

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, HHW, and obsolete/end-of-life electronic devices.

Goal #7

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

Goal #8

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

Goal #9

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

Goal #10

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

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

than to the remaining goals. Thus, Goals 1 and 2 are the primary goals of the state plan.

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

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

See Chapter 5 Section B and Appendix I for descriptions of the programs the SWMD will use to achieve or work towards achieving the ten goals.

CHAPTER 2. District Profile

A. Profile of Political Jurisdictions

1. Counties in the Solid Waste Management District

The District is a multi-county district comprised of Allen, Champaign, Hardin, Madison, Shelby and Union Counties.

2. County Overview

The District is one of the fifteen multi-county Districts in Ohio. The six-county area of the District consists of the following notable communities:

- The City of Lima in Allen County is the largest city in the District. In 2019, it had a population of 36,659 people which comprised approximately 11 percent of the District’s population.
- There are 7 cities ranging in population from 8,180 people to 36,659 people.
- There are 39 villages ranging in population from 102 people to 5,544 people.
- There are 81 townships ranging in population from 335 people to 12,083 people.

B. Population

1. Reference Year Population

Table 2-1 presents the adjusted population, the largest city, and the population of the largest city in the SWMD during the 2019 reference year:

Table 2-1. Population of District in 2019

County Name	County Population	Largest Political Jurisdiction		
		Community Name	Population	Percent of Total County Population
Allen	106,607	Lima	36,659	34%
Champaign	38,885	Urbana	11,404	29%
Hardin	31,478	Kenton	8,180	26%
Madison	45,591	London	10,328	23%
Shelby	48,590	Sidney	20,449	44%
Union	55,465	Marysville	24,667	53%
Total	326,616			

Source(s) of information: Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township.” July 2019.

State law requires the entire population of cities and villages which are split between two counties to be included with the solid waste district having the majority of the city or village population. Since less than one-half of the populations for the Village of Bluffton, City of Delphos, and Village of Ridgeway reside outside of the District, the portion of the City and Village in the other county is added to the District population. For 2019, the adjusted population of the District was 326,616.

2. Population Distribution

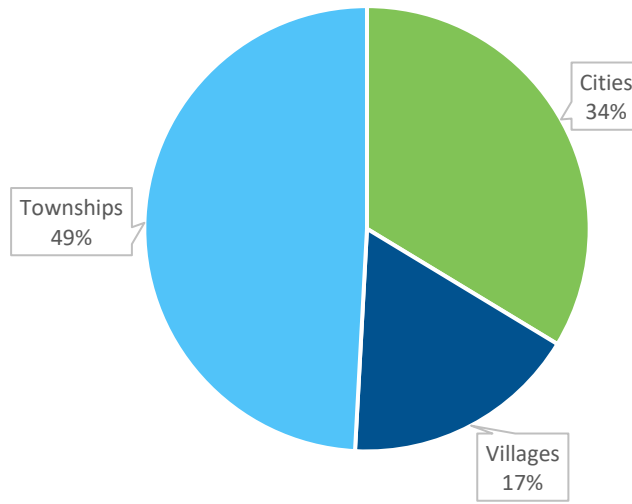
Table 2-2 below presents the distribution of the District’s population in cities, villages, and unincorporated areas.

Table 2-2. Population Distribution

County	Percent of Population in:		
	Cities	Villages	Unincorporated Townships
Allen	39.58%	9.37%	51.05%
Champaign	29.33%	15.34%	55.33%
Hardin	26.08%	32.19%	41.73%
Madison	23.09%	23.79%	53.12%
Shelby	42.08%	14.40%	43.52%
Union	41.82%	8.08%	50.10%

Source(s) of information: Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township.” July 2019.

Figure 2-1. 2019 District Population Distribution

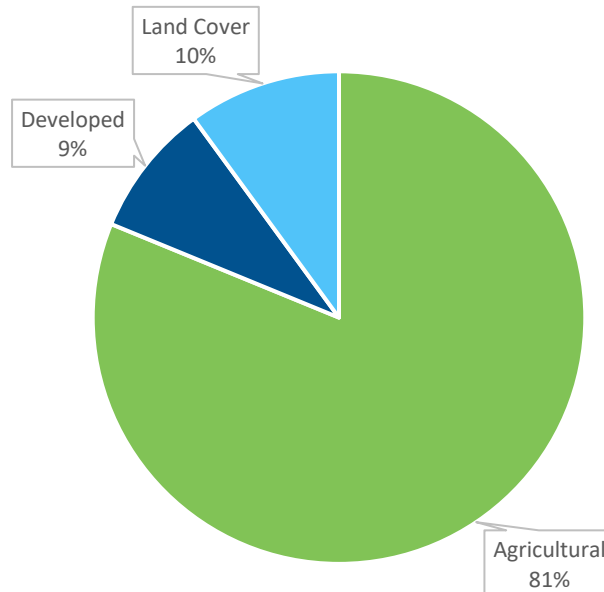


According to the Ohio Development Services Agency’s profile for each county in the District, it is comprised of mostly agricultural land use followed by rural areas then developed land. The following definitions for land uses were used:

- Agricultural land use (cultivated crops and pasture/hay)
- Developed land use (high and low density)
- Land cover (forest, wetlands, open water, shrub/grasslands, or barren, strip mines, gravel pits)

Table 2-3. Land Use Distribution

County	Agricultural Land Use	Developed Land Use	Land Cover
Allen	72.16%	17.37%	10.47%
Champaign	80.43%	6.21%	13.36%
Hardin	85.44%	6.01%	8.55%
Madison	88.49%	5.97%	5.54%
Shelby	80.20%	8.19%	11.61%
Union	80.48%	8.80%	10.72%

Figure 2-2. 2019 District Land Use Distribution

3. Population Change

The District's population is expected to increase by 2.9 percent (or 9,804 residents) from 2019 to 2038.

4. Implications for Solid Waste Management

Based on the population projections, the District does not foresee any major implications related to managing solid waste and providing recycling programs during the planning period. The District is planning on minor improvements in recycling operations throughout the planning period.

C. Profile of Commercial and Institutional Sector

The District has a diverse commercial and institutional sector. The largest portion of businesses fall under the health care and social assistance NAICS code followed by retail trade. The healthcare industry is the biggest employer in the District, which employs the most residents. Other types of commercial/institutional sector jobs that employ a significant portion of all the District's employees include other services and retail trade.

There are approximately 2,867 commercial businesses and institutions in the District. The top employers include the health care, education, and wholesale/retail trade. The following table lists the top employers in the commercial and institutional sector.

Major Commercial/Institutional Sector Employers in District

County	Company Name	Type of Business/ Organization
Allen	Mercy Health	Health Care and Social Assistance
Allen	Nickles Bakery	Wholesale Trade
Allen	Citizens Bank	Financial
Allen	Apollo Career Center	Educational Services
Allen	Kohls	Retail Trade
Allen	Alh Under	Retail Trade
Allen	Orthopedic Institute of Ohio	Health Care and Social Assistance
Allen	Allen County Courthouse	Public Administration
Champaign	Graham Local School District	Educational Services
Champaign	Russel T Bundy Assoc	Wholesale Trade
Hardin	Ohio Northern University	Educational Services
Hardin	West Liberty-Salem Elementary	Educational Services
Madison	London Correctional	Public Administration
Madison	Rocking Horse Children's Health	Health Care and Social Assistance
Madison	Intelligrated	Transportation
Shelby	Freshway Foods	Wholesale Trade
Shelby	Anna Local School District	Educational Services
Shelby	Edgewell Personal Care	Health Care and Social Assistance
Shelby	Rising Sun Express	Transportation
Shelby	Holloway Sportswear	Retail Trade
Union	Home Depot	Retail Trade
Union	Costco Wholesale	Retail Trade
Union	Walnut Crossing	Health Care and Social Assistance
Union	Nissin International Transport	Transportation
Union	Union County Job & Family	Public Administration

Source: U.S. Business Database. Rep. Reference USA. Web. 16 Mar 2022

D. Profile of Industrial Sector

There are approximately 634 industries operating in the District. The top 20 industrial sector employers are presented in the table below.

Largest Industrial Sector Employers

Company Name	County
Scotts Miracle Grow	Union
Honeywell International	Champaign
Honda Development and Manufacturing of America, LLC)	Union
Honda Development and Manufacturing of America, LLC)	Shelby
Emerson Climate Tech	Shelby
SumiRiko Ohio	Allen
Select Sires Inc.	Union
Rittal Corporation	Champaign
Range Clean Mfg, Inc.	Shelby
Plastipak Packaging	Shelby
KTH Parts Industries	Champaign
Jefferson Industries	Union
General Dynamics	Allen
Ford Motor Company	Allen
Cr Compressors	Shelby
American Trim	Allen
Schwan's Ma Ma Rosa's Pizza	Shelby
P&G	Allen
Parker Hydraulic Pump-Power	Union
Orbis	Champaign

According to the Department of Job and Family Services' publication *2028 Job Outlook for the Central and West JobsOhio Regions*, employment in manufacturing is projected to increase by 0.6 to 5.2 percent from 2018 to 2028. The change in annual manufacturing employment will likely be small in terms of the effect on industrial sector waste generation. It is likely that the District will experience a slight decrease or plateau in the amount of waste generated by the industrial sector in the upcoming planning period.

E. Other Characteristics

Looking at the universities listed earlier in the chapter, the District hosts over 11,400 students. The students comprise a transitory population which fluctuates during the year and results in a variable solid waste generation from the schools.

Institution	Number of Enrollment
Ohio Northern University	2,817
Bluffton University	750
James A. Rhodes State College	3,324
University of NW Ohio	3,009
Ohio State University Lima	998
Total	10,898

*Enrollment figures obtained from: <http://www.collegesimply.com/colleges/ohio>

These facilities have the potential to increase solid waste generation substantially during certain periods of the year.

CHAPTER 3. Waste Generation

This chapter of the Solid Waste Management Plan provides a summary of the solid waste management district's historical and projected solid waste generation. The NCO Solid Waste District's (District) Policy Committee needs to understand the amounts and types of waste the District 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 District in the past and that could be generated in the future.

The District calculated how much solid waste was generated for the residential/commercial and industrial sectors. Residential/commercial waste is essentially municipal solid waste and is the waste that is generated by a typical community. Industrial solid waste is generated by manufacturing operations. In order to calculate how much waste was generated, the District added the quantities of waste disposed of in landfills and reduced/recycled.

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

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

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

A. Solid Waste Generated in Reference Year

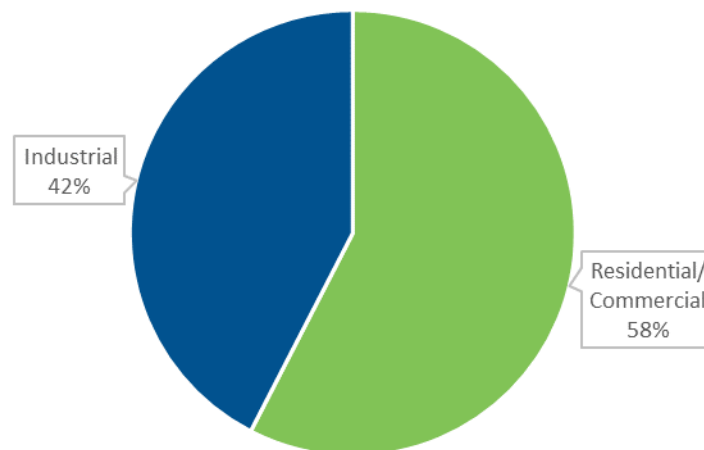
Table 3-1 shows the amounts of residential/commercial (R/C), industrial, and excluded waste generated within the District during 2019 (the reference year). The amount generated is defined by the tons disposed in landfills plus the tons recycled, composted, and otherwise diverted from landfill disposal.

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

Type of Waste	Tons Generated
Residential/ Commercial	325,134
Industrial	239,542
Total	564,676

As demonstrated in **Figure 3-1**, the R/C sector generates the majority (60%) of the total waste generated in the District, followed by the industrial sector (40%). Excluded waste represents less than 10% of the total waste generated has been eliminated from the generation analysis per the 4.1 format requirements.

Figure 3-1. Waste Type as Percentage of Total Waste Generated



1. Residential/Commercial Waste Generated in Reference Year

In 2019, 325,134 total tons of solid waste were generated from residential and commercial sources in the District. Waste generation is the sum of tons landfilled, tons recycled, and tons composted. This amounts to a residential/commercial waste generation rate of 5.5 pounds per person per day (PPD) which is less than the statewide average of 7.10 PPD.

2. Industrial Waste Generated in Reference Year

In 2019, 239,542 total tons of waste were generated from industrial sources in the District.

3. Excluded Waste Generated in Reference Year

Excluded waste includes materials that are excluded from the definition of solid waste in ORC 3734.01(E). This includes slag, uncontaminated earth,

non-toxic fly ash, spent non-toxic foundry sand, and materials from mining operations. In 2019, 32,207 tons of excluded waste were generated in the District. These tons are excluded from the District total generation projection totals as excluded waste is less than 10% of the District waste generation.

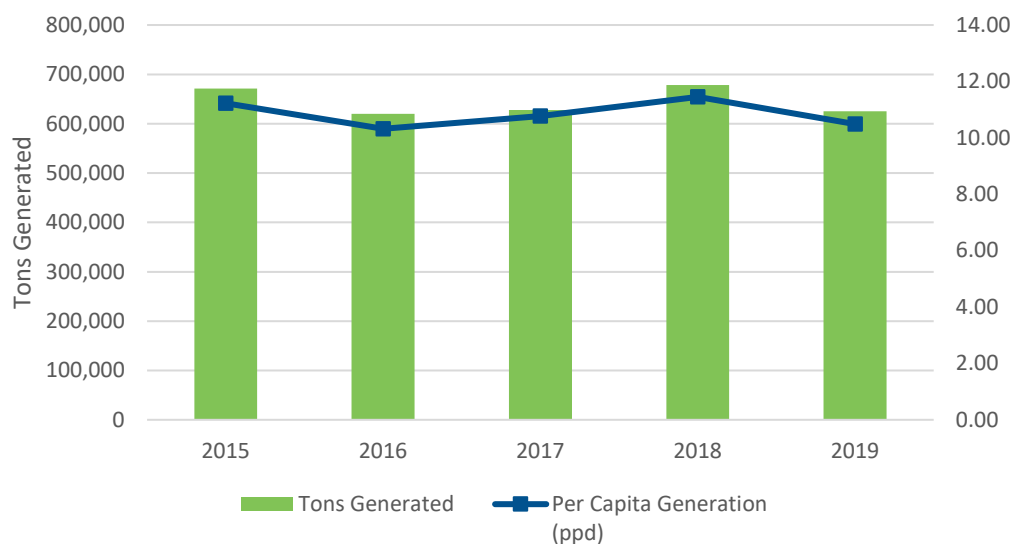
B. Historical Waste Generated

The overall waste generation for the District from all sectors from 2015 through 2019 is shown in the table below and **Figure 3-2**. These show that generation is stable; although there are natural fluctuations in overall generation each year, overall trends are neither substantially increasing nor decreasing.

Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial		Industrial		Total	Excluded (tons)	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled				
2015	327,694	238,942	84,021	55,469	220,730	671,251	72,089	11.22	-
2016	329,148	219,549	65,107	72,754	232,600	619,911	29,901	10.32	-0.08
2017	319,507	217,033	77,385	64,102	206,414	628,101	63,167	10.77	1.3%
2018	324,513	261,490	82,310	107,001	164,211	678,128	63,116	11.45	8.0%
2019	326,616	238,856	86,278	76,908	162,634	596,883	32,207	10.01	-12.0%

Figure 3-2. District Total Waste Generated



1. Historical Residential/Commercial Waste Generated

Overall, waste generation in the residential/commercial sector has increased slightly over the five-year period from 2015 through 2019. **Figure 3-3** shows the breakout of waste recycled (including composted) and waste landfilled which combined, equal generation. **Figure 3-4** shows the per capita waste generation rate for the residential/commercial sector. The average per capita waste generation in this period was 5.3 pounds per person per day.

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

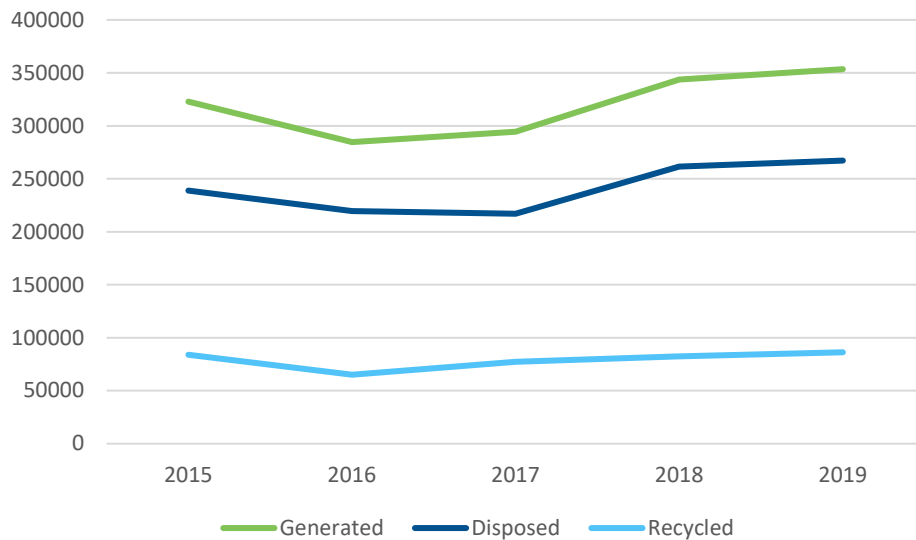
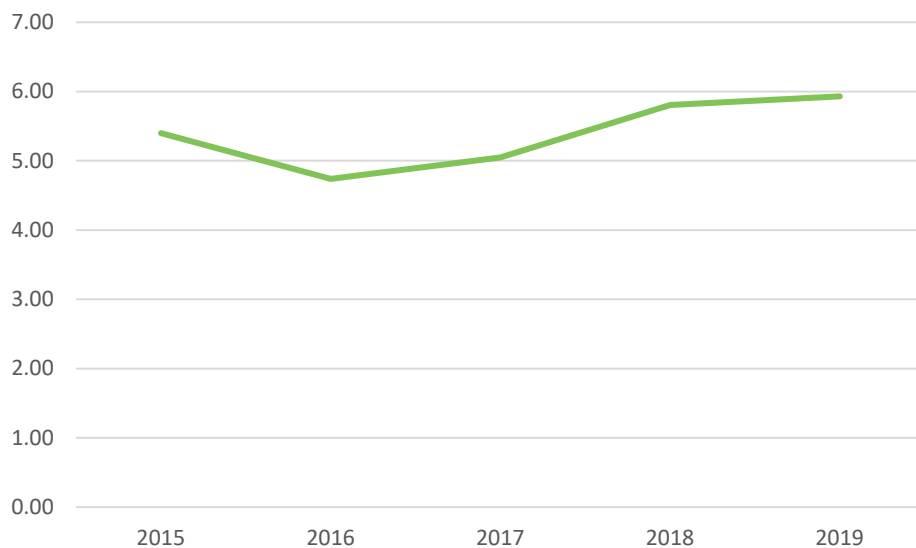


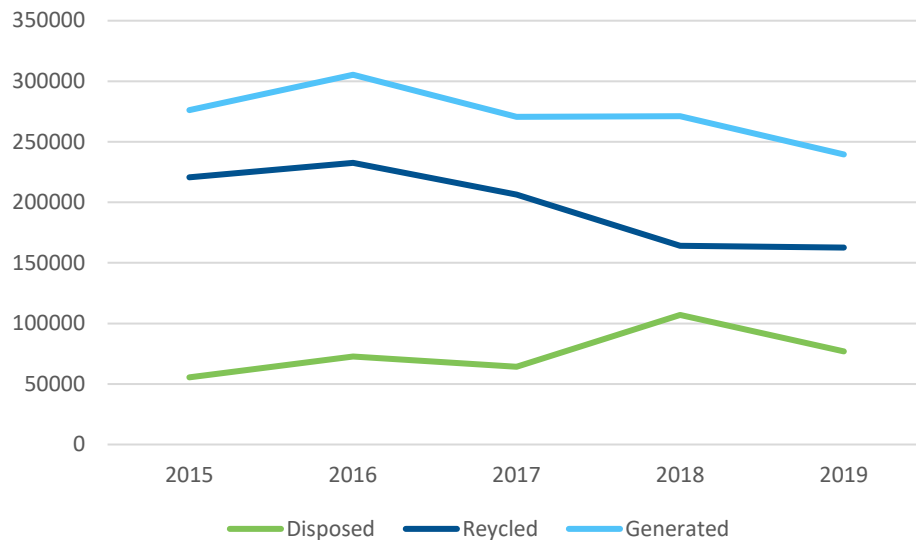
Figure 3-4. Residential/Commercial Waste Generation Per Capita



2. Historical Industrial Waste Generated

Industrial waste generation decreased slightly over the five-year period from 2015 to 2019 due to decreasing recycling totals. Disposal increased less than recycling decreased.

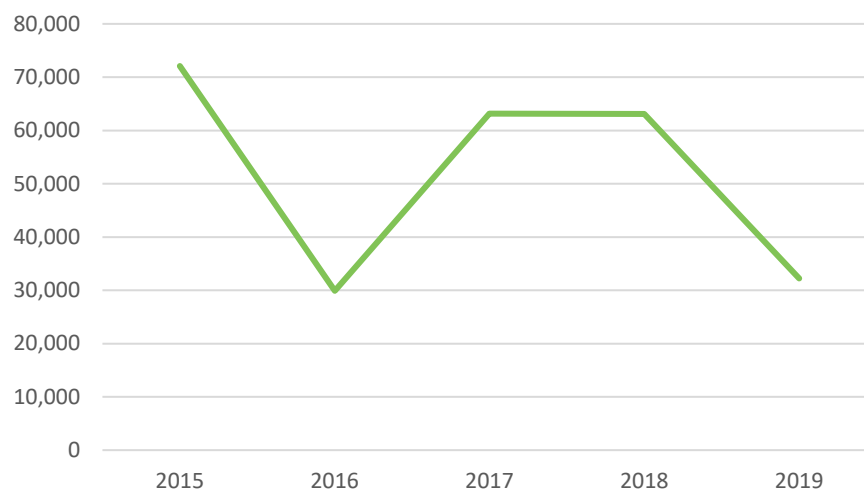
Figure 3-5. Industrial Waste Generation: 2015-2019



3. Historical Excluded Waste Generated

Annual quantities of excluded waste generated fluctuate dramatically each year based on projects and the economy. From 2015 to 2019, volumes of excluded waste have ranged from a low of 29,901 tons in 2016 to a high of 72,089 tons in 2015.

Figure 3-6. Excluded Waste Generation: 2015-2019



C. Waste Generation Projections

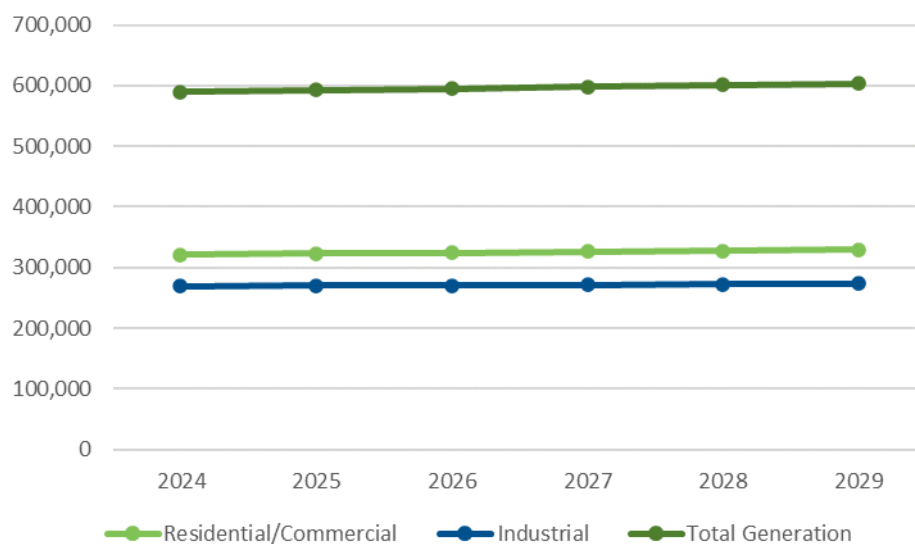
Table 3-2 demonstrates that waste generation within the District is expected to increase approximately 3.58% during the first six years of the planning period. The generation projections do not include excluded waste as the amount of excluded waste is less than 10% of the overall waste generation of the District.

Table 3-2. Waste Generation Projections

Year	Residential Commercial Waste	Industrial Waste	Total
2024	321,169	269,032	590,200
2025	322,851	269,988	592,839
2026	324,566	270,955	595,520
2027	326,303	271,933	598,236
2028	328,052	272,923	600,975
2029	329,812	273,924	603,737

Figure 3-7 presents the projections for the amount of waste to be generated for the first six years of the planning period.

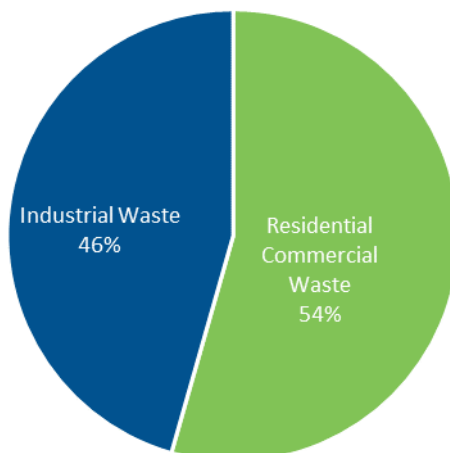
Figure 3-7. Waste Generation Projections



In general, generation for the residential/commercial and industrial sectors is projected to increase slowly. Generation projections were based on projections for disposal and recycling contained in Appendices D, E and F. A detailed explanation of the methodologies can be found in those appendices.

The following figure shows the percentage of solid waste generated in each sector for the first year of the planning period (2024).

Figure 3-8. Total Waste Generation: 2021



1. Residential/Commercial Waste Projections

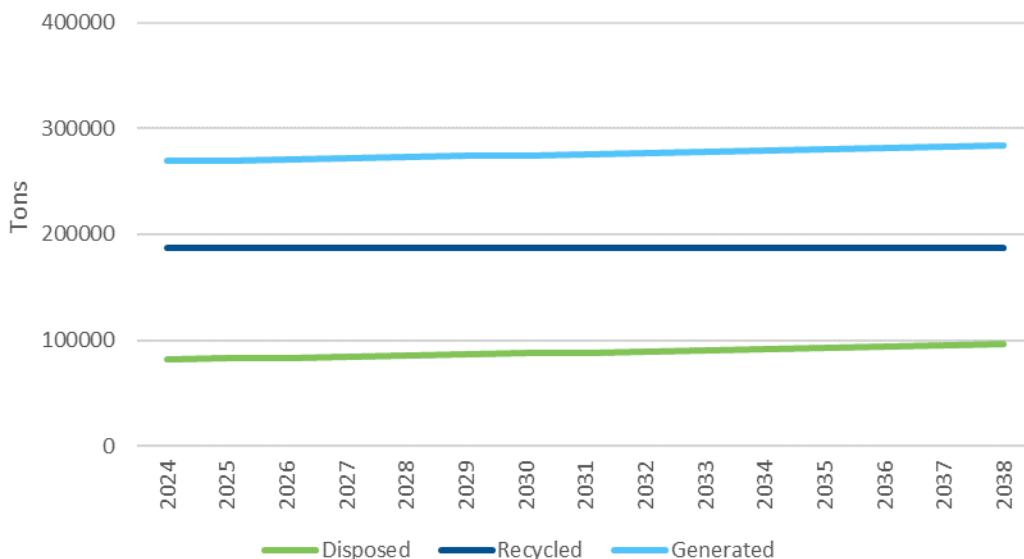
Residential/commercial sector disposal tonnages are projected to increase throughout the planning period. To project the total tons of residential/commercial sector disposal the average annual increase in tonnage of .67 percent based upon historical data. **Table D-6** in Appendix D presents the residential/commercial waste disposal projections. The District considered three projection scenarios and selected this approach because it produced the most reasonable results based on historical trends.

Residential/commercial sector recycling is projected to increase from 74,165 tons in 2024 to 74,964 tons in 2038, or 1.06% over the planning period.

Multiple methodologies were used to project the District's residential/commercial sector recycling, which were based on the assumptions made after the completion of a historical analysis for different programs and data sources. **Table E-8** in Appendix E provides recycling projections by program/source; a detailed methodology for projecting the recycling from each program/source is provided after the table.

The following figure presents the actual and projected totals of R/C recycling, disposal, and total generation from the reference year to the end of the planning period.

Figure 3-9. Residential/Commercial Waste Generation: 2024-2038



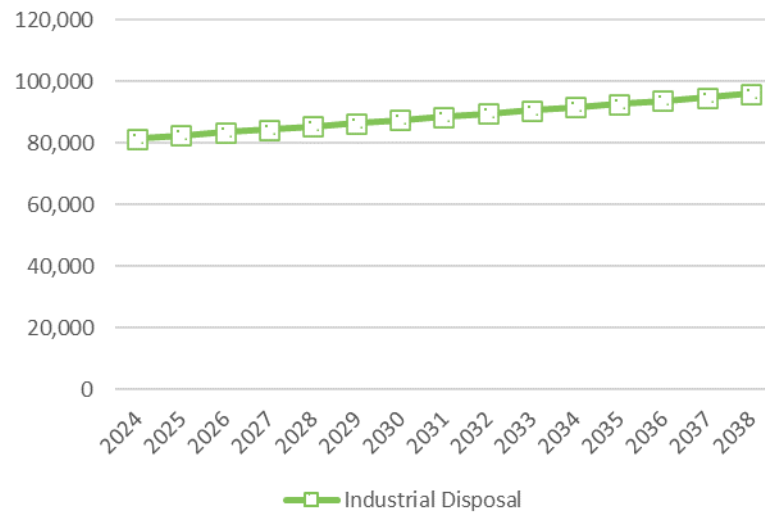
2. Industrial Waste Projections

Waste generation for the industrial sector only includes disposal projections from Appendix D. Recycling projections have not been calculated or will be tracked for this Plan Update per the recent changes in the State Plan.

Industrial sector disposal tonnages are projected to increase throughout the planning period. Appendix D presents the industrial waste disposal projections. The District considered three projection scenarios and selected this approach because it produced the most reasonable results based on historical trends.

The following figure presents the actual and projected totals of industrial sector disposal from the reference year to the end of the planning period.

Figure 3-10. Industrial Waste Generation: 2024-2038



3. Excluded Waste

Excluded waste tons have been removed from the District total generation projection totals as excluded waste is less than 10% of the District waste generation.

CHAPTER 4. Waste Management

Chapter 3 provided a summary of how much waste the NCO Solid Waste District (District) generated in the reference year and how much waste the District is estimated to generate during the planning period. This Chapter summarizes the Policy Committee's strategy for how the District will manage that waste during the planning period.

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

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

Although the Policy Committee needs to ensure that the District will have access to all types of needed facilities, Ohio law emphasizes access to disposal capacity. In the solid waste management plan, the District must demonstrate that it will have access to enough landfill capacity for all the waste the District will need to dispose of. If there is not 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 districts in that region would likely rely on transfer facilities to transport waste to an existing landfill instead of building a new landfill.

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

A. Waste Management Overview

The solid waste generated within the District 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 first six years of the planning period and indicates that disposal (“Transfer” plus “Landfill”) will continue to comprise the largest category.

Table 4-1. Methods for Managing Waste

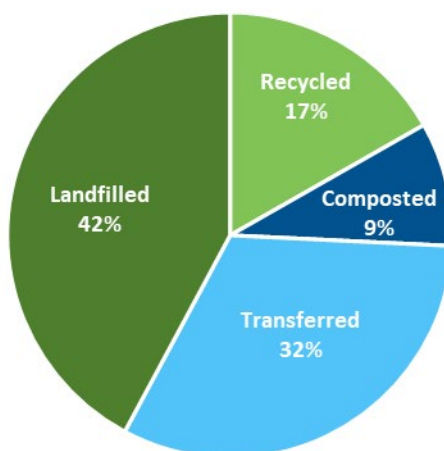
Year	Generate ¹	Recycle ²	Compost ³	Transfer ⁴	Landfill ⁵
2024	402,692	74,165	39,846	141,991	186,536
2025	405,331	74,185	39,857	141,554	189,591
2026	408,012	74,226	39,884	141,127	192,659
2027	410,728	74,279	39,913	140,754	195,696
2028	413,467	74,331	39,941	140,389	198,746
2029	416,228	74,384	39,969	140,460	201,385

- ¹ “Generate” represents the total of the other four columns.
- ² “Recycle” is the total amount reduced and recycled minus composting for the residential/commercial sector only.
- ³ “Composted” is the amount of yard waste/food waste sent to a compost facility.
- ⁴ “Transferred” is the amount sent to transfer stations prior to delivery to a landfill.
- ⁵ “Landfilled” plus the “Transferred” amount equals the total disposal.

Sources of information: Tables K-1, E-8, and D-6.

The following figure shows that recycling as a percentage of total generation for 2024 is projected to be 17 percent and compost is projected to be 9 percent while the amount of waste sent to transfer stations prior to final disposal in a landfill is approximately 42 percent. The tonnage sent directly to landfills for disposal is expected to be 32 percent of total generation. The percentage of waste managed by each method is projected to remain the same in 2029.

Figure 4-1. 2024 Percent of Generation Managed by Each Method



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

There are no landfills located in the District. There are 4 transfer stations located in the District. There are a number of composting and recycling facilities which are located in the District. The facilities used by the District during 2019 are discussed below.

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 2019 are shown in **Table 4-2**. This table illustrates that 84 percent of the direct-hauled waste was disposed at the Noble Road Landfill, which is a publicly-available, privately-owned facility. The landfills which received waste from the District in 2019 had an average of nearly 41 years of remaining capacity.

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

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
<i>In-District</i>					
None					
<i>Out-of-District</i>					
Athens-Hocking Reclamation Center	Athens	OH	5	0.00%	47.0
Crawford County Landfill	Crawford	OH	1,585	0.84%	21.0
Defiance County Sanitary Landfill	Defiance	OH	5,109	2.72%	27.0
Pine Grove Regional Facility	Fairfield	OH	368	0.20%	89.0
SWACO Franklin County Sanitary Landfill	Franklin	OH	8,466	4.51%	41.0
Rumpke Sanitary Landfill	Hamilton	OH	3,201	1.70%	32.0
Hancock County Landfill	Hancock	OH	11,490	6.11%	24.0
Beech Hollow Landfill	Jackson	OH	694	0.37%	85.0
Cherokee Run Landfill Inc	Logan	OH	75,329	40.09%	40.0
Carbon Limestone Landfill LLC	Mahoning	OH	20	0.01%	31.0
Republic Services Inc Celina Sanitary Landfill	Mercer	OH	12,370	6.58%	0.0
Stony Hollow Landfill Inc	Montgomery	OH	8,757	4.66%	30.0
Port Clinton Landfill Inc	Ottawa	OH	0	0.00%	84.0

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
Suburban Landfill Inc	Perry	OH	101	0.05%	69.0
Pike Sanitation Landfill	Pike	OH	5,399	2.87%	42.0
Noble Road Landfill	Richland	OH	11	0.01%	12.0
Sunny Farms Landfill LLC	Seneca	OH	584	0.31%	18.0
American Landfill, Inc.	Stark	OH	8	0.00%	85.0
Evergreen Recycling & Disposal	Wood	OH	370	0.20%	49.0
Wood County Landfill	Wood	OH	29	0.02%	3.0
County Environmental Landfill of Wyandot	Wyandot	OH	50,373	26.81%	124.0
Out-of-State					
Bavarian Trucking Co Inc	Boone	KY	87	0%	N/A
National Serv-All Landfill	Allen	IN	62	0%	N/A
Jay County Landfill	Jay	IN	1,987	14%	N/A
Randolph Farms Landfill	Randolph	IN	1,377	1%	N/A
Caldwell Landfill	Shelby	IN	131	0%	N/A
County Line Landfill	Fulton	IN	5	0%	N/A
Sycamore Ridge Landfill	Vigo	IN	4	0%	N/A
Total			187,922	100%	--

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 Facilities

The transfer facilities receiving waste from District entities during 2019 are listed in **Table 4-3**. Approximately 45% of the total waste ultimately sent for disposal was processed by transfer stations while approximately 50% was directly hauled to landfills.

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

Facility Name	Location		Tons Accepted from District	% all District Waste Transferred	Final Waste Destination
	County	State			
<i>In-District</i>					
Rumpke Allen County Transfer Station	Allen	OH	46,769	32.0%	Crawford County Landfill
Waste Management of Ohio Inc - Lima	Allen	OH	20,860	14.3%	Jay County Landfill
Hardin County Solid Waste Facility	Hardin	OH	11,628	8.0%	Cherokee Run Landfill
Shelby County Transfer Facility	Shelby	OH	13,689	9.4%	Cherokee Run Landfill
<i>Out-of-District</i>					
Rumpke Waste Inc Greenville Transfer Facility	Darke	OH	9,434	6.5%	Rumpke Sanitary Landfill, Inc.
Delaware County Transfer Facility	Delaware	OH	3,547	2.4%	Crawford County Landfill
Fayette County Transfer	Fayette	OH	306	0.2%	Beech Hollow Landfill
Local Waste Services Inc	Franklin	OH	2,507	1.7%	Pine Grove Landfill
Republic Services Inc Reynolds Ave Transfer Facility	Franklin	OH	5,528	3.8%	Pine Grove Regional Facility
Rumpke Waste Inc Columbus Transfer & Recycling Facility	Franklin	OH	11,246	7.7%	Beech Hollow Landfill
Waste Management of Ohio Transfer and Recycling	Franklin	OH	5,755	3.9%	Beech Hollow Landfill
Republic Services Mount Vernon Transfer Facility	Knox	OH	2	0.0%	Pine Grove Regional Landfill
Marion County Solid Waste Transfer Facility	Marion	OH	1,112	0.8%	Wyandot County Environmental Landfill
Maharg Inc Solid Waste Transfer Facility	Mercer	OH	1	0.0%	Jay County Landfill
Miami County Solid Waste & Recycling Facility	Miami	OH	291	0.2%	Cherokee Run Landfill
Montgomery County South Transfer	Montgomery	OH	4,716	3.2%	Rumpke Sanitary Landfill

Facility Name	Location		Tons Accepted from District	% all District Waste Transferred	Final Waste Destination
	County	State			
Rumpke Waste Inc Circleville Transfer Facility	Pickaway	OH	8,426	5.8%	Pike County Sanitary Landfill
Waste Management of Ohio - Chillicothe	Ross	OH	104	0.1%	Suburban Landfill
Out-of-State					
Bunn Box Inc.	Allen	IN	5	0%	National Serv-All Landfill
Total			145,927	100%	

3. Composting Facilities

Table 4-4 shows the composting facilities which received yard waste from the District in 2019.

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

Facility Name	Location	Material Composted (tons)	Percent of all Material Composted
Allen County			
Allen Correctional Institution	2338 North West Street, Lima	649	2.32%
Lima Compost Facility/Wright Mulch Inc	1227 East Hanthorn Road, Lima	4,229	15.09%
EOLM Lima Allen County Landfill Inc	1500 Fort Amanda Road, Lima	109	0.39%
Resource Recycling	1596 Neubrecht Road, Lima	144	0.51%
Resource Recycling West	1596 Neubrecht Road, Lima	143	0.51%
Champaign County			
Urbana Composting Facility	1263 Muzzy Road, Urbana	3,977	14.19%
Hardin County			
Hardin County Solid Waste Facility	45 Jones Rd, Kenton	46	0.16%
Madison County			
West Jefferson Composting Facility	Mill Rd, West Jefferson	221	0.79%
London Correctional Institution	1580 Ohio 56, London	78	0.28%
R&SH CO LLC	9050 Amity Pike, Plain City	0	0.00%

Facility Name	Location	Material Composted (tons)	Percent of all Material Composted
Shelby County			
Sidney Composting Facility	690 Brooklyn Avenue, Sidney	1,101	3.93%
Roe Transportation Inc	3680 State Rte 47, Sidney	14,833	52.91%
Village of Russia Composting Facility	551 East Main Street, Russia	56	0.20%
Union County			
Maintenance and Operations Center	455 North Maple Street, Marysville	1,194	4.26%
New Day Farms LLC Mad River East	27322 State Route 739, Raymond	0	0.00%
New Day Farms LLC (Farm 3 Facility)	27400 Coder-Holloway Road, West Mansfield	0	0.00%
New Day Farms LLC Mad River West	27322 Ohio 739, Raymond	0	0.00%
Out-of-District Facilities			
Park Enterprise Construction Co Inc	560 Barks Road West, Marion	159	0.57%
Mad River Topsoil Inc	5625 Old Lower Valley Pike, Springfield	2	0.01%
Garick LLC Paygro Division	11000 Huntington Road, South Charleston	218	0.78%
Cherokee Run Landfill Inc	2946 US Rte 68 N, Bellefontaine	390	1.39%
Price Farms Organics Ltd	4838 Warrensburg Road, Delaware	483	1.72%
Total		28,032	

4. Processing Facilities

Table 4-5 shows the major processing facilities which reported processing recyclables from the District during the reference year. This list was compiled by analyzing data resulting from the District's survey efforts. The majority of the facilities processing recyclables generated in the District are located in the District or in the Columbus and Dayton regions.

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

Facility Name	Sector	County	State	Type of Facility	Tons Accepted from SWMD
Allen County Recyclers	Residential/Commercial	Allen	OH	MRF ¹	7,500 ²
Hardin County Solid Waste Facility	Residential/Commercial	Hardin	OH	MRF	183
Shelby County Recycling Center	Residential/Commercial	Shelby	OH	MRF	2,800
Union Recyclers	Residential/Commercial	Union	OH	MRF	6,988
Rumpke Waste Recycling Columbus	Residential/Commercial/Industrial	Franklin	OH	Recycling Transfer Station	1,234
Rumpke Recycling Dayton	Residential/Commercial/Industrial	Montgomery	OH	Recycling Transfer Station	4,269
WM Recycling: Columbus	Commercial/Industrial	Franklin	OH	Transfer Station	1,222
Rumpke Chillicothe	Commercial	Ross	OH	Recycling Transfer Station	410
Dayton Glass Plant	Commercial	Montgomery	OH	MRF	654
Rumpke Center City Recycling Hamilton County	Residential/Commercial	Hamilton	OH	MRF	60
Royal Oaks Recycling	Residential	Dayton / Cleveland	OH	Processor	1,615
Total					26,935

¹ "MRF" means Material Recovery Facility.

² Allen County Recyclers recycling tonnages are sent to other facilities with the majority to Union Recyclers.

5. Other Waste Management

The District did not identify any other methods used for waste management during 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 the District's needs.

Transfer stations processed a major percentage (45%) of the District's waste in past years and are expected to do so throughout the planning period. No information currently available to the District suggests that the existing transfer stations used to process District waste will close in the near future.

The amount of materials composted throughout the planning period is expected to be consistent with that of the reference year. The number of operating composting facilities processing the majority of yard waste from the District is not expected to change, composting facility capacity should be adequate throughout the planning period.

D. Siting Strategy

The District's Siting Strategy for Solid Waste Disposal Facilities ensures that proposals to construct a new Solid Waste Disposal Facility within the District or modify an existing Solid Waste Disposal Facility within the District comply with the Solid Waste Management Plan ("Plan") and District Rules.

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

E. 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

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.)

policy committee can also prevent the board of directors from designating facilities by withholding that authority in the solid waste management plan.

Even if the policy committee grants the board of directors the authority to designate in a solid waste management plan, the board of directors decides whether to act on that authority. If it chooses to use its authority to designate facilities, then the board of directors must follow the process that is prescribed in ORC Section 343.013, 343.014 and 343.015. If it chooses not to designate facilities, then the board of directors simply takes no action.

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

1. Description of the SWMD’s Designation Process

The District’s existing Plan authorizes the Board of Directors to designate solid waste facilities. The Board is authorized to establish facility designations in accordance with Sections 343.013, 343.014 and 343.015 of the Ohio Revised Code. In addition, facility designation will be established and governed by applicable District rules. Authorization to designate solid waste facilities will continue with the approval of this Plan Update.

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

2. List of Designated Facilities

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

Table 4-6. Facilities Currently Designated

Facility Name	Location		Facility Type	Year Designated
	County	State		
<i>In-District</i>				
Hardin Co. SW TS	Hardin	OH	TS	2020

Facility Name	Location		Facility Type	Year Designated
	County	State		
Republic Services - Shelby Co. TS	Shelby	OH	TS	2020
Rumpke - Allen County TS	Allen	OH	TS	2020
WM of OH Lima TS	Allen	OH	TS	2020
<i>Out-of-District</i>				
Apex LF	Jefferson	OH	LF	2020
Athens Hocking Reclamation Center	Athens	OH	LF	2020
Carbon Limestone Landfill LLC	Mahoning	OH	LF	2020
Defiance Co. LF	Defiance	OH	LF	2020
Hancock Co. Sanitary LF	Hancock	OH	LF	2020
Kimble Sanitary LF	Tuscarawas	OH	LF	2020
Kimble Sanitary TS-Canton	Stark	OH	TS	2020
Kimble Sanitary TS-Twinsburg	Summit	OH	TS	2020
Kimble Sanitary TS-Cambridge	Guernsey	OH	TS	2020
Kimble Sanitary TS-Carrollton	Carroll	OH	TS	2020
Kimble Sanitary TS-Valley City	Medina	OH	TS	2020
Local Waste Services	Franklin	OH	TS	2020
Miami County Solid Waste & Recycling Facility	Miami	OH	TS	2020
Montgomery County Solid Waste Transfer and Recycling Facility	Montgomery	OH	TS	2020
Rep. Serv. - Celina LF	Mercer	OH	LF	2020
Rep Serv. - Pine Grove LF	Fairfield	OH	LF	2020
Rep. Serv. - Cherokee Run LF	Logan	OH	LF	2020
Rep. Serv. - Co. Environmental Oh Wyandot	Wyandot	OH	LF	2020
Rep. Serv. - Marion TS	Marion	OH	TS	2020
Rep. Serv. - Mt. Vernon TS	Knox	OH	TS	2020
Rep. Serv. - Reynolds Ave. TS	Franklin	OH	TS	2020
Rumpke - Richland Co. TS	Richland	OH	TS	2020
Rumpke - Greenville TS	Darke	OH	TS	2020
Rumpke - Delaware TS	Delaware	OH	TS	2020
Rumpke - Circleville TS	Pickaway	OH	TS	2020
Rumpke - Columbus TS	Franklin	OH	TS	2020

Facility Name	Location		Facility Type	Year Designated
	County	State		
Rumpke Sanitary LF, Inc.	Hancock	OH	LF	2020
Rumpke - Pike Co. San LF	Pike	OH	LF	2020
Rumpke - Noble Rd. LF	Richland	OH	LF	2020
Rumpke - Brown Co. San LF	Brown	OH	LF	2020
Rumpke - Crawford Co. LF	Crawford	OH	LF	2020
Rumpke - Beech Hollow LF	Jackson	OH	LF	2020
SWACO Jackson Pike Transfer Facility	Franklin	OH	TS	2020
SWACO Morse Road Transfer Facility	Franklin	OH	TS	2020
SWACO Franklin County Sanitary Landfill	Franklin	OH	LF	2020
WM Evergreen LF	Wood	OH	LF	2020
WM Stony Hollow LF	Montgomery	OH	LF	2020
WM Suburban S LF	Perry	OH	LF	2020
WM American LF	Stark	OH	LF	2020
WM Fairborn TS	Franklin	OH	TS	2020
WM Canal Winchester TS	Franklin	OH	TS	2020
WM Chillicothe TS - Mound	Ross	OH	TS	2020
Wood Co. LF	Wood	OH	LF	2020
Out-of-State				
Jay County Landfill	Jay	IN	LF	2020
Randolph Farms LF	Randolph	IN	LF	2020

CHAPTER 5. Waste Reduction and Recycling

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

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 waste 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 District's abilities, strengths and weaknesses, operations, existing programs and services, outstanding needs, available resources, etc. The Policy Committee reviewed a list of actions the SWMD could take, programs that the District could implement, or other steps the SWMD could take 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. (For more in-depth information regarding the analyses of District programs and the development of priorities, see Appendix H and Appendix I, respectively.)

After deciding on programs and services, the Policy Committee reviewed projections of 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 details regarding the residential/commercial sector and Appendix F for the industrial sector.)

Finally, the District and Policy Committee realize that the highest priorities identified during this Plan Update process were to implement all existing programs, reduce contamination, increase recycling, and enhance its education, awareness, and outreach programs. The District reserves the right to ensure the implementation of the programs and initiatives that support the District’s highest priorities first before other secondary new programs or initiatives.

A. Program Evaluation and Priorities

1. Strategic Analysis

All existing District programs have been evaluated qualitatively in terms of the suggestions included within Ohio EPA’s guidance document (i.e., Format v4.1), and the strengths and weaknesses were identified for each program. For programs which have data available, quantitative evaluations were incorporated, also. The District conducted additional analyses for subject areas or issues not necessarily related to an existing program where appropriate. The following table includes the 13 distinct analyses conducted for the District’s programs.

Strategic Analysis Categories

Analysis	Topic
#1	Residential Recycling Infrastructure Analysis
#2-3	Business and Industrial Sector Analysis
#4	Residential/Commercial Waste Composition Analysis
#5	Economic Incentive Analysis
#6	Restricted and Difficult to Manage Waste Analysis
#7	Diversion Analysis
#8	Special Program Needs Analysis
#9	Financial Analysis
#10	Regional Analysis
#11	Data Collection Analysis
#12	Education and Outreach Analysis
#13	Processing Capacity Analysis

2. Conclusions and Priorities

The strategic analysis conducted by the District identified strengths and weaknesses for existing programs and challenges the District faces to improve certain programs. The topics or issues potentially needing to be addressed through some type of new initiative were also identified through this process.

After compiling a list of all the existing programs and the new initiatives, the District staff employed a ranking system to prioritize solid waste management efforts within the District. Each existing program and new initiative were ranked from 1 to 3 based upon its importance and feasibility/ease of implementing. The list of prioritized possible actions was then presented to the Policy Committee with discussion from District personnel and the District’s consultant. The Policy Committee either confirmed the District’s prioritization and/or changed the priority. All programs and initiatives with a ranking of “3” are recommended for implementation, as well as some with a ranking of “2” with Policy Committee direction. All others are not recommended at this time.

For a complete listing of all existing programs and initiatives, including those with a ranking of “1” or “2”, see Appendix I. In many cases, the new initiatives are intended to address problems identified for an existing program or to enhance an existing program.

A complete listing and description of all District programs and new initiatives recommended for implementation with this Plan Update is provided below in Section B, “Program Descriptions.”

District Conclusions and Priorities: Strategic Analysis

Name	Existing or Start Date
Curbside Recycling Expansion	Existing
Curbside Recycling Creation	Existing
Curbside Re-Start	Existing
Curbside Contract Tracking	Existing
PAYT	Existing
Curbside Contamination Reduction	2024
Drop-Off Evaluations	Existing
Closed Drop-Off Procedure	Existing
Drop-Off Contamination Reduction	2024
Illegal Dumping Signs at Drop-Off Sites	2024
Illegal Dumping Messaging	2024
Ohio EPA Community Development Grants	Existing
Commercial and Industrial Waste Audits and Assessments	Existing

Name	Existing or Start Date
Commercial and Industrial Technical Assistance	Existing
Ohio EPA Market Development and Scrap Tire Grants	Existing
Recycling Assistance Grants	Existing
Community Clean-Up Grants	Existing
Yard Waste Financial Assistance	Existing
Disaster Debris Management Financial Assistance	Existing
Education and Outreach Financial Assistance	Existing
Scrap Tire Clean-Up Financial Assistance	Existing
Permanent HHW Collection	Existing
Mobile HHW Collection	Existing
Scrap Tires	Existing
E-Waste	Existing
E-Waste R2 Certification Requirement	2024
Lead Acid Batteries	Existing
Used Oil and Antifreeze	Existing
Appliances	Existing
Medicine and Prescriptions	Existing
Union Recyclers Loan Pay-Off	2020
Data Collection	Existing
Data Collection Changes	2023
District Web Site	Existing
New District Web Site	2022
Adult Education	Existing
Adult Education	2024
School Age Children Education	Existing
School Age Children Education	2024
Commercial and Industrial Education	Existing
Community and Elected Officials Education	Existing

Name	Existing or Start Date
Shelby County Recycling Center	Existing
Union Recyclers	Existing
Hardin County Transfer Station	Existing
London Recycle Transfer	Existing
MRF Account	Existing

B. Program Descriptions

The following section summarizes all initiatives and programs the District will implement for the planning period. Appendix B, H, I and L contains additional detail on existing programs.

Name	Description
Curbside and Drop-Offs	<p>All Curbside and Drop Off Programs Provided in Appendix J, Table J-1</p> <ul style="list-style-type: none"> • 20 Non-Subscription Curbside Recycling Programs • 1 Subscription Curbside Recycling Program • 9 Full Time Urban Drop-Off Recycling Programs • 9 Full Time Rural Drop-Off Recycling Programs • 6 Part Time Urban Drop-Off Recycling Programs • 31 Part Time Rural Drop-Off Recycling Programs <p>Target Audience: District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities and District Program Paid by: District or Communities Program Promotion: Web Site, Mailers, Direct Engagement District Expenses: Budget Line Item 2.d.2 (Drop-Off) Budget Line Item 1.b, 2.a.1 for Curbside Technical Assistance</p>
New Drop-Off	<p>The District is planning on the possibility of implementing a part time recycling drop-off site in Union County. Targeted communities for this new drop-off site include Milcreek, Dover, Taylor, Jackson or Washington Townships. Because this Plan will be updated two more times before 2038, the District will finalize the implementation in the next Plan Update.</p> <p>Target Audience: Milcreek, Dover, Taylor, Jackson or Washington Townships Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities and District Program Paid by: District or Communities Program Promotion: Web Site, Mailers, Direct Engagement District Expenses: Budget Line Item 2.d.2</p>

Name	Description
Curbside and Drop-Offs	<p>All Curbside and Drop Off Programs Provided in Appendix J, Table J-1</p> <ul style="list-style-type: none"> • 20 Non-Subscription Curbside Recycling Programs • 1 Subscription Curbside Recycling Program • 9 Full Time Urban Drop-Off Recycling Programs • 9 Full Time Rural Drop-Off Recycling Programs • 6 Part Time Urban Drop-Off Recycling Programs • 31 Part Time Rural Drop-Off Recycling Programs <p>Target Audience: District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities and District Program Paid by: District or Communities Program Promotion: Web Site, Mailers, Direct Engagement District Expenses: Budget Line Item 2.d.2 (Drop-Off) No Curbside District Expenses</p>
New Drop-Off	<p>The District is planning on the possibility of implementing a part time recycling drop-off site in Union County. Targeted communities for this new drop-off site include Milcreek, Dover, Taylor, Jackson or Washington Townships. Because this Plan will be updated two more times before 2038, the District will finalize the implementation in the next Plan Update.</p> <p>Target Audience: Milcreek, Dover, Taylor, Jackson or Washington Townships Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities and District Program Paid by: District or Communities Program Promotion: Web Site, Mailers, Direct Engagement District Expenses: Budget Line Item 2.d.2</p>

Name	Description
Curbside Recycling Expansion	<p>The District will continue to provide assistance to communities that are interested in implementing or expanding a non-subscription curbside recycling program.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities (Expansion) Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a. or 2.h.1</p>
Curbside Recycling Creation	<p>The District’s historical assistance for communities that are considering either adding recycling to their trash contract or are interested in contracting for solid waste services that includes recycling:</p>

Name	Description
	<ul style="list-style-type: none"> • Meet with the community to discuss the option of contracts and solid waste services at the curb. • Survey residents on their willingness to participate in a new program (Kenton in 2019). • If a community decides to move forward with a program, provide assistance with RFP and contract development (Richwood and Milford Center in 2018). • Offer any assistance permitted under this Plan Update to assist with the program. <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: District Budget Line Item 1.b, 2.a., 2.h.1</p>
Curbside Re-Start	<p>For any planned or existing curbside recycling program that ceases to operate during the planning period, the District will implement the following procedure:</p> <ul style="list-style-type: none"> • Meet with the operator of the curbside program to determine cause of program elimination. • Offer any assistance permitted under this Plan Update to re-start the program. • If the program cannot be re-started, the District will evaluate the options available including replacing the program with full time or part time recycling drop-off centers to ensure no loss in recycling access is realized. <p>If the elimination of a curbside recycling program does not cause the county to fall below the 80% recycling access goal requirement, the District reserves the right to not implement any substitute program.</p> <p>Target Audience: District Curbside Communities Service Area: District Curbside Communities Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities (Re-Start) Program Promotion: District Web Site, Direct Engagement District Expenses: Budget Line Item 1.b, 2.a., 2.h.1</p>
Curbside Contract Tracking	<p>The District will continue to track all single hauler and consortium contracts throughout the District.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District</p>

Name	Description
	Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.
PAYT	<p>The District continues to support PAYT programs when it makes sense for a community. The District supports the recycling program hierarchy contained in Appendix H. This program includes:</p> <ul style="list-style-type: none"> • Technical assistance • Direct engagement with Community Officials <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>
Curbside Contamination Reduction	<p>The District will begin a multi-stage contamination reduction initiative that includes the following:</p> <ul style="list-style-type: none"> • Educational flyers, resources, videos and information located on District web site • Assessment of contamination via loads delivered to District MRFs or third party MRFs for the purpose of identifying target communities and/or routes for education. • Targeted mailings of education information to communities and/or specific routes within communities across all six counties • Targeted tagging of curbside carts or bins for communities and/or specific routes within communities across all six counties with District staff as needed • Targeted tagging of curbside carts or bins for communities and/or specific routes within communities across all six counties with seasonal staff as needed and as budgets allow • Measure effectiveness of initiative as available or achievable • Other activities as determined to achieve goal <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities (Expansion) Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a., 2.g.1, 2.g.2 or 2.g.3</p>
Drop-Off Evaluations	<p>The District monitored a variety of elements regarding drop-off recycling locations, such as total tons of materials collected and contamination issues. The District may adjust the drop-off program on an as-needed basis when improvements are identified. Potential issues the District circumvents by evaluating the drop-off program on a continual basis are the following:</p> <ul style="list-style-type: none"> • Location of drop-off

Name	Description
	<ul style="list-style-type: none"> • Collection hours • Material accepted • Participant feedback on program • Estimated tonnage collected • Excessive abuse of drop-off sites from contamination or dumping • Underutilization of drop-off bins • Collection frequency that does not meet public needs (i.e., issues with over-flow) <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Program Paid by: District Program Promotion: N/A District Expenses: Budget Line Item 1.b, 2.a.</p>
<p>Closed Drop-Off Procedure</p>	<p>For any planned or existing drop-off recycling program that ceases to operate during the planning period, the District will implement the following procedure:</p> <ul style="list-style-type: none"> • Meet with the operator of the drop-off program to determine cause of program elimination. • Offer any assistance permitted under this Plan Update to re-start the program. • If the program cannot be re-started, the District will evaluate the options available including replacing the program with full time or part time recycling drop-off centers in other areas of the county affected to ensure no loss in recycling access is realized. • If the elimination of a drop-off recycling program does not cause the county to fall below the 80% recycling access goal requirement, the District reserves the right to not implement any substitute program. <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>
<p>Drop-Off Contamination Reduction</p>	<p>The District will begin a multi-stage contamination reduction initiative that includes the following:</p> <ul style="list-style-type: none"> • Educational flyers, resources, videos and information located on District web site. • Assessment of contamination via loads delivered to District MRFs or third party MRFs for the purpose of identifying target communities and or sites for education. • Targeted mailings of education information to communities • Targeted inspections and engagement with participants for communities across all six counties with District staff as needed • Targeted inspections and engagement with participants across all six counties with seasonal staff as needed and as budgets allow

Name	Description
	<ul style="list-style-type: none"> • Measure effectiveness of initiative as available or achievable • Other activities as determined to achieve goal <p>Target Audience: All District Communities Service Area: District Materials Collected: Illegally Dumped Materials Program Operator: District Program Paid by: District Program Promotion: Web Site, Mailers, Videos, Direct Engagement District Expenses: Budget Line Item 1.b, 2.a., 2.g.1, 2.g.2 or 2.g.3</p>
<p>Illegal Dumping Signs at Drop-Off Sites</p>	<p>The District will target drop-off sites that are experiencing illegal dumping activities and install signs that discourage illegal dumping. The signs will communicate the Ohio law on illegal dumping and the possible consequences of breaking this law. Signs will be placed as needed throughout the planning period.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: Illegally Dumped Materials Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site, Social Media District Expenses: Budget Line Item 2.g.1, 2.d.2</p>
<p>Illegal Dumping Messaging</p>	<p>The District will add messaging on its web site, flyers, social media and other engagement instruments as needed to educate residents and businesses on illegal dumping issues at the District drop-off system and or community areas.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: Illegally Dumped Materials Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site, Social Media District Expenses: Budget Line Item 2.g.1</p>
<p>Ohio EPA Community Development Grants</p>	<p>The District provides technical assistance to communities regarding Ohio EPA grants as requested.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>

Name	Description
<p>Commercial and Industrial Waste Audits and Assessments</p>	<p>The District assists businesses with waste audits for commercial businesses, industries, agricultural operations, and non-profit organizations upon request for no cost. Audits evaluate the waste streams of each business/industry, the current disposal practices and costs, current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting.</p> <p>Target Audience: All District Commercial, Industrial, Institutional Entities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement</p> <p>District Expenses: Budget Line Item 1.b, 2.a.</p>
<p>Commercial and Industrial Technical Assistance</p>	<p>The District provides technical assistance to the commercial and industrial sector as well as the institutional sector through direct engagement activities. The District is a technical resource for businesses and schools for recycling and solid waste questions as needed and requested. The District includes a vast array of resources on its web site for the benefit of residents and businesses.</p> <p>Target Audience: All District Commercial, Industrial, Institutional Entities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement</p> <p>District Expenses: Budget Line Item 1.b, 2.a.</p>
<p>Commercial and Industrial Market Development and Scrap Tire Grant Assistance</p>	<p>The District provides technical assistance to businesses regarding Ohio EPA grants as requested.</p> <p>Target Audience: All District Commercial, Industrial, Institutional Entities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement</p> <p>District Expenses: Budget Line Item 1.b, 2.a.</p>
<p>Recycling Assistance Grants</p>	<p>The District provides financial assistance funds for one-time expenses related to the start-up or improvement of curbside and drop-off recycling programs. Other recycling programs are also considered for funding per the District's policy for this program identified in the District's financial assistance guidance manual.</p> <p>Target Audience: All District Communities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District and District Communities</p>

Name	Description
	Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line 2.h.1
Community Clean-Up Grants	<p>The District offers communities throughout the six-county area financial assistance for clean-up projects. Projects normally occur in the spring and allow residents to bring special items and bulk materials (such as mattresses and furniture) and other items not normally accepted by their trash hauler to a central collection area. Any political subdivision located within Allen, Champaign, Hardin, Madison, Shelby and Union Counties are eligible to apply. Additional details on funding criteria and allowable expenses were included in the District’s financial assistance guidance manual, located in the District office.</p> Target Audience: All District Communities Service Area: District Materials Collected: Trash, Litter, OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.e.5
Yard Waste Financial Assistance	<p>The District offers communities, throughout the six-county region, financial assistance for managing yard waste (leaves, brush and wood). The projects normally occur in the spring and fall. Typical projects in the past have involved grinding of yard waste for mulch.</p> Target Audience: All District Communities Service Area: District Materials Collected: Yard waste. Leaves, brush Program Operator: District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.f
Disaster Debris Management Financial Assistance	<p>The District annually budgets funds to provide financial assistance with unplanned solid waste management costs which are a direct result of disaster situations. In addition to the financial assistance, in the event of a natural disaster, the District offers the following technical assistance services to any County Emergency Management Agency (EMA) and/or local law enforcement in its jurisdiction:</p> <ul style="list-style-type: none"> • Make District staff available 24 hours a day to respond to any solid waste disaster. • At the EMA's or local law enforcement request, the District Director will evaluate the situation to determine the process of clean-up and financial needs. • The District will coordinate with the local EMA, Ohio EPA district office and/or the local health department to establish disposal procedures and monitor debris sites to mitigate any impact on public health. Target Audience: All District Communities

Name	Description
	<p>Service Area: District Materials Collected: Solid Waste Program Operator: District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.n</p>
<p>Education and Outreach Financial Assistance</p>	<p>The District offers outreach and education assistance funds for one-time expenses related to the education of District residents and students.</p> <p>Target Audience: Any educational institution including primary and secondary schools, community colleges, colleges, universities, any governmental agency, non-profit organizations</p> <p>Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Entities Listed Above Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.h.1</p>
<p>Scrap Tire Clean-Up Financial Assistance</p>	<p>The District offers assistance to county engineers, municipalities and townships with the costs of tire disposal and recycling associated with the clean-up of littered and illegally dumped tires. Under this program, the political subdivision is responsible for collecting the tires and then coordinating with the District for the proper disposal/recycling and hauling of the tires. The District will coordinate with a tire recycler/hauler to pick up the tires at a convenient time. The District can pay for the hauling and disposal fee. The contractor that the District is currently using shreds the tires for recycling applications.</p> <p>Target Audience: All District Communities, County Engineers Service Area: District Materials Collected: Scrap Tires Program Operator: District Communities, County Engineers Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.e.1</p>
<p>Permanent HHW Collection</p>	<p>The District operated 3 permanent HHW facilities in 2019 in Allen, Shelby, and Union Counties during the months of April-October. This program operates per the following:</p> <ul style="list-style-type: none"> • Appointment based participation • User fee charged (\$1.00 per pound currently) • April – October collection days specific to County (see web site for actual days) <p>Target Audience: District Residents Service Area: District Materials Collected: HHW Materials Program Operator: District Program Paid by: District</p>

Name	Description
	Program Promotion: Web Site District Expenses: Budget line item 2.e.1
Mobile HHW Collection	<p>The District operated 3 Mobile HHW facilities in 2019 in Hardin, Madison and Champaign Counties during the months of April - October. This program operates in the same manner as the permanent HHW facility program including:</p> <ul style="list-style-type: none"> • Appointment based participation • User fee charged (\$1.00 per pound currently) • April – October collection days specific to County (see web site for actual days) • All collected materials delivered to one of the three permanent HHW facilities for packing and shipping <p>Target Audience: District Residents Service Area: District Materials Collected: HHW Materials Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget line item 2.e.1</p>
Scrap Tires	<p>The District does not conduct a scrap tire collection program. The District provides a list of companies that accept or haul scrap tires on the District’s web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Scrap Tires Program Operator: District Communities Program Paid by: Tire Companies Program Promotion: Web Site District Expenses: Budget Line Item 1.b, 2.a.</p>
E-Waste	<p>The District included electronic waste management in its education and awareness program primarily to promote collection events and in-district recyclers. There are permanent sites located at the Hardin County Transfer Station, Shelby County Recycling Center, Union Recyclers (events only) and the District office in Allen County that accept E-Waste year-round. Other third-party entities in each county of the District also accept a variety of E-Waste which is included on the District’s web site or the individual entity’s web site.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Ewaste Program Operator: District and Communities Program Paid by: District and Communities Program Promotion: Web Site District Expenses: Budget Line Item 2.e.3</p>

Name	Description
E-Waste R2 Certification Requirement	<p>The District will ensure that any contract used by the District directly is R2 certified. The District will also promote this standard to any community and or entity that is conducting their own E-Waste collection. The R2 certification is a nationally recognized certification that ensures the proper management of E-Waste by processors.</p> <p>Target Audience: Ewaste Contractors Service Area: District Materials Collected: Ewaste Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a</p>
Lead Acid Batteries	<p>Lead acid batteries as well as other household batteries are accepted in the District's permanent and mobile HHW program.</p> <p>The District provides a list of companies that accept lead acid batteries on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents and Businesses Service Area: District Materials Collected: Lead Acid Batteries Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>
Used Oil and Antifreeze	<p>Used oil, antifreeze and other common residential oils are accepted in the District's permanent and mobile HHW program.</p> <p>The District provides a list of companies that accept used oil and antifreeze on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Used Oil and Antifreeze Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>
Appliances	<p>The District does not conduct any special collections for appliances.</p> <p>The District provides a list of companies that accept appliances and scrap metal on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Appliances Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>

Name	Description
Medicine and Prescriptions	<p>The District does not conduct any special collections for medication or prescriptions.</p> <p>The District provides a list of companies and or entities that accept medicines and prescriptions on the District’s web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Prescriptions Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>
Union Recyclers Loan Pay-Off	<p>The District’s loan with OWDA is a simple interest loan that can be paid off early without penalty. The loan was initiated in 2020 with its term running 20 years. The payments are made twice per year in January and July. The District will strive to pay off the loan as early as possible as budget allows.</p> <p>Target Audience: N/A Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: N/a District Expenses: Budget Line Item 2.o</p>
Data Collection	<p>The District will utilize data from community recycling programs, MRF/Processor data and Ohio EPA data. Double counting will be minimized with the new data collection program.</p> <p>The data collected along with the plan implementation monitoring each year will be used to complete the Annual District Report as required by law.</p> <p>Target Audience: District Communities, MRFs, Processors Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Online Data Collection District Expenses: Budget Line Item 1.b, 2,a.1</p>
Data Collection	<p>The District will cease collecting data from the Industrial sector since the 2020 State Solid Waste Plan no longer requires districts to try and meet the industrial recycling goal of 66%. In addition, the District will cease collecting data from commercial and institutional entities to avoid double counting with MRF and processor data.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: N/A Program Operator: District</p>

Name	Description
	Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2,a.1
District Web Site	The District web site will continue and be updated as needed. Target Audience: All District Communities, Institutions and Businesses Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Web Site, Direct Engagement and Social Media District Expenses: Budget Line Item 2.g.1
New District Web Site	The new District web site was developed and refined in late 2021 and early 2022 and is being continually improved over time. The expense for the development of the new web site was covered under Budget Line Item 1.b and 2.g.1. Future expenses for the web site are covered below. Target Audience: All District Communities, Institutions and Businesses Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Web Site, Direct Engagement and Social Media District Expenses: Budget Line Item 2.g.1
Adult Education	The District provides educational opportunities for adults throughout the year. This includes: <ul style="list-style-type: none"> • Information on website including recycling and educational content • Conduct presentations as requested based on staff availability • Direct engagement as discussed in other programming in this Plan Update Target Audience: District Adults Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1
Adult Education	Creation of topic and audience specific content videos to be housed on District web site. The District will develop videos using standard cell phone-based video equipment on various topics including, but not limited to the following: <ul style="list-style-type: none"> • Waste diversion and recycling

Name	Description
	<ul style="list-style-type: none"> • Waste minimization and reduction • Composting and compost facilities • HHW minimization • District special materials collection participation process • District recycling facilities • District HHW facilities (fixed and mobile) • District recycling drop-off facilities • Curbside recycling • Contamination • Other topics as determined <p>As videos are created, they will be categorized and housed on the District's web site for all visitors to view.</p> <p>Target Audience: District Adults Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>
<p>School Age Children Education</p>	<p>The District provides educational opportunities for students throughout the school year. This includes:</p> <ul style="list-style-type: none"> • Information on website including recycling and educational content • Funding assistance for school recycling and education projects • Conduct presentations as requested based on staff availability <p>Target Audience: District School Age Children Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>
<p>School Age Children Education</p>	<p>Creation of topic and audience specific content (school age children) videos to be housed on District web site. The District will develop videos using standard cell phone-based video equipment on various topics including, but not limited to the following:</p> <ul style="list-style-type: none"> • Recycled content materials • What happens to recycle materials • Contamination • Composting • Alternatives to HHW • District recycling facilities • District HHW facilities (fixed and mobile) • District recycling drop-off facilities

Name	Description
	<ul style="list-style-type: none"> Other topics as determined <p>As videos are created, they will be categorized and housed on the District's web site for all visitors to view.</p> <p>Target Audience: District School Age Children Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>
<p>Commercial and Industrial Education</p>	<p>The District provides educational and program opportunities to the business and institutional sector as follows:</p> <ul style="list-style-type: none"> Information on website including recycling, waste disposal and hauler information Technical assistance on solid waste projects as requested Waste audits and assessments Information about EPA grant opportunities and potential sponsorship In person presentations as requested when staff time is available <p>Target Audience: District Commercial, Industrial and Institutional Entities Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>
<p>Community and Elected Officials Education</p>	<p>The District provides educational and program opportunities to community leaders and elected officials as follows:</p> <ul style="list-style-type: none"> Information on website including recycling, waste disposal and hauler information Curbside and drop-off assistance Contracting and marketing assistance Grant opportunities Presentations Policy Committee engagement and technical assistance Board of Directors engagement and technical assistance In person presentations as requested when staff time is available <p>Target Audience: District Elected and Community Officials Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District</p>

Name	Description
	<p>Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>
<p>Shelby County Recycling Center</p>	<p>The District has a contract with the Shelby County Commissioners to operate the county-owned recycling center with District employees. The District does not own the buildings or the equipment but is responsible for the operation of the facility. All money funding for the operation of the facility are Shelby County provided and come from the sale of recyclables, user fees and other revenue sources. This facility is not financially supported by the District for normal business operations. The District does provide financial assistance for recycling access and technical support.</p> <p>Target Audience: N/A Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: Shelby County Program Paid by: Shelby County Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.d.2, 2.h.2</p>
<p>Union Recyclers</p>	<p>The District operates (through a private contract) the Union Recyclers facility. The Union County Commissioners owns the Union Recyclers real estate and lease it back to the District. All money funding for the operation of the facility are derived from the sale of recyclables, user fees and other revenue sources. This facility is not financially supported by the District for normal processing operations. The District does provide financial assistance for recycling access and technical support. The District does have a loan for the capital improvement to this facility which is covered under a separate program.</p> <p>Target Audience: N/A Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District (through private contract) Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.d.2, 2.h.2</p>
<p>Hardin County Transfer Station</p>	<p>The District has assisted Hardin County with its recycle and solid waste transfer station for many years. Past efforts have included technical assistance with the solid waste transfer station operation, disposal contracts and compactor issues. The facility also accepts recyclables that are compacted and then transferred to Union Recyclers.</p> <p>Target Audience: Harding County Service Area: Hardin County Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: Hardin County Program Paid by: Hardin County Program Promotion: N/A</p>

Name	Description
	District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.h.1
London Recycle Transfer	<p>The District assisted the City of London with implementing a new drop-off site in 2007. The purpose of the site was to create an incentive for the City to implement a curbside recycling program. With no recycling facilities close to London, the creation of this facility made it convenient for London to accumulate recyclable materials at the site to be transported to a recycle center in the region. The District currently transports the recyclables from the London facility and delivers them to Union Recyclers for processing.</p> <p>Target Audience: London Service Area: London Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: London Program Paid by: London and District Program Promotion: N/A District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.h.1</p>
MRF Account	<p>The District created a separate MRF Account (within the District’s general fund) to track revenue generated from a generation fee increase that was implemented in 2010. The generation fee revenue split to the MRF Account includes \$1.00/ton out of the \$5.00/ton generation fee to be utilized for in-district recycling facility capital improvements and other special projects. The revenue (\$1.00/ton) generated approximately \$300,000 annually (through 2020) and has been used to implement the initiatives listed above to date. With the implementation of the new contract fee through designation, the revenue now generates approximately \$600,000 annually (\$2.00/ton out of the \$6.00/ton contract fee). A portion of the MRF funding is utilized to pay-off the Union Recyclers loan in addition to the other activities listed above.</p> <p>Target Audience: All District Owned MRFs Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District and Shelby County Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 2.b.1</p>

C. Waste Reduction and Recycling Rates

1. Residential/Commercial Recycling in the District

Waste reduction and recycling in the residential/commercial sector is expected to remain stable during the first six years of the planning period based upon the tons collected (see following table).

Residential/Commercial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Residential/ Commercial WRR ¹
2024	74,165	23.09%
2025	74,185	22.98%
2026	74,226	22.87%
2027	74,279	22.76%
2028	74,331	22.66%
2029	74,384	22.55%

¹ "WRR" means waste reduction and recycling rate.

2. Industrial Recycling in the District

The District is not tracking or projecting industrial recycling for the Plan Update per changes in the State Plan requirements.

3. Curbside and Drop-Off Recycling Inventory

The following tables list the existing curbside and drop-off recycling programs in the District.

Curbside Recycling Services

ID#	Community Served	Service Provider	Ongoing Service
SC1	Choctaw Lake	Contract between Community and Rumpke	Yes
NSC1	Bluffton Village	Contract between Village and Rumpke	Yes
NSC2	Delphos City	Contract between City and Rumpke	Yes
NSC3	Elida Village	Contract between Village and Rumpke	Yes

ID#	Community Served	Service Provider	Ongoing Service
NSC4	Lima City	Contract between City and Rumpke	Yes
NSC5	Spencerville Village	Contract between Village and Rumpke	Yes
NSC6	Urbana City	Contract between City and Rumpke	Yes
NSC7	Ada Village	Contract between Village and Rumpke	Yes
NSC8	Forest Village	Contract between Village and Republic	Yes
NSC9	Kenton City	Contract between City and Republic	Yes
NSC10	London City	City collects.	Yes
NSC11	Plain City Village	Contract between Village and Local Waste	Yes
NSC12	West Jefferson Village	Contract between Village and Waste Management	Yes
NSC13	Anna Village	Contract between County and Republic	Yes
NSC14	Botkins Village	Contract between County and Republic	Yes
NSC15	Fort Loramie Village	Contract between County and Republic	Yes
NSC16	Jackson Center Village	Contract between County and Republic	Yes
NSC17	Kettersville Village	Contract between County and Republic	Yes
NSC18	Russia Village	Contract between County and Republic	Yes
NSC19	Sidney City	Contract between County and Republic	Yes
NSC20	Marysville City	Contract between City and Republic	Yes

Drop-Off Recycling Services

ID#	Name of Drop-Off	Service Provider	Ongoing Service
FT-U1	Allen County Recyclers	District	Yes
FT-U2	Ford Motor Company	District	No
FT-U3	Cenovus Refining (Formerly	District	Yes

ID#	Name of Drop-Off	Service Provider	Ongoing Service
	Husky (Premcor))		
FT-U4	American Township - Neighborhood Relief Thrift Store	District	Yes
FT-U5	Shawnee Township - Waste Management of NW Ohio	District	Yes
FT-U6	Urbana Township	District	Yes
FT-U7	Kenton	District	Yes
FT-U8	Sidney	Republic	Yes
FT-U9	Marysville	District	Yes
PT-U1	American Township Mobile Drop-off	District	Yes
PT-U2	Bath Township Mobile Drop-off	District	Yes
PT-U3	Delphos City - Marion Township	District	Yes
PT-U4	Delphos City - Saint John High School	District	Yes
PT-U5	London	District and City	Yes
PT-U6	Jefferson Township Mobile Drop-off	District	Yes
PT-U7	Plain City - Jerome Township Mobile Drop-off	District	Yes
PT-U8	Paris Township	District	Yes
FT-R1	Perry Township	District	Yes
FT-R2	Mt. Victory Village - Hale Township Mobile Drop-off	District	Yes
FT-R3	Choctaw Lake - Somerford Township	District	Yes
FT-R4	Mt. Sterling Village - Pleasant Township	District	Yes
FT-R5	Fort Loramie Village - McLean Township	District	Yes
FT-R6	Houston Village - Loramie Township	District	Yes
FT-R7	Jackson Center Village - Jackson Township	District	Yes
FT-R8	McCartyville Village - VanBuren Township	District	Yes
FT-R9	Richwood Village - Claibourne Township	District	Yes
PT-R1	Cairo Village - Monroe Township Mobile Drop-off	District	Yes
PT-R2	Gomer - Sugar Creek Township	District	Yes
PT-R3	Harrod Village - Auglaize Township Mobile Drop-off	District	Yes

ID#	Name of Drop-Off	Service Provider	Ongoing Service
PT-R4	Lafayette Village - Jackson Township Mobile Drop-off	District	Yes
PT-R5	Spencerville - Amanda Township Mobile drop-off	District	No
PT-R6	Christiansburg Village - Jackson Township Mobile Drop-off	District	Yes
PT-R7	Mad River Township Mobile Drop-off	District	Yes
PT-R8	Mechanicsburg - Goshen Township Mobile Drop-off	District	Yes
PT-R9	North Lewisburg Village - Rush Township Mobile Drop-off	District	Yes
PT-R10	Rosewood Village - Adams Township Mobile Drop-off	District	Yes
PT-R11	St. Paris Township/Johnson Township Mobile Drop-off	District	Yes
PT-R12	Urbana - Salem Township Mobile Drop-off	District	Yes
PT-R13	Wayne Township Mobile Drop-off	District	Yes
PT-R14	Dunkirk Village - Blanchard Township Mobile Drop-off	District	Yes
PT-R15	Kenton - Cessna Township	District	Yes
PT-R16	Mt. Victory - Dudley Township	District	Yes
PT-R17	Amity Village - Canaan Township	District	Yes
PT-R18	Lafayette - Deercreek Township	District	Yes
PT-R19	Newport Village - Paint Township	Contract between Gale's and Republic.	Yes
PT-R20	Oak Run Township	District	Yes
PT-R21	Plain City Village	District	Yes
PT-R22	Plumwood Village - Monroe Township	District	Yes
PT-R23	Anna Village - Dinsmore Township	District	Yes
PT-R24	Kettlersville Village - Van Buren Township	Contract between City and brokers	Yes
PT-R25	Swanders Village - Franklin Township	District	Yes
PT-R26	Allen Township	District	Yes
PT-R27	Magnetic Springs Village - Leesburg Township	District	Yes

ID#	Name of Drop-Off	Service Provider	Ongoing Service
PT-R28	Milford Center Village - Union Township Mobile Drop-off	District	Yes
PT-R29	Raymond Village - Liberty Township Mobile Drop-off	Contract between District and Kimble	Yes
PT-R30	Unionville Center - Darby Township Mobile Drop-off	Contract between District and Kimble	Yes
PT-R31	York Center - York Township Mobile Drop-off	District	Yes

CHAPTER 6. Budget

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the SWMD will obtain money to pay for operating the SWMD 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 be made in accordance with the 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 and District budget policies are provided in Appendix O.

A. Overview of the District's Budget

During the 2019 reference year, the District's overall revenue was \$1.8 million. In the first year of the planning period (2024), revenue is projected to be \$1.8 million. Revenue is projected to remain constant annually with a projected revenue of \$1.8 to \$1.9 million. Current revenue is generated through contract fees through designation, interest, grants and miscellaneous revenue.

Projected expenditures were developed based on the programmatic needs identified in Appendix H, I, and L. During the first six years of the planning period, annual expenditures range from approximately \$1.9 to \$1.8 million. Based on projections, the District will have ample revenue to finance the implementation of the programs and initiatives described throughout this Plan Update. The District is projected to begin the planning period in 2024 with a carryover balance of approximately \$2.3 million and end the planning period with a carryover balance of approximately \$2.9 million.

B. Revenue

Overview of How Solid Waste Management Districts Earn Revenue

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

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

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

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

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

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

Generation Fees (see Ohio Revised Code Section 3734.573)

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

Rates and Charges (see Ohio Revised Code Section 343.08)

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

Contracts (see Ohio Revised Code Sections 343.02 and 343.03)

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

Other Sources of Revenue

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

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

The following summarizes the actual funding sources for the District:

1. Disposal Fees

The District does not have disposal fees.

2. Generation Fees

The District did receive revenue from generation fees in 2019 through 2020 and partially in 2021. The District transitioned to a contract fee through designation that will be discussed in the next section.

3. Contract Fees

The District implemented designation which includes a contract fee of \$6.00 per ton that is collected at each designated facility in early 2021. The list of designated facilities and the process of designation is included in Appendix P.

4. Rates & Charges (Improved Parcels)

The District does not receive revenue from rates or charges on improved parcels in the District through the ORC 343.08 process for rates and charges.

The District reserves the right to implement a charge on improved parcels for which solid waste service are provided at any point in the planning period if deemed appropriate by the Board of Directors. If any implementation of projects requires or is deemed necessary to be funded by an ORC 343 rate or charge, the District will determine if the change in funding or addition of the funding warrants a change in the budget. If the plan budget changes to the extent that it must be ratified, the District will amend the budget in accordance with ORC Section 3734.56(E).

The District does receive revenue from rates charged in the HHW program through the ORC 343.08 process for rates and charges. The District's rates for HHW user fees are \$1.00 per pound for acceptable HHW materials and \$5.00 per visit for acceptable mercury containing devices. The revenue partially offsets the expenses of the program.

5. Other Sources of Revenue

Other sources of revenue include:

a. Interest

Interest income from the District's fund balance totaled \$50,077, \$17,542 and \$1,380 in 2019, 2020 and 2021. For 2022 through 2038, the District is projecting an annual interest revenue of \$15,000.

b. Grants

The District received a variety of grants from Ohio EPA from 2019-2021 (\$192,000, \$155,000 and \$300,000). Ohio EPA's grants are competitive and not guaranteed; therefore, the District is not projecting grant revenue during the planning period.

c. Miscellaneous

The District received a variety of miscellaneous income from 2019-2021 (\$95,235, \$24,699 and \$163,941). Miscellaneous revenue can be from HHW fees, transfers, reimbursements and other miscellaneous revenue. For 2022 through 2038, the District is projecting an annual miscellaneous revenue of \$30,000.

6. Summary of Revenue

The following table presents the District's total revenue by source for the 2019 reference year and the first six years of the Plan (2024 to 2029).

Table 6-1. Summary of Revenue

Year	Generation Fees	Contract Fees	Interest	Grants	Misc	Total Revenue
Reference Year						
2019	\$1,502,472	\$0	\$50,077	\$192,000	\$95,235	\$1,839,784
Planning Period						
2024	\$0	\$1,818,000	\$15,000	\$0	\$30,000	\$1,863,000
2025	\$0	\$1,836,180	\$15,000	\$0	\$30,000	\$1,881,180
2026	\$0	\$1,854,542	\$15,000	\$0	\$30,000	\$1,899,542
2027	\$0	\$1,873,087	\$15,000	\$0	\$30,000	\$1,918,087
2028	\$0	\$1,891,818	\$15,000	\$0	\$30,000	\$1,936,818
2029	\$0	\$1,910,736	\$15,000	\$0	\$30,000	\$1,955,736

Source(s) of information: Plan Tables O-1 and O-5.

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 anti-littering laws and ordinances.
8. Financial assistance to approved boards of health for operator certification training.
9. Financial assistance to municipal corporations and townships for the added costs of hosting a solid waste facility that is not a landfill.

10. Financial assistance to communities adjacent to and affected by a publicly-owned landfill when those communities are not located within the SWMD or do not host the landfill.

In most cases, 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 drop-off 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 2019 reference year and for the first six years of the planning period (2024 to 2026) broken into specific expense categories.

Table 6-2. Summary of Expenses

Expense Category	Year						
	Reference 2019	Planning Period					
		2024	2025	2026	2027	2028	2029
Plan Monitoring/Prep.	\$ 253,297	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000
District Administration	\$ 454,490	\$ 580,374	\$ 588,649	\$ 567,172	\$ 575,951	\$ 584,994	\$ 594,307
Facility Operation	\$ 184,503	\$ 436,519	\$ 436,519	\$ 436,519	\$ 436,519	\$ 436,519	\$ 436,519
Recycling Collection	\$ 169,700	\$ 260,000	\$ 260,000	\$ 260,000	\$ 260,000	\$ 260,000	\$ 260,000
Special Collections	\$ 100,801	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000
Education/Awareness	\$ 150,615	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000
Recycling Market Development	\$ 166,130	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000
Emergency Debris Management	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Loan Payment	\$ -	\$ 163,481	\$ 163,481	\$ 163,481	\$ 163,481	\$ 163,481	\$ 163,481
Health Dept. Enforcement	\$ 18,013	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Total Expenses	\$1,497,549	\$1,890,374	\$1,898,649	\$1,877,172	\$1,885,951	\$1,894,994	\$1,904,307

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

Expense categories in **Table 6-2** include the following:

Plan Preparation – Budget includes estimated expenses related to retaining a consultant for assistance with plan preparation for each 5-year update that will occur during the planning period. Plan preparation time periods in this budget include 2021-2023, 2027-2029 and 2033-2035.

Plan Monitoring – Budget includes estimated expenses related to District consultant and legal counsel for plan implementation and plan monitoring for the current solid waste plan being implemented. This line item also includes ADR related expenses for surveying, mail costs and consulting.

Personnel – Budget includes expenditures for District employee salaries. Expenditures are projected to increase 3.0% annually based on historic trends and District practices. This line item also included plan implementation tasks, technical assistance and other activities as indicated in Appendix I implementation schedule.

Office Overhead – Budget includes expenditures for OPERS, workers' compensation, Medicare, life insurance, unemployment insurance, and health insurance. This line item also includes the cost of utilities and office rent. Expenditures are projected to remain constant annually.

Other – Budget includes expenditures for equipment, travel, supplies, sundry, general plan implementation and vehicle purchases. The budget remains constant, except for when a new vehicle is purchased (2023-2025), throughout the planning period.

MRF/Recycling Center – Expenses related to the MRF fund for the support of the District MRFs. For the period 2019-2021, the District expended higher than normal amounts that were primarily related to the expansion project at Union Recyclers. This project was completed in 2021. For 2022 and beyond, expenses are projected to remain constant throughout the planning period at \$436,519. The District has historically budgeted (with exception of 2019-2021) a fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Drop-off – Expenses related to supporting the District Recycling Access for drop-offs. The District budget for the planning period remains constant each year at \$260,000. This expenditure is a part of the Recycling Assistance-Access Financial Assistance Program. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period. This line item also includes any one time planned expenses as indicated in Appendix I such new signage.

Tire Collection – The cost of operating the program and contractor costs from the County Engineer and Townships. (\$5,000/year). Costs are projected to remain constant each year from 2023 to 2038. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

HHW Collection –The cost of operating the District’s county-wide household hazardous waste collection and disposal program (\$60,000/year) starting in 2022. Costs are projected to remain constant each year from 2022 to 2038. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Electronics Collection – The cost of operating the program and contractor costs (\$15,000/year) starting in 2022. Costs are projected to remain constant each year from 2022 to 2038. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Other Collection Drives – The cost of the community clean-up grants offered each year of the planning period (\$30,000/year). Costs are projected to remain constant throughout the planning period. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Yard Waste/Other Organics

The cost to provide funding for leaf land application and other composting projects (\$5,000/year). Costs are projected to remain constant throughout the planning period. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Education Staff – Includes consulting costs for providing targeted education and outreach activities, web site management and other education/outreach tasks. This expense line item also includes partially funding the new initiatives discussed in Appendix I. Video production will be done in-house which will not incur any expenses.

Then new web site was developed in 2021 under this budget line item. Ongoing improvements and updates since the inception of the new web site are covered by this budget line item.

Costs associated to education and awareness programs are set at a flat \$50,000/year rate. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Advertisement/Promotion – Includes consulting costs and third-party costs for targeted advertisement and promotion of District programs and contamination reduction direct engagement activities. The cost for any targeted direct engagement seasonal staffing (contamination reduction initiatives) costs as articulated in Appendix I would be accounted for in this line item. Costs associated to advertisement and promotion are set at a flat \$30,000/year rate. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Other – Includes education and awareness materials and supplies. Costs associated to other are set at a flat \$5,000/year rate. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

General Market Development Activities

The cost of the Recycling Financial Assistance offered each year of the planning period (\$115,000/year). The financial assistance includes:

- Recycling Assistance – Start-Up/Improvement
- Outreach and Education
- Curbside/Drop-Off Direct Engagement Activities as Needed

The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

Emergency Debris Management

This line item is a budgeted amount for the emergency fund. The District rarely expends funds under this line item. In the tear that no funds are allocated, the unexpended funds fall to the fund balance. For any given year where a request comes in that exceeds \$5,000, funding of the request would come from the fund balance. Funds could be applied for through the Disaster Debris Management grants. The cost of the Disaster Debris Grants offered each year of the planning period (\$5,000/year). Costs are projected to remain constant throughout the planning period.

2.o Loan Payment

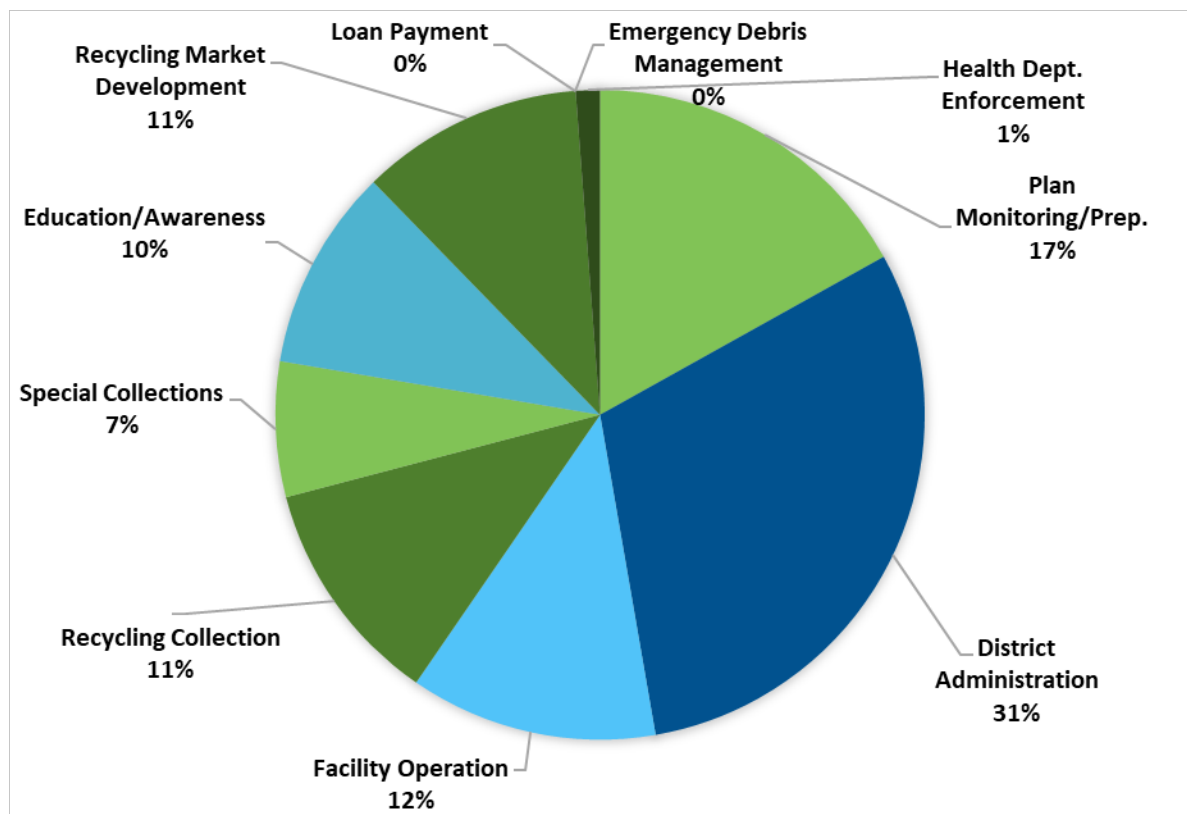
This line-item budget included the bi-annual payments to the Ohio Water Development Authority for the Union Recyclers expansion loan. The payments are fixed at \$81,740.34 in January and July each year for a total of \$163,480.68.

Health Department Enforcement

In 2019, funding was provided to health departments in the District (Champaign, Madison, Shelby and Union counties) for a total of \$20,000/year for all 4 health departments for solid waste enforcement. This amount was raised from \$18,013 to \$20,000 starting in 2022.

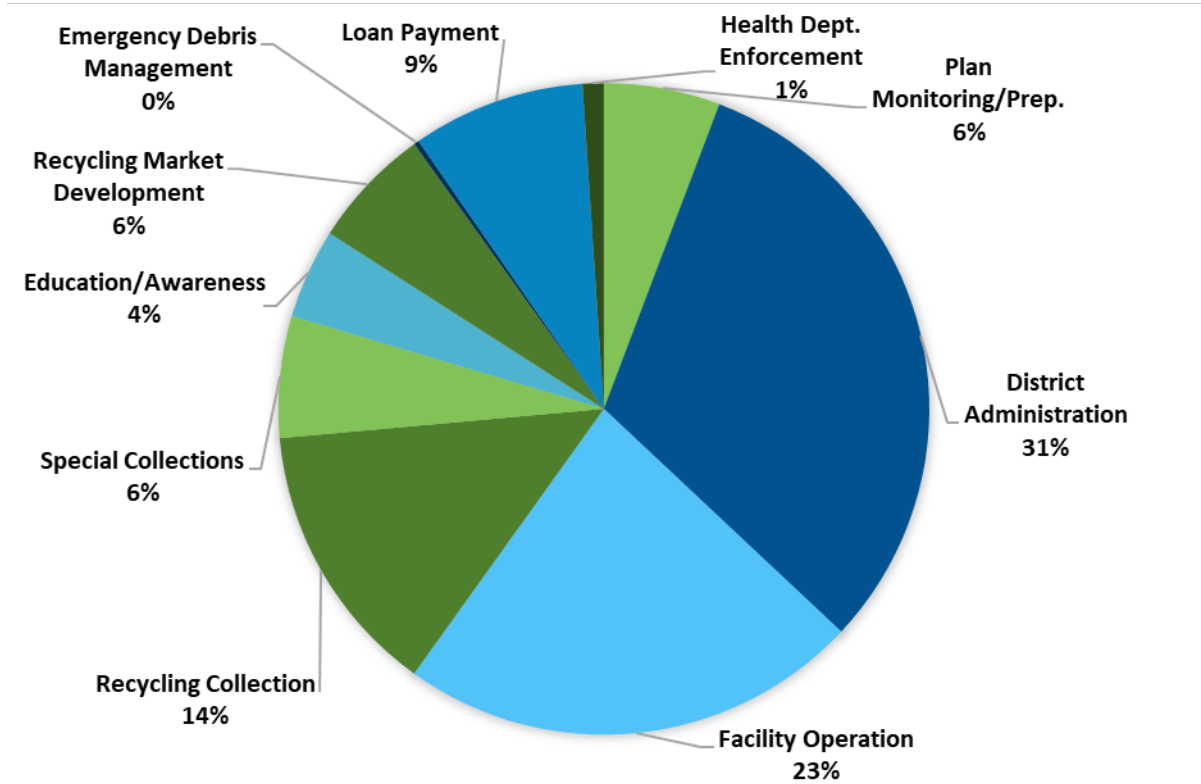
The following figure presents the distribution of expenses by category for the 2019 reference year. The top three expenditure categories include District administration (31%), Plan Monitoring/Preparation (17%) and Facility Operation (12%).

Figure 6-1. 2019 Distribution of Expenses by Category



Throughout the first six years of the planning period, the distribution of expenses among categories remains nearly the same. In 2029, the sixth year of the planning period, the top three expense categories include District Administration (31%), Facility Operation (23%) and Recycling Collection (14%).

Figure 6-2. 2029 Distribution of Expenses by Category



D. Budget Summary

Table 6-3 presents a summary of the budget for the 2019 reference year and the first six years of the planning period (2024 to 2029). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue remains consistent at 1.8 to 1.9 million; expenses fluctuate from \$1.8 to \$1.9 million annually. The District’s ending balance during the first six years of the planning period ranges from a low of \$2.5 million in 2029 to a high of \$2.8 Million in 2019. Funding should be available to operate the programs outlined throughout this Plan.

Table 6-3. Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2019	\$1,839,784	\$1,497,549	\$342,235	\$2,851,385
Planning Period				
2024	\$1,881,180	\$1,890,374	(\$9,194)	\$2,362,823
2025	\$1,899,542	\$1,898,649	\$893	\$2,363,716
2026	\$1,918,087	\$1,877,172	\$40,915	\$2,404,631
2027	\$1,936,818	\$1,885,951	\$50,867	\$2,455,497
2028	\$1,955,736	\$1,894,994	\$60,743	\$2,516,240
2029	\$1,974,844	\$1,904,307	\$70,536	\$2,586,776



APPENDIX A

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



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

A. Reference Year

The reference year for this solid waste management plan is **2019**.

B. Planning Period (first and last years)

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

C. Goal Statement

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

D. Material Change in Circumstances/Contingencies

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

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

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

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

1. Assurance of Waste Disposal Capacity

a. Reduction in Available Capacity

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

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

b. Increase in Waste Generation

Future capacity needs of the District as outlined in the *Plan Update* are based on waste generation estimates. A significant increase in solid waste generation within the District may affect capacity requirements and result in diminished capacity for handling or disposing of solid waste. A material change in circumstances may have occurred if waste generation increases, and the increase has a significant adverse impact on capacity for handling or disposing of solid waste generated within the District at facilities designated and identified in the *Plan Update*. A material change in circumstances has not occurred, however, if the private sector can secure arrangements to manage the increased waste volume at any other properly licensed and permitted solid waste management facility.

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

capacity for District solid waste and determine whether sufficient capacity is available to the District.

2. Compliance with Applicable Waste Reduction or Access Goals

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

The following are the goals of the 2020 State Solid Waste Management Plan.

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

Goal 2 – Waste reduction and recycling rates. The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector. The industrial sector goal has been eliminated.

Goal 3 – Outreach and Education (Minimum Required Programs). The SWMD shall provide the following required programs:

- A web site
- A comprehensive resource guide
- An inventory of available infrastructure
- A speaker or presenter

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

Goal 5 – Industrial Programs and Services. The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.

Goal 6 – Restricted Solid Wastes, Household Hazardous Waste (HHW) and Electronics. The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, HHW, and electronics.

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

Goal 8 – Measure Greenhouse Gas Reduction. 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 – Market Development. The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

Goal 10 – Reporting. The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD’s solid waste management plan.

Pursuant to the Ohio Revised Code, the Ohio Administrative Code and the *State Solid Waste Management Plan* (State Plan), the District has established specific goals regarding waste reduction and recycling within the District. The District will propose several strategies that will greatly reduce materials currently going to area landfills and also increase local participation rates for existing recycling programs. These strategies will be a major portion of the District’s compliance plan for Access and Participation Standards. The Board and Policy Committee will review the implementation of these strategies annually to ensure that the implementation will include an assessment of any changes in these strategies for access and recycling rates. Should a significant delay in program implementation or the discontinuance of essential programs result in the inability of the District to achieve either goal, the Board shall, based on recommendations from the Executive Director, make a determination as to whether a material change in circumstances has occurred. A material change in circumstances has not occurred, however, where the Board is able to implement new programs or modify existing programs to meet the goals approved in this *Plan Update* to meet State of Ohio requirements.

If the planned recycling facilities operated by the District that are listed in this *Plan Update* incur a significant delay in operation or

cease operations due to financial solvency or operational issues that results in the inability of the District to achieve a stated goal in this *Plan Update*, the Board shall make a determination as to whether a material change in circumstances has occurred. A material change in circumstances has not occurred, however, where the Board is able to identify and utilize other regional recycling facilities or implement new programs or modify existing programs to meet the current goals in this *Plan Update* as approved by the Director of Ohio EPA, to meet State of Ohio requirements.

Though the District is committing to achieving Goal #1 in this Plan Update, the District will strive to achieve a modified version of Goal #2, as well.

3. Financing of Plan Implementation

a. Decrease in Waste Generation and/or Waste Disposal

District obtains revenues to finance implementation of the *Plan Update* from a \$6.00 per ton contract fee through designation on the generation of solid waste within the District as authorized by the Ohio Revised Code. A significant reduction in the generation of waste within the District could result in a significant decrease in revenue and adversely affect the ability of the Board to finance implementation of the *Plan Update*. The Executive Director for the District monitors revenues and reports changes in financial condition to the Board at quarterly Board meetings. The Board will receive financial reports from the Executive Director, consider such reports, and set budget and funding priorities to implement the *Plan Update*. A material change in circumstances may have occurred where a significant reduction in revenue adversely affects the Board's ability to finance plan implementation. No material change in circumstances has occurred, however, where the Board is able to maintain programs at current funding levels through re-allocation of District funds, or through an increase in District contract fees through designation, or rates and charges as permitted by the Ohio Revised Code and the Plan.

4. Procedures Where Material Change in Circumstances has Occurred

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

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

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

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

The residential/commercial recycling total (86,278 tons) was adjusted (reduced) for this Plan Update by 1,954 tons for cardboard. The cardboard total was inadvertently reported in the ADR total (88,231 tons) when it should have been adjusted (reduced) for double counting.

The residential/commercial disposal total (238,856 tons) was adjusted (increased) for this Plan Update by 34 tons as compared to Ohio EPA data based on new disposal data made available during this Plan Update.

For the 2021 ADR, the District added 4,077 tons of field spread leaves to this Plan Update. The 2021 ADR did not include this data by mistake.

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

The break-out between plan preparation and plan implementation has been updated to more accurately reflect the distribution of District and consultant expenses for 2022 and beyond. The budget in Appendix O and Chapter 6 is the accurate distribution of these expenses vs previous quarterly fee reports.



APPENDIX B

**RECYCLING INFRASTRUCTURE
INVENTORY**

APPENDIX B. Recycling Infrastructure Inventory

A. Curbside Recycling Services and Drop-Off Recycling Locations

1. Curbside Recycling Services

“Inventory of Curbside Recycling Services Available in the Reference Year”, presents data for 21 communities that operated curbside recycling programs in 2019. All of these curbside programs are volume-based, using either carts or limited use of cans. (See **Table B-1.**)

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

ID #	Name of Curbside Service	Service Provider	County	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Weight Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NSC1	Bluffton Village	X	Allen	Contract between Village and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC, WG	Single stream, DNR	N	302	Y
NSC2	Delphos City	X	Allen	Contract between City and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC, WG	Single stream, DNR	N	411	Y
NSC3	Elida Village	X	Allen	Contract between Village and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	145	Y
NSC4	Lima City	X	Allen	Contract between City and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	1,278	Y
NSC5	Spencerville Village	X	Allen	Contract between Village and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	90	Y
NSC6	Urbana City	X	Champaign	Contract between City and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC, AS	Single stream, DNR	N	695	Y
NSC7	Ada Village	X	Hardin	Contract between Village and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	202	Y
NSC8	Forest Village	X	Hardin	Contract between Village and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	36	Y
NSC9	Kenton City	X	Hardin	Contract between City and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	492	Y

ID #	Name of Curbside Service	Service Provider	County	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Weight Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NSC10	London City	X	Madison	City collects.	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	542	Y
NSC11	Plain City	X	Madison	Contract between Village and Local Waste	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	199	Y
NSC12	West Jefferson	X	Madison	Contract between Village and Waste Management	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	265	Y
NSC13	Anna Village	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	78	Y
NSC14	Botkins Village	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	52	Y
NSC15	Fort Loramie Village	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	85	Y
NSC16	Jackson Center Village	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	71	Y
NSC17	Kettlersville Village	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	15	Y
NSC18	Russia Village	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	56	Y
NSC19	Sidney City	X	Shelby	Contract between County and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	633	Y
NSC20	Marysville City	X	Union	Contract between City and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	1,271	Y
Totals									6,918	

Materials Collected: AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, WG = White Goods, AS = aseptic containers

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

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Weight Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
SC1	Choctaw Lake	Madison	Contract between Community and Rumpke	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	125	Y

Materials Collected: AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, WG = White Goods, AS = aseptic containers

Tonnage reported in Table B-1a and B-1b reflects the most accurate information available, which was reported by cities, villages, townships, and haulers.

Approximately 7,043 tons of materials were recycled between 20 non-subscription and 1 subscription curbside recycling programs in 2019.

The following section summarizes the curbside recycling activities in each of the District’s counties. Details on each program can also be found on the District’s web site at www.ncowaste.org.

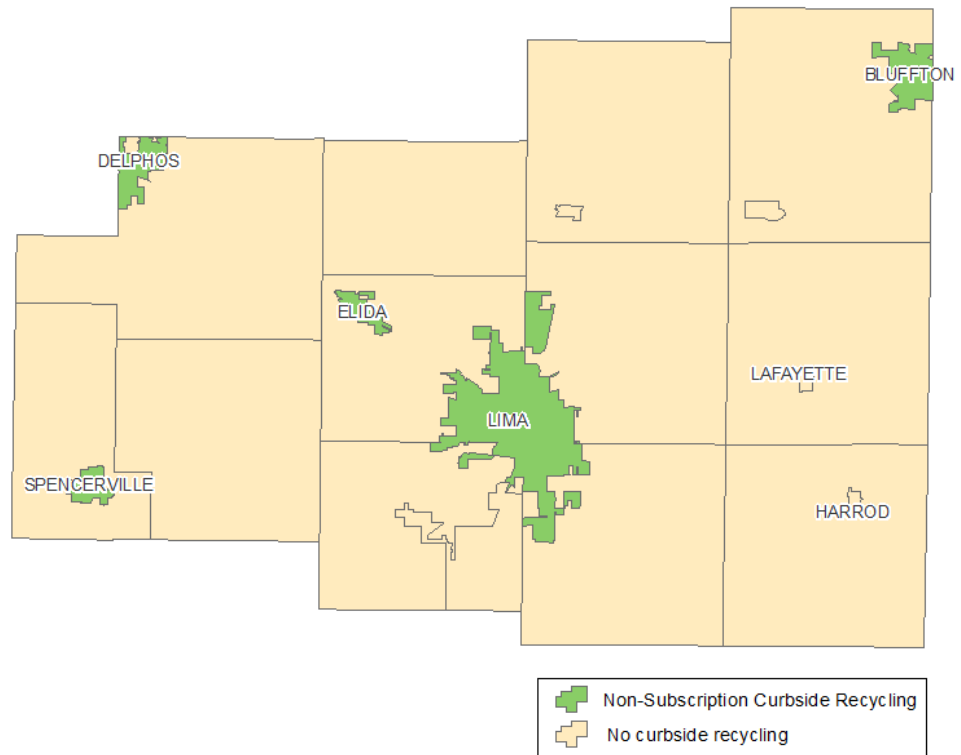
Allen County

In Allen County, the following five political subdivisions provided residents with access to non-subscription curbside recycling:

- Bluffton
- Delphos
- Elida
- Lima
- Spencerville

These five programs collected a total of 2,226 tons of materials in 2019. The following figure presents the location of the curbside recycling programs in Allen County:

Allen County Curbside Recycling Programs

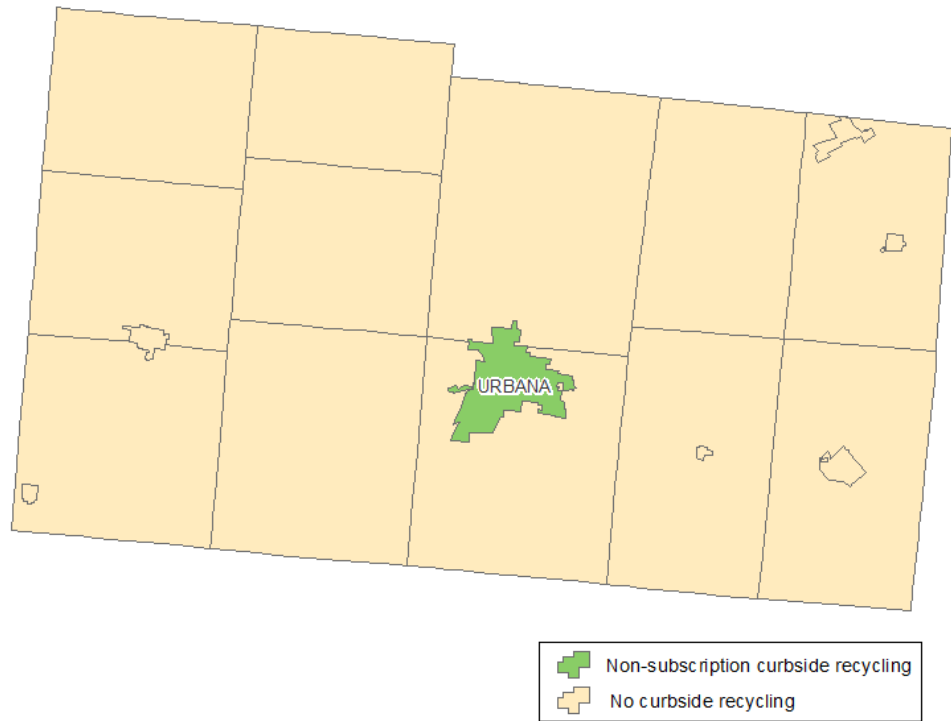


Champaign County

One non-subscription curbside recycling program operated in Champaign County in the City of Urbana. In 2019, the program collected 695 tons of materials.

The following figure presents the political subdivision where residents have access to curbside recycling in Champaign County:

Champaign County Curbside Recycling Programs



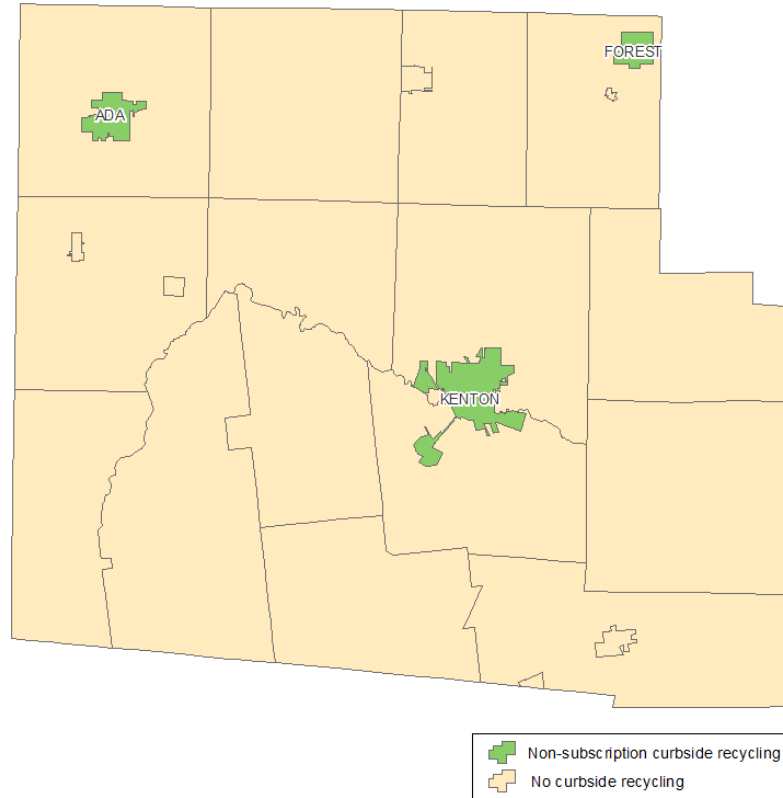
Hardin County

In Hardin County, the following three political subdivisions provided residents with access to non-subscription curbside recycling:

- City of Kenton
- Village of Forest
- Village of Ada

These three programs collected a total of 730 tons of materials in 2019. The following figure presents the location of the curbside recycling programs in Hardin County:

Hardin County Curbside Recycling Programs



Madison County

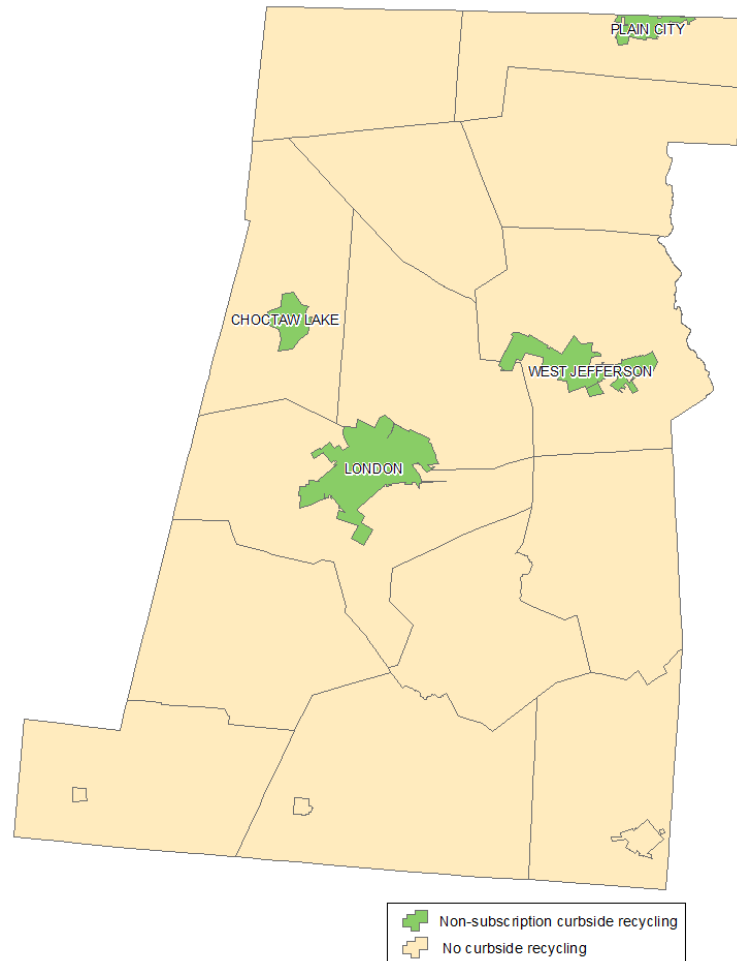
The following three Madison County political subdivisions and one Census Designated Place (CDP) provided residents with access to non-subscription and subscription curbside recycling:

- City of London
- Village of Plain City
- Village of West Jefferson
- Choctaw Lake (CDP)(subscription)

One of Madison County’s political subdivisions, the City of London, operated a PAYT disposal system in conjunction with the non-subscription curbside recycling program.

Madison County’s curbside recycling programs collected a total of 1,130 tons of materials in 2019. The following figure presents the location of the curbside recycling programs in Madison County:

Madison County Curbside Recycling Programs



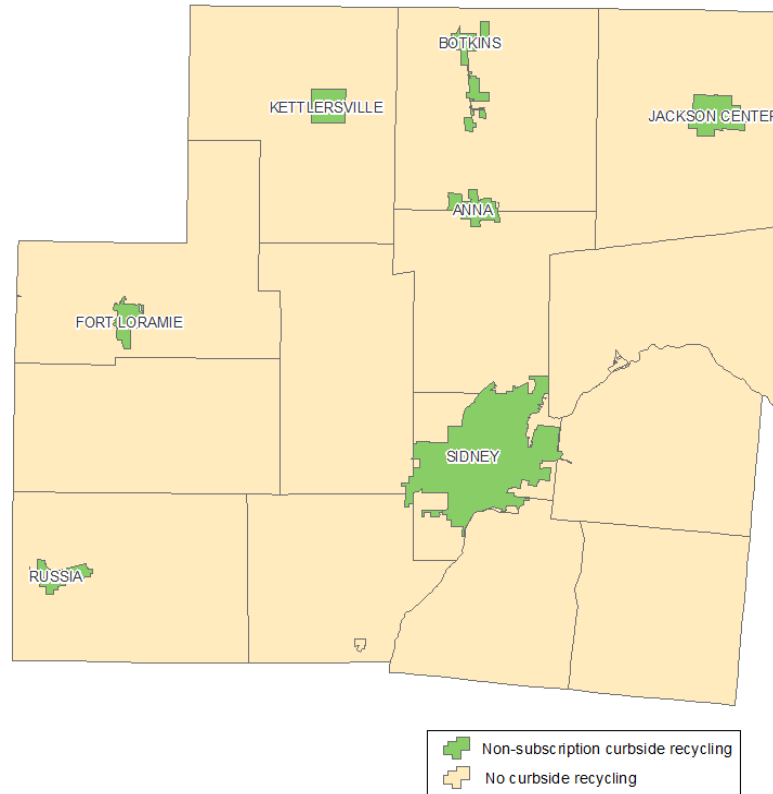
Shelby County

Shelby County had a total of seven political subdivisions in Shelby County that had curbside recycling. The following political subdivisions provided residents with access to non-subscription curbside recycling:

- Village of Anna
- Village of Botkins
- Village of Fort Loramie
- Village of Jackson Center Village
- Village of Kettlersville
- Village of Russia
- City of Sidney

The curbside recycling programs collected a total of 991 tons of materials. In 2019 the following figure presents the location of the curbside recycling programs in Shelby County:

Shelby County Curbside Recycling Programs

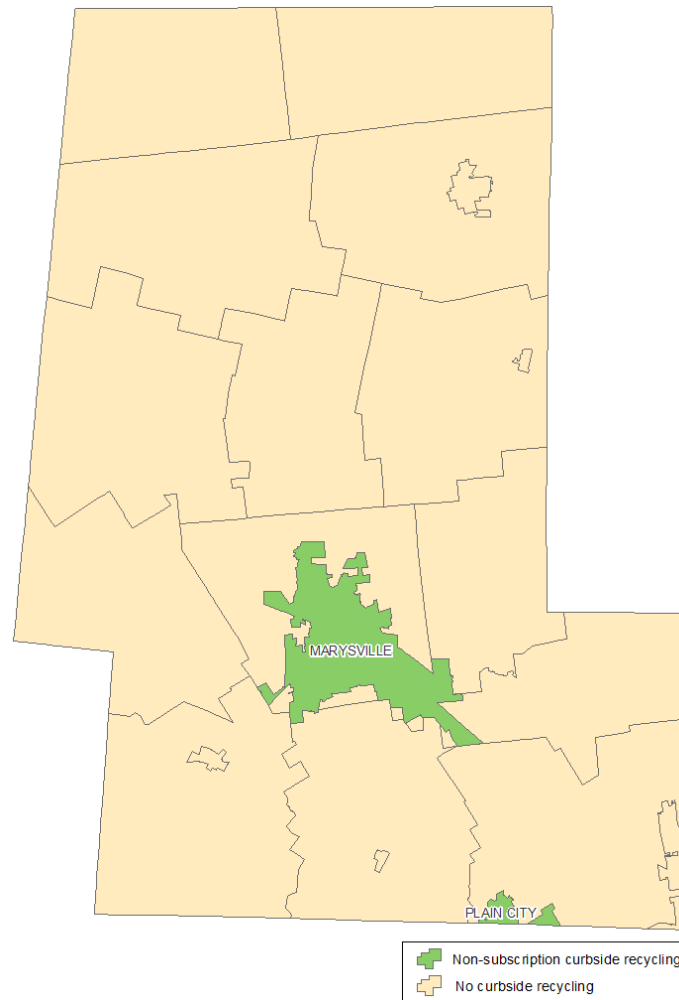


Union County

The City of Marysville in Union County had non-subscription curbside recycling. A portion of the Village of Plain City in Union County also had non-subscription curbside. The City of Marysville operated the recycling program.

Marysville's curbside recycling program collected a total of 1,271 tons of materials in 2019. The following figure presents the location of the curbside recycling programs in Union County:

Union County Curbside Recycling Programs



Curbside Expansion Efforts

The District will continue to provide assistance to communities that are interested in implementing or expanding a non-subscription curbside recycling program.

In 2016, the District assisted the 6 villages in Shelby County with a new curbside trash and recycling program. The District negotiated a new contract with Republic Services.

In 2018, the District assisted the Village of Richwood and Milford Center with a request for proposal for curbside services. Neither one of these Villages ultimately developed a new curbside trash and recycling program.

Curbside Re-Start Program

There were no curbside cancellations during 2019. For any planned or existing curbside recycling program that ceases to operate during the planning period, the District will implement the following procedure:

- Meet with the operator of the curbside program to determine cause of program elimination.
- Offer any assistance permitted under this *Plan Update* to re-start the program.
- If the program cannot be re-started, the District will evaluate the options available including replacing the program with full time or part time recycling drop-off centers to ensure no loss in recycling access is realized.
- If the elimination of a curbside recycling program does not cause the county to fall below the 80% recycling access goal requirement, the District reserves the right to not implement any substitute program.

Curbside Recycling Creation

There were no new curbside programs that started in 2019. The District tracks all current contracts for single hauler and consortiums to understand what communities have curbside programs. Some communities have a contract for curbside trash only. The District has always promoted curbside recycling as an important strategy that communities should consider. The District's historical assistance for communities that are considering either adding recycling to their trash contract or are interested in contracting for solid waste services that includes recycling:

- Meet with the community to discuss the option of contracts and solid waste services at the curb.
- Survey residents if need on their willingness to participate in a new program (Kenton in 2019).
- If a community decides to move forward with a program, provide assistance with RFP and contract development (Richwood and Milford Center in 2018).
- Offer any assistance permitted under this *Plan Update* to assist with the program.

PAYT Promotion Efforts

There were no new pay-as-you-throw (PAYT) or volume-based programs implemented in 2019. In 2019, of the 21 curbside recycling programs in the District, 10 were PAYT.

2. Drop-off Recycling Locations

Fifty-seven drop-off recycling locations are available to residents of the District. These sites accepted a total of 3,367.7 tons in 2019. **Tables B-2a-d** lists each of the drop-offs.

Table B-2a: Inventory of Full-Time, Urban Drop-off Sites Available in the 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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-U1	Allen County Recyclers	District	Allen	District	This drop-off site was operational from M-F 8:00AM - 4:30PM and Saturday 8:00AM - 12:00PM.	AC, SC, GL, PL, MxP, OCC, SM	Y	2,200	Y
FT-U2	Ford Motor Company	District	Allen	District	This site is open 24 hours per day, 7 days per week	AC, SC, GL, PL, MxP, OCC	Y	78.34	N
FT-U3	Husky (Premcor) Refining	District	Allen	District	This site is open 24 hours per day, 7 days per week	AC, SC, GL, PL, MxP, OCC, AF	Y	28.25	Y
FT-U4	American Township - Neighborhood Relief Thrift Store	District	Allen	District	This drop-off site was operational from M-F 10:00AM - 8:00PM and Saturday 10:00AM - 6:00PM.	MxP, OCC, SM, BK	Y	N/A	Y
FT-U5	Shawnee Township - Waste Management of NW Ohio	District	Allen	District	This drop-off site was operational from M-F 8:00AM - 4:00PM and Saturday 8:00AM - 12:00PM.	AC, SC, GL, PL, MxP, OCC, SM	Y	37.06	Y
FT-U6	Urbana Township	District	Champaign	District	This drop-off site was operational from dawn to dusk.	AC, SC, GL, PL, MxP, OCC	Y	84.96	Y
FT-U7	Kenton	District	Hardin	District	This drop-off site was operational from M-F 8:30AM - 4:00PM and Saturday 8:30AM - 11:50AM.	AC, SC, GL, PL, MxP, OCC	Y	154.21	Y
FT-U8	Sidney	Republic	Shelby	Republic	This drop-off site was operational from Monday through Friday 8:00 AM to 4:00 PM and on Saturdays 8:00AM to 12:00PM.	AC, SC, GL, PL, MxP, OCC, SM	Y	0	Y
FT-U9	Marysville	District	Union	District	This drop-off site was operational 24/7.	AC, SC, GL, PL, MxP, OCC	Y	334.34	Y

Materials Collected: AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, SM = Scrap Metals, AF = Aluminum Foil, BK = Books

Table B-2b: Inventory of Part-Time, Urban Drop-off Sites Available in the 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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PT-U1	American Township Mobile Drop-off	District	Allen	District	This drop-off site was operational every 1st Thursday of Every Month - 2:30PM to 5:00PM.	AC, SC, GL, PL, MxP, OCC, AF	Y	20.54	Y
PT-U2	Bath Township Mobile Drop-off	District	Allen	District	This drop-off site was operational every 3rd Thursday of Every Month - 2:30PM to 5:00PM	AC, SC, GL, PL, MxP, OCC, AF	Y	14.42	Y
PT-U3	Delphos City - Marion Township	District	Allen	District	This drop-off site was operational every 4th Saturday of Every Month - 9:00AM to 11:30AM	AC, SC, GL, PL, MxP, OCC, AF	Y	28.46	Y
PT-U4	Delphos City - Saint John High School	District	Allen	District	This drop-off site was operational every other Saturday of Every Month - 9:00 AM to 12:00 pm	AC, SC, GL, PL, MxP, OCC, SM	Y	17	Y
PT-U5	London	District	Madison	District	This drop-off site was operational on the 4th Monday of every month from 12:30PM to 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	0.27097	Y
PT-U6	Jefferson Township Mobile Drop-off	District	Madison	District	This drop-off site was operational on the 1st Thursday of every month 9:00AM to 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	1.7565	Y
PT-U7	Plain City - Jerome Township Mobile Drop-off	District	Union	District	This drop-off site was operational on the first Monday of every month from 8:30AM to 12:00PM and the second Saturday of every month from 10:00AM - 12:30PM.	AC, SC, GL, PL, MxP, OCC	Y	7.59	Y
PT-U8	Paris Township	District	Union	District	N/A	N/A	Y	N/A	Y
Total								90.04	

Materials Collected: AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, SM = Scrap Metals, AF = Aluminum Foil, BK = Books

Table B-2c: Inventory of Full-Time, Rural Drop-off Sites Available in the 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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-R1	Perry Township	District	Allen	District	This drop-off site was operational from dawn to dusk.	AC, SC, GL, PL, MxP, OCC, SM	Y	36.33	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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-R2	Mt. Victory Village - Hale Township Mobile Drop-off	District	Hardin	District	This drop-off site was operational	AC, SC, GL, PL, MxP, OCC	Y	20.82	Y
FT-R3	Choctaw Lake - Somerford Township	District	Madison	District	N/A	N/A	Y	N/A	Y
FT-R4	Mt. Sterling Village - Pleasant Township	District	Madison	District	This drop-off site was operational every 4th Monday of the month from 9:00AM to 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	0.9045	Y
FT-R5	Fort Loramie Village - McLean Township	District	Shelby	District	This drop-off site was operational from dawn to dusk.	AC, SC, GL, PL, MxP, OCC, SM	Y	161.98	Y
FT-R6	Houston Village - Loramie Township	District	Shelby	District	This drop-off site was operational from dawn to dusk.	AC, SC, GL, PL, MxP, OCC, SM	Y	40.60	Y
FT-R7	Jackson Center Village - Jackson Township	District	Shelby	District	This drop-off site was operational from dawn to dusk.	AC, SC, GL, PL, MxP, OCC, SM	Y	92.73	Y
FT-R8	McCartyville Village - VanBuren Township	District	Shelby	District	This drop-off site was operational from dawn to dusk.	AC, SC, GL, PL, MxP, OCC, SM	Y	77.09	Y
FT-R9	Richwood Village - Claibourne Township	District	Union	District	This drop-off site was operational 24/7.	AC, SC, GL, PL, MxP, OCC	Y	131.5	Y

Materials Collected: AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, SM = Scrap Metals, AF = Aluminum Foil, BK = Books

Table B-2d: Inventory of Part-Time, Rural Drop-off Sites Available in the 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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PT-R1	Cairo Village - Monroe Township Mobile Drop-off	District	Allen	District	This drop-off site was operational every 2nd Thursday of Every Month - 2:30PM to 5:00PM.	AC, SC, GL, PL, MxP, OCC, AF	Y	6.45	Y
PT-R2	Gomer - Sugar Creek Township	District	Allen	District	This drop-off site was operational every 3rd Saturday from 9:00AM to 12:00PM.	AC, SC, GL, PL, MxP, OCC	Y	22	Y
PT-R3	Harrod Village - Auglaize Township Mobile Drop-off	District	Allen	District	This drop-off site was operational every 3rd Tuesday of Every Month -	AC, SC, GL, PL, MxP, OCC, AF	Y	7.66	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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
					12:00PM to 2:30PM.				
PT-R4	Lafayette Village - Jackson Township Mobile Drop-off	District	Allen	District	This drop-off site was operational every 3rd Tuesday of Every Month - 3:00PM to 5:30PM.	AC, SC, GL, PL, MxP, OCC, AF	Y	10.82	Y
PT-R5	Spencerville - Amanda Township Mobile drop-off	District	Allen	District	This drop-off site was operational every 4th Saturday of Every Month - 9:00AM to 12:00PM.	AC, SC, GL, PL, MxP, OCC, AF	Y	43.88	N
PT-R6	Christiansburg Village - Jackson Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational the 4th Wednesday of every month 12:00PM to 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	5.668	Y
PT-R7	Mad River Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 1st Wednesday of every month 12:30PM to 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	3.3635	Y
PT-R8	Mechanicsburg - Goshen Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 3rd Wednesday of the month from 12:00PM to 3:00PM .	AC, SC, GL, PL, MxP, OCC	Y	5.3345	Y
PT-R9	North Lewisburg Village - Rush Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 3rd Wednesday of every month 8:30AM to 11:00AM.	AC, SC, GL, PL, MxP, OCC	Y	3.4755	Y
PT-R10	Rosewood Village - Adams Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 4th Wednesday of every month 8:30AM to 11:00AM.	AC, SC, GL, PL, MxP, OCC	Y	2.152	Y
PT-R11	St. Paris Township/Johnson Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 1st Wednesday of every month 9:00AM to 12:00PM.	AC, SC, GL, PL, MxP, OCC	Y	7.9065	Y
PT-R12	Urbana - Salem Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 1st Tuesday of every month at the from 9:00AM to 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	1.645	Y
PT-R13	Wayne Township Mobile Drop-off	District	Champaign	District	This drop-off site was operational on the 1st Tuesday of every month 12:30PM to 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	2.055	Y
PT-R14	Dunkirk Village - Blanchard Township Mobile Drop-off	District	Hardin	District	This drop-off site was operational every 2nd Tuesday	AC, SC, GL, PL, MxP, OCC	Y	10.71	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 Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
					& 4th Thursday of Each Month 9:00AM to 11:30AM.				
PT-R15	Kenton - Cessna Township	District	Hardin	District	This drop-off site was operational the 1st Saturday of Each Month 10:00AM to 12:00PM.	AC, SC, GL, PL, MxP, OCC	Y	2.8	Y
PT-R16	Mt. Victory - Dudley Township	District	Hardin	District	This drop-off site was operational every 1st Saturday of Each Month 9:00AM to 11:00AM.	AC, SC, GL, PL, MxP, OCC	Y	3.5	Y
PT-R17	Amity Village - Canaan Township	District	Madison	District	This drop-off site was operational every 2nd Wednesday of the month from 8:30AM to 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	6.8255	Y
PT-R18	Lafayette - Deercreek Township	District	Madison	District	This drop-off site was operational every 1st Thursday of the month from 12:00PM to 2:30PM.	AC, SC, GL, PL, MxP, OCC	Y	1.9835	Y
PT-R19	Newport Village - Paint Township	Contract between Gale's and Republic	Madison	Contract between Gale's and Republic	This drop-off site was operational every 3rd Tuesday of the month from 12:30PM to 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	0	Y
PT-R20	Oak Run Township	District	Madison	District	This drop-off site was operational every 3rd Tuesday of the month from 9:00AM to 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	4.3285	Y
PT-R21	Plain City	Contract between District and Kimble	Madison	Contract between District and Kimble	This drop-off site was operational on the second Saturday of every month from 8:00AM - 9:30AM.	AC, SC, GL, PL, MxP, OCC	Y	4.56	Y
PT-R22	Plumwood Village - Monroe Township	District	Madison	District	This drop-off site was operational every 2nd Wednesday of the month from 12:30PM to 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	2.4545	Y
PT-R23	Anna Village - Dinsmore Township	District	Shelby	District	This drop-off site was operational once a month. Schedule was posted on website.	AC, SC, GL, PL, MxP, OCC, SM	Y	4.71	Y
PT-R24	Kettlersville Village - Van Buren Township	Contract between	Shelby	Contract between	This drop-off site was operational once a month.	AC, SC, GL, PL, MxP, OCC, SM	Y	5.25	Y

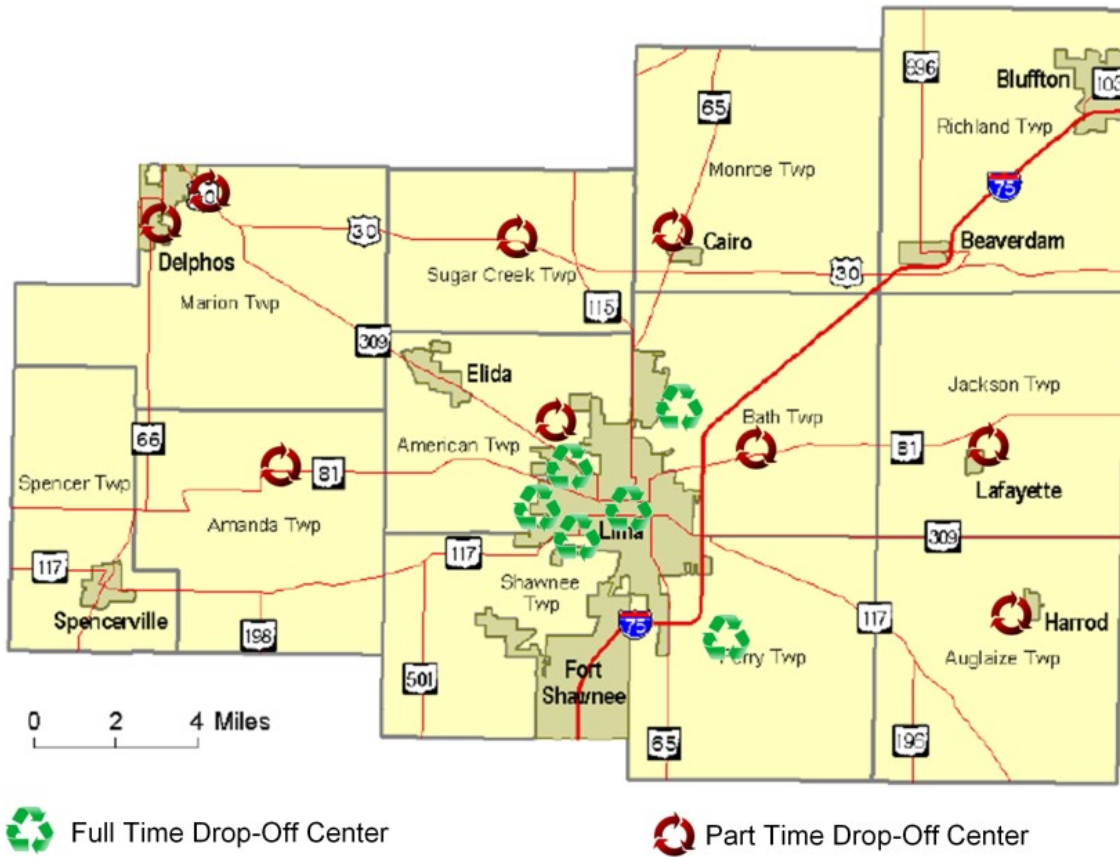
ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards (Y/N)	Weight Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
		City and brokers		n City and brokers	Schedule was posted on website.				
PT-R25	Swanders Village - Franklin Township	District	Shelby	District	This drop-off site was operational once a month. Schedule was posted on website.	AC, SC, GL, PL, MxP, OCC, SM	Y	3.5	Y
PT-R26	Allen Township	District	Union	District	This drop-off site was operational on the third Thursday of every month from 12:30PM - 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	1.25	Y
PT-R27	Magnetic Springs Village - Leesburg Township	District	Union	District	This drop-off site was operational on the fourth Tuesday of every month from 11:30AM - 1:00PM.	AC, SC, GL, PL, MxP, OCC	Y	0.83	Y
PT-R28	Milford Center Village - Union Township Mobile Drop-off	District	Union	District	This drop-off site was operational on the second Monday of every month from 9:00AM - 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	2.43	Y
PT-R29	Raymond Village - Liberty Township Mobile Drop-off	Contract between District and Kimble	Union	Contract between District and Kimble	This drop-off site was operational on the third Thursday of every month from 9:00AM - 11:30AM.	AC, SC, GL, PL, MxP, OCC	Y	0.83	Y
PT-R30	Unionville Center - Darby Township Mobile Drop-off	Contract between District and Kimble	Union	Contract between District and Kimble	This drop-off site was operational on the second Monday of every month from 12:30PM - 3:00PM.	AC, SC, GL, PL, MxP, OCC	Y	2.124	Y
PT-R31	York Center - York Township Mobile Drop-off	0	Union	0	This drop-off site was operational on the fourth Tuesday of every month from 9:00AM - 10:30AM.	AC, SC, GL, PL, MxP, OCC	0	0.44	Y

Materials Collected: AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, SM = Scrap Metals, AF = Aluminum Foil, BK = Books

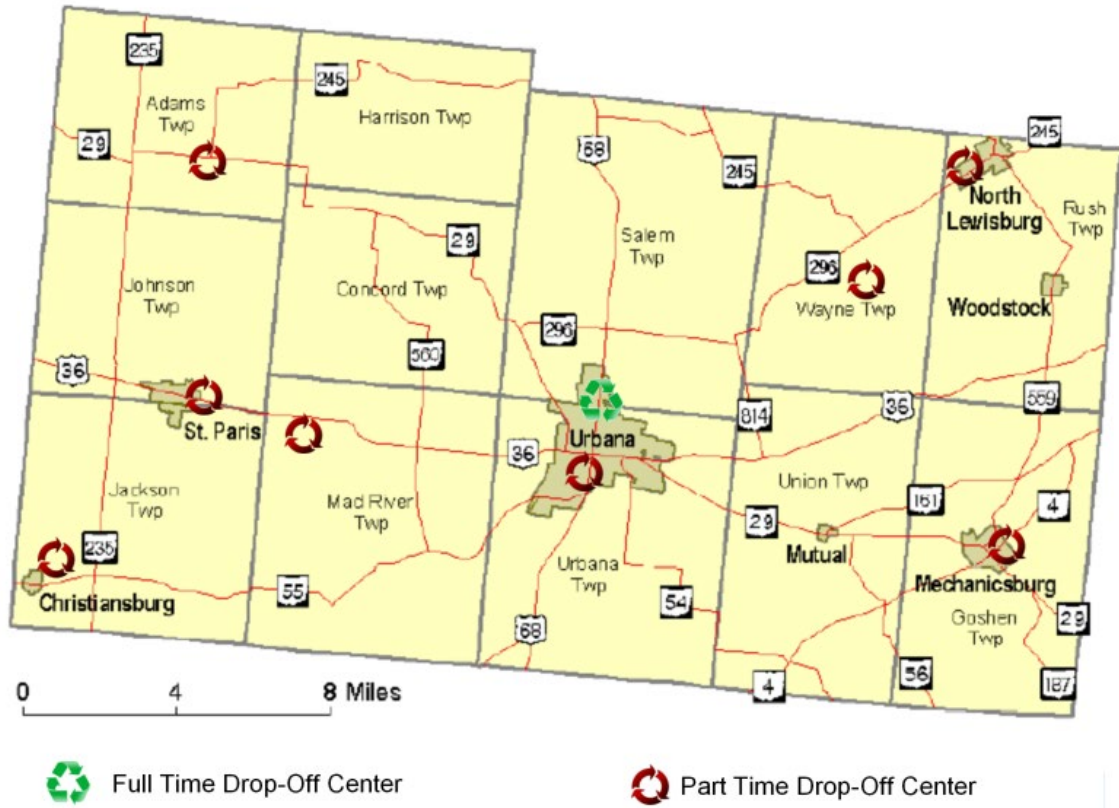
The District does not use mixed municipal solid waste material recovery facilities, therefore **Table B-3** has been omitted.

The following maps indicated the location of each drop-off:

Allen County Drop-Off Recycling Program



Champaign County Drop-Off Recycling Program



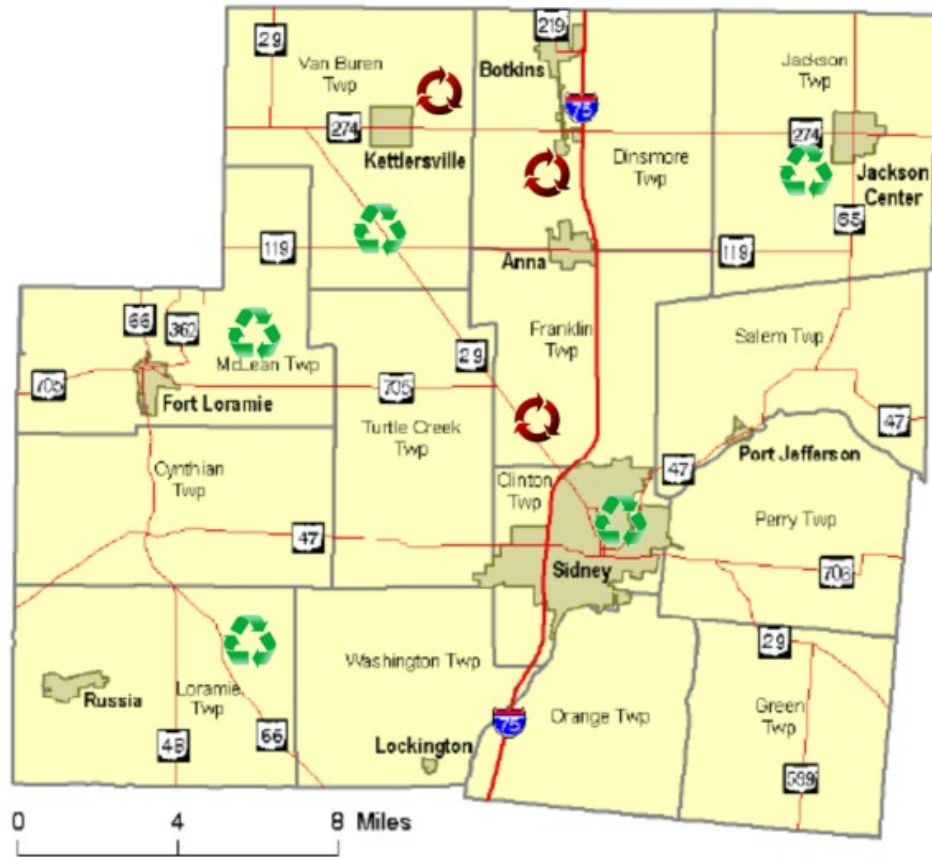
Hardin County Drop-Off Recycling Program



Madison County Drop-Off Recycling Program



Shelby County Drop-Off Recycling Program



Full Time Drop-Off Center



Part Time Drop-Off Center

Union County Drop-Off Recycling Program



Full Time Drop-Off Center



Part Time Drop-Off Center

Ongoing Site Evaluations

The District monitored a variety of elements regarding drop-off recycling locations, such as total tons of materials collected and contamination issues. The District may adjust the drop-off program on an as-needed basis when improvements are identified. Potential issues the District circumvents by evaluating the drop-off program on a continual basis are the following:

- Location of drop-off
- Collection hours
- Material accepted
- Participant feedback on program
- Estimated tonnage collected

- Excessive abuse of drop-off sites from contamination or dumping
- Underutilization of drop-off bins
- Collection frequency that does not meet public needs (i.e., issues with over-flow)

Any changes to the drop-off program in any of the counties in the District will be made to ensure that each county has a 80% or greater recycling access credit.

Procedure for Closed Drop-Offs

As a result of any ongoing site evaluations or direct decisions made by communities, some drop-offs may be relocated, closed, or change operation status from part-time to full-time or vice versa.

For any planned or existing drop-off recycling program that ceases to operate during the planning period, the District will implement the following procedure:

Meet with the operator of the drop-off program to determine cause of program elimination.

- Offer any assistance permitted under this *Plan Update* to re-start the program.
- If the program cannot be re-started, the District will evaluate the options available including replacing the program with full time or part time recycling drop-off centers in other areas of the county affected to ensure no loss in recycling access is realized.
- If the elimination of a drop-off recycling program does not cause the county to fall below the 80% recycling access goal requirement, the District reserves the right to not implement any substitute program.

The District reserves the right to work with any community at any time to upgrade their drop-off program based on actual political, economic, socioeconomic, markets, service provider infrastructure and other factors. Finally, the District, before implementing, enhancing or changing any recycling drop-off program, will first make sure the initiative is reasonable and cost effective.

B. Curbside Recycling and Trash Collection Service Providers

Table B-4a identifies the municipal and commercial haulers that provided trash collection services in the 2019. These haulers are licensed by the District. The table also shows the haulers which offer PAYT collection.

Table B-4. Inventory of Trash Collection Providers in the Reference Year

Name of Provider	County Served	Trash Collection Service				Recycling Collection Service		
		PAYT	RES	COM	IND	RES	COM	IND
Public Sector								
City of London Ohio Sanitation Department	City of London (Madison County)		✓			✓		
Village of Forest	Village of Forest (Hardin County)		✓			✓		
Private Sector								
Action Refuse	Lima and surrounding areas (Allen County)		✓	✓	✓			
Allen County Recyclers	Allen County (Roll-offs only)		✓	✓		✓	✓	✓
Allen County Refuse	Elida, Spencerville, and Delphos (Allen County)					✓		
Art's Roll Off	Allen County		✓					
B&M Trucking Company	Madison County							
Brown's Refuse	Allen & Hardin Counties		✓					
Griffith's Trash Pick Up Services	Allen County - Greater Lima area					✓	✓	
H.W. Mann	Eastern part of Champaign County							✓
Hasting's Hauling	Residential Collection Routes in Rural Hardin County		✓	✓	✓			
Hemmelgarn Roll Off Services	Roll-off Containers only in Shelby County and surrounding area		✓	✓				
H&S Refuse	Allen County		✓	✓	✓			
J & N Hallers	Allen and Hardin Counties		✓					
Lightner's Town and Country	Rural Hardin County				✓			
Koogler's Refuse, Inc.	Allen and Hardin Counties							
Maharg Trash Service	Shelby County		✓	✓	✓			
Miller's Refuse	Hardin County		✓	✓				
Newfer Norman Refuse Removal	Greater Lima area (Allen County)		✓					
P & K Hauling	Greater Spencerville area		✓	✓	✓	✓		
Porter Sanitation, LLC	Allen County							

Name of Provider	County Served	Trash Collection Service				Recycling Collection Service		
		PAYT	RES	COM	IND	RES	COM	IND
R.L.W. Refuse	Allen County		✓	✓				
Roberts Hauling	Champaign County		✓	✓				
Roberts Refuse Service	Urbana, St. Paris, and McBurg (Champaign County)		✓	✓				
Republic Waste Services	Shelby County		✓	✓		✓	✓	
Republic Waste Services	Lima, Bluffton, and other communities in Allen County		✓	✓		✓		
Republic Waste Services	Allen County		✓					
Rumpke Waste Inc.	District-wide		✓	✓				
Smith's Trucking & Roll-off Container Service	Roll-off Containers only; Occasional Placement in Madison and Champaign counties		✓					
SV&E Refuse LLC	Collection routes in Hardin, Allen and Logan counties (2 trucks)		✓	✓				
Vince Refuse	Champaign County					✓		
Waste Collection of Christiansburg	Christiansburg, St Paris and Rosewood (Champaign County)				✓			
Waste Management, Inc.	District-wide		✓	✓	✓	✓	✓	
Wee Haul	Shelby County		✓					

RES = Residential, COM = Commercial, IND = Industrial

C. Composting Facilities and Activities

Table B-5 identifies the yard waste management facilities and activities which received yard waste and other organic waste during the reference year. This table includes the facilities and programs that managed food waste, leaves, brush, trees, grass clippings and logs. “Other Food Waste Management Activities” includes tonnages recycled and/or donated by survey respondents that were not processed by compost facilities listed in **Table B-5**. As shown in the table, the majority of yard waste is managed at in-district facilities. The “Grand Total” at the bottom of the table reflects only the tonnages reported by composting facilities in order to avoid double-counting.

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

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
Compost Facilities						
Allen County						
YW1	Allen Correctional Institution	II		2338 North West Street, Lima	214	435
YW2	Lima Compost Facility/Wright Mulch Inc	II		1227 East Hanthorn Road, Lima	0	4,229
YW3	EOLM Lima Allen County Landfill Inc	IV		1500 Fort Amanda Road, Lima	0	109
YW4	Resource Recycling	III		1596 Neubrecht Road, Lima	0	144
YW5	Resource Recycling West	III		1596 Neubrecht Road, Lima	0	143
Champaign County						
YW6	Urbana Composting Facility	IV		1263 Muzzy Road, Urbana	0	3,977
Hardin County						
YW7	Hardin County Solid Waste Facility	IV		45 Jones Rd, Kenton	0	46
Madison County						
YW8	West Jefferson Composting Facility	IV		Mill Rd, West Jefferson	0	221
YW9	London Correctional Institution	II		1580 Ohio 56, London	0	78
YW10	R&SH CO LLC	III		9050 Amity Pike, Plain City	0	0
Shelby County						
YW11	Sidney Composting Facility	IV		690 Brooklyn Avenue, Sidney	0	1,101
YW12	Roe Transportation Inc	IV		3680 State Rte 47, Sidney	0	14,833
YW13	Village of Russia Composting Facility	IV		551 East Main Street, Russia	0	56
Union County						
YW14	Maintenance and Operations Center	IV		455 North Maple Street, Marysville	0	1,194
YW15	New Day Farms LLC Mad River East	III		27322 State Route 739, Raymond	0	0
YW16	New Day Farms LLC (Farm 3 Facility)	III		27400 Coder-Holloway Road, West Mansfield	0	0
YW17	New Day Farms LLC Mad River West	III		27322 Ohio 739, Raymond	0	0
In-District Facilities Total					214	26,566
Out-of-District Facilities						

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
YW18	Park Enterprise Construction Co Inc	IV		560 Barks Road West, Marion	0	159
YW19	Mad River Topsoil Inc	IV		5625 Old Lower Valley Pike, Springfield	0	2
YW20	Garick LLC Paygro Division	II		11000 Huntington Road, South Charleston	1	217
YW21	Cherokee Run Landfill Inc	IV		2946 US Rte 68 N, Bellefontaine	0	390
YW22	Price Farms Organics Ltd	II		4838 Warrensburg Road, Delaware	483	0
Out-of-District Facilities Total					484	767
Community Yard Waste Collection Programs						
Total					1	767
Mulching Operations						
None						
Total						0
Land Application						
None						
Total					0	0
Anaerobic Digestion						
None						DNR
Total					0	0
Hauler and Walmart Food Waste Data						
YW23	Hauler and Walmart				1,038	0

Table B-6 has omitted since yard waste and food waste management activities have already been described in Table B-5.

D. Material Handling Facilities Used by the District

The haulers in the District used three single-stream MRFs in the reference year. As indicated in **Table B-7** below, the majority of recyclables were processed at Union Recyclers in Union County.

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

Facility Name	Sector	County	State	Type of Facility	Tons Accepted from SWMD
Allen County Recyclers	Residential/Commercial	Allen	OH	MRF ¹	7,500 ²
Hardin County Solid Waste Facility	Residential/Commercial	Hardin	OH	MRF	183
Shelby County Recycling Center	Residential/Commercial	Shelby	OH	MRF	2,800
Union Recyclers	Residential/Commercial	Union	OH	MRF	6,988
Rumpke Waste Recycling Columbus	Residential/Commercial/Industrial	Franklin	OH	Recycling Transfer Station	1,234
Rumpke Recycling Dayton	Residential/Commercial/Industrial	Montgomery	OH	Recycling Transfer Station	4,269
WM Recycling: Columbus	Commercial/Industrial	Franklin	OH	Transfer Station	1,222
Rumpke Chillicothe	Commercial	Ross	OH	Recycling Transfer Station	410
Dayton Glass Plant	Commercial	Montgomery	OH	MRF	654
Rumpke Center City Recycling Hamilton County	Residential/Commercial	Hamilton	OH	MRF	60
Royal Oaks Recycling	Residential	Dayton / Cleveland	OH	Processor	1,615
Total					19,435

¹ "MRF" means Material Recovery Facility.

² Allen County Recyclers recycling tonnages are sent to other facilities with the majority to Union Recyclers.



APPENDIX C

POPULATION DATA

APPENDIX C. Population Data

As of July 1, 2019, the population of the North Central Ohio Solid Waste District was estimated at 326,616. The community populations which need to be added to or subtracted from the District total in order to obtain the total district population for the reference year are shown in **Table C-1**. The population estimate for 2019 is based on Ohio Department of Development (ODOD) Office of Strategic Research document, “2019 Population Estimates for Cities, Villages and Townships”, published in May 2020. As indicated in the table, the total adjusted population for the District is 326,616 for the reference year of 2019.

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

Community	Allen
Before Adjustment	103,351
Additions	
Bluffton Village	167
Delphos City	3,089
Subtractions	
None	
After Adjustment	106,607

Community	Champaign
Before Adjustment	38,885
Additions	
None	
Subtractions	
None	
After Adjustment	38,885

Community	Hardin
Before Adjustment	31,365
Additions	
Ridgeway village	113
Subtractions	
None	
After Adjustment	31,478

Community	Madison
Before Adjustment	44,731
Additions	
Plain City Village	860
Subtractions	
None	
After Adjustment	45,591

Community	Shelby
Before Adjustment	48,590
Additions	
None	
Subtractions	
None	
After Adjustment	48,590

Community	Union
Before Adjustment	58,988
Additions	
None	
Subtractions	
Dublin city	2,663
Plain City Village	860
After Adjustment	55,465

Total District Adjusted Population	326,616
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Sources of Information: Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township,” May 2019. <https://development.ohio.gov/files/research/P5027.pdf>

State law requires the entire population of cities and villages which are split between two counties to be included with the solid waste district having the majority of the city or village population. Since less than one-half of the populations for the Village of Bluffton, City of Delphos, and Village of Ridgeway reside outside of the District, the portion of the City and Village in the other county is added to the District population. Since more than one-half of the population for the City of Dublin resides outside of the District, the portion of the City in the District is subtracted from the District population (See **Table C-1.**)

Population projections for the entire planning period are shown below in **Table C-2.** Reference year 2019 populations represent the actual estimates for that year after applying the adjustment listed in **Table C-1.** The District populations calculated for 2020, 2025, 2030, 2035, and 2040 have been determined using projection estimates for those years from the Ohio Development Services Agency¹ and then adding/subtracting out the adjustment populations in **Table C-1.** Straight-line projections have been used to develop the population estimates for years between the five-year intervals.

¹ “2010 to 2040 Projected Population for Ohio Counties: Summary 2010 to 2040 Projected,” Ohio Development Services Agency (ODSA) publication, April 2018. <http://www.development.ohio.gov/files/research/P6090.pdf>

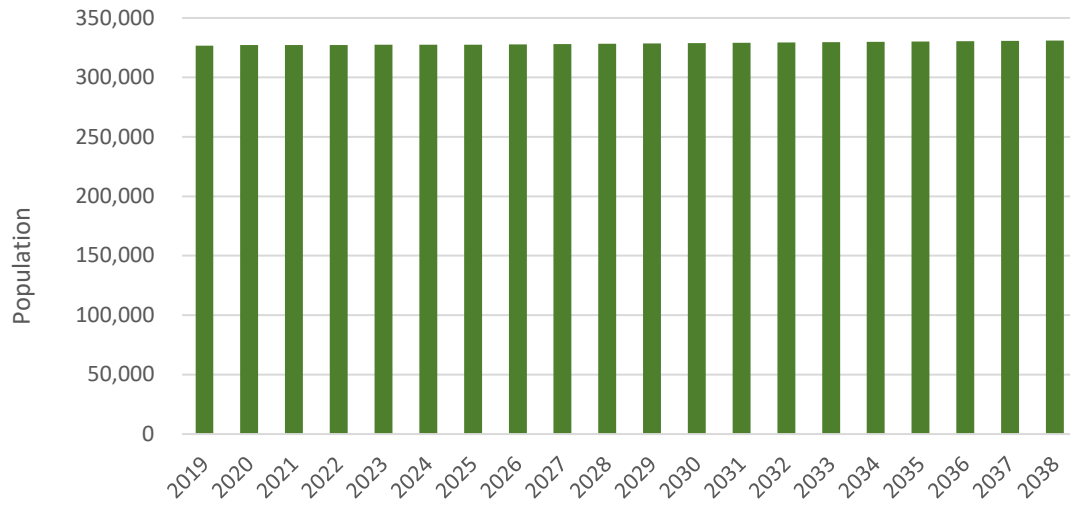
Table C-2 Population Projections

Year	Allen	Champaign	Hardin	Madison	Shelby	Union	Total District Population
2019	106,607	38,885	31,478	45,591	48,590	55,465	326,616
2020	105,230	38,705	30,838	44,683	48,119	59,554	327,129
2021	105,036	38,454	30,807	44,902	48,023	59,995	327,218
2022	104,843	38,203	30,776	45,121	47,926	60,437	327,306
2023	104,649	37,952	30,746	45,340	47,830	60,878	327,395
2024	104,455	37,701	30,715	45,559	47,733	61,320	327,483
2025	104,261	37,450	30,684	45,778	47,637	61,761	327,571
2026	104,059	37,328	30,653	46,003	47,542	62,218	327,803
2027	103,857	37,206	30,623	46,227	47,447	62,675	328,035
2028	103,655	37,084	30,592	46,452	47,351	63,132	328,267
2029	103,453	36,962	30,562	46,676	47,256	63,589	328,499
2030	103,251	36,840	30,531	46,901	47,161	64,046	328,730
2031	103,051	36,744	30,501	47,131	47,067	64,519	329,012
2032	102,851	36,648	30,470	47,361	46,972	64,992	329,294
2033	102,651	36,552	30,440	47,592	46,878	65,464	329,576
2034	102,451	36,456	30,409	47,822	46,783	65,937	329,858
2035	102,250	36,360	30,379	48,052	46,689	66,410	330,140
2036	102,059	36,266	30,349	48,288	46,596	66,900	330,457
2037	101,867	36,172	30,319	48,524	46,502	67,389	330,773
2038	101,676	36,078	30,288	48,760	46,409	67,879	331,090

Source(s) of Information: Ohio Development Services Agency, “2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected,” April 2018, updated with 2020/2021 data with adjustments to projections. <http://www.development.ohio.gov/files/research/P6090.pdf>.

The figure below shows a steady increase in the population throughout the planning period. The population is expected to increase by 0.43 percent from 2019 through the fifth year of the planning period (year 2028) and increase by 1.27 percent by the end of the planning period.

Figure C-1. District Population: 2019 through 2038





APPENDIX D

DISPOSAL DATA

APPENDIX D. Disposal Data

A. Reference Year Waste Disposed

Forty percent of the District waste, which was directly hauled for disposal in the reference year, was sent to the out-of-District Cherokee Run Landfill Inc in Logan County. The County Environmental Landfill of Wyandot received the second highest amount, at only 27 percent of the total (See **Table D-1a**).

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

Facility Name	Location		Waste Received from SWMD (TPY)			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<i>In-district facilities</i>						
None						
<i>Out-of-district facilities</i>						
Athens-Hocking Reclamation Center	Athens	OH	0	5	0	5
Crawford County Landfill	Crawford	OH	574	904	108	1,585
Defiance County Sanitary Landfill	Defiance	OH	1,198	3,821	90	5,109
Pine Grove Regional Facility	Fairfield	OH	4	307	57	368
SWACO Franklin County Sanitary Landfill	Franklin	OH	3,428	5,038	0	8,466
Rumpke Sanitary Landfill	Hamilton	OH	0	3,201	0	3,201
Hancock County Landfill	Hancock	OH	9,384	163	1,942	11,490
Beech Hollow Landfill	Jackson	OH	33	661	0	694
Cherokee Run Landfill Inc	Logan	OH	47,099	20,385	7,845	75,329
Carbon Limestone Landfill LLC	Mahoning	OH	0	20	0	20
Republic Services Inc Celina Sanitary Landfill	Mercer	OH	6,627	2,808	2,935	12,370
Stony Hollow Landfill Inc	Montgomery	OH	7,181	1,535	41	8,757
Port Clinton Landfill Inc	Ottawa	OH	0	0	0	0
Suburban Landfill Inc	Perry	OH	0	101	0	101
Pike Sanitation Landfill	Pike	OH	5,210	189	0	5,399
Noble Road Landfill	Richland	OH	0	11	0	11
Sunny Farms Landfill LLC	Seneca	OH	584	0	0	584
American Landfill, Inc.	Stark	OH	0	5	3	8
Evergreen Recycling & Disposal	Wood	OH	103	181	86	370
Wood County Landfill	Wood	OH	18	0	11	29
County Environmental Landfill of Wyandot	Wyandot	OH	16,407	18,627	15,338	50,373
<i>Out-of-state facilities</i>						
Bavarian Trucking Co Inc	Boone	KY	18	69	0	87
National Serv-All Landfill	Allen	IN	13	49	0	62
Jay County Landfill	Jay	IN	0	1,987	0	30,339
Randolph Farms Landfill	Randolph	IN	1,377	0	0	1,377
Caldwell Landfill	Shelby	IN	0	131	0	131
County Line Landfill	Fulton	IN	0	5	0	5
Sycamore Ridge Landfill	Vigo	IN	0	4	0	4
Total Direct Haul Waste Disposed in Landfills			99,259	60,201	28,459	187,918

Source(s) of Information: Ohio Environmental Protection Agency, “2019 Facility Data Report Tables,” February 17, 2021.

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

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

Facility Name	Location		Waste Accepted from the District		
	County	State	Industrial	Excluded	Total
None		OH			0
Total			0	0	0

Source(s) of Information: Ohio Environmental Protection Agency

Transfer facilities process a larger portion of District waste sent for disposal (See **Table D-2**). During 2019, out-of-District transfer facilities received almost 146,000 tons of the transferred waste. The in-District Rumpke Allen County Transfer Station reported the highest tonnage received from the District. The Waste Management of Ohio Inc - Lima, also located in the District, received the second highest percentage of District waste being routed through transfer stations.

Table D-2. Waste Transferred in Reference Year

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
<i>In-district facilities</i>							
Rumpke Allen County Transfer Station	Allen	OH	46,213	234	323	46,769	Crawford County Landfill
Waste Management of Ohio Inc - Lima	Allen	OH	19,467	1,393	0	20,860	Jay County Landfill
Hardin County Solid Waste Facility	Hardin	OH	11,532	0	97	11,628	Cherokee Run Landfill
Shelby County Transfer Facility	Shelby	OH	11,607	0	2,082	13,689	Cherokee Run Landfill
<i>Out-of-district facilities</i>							
Rumpke Waste Inc Greenville Transfer Facility	Darke	OH	8,705	692	38	9,434	Rumpke Sanitary Landfill, Inc.
Delaware County Transfer Facility	Delaware	OH	2,857	37	653	3,547	Crawford County Landfill
Fayette County Transfer	Fayette	OH	78	228	0	306	Beech Hollow Landfill
Local Waste Services Inc	Franklin	OH	2,455	0	52	2,507	Pine Grove Landfill

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
Republic Services Inc Reynolds Ave Transfer Facility	Franklin	OH	5,233	0	295	5,528	Pine Grove Regional Facility
Rumpke Waste Inc Columbus Transfer & Recycling Facility	Franklin	OH	11,246	0	0	11,246	Beech Hollow Landfill
Waste Management of Ohio Transfer and Recycling	Franklin	OH	5,755	0	0	5,755	Beech Hollow Landfill
Republic Services Mount Vernon Transfer Facility	Knox	OH	1	0	1	2	Pine Grove Regional Landfill
Marion County Solid Waste Transfer Facility	Marion	OH	1,112	0	0	1,112	Wyandot County Environmental Landfill
Maharg Inc Solid Waste Transfer Facility	Mercer	OH	1	0	0	1	Jay County Landfill
Miami County Solid Waste & Recycling Facility	Miami	OH	291	0	0	291	Cherokee Run Landfill
Montgomery County South Transfer	Montgomery	OH	4,716.2	0	0	4,716	Rumpke Sanitary Landfill
Rumpke Waste Inc Circleville Transfer Facility	Pickaway	OH	8,222	0	204	8,426	Pike County Sanitary Landfill
Waste Management of Ohio - Chillicothe	Ross	OH	104	0	0	104	Suburban Landfill
Out-of-state facilities							
Bunn Box Inc.	Allen	IN	0.0	0.0	4.6	5	National Serv-All Landfill
Total Transferred Waste			139,594	2,584	3,748	145,927	

Note: Res/Com = residential/commercial; TS/TF = transfer station/transfer facility; LF = landfill

Source(s) of Information: Ohio Environmental Protection Agency, "2019 Facility Data Report Tables," February 17, 2021.

Only 1 ton of District waste was reportedly received at incinerators during the reference year, which is less than 1% of total disposed waste. (See **Table D-3.**)

Table D-3. Waste Incinerated/Burned for Energy Recovery in 2019

Facility Name	Location		Waste Received from the SWMD (TPY)			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<i>In-district facilities</i>						
None						
<i>Out-of-district facilities</i>						
None						
<i>Out-of-state facilities</i>						
Tradebe Treatment & Recycling, LLC	Lake	IN	0	21	0	
Indianapolis Resource Recovery Facility	Marion	IN	0	13,833	0	13,833
Stericycle Environmental Solutions, Inc.	Marion	IN	0	2	0	2
EQ Industrial Services Processing Facility	Marion	IN	0	2	0	2
Medassure of Indiana Treatment Facility	Marion	IN	3	0	0	
Merrell Bros Inc Indy Disposal Solutions	Marion	IN	0	265	0	
Covanta Environmental Solutions, LLC	Porter	IN	0	2,871	0	2,871
			3	14,123	0	13,837

SF = Solidification Facility, RR = Resource Recovery System, MW = Medical Waste Processor, I = Incinerator

Sources: OEPA Facility Data Report - 2019, IDEM 2019

Table D-4 shows the total waste disposed in the reference year for the District. Excluded waste and incinerated waste has been included in this table but will be excluded from the rest of the Plan Update since each accounted for less than 10 percent of the total waste disposed.¹

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

Table D-4. Total Waste Disposed in Reference Year

Disposal Method	Residential/Commercial	Industrial	Excluded	Total	% of Total Waste Disposed
Direct Hauled	99,259	60,201	0	159,460	50%
Transferred	139,594	2,584	0	142,179	45%
Incinerated	3	14,123	0	14,126	4%
Total	238,856	76,908	0	315,764	100%
% of Total	76%	24%	0%	100%	

Source(s) of Information: Ohio Environmental Protection Agency, “2019 Facility Data Report Tables,” February 17, 2021.

B. Historical Waste Analysis

The amount of total solid waste disposed from the District since 2010 has increased. Between 2010 and 2017, disposal fluctuated somewhat, but in 2018 there was a 19% increase in total disposal because of a 67% increase in industrial tons disposed. This extreme increase was due to a large industrial waste generator in 2018 and before. From 2014 through 2019, total disposal has slightly increased each year besides the outlier of 2018. See **Table D-5**.

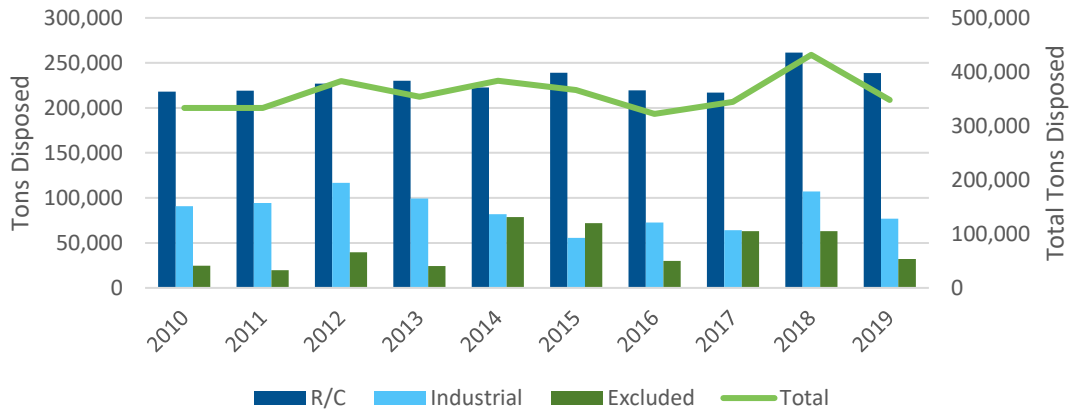
Table D-5. Historical Disposal Data: 2010-2019

Year	Population	Residential/Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (ppd)	Tons	Tons	Weight	Tons
2010	320,743	3.72	218,010	90,711	24,729	333,450
2011	322,092	3.73	219,172	94,187	19,645	333,004
2012	323,461	3.85	227,016	116,626	39,526	383,168
2013	324,851	3.88	230,117	99,291	24,421	353,829
2014	326,262	3.74	222,671	82,068	78,621	383,360
2015	327,694	4.00	238,942	55,469	72,089	366,500
2016	329,148	3.65	219,549	72,754	29,901	322,204
2017	319,507	3.72	217,033	64,102	63,167	344,302
2018	324,513	4.42	261,490	107,001	63,116	431,607
2019	326,616	4.01	238,856	76,908	32,207	347,971

Source(s) of Information: Ohio Environmental Protection Agency, “2019 Facility Data Report Tables,” February 17, 2021.

The disposal tonnages for the residential/commercial (R/C) sector, the industrial sector, excluded waste, and total disposal are shown graphically below. Although there has been a 13% increase in total tons disposed of between 2010 and 2019, the average annual rate of increase is 2.0%.

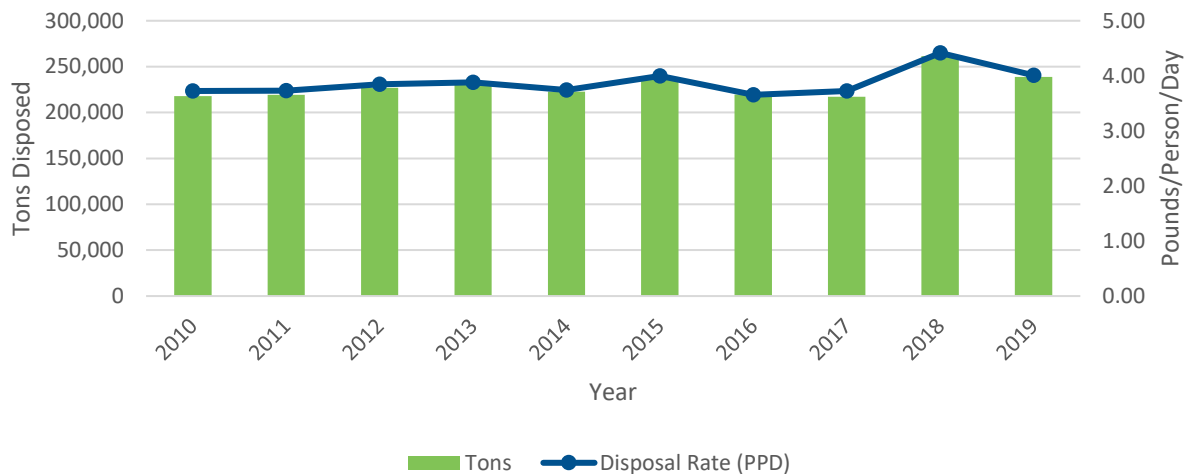
Figure D-1. District Disposal: 2010 – 2019



C. Residential-Commercial Disposal

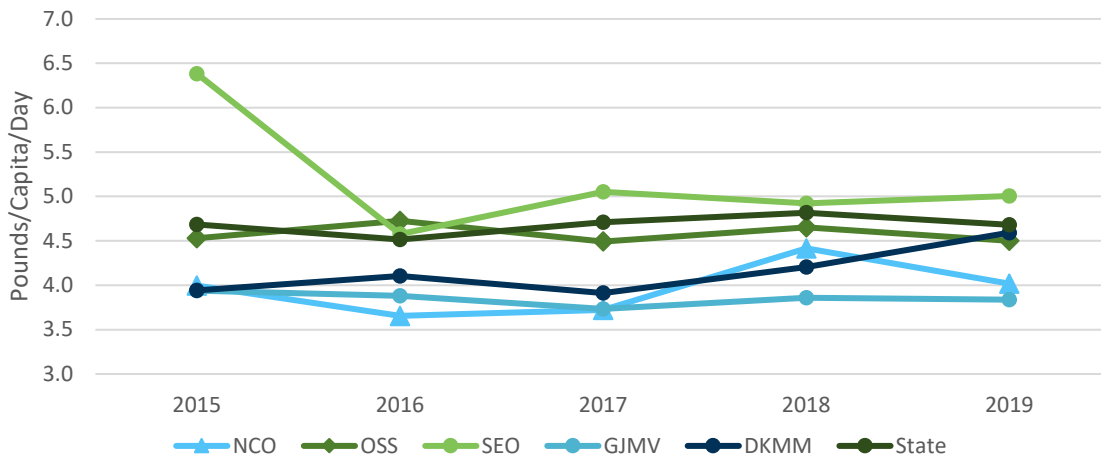
Residential/commercial (R/C) disposal has increased from 218,010 tons in 2010 to 238,856 tons in 2019. Between 2010 and 2017, the District’s annual rate of change in residential/commercial disposal was 0.04%. From 2017 to 2018, there was a 20.48% increase in disposal. (See **Figure D-2.**) The changes in tons disposed have been closely tracked by changes in the per capita disposal rate. The highest disposal rate during the ten-year period occurred in 2018. The disposal rate has steadily increased since 2016.

Figure D-2. Residential/Commercial Tons Disposed vs. Disposal Rate: 2010 – 2019



The R/C disposal rate for the District was compared with disposal rate for the Ottawa-Sandusky-Seneca Joint SWMD, Southeast Ohio SWMD, Gallia-Jackson-Meigs-Vinton Joint SWMD, Delaware-Knox-Marion-Morrow Joint SWMD, and the state average, which are similar to the District for rural multi-county districts. The figure below shows that each of these SWMDs experienced a variety of changes in the R/C disposal rate from 2015 through 2019.

Figure D-3. R/C Disposal Rate for Selected SWMDs: 2015-2019



The actual residential/commercial disposal in years 2016 and 2017 was less than projected disposal from the most previously approved Plan. The actual disposal in years 2015, 2018 and 2019 was more than projected in the previous Plan. The largest difference between actual and projected was in 2017 where actual R/C disposal was 7.0% less than projected (see the table below) and in 2018, 10% more than projected. For 2019, the difference between actual and projected was negligible.

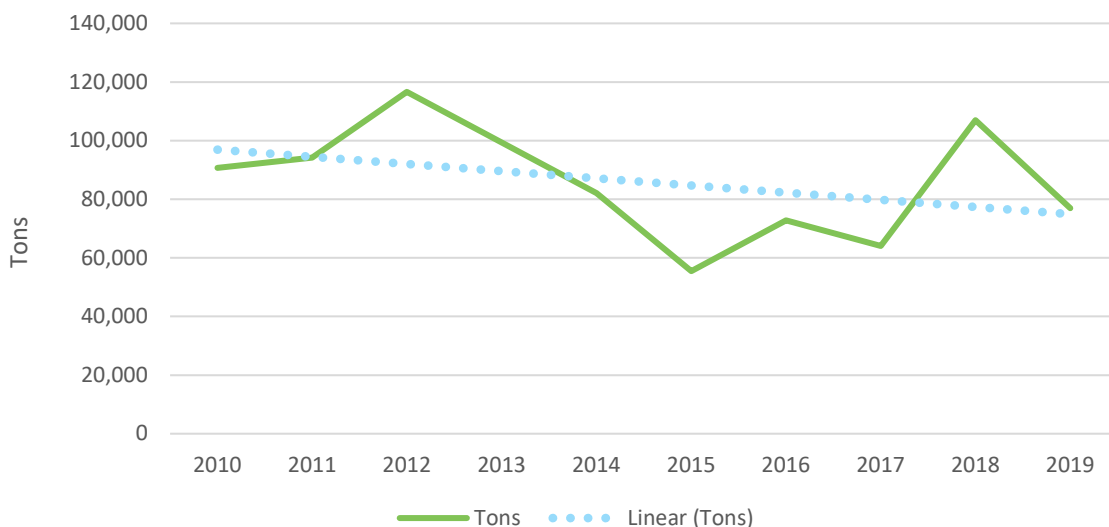
Actual vs. Current Plan Projections for Residential/Commercial Disposal: 2013-2019

Year	Residential/Commercial Sector Tons Disposed		
	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2015	238,942	225,784	-5.5%
2016	219,549	228,938	4.3%
2017	217,033	232,132	7.0%
2018	261,490	235,370	-10.0%
2019	238,856	238,650	-0.1%

A. Industrial Sector Disposal

As shown in **Figure D-4**, industrial disposal increased substantially from 2010 through 2018 fluctuating and overall increasing. The average industrial annual change in disposal rate between 2010 and 2019 was about a 5.7% increase.

Figure D-4. Industrial Sector Disposal: 2010 – 2019



The table below shows the annual rate of change in industrial disposal for 2010-2019.

Year	Industrial
2010	--
2011	3.83%
2012	23.82%
2013	-14.86%
2014	-17.35%
2015	-32.41%
2016	31.16%
2017	-11.89%
2018	66.92%
2019	-28.12%

Actual industrial disposal from 2015 through 2019 was less than the tonnages projected in the current plan (see the table below). The District has examined the difference between actual and projected tonnages and the likely factors explaining the differences.

**Actual vs. Current Plan Projections, Industrial Sector Disposal:
2015 – 2019**

Year	Industrial Sector Tons Disposed		
	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2015	55,469	87,882	-58.4%
2016	72,754	93,605	-28.7%
2017	64,102	99,328	-55.0%
2018	107,001	99,328	7.2%
2019	76,908	99,328	-29.2%

Between 2013 and 2019, industrial disposal was on average 75,247 tons annually and projected was 95,894 tons. The significant difference between the actual and projected industrial disposal was during 2017 with an actual 35,226 tons difference or 55%.

B. Disposal Projections

1. Residential/Commercial Sector

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

Tonnages Projected for R/C Sector: 3 Scenarios

#	Scenarios	2038 Projection	Tonnage Highest during last ten years	2019
	Description			
1	Assume disposal rate of change of population projected in Table C-2	242,128	261,490	238,856
2	Assume annual increase in tonnage of 1.35 percent based upon average percent change, 2010-2019	307,946		
3	Assume annual increase in tonnage of .67 percent based upon half average percent change, 2010-2019	271,325		

Scenario 1 assumes a disposal rate of change of population projected in Table C-2. This scenario results in a slight increase in tons disposed by the end of the planning period (approximately 242,128 tons).

Scenario 2 applies the average annual increase in tonnage of 1.35 percent based upon average percent change, 2010-2019. This scenario results in a increase in tons disposed by the end of the planning period (approximately 307,946 tons).

Scenario 3 applies the average annual increase in tonnage of .67 percent (half the increase in Scenario 2) based upon average percent change, 2010-2019. This scenario results in a increase in tons disposed by the end of the planning period (approximately 271,325 tons).

The District’s R/C disposal rate has fluctuated since 2015 (3.65 ppd to 4.42 ppd), which is calculated to be a 3.96 average annual rate of change.

Although several conclusions could be drawn from the last ten years of disposal data, the District believes that Scenario 3 represents the most reasonable approach for disposal projections. This scenario incorporates half the increase in the disposal rate experienced during the last ten years and the uncertainty of developing projections, especially for years further into the future, by keeping the disposal rate at a reasonable level.

2. Industrial Sector

The District evaluated three alternative methodologies for projecting industrial waste disposal (See the table below). **Scenario 1** applies a flatline disposal from 2019.

Tonnages Projected for Industrial Sector: 3 Scenarios

Scenarios		Tonnage		
#	Description	208 Projection	Highest during last ten years	2019
1	Assume annual 0% change throughout the planning period	76,908	116,626	76,908
2	Assume annual increase in tonnage of 2.34 percent based upon average percent change, 2010-2019	119,462		
3	Assume annual increase in tonnage of half of the 2.34 percent based upon average percent change, 2010-2019. (1.17%)	95,974		

Scenario 2 uses an assumed annual increase in tonnage of 2.34 percent based upon average percent change, 2010-2019.

Scenario 3 was developed in an effort to combine the somewhat conflicting results of Scenarios 1 and 2. For the third scenario, the District assumed that the rate of increase in disposal experienced from 2010 through 2019 at half rate to be conservative. The District believes that Scenario 3 represents the most reasonable projections for industrial disposal.

3. Summary

Table D-6 represents the results of using the approaches proposed above by the District for R/C and industrial disposal projections. The tons of R/C projected for disposal continue to increase throughout the planning period due to the anticipated increase in population.

Due to the amount of excluded waste disposed being less than 10% of total waste generated, this portion of total disposal is projected from 2021 to the end of the planning period to remain constant at the average tonnage calculated for 2015 through 2019.

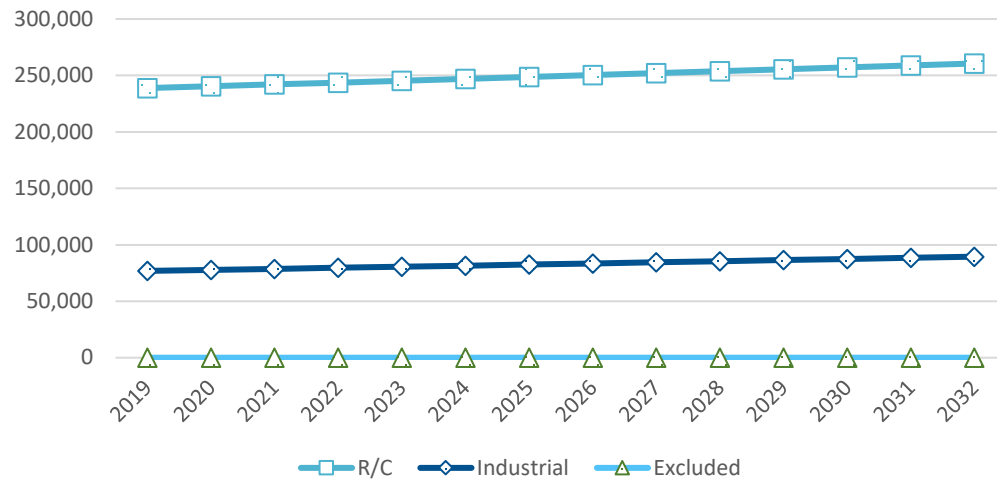
Table D-6. Waste Disposal Projections

	Year	Residential/ Commercial/ Solid Waste Tons	Industrial Solid Waste Tons	Excluded Waste Tons	Total Waste Tons
	2019	238,856	76,908	0	315,764
	2020	240,464	77,810	0	318,274
	2021	242,082	78,722	0	320,804
	2022	243,712	79,645	0	323,357
	2023	245,352	80,579	0	325,931
1st Yr. of Planning Period → x	2024	247,003	81,524	0	328,527
	2025	248,666	82,480	0	331,146
	2026	250,340	83,447	0	333,786
	2027	252,025	84,425	0	336,450
	2028	253,721	85,415	0	339,136
	2029	255,429	86,416	0	341,845
	2030	257,148	87,429	0	344,577
	2031	258,879	88,454	0	347,333
	2032	260,621	89,491	0	350,113
	2033	262,375	90,541	0	352,916
	2034	264,141	91,602	0	355,744

Year	Residential/ Commercial Solid Waste Tons	Industrial Solid Waste Tons	Excluded Waste Tons	Total Waste Tons
2035	265,919	92,676	0	358,595
2036	267,709	93,763	0	361,472
2037	269,511	94,862	0	364,373
2038	271,325	95,974	0	367,299

The figure below shows projected amounts for R/C, industrial, and excluded waste for the planning period.

Figure D-7. Projected Disposal Using R/C Average Annual Rate of Change (2015-2019) and Industrial Factor: 2019-2038





APPENDIX E

RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA

APPENDIX E. Residential/Commercial Reduction and Recycling Data

This Appendix presents the reduction and recycling data for the residential and commercial sectors in the 2019 reference year. In order to avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities, such as programs, brokers, and scrap yards, will be demonstrated. A historic analysis of the residential/commercial sector’s recycling is included in this Appendix. Information in this section as well as information from other sources was used to calculate the recycling projections from 2019 to the end of the planning period (2038) which are included at the end of this Appendix.

Table E-1A. Commercial Survey Results

NAICS	WG	EW	LAB	FW	GL	FM	NFM	OCC	MxP	PL	Tx	W	R	CoM	YW	UO	ST	DCB	HHW	Other: Misc.	Total	Adj.	Adj. Total
42	0	0	0	12,000	0	0	0	90	2	1	0	15	0	0	0	0	0	0	0	0	12,108	96	12,012
44	0	0	1	0	0	117	139	91	5	13	0	30	0	0	0	0	0	1	0	0	397	44	353
45	0	0	0	0	0	12	2	1,394	102	105	240	4,127	0	0	0	0	0	0	0	0	5,982	10	5,972
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	5	13	0	0	0	0	6	0	0	0	0	0	0	24	1	23
52	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	5	0	5
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	3
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
61	12	0	0	0	0	41	3	60	72	2	0	3	0	50	0	9	15	0	0	0	267	21	245
62	0	0	0	0	0	0	0	175	4	0	0	0	0	2	0	0	0	0	0	0	180	10	170
71	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	40	1	65	479	1	0	1	0	2,498	0	0	0	0	0	0	3,085	3	3,082
92	0	0	0	300	0	32	47	192	40	30	0	8	0	3,566	1,049	2	0	0	0	0	5,265	4,619	646
Total	12	0	1	12,300	0	242	193	2,075	723	151	240	4,184	0	6,121	1,049	11	15	1	0	0	27,318	4,808	22,511
Adj.	0	0	0	0	0	32	4	121	6	6	0	16	0	3,574	1,049	0	0	0	0	0	4,808		
Adj. Total	12	0	1	12,300	0	210	189	1,954	717	145	240	4,168	0	2,547	0	11	15	1	0	0	22,511		

NAICS = North American Industrial Classification System, WG = white goods, EW = electronic waste, LAB = lead-acid batteries, FW = food waste, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, TX = textiles, W = wood, R = Rubber, CoM = commingled, YW = yard waste, UO = Used Oil, SC = Scrap Tires, DCB = Dry-cell Batteries, Adj. = Adjusted or Adjustments

Source(s) of Information: District recycling survey responses

The following table explains the adjustments made in Table E-1A.

Table E-1B. Commercial Survey Adjustments

Material	Adjustments
Corrugated Cardboard (OCC)	Tonnage was removed from all survey responses if the survey recipient did not identify a processor for the material. Tonnage was also removed if a hauler or Paper Retriever were listed as the processors since these totals were counted toward the commercial sector's recycling totals.
Mixed Paper (MxP)	Tonnage was removed from all survey responses if the survey recipient did not identify a processor for the material. Tonnage was also removed if a hauler or Paper Retriever were listed as the processors since these totals were counted toward the commercial sector's recycling totals.
Yard Waste (YW)	Tonnage was removed from all survey responses if the survey recipient did not identify a processor for the material. Tonnage reported from registered compost facilities was not counted, so only tonnage reported to have been managed elsewhere was counted.
Scrap Tires (SC)	Tonnage was removed from all survey responses since and data was used from the OEPA reported 2019 County Scrap Tire Numbers in Table E-4.

Data from a total of 93 commercial businesses and institutions was used to complete **Table E-1**. Companies and institutions reported recycling 20,843 tons of materials in 2019, with approximately 8,530 tons subtracted to avoid double-counting.

Table E-2. 2019 Data from Other Recycling Facilities

Source of Materials	WG	EW	LAB	GL	FM	NFM	OCC	MxP	PL	W	CoM	UO	ST	Total	Adj.	Adj.Total
Buybacks																
None														-	-	-
Scrap Yards																
None														-	-	-
Processors																
PR1	-	-	-	654	-	-	-	-	-	-	-	-	-	654	-	654
PR2	-	-	-	-	-	-	-	1,615	-	-	-	-	-	1,615	-	1,615
Unadjusted Total	-	-	-	654	-	-	-	1,615	-	-	-	-	-	2,270	-	2,270
Adjustments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Adjusted Total	-	-	-	654	-	-	-	1,615	-	-	-	-	-	2,270	-	2,270
MRF's																
MRF1	-	-	-	-	38	-	-	-	-	-	136	-	9	183	-	183
MRF2	7	7	2	518	151	96	2,547	707	749	19	-	2	4	4,809	-	4,809
MRF3	-	-	-	-	800	50	-	-	120	1,060	6,500	-	-	8,530	8,530	-
MRF4	-	-	-	229	31	16	284	573	95	-	-	-	-	1,229	-	1,229
MRF5	-	-	-	133	89	54	504	2,172	397	-	-	-	-	3,349	-	3,349
MRF6	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	4
MRF7	-	-	-	-	20	-	389	-	-	-	1	-	-	410	-	410
MRF8	-	-	-	6	1	1	30	19	3	-	-	-	-	60	-	60
Unadjusted Total	7	7	2	886	1,130	217	3,758	3,472	1,363	1,079	6,637	2	13	18,573	8,530	10,043
Adjustments	-	-	-	-	800	50	-	-	120	1,060	6,500	-	-	8,530	-	8,530
Adjusted Total	7	7	2	886	330	167	3,758	3,472	1,243	19	137	2	13	10,043	-	10,043
Grand Totals																
Unadjusted Total	7	7	2	1,540	1,130	217	3,758	5,087	1,363	1,079	6,637	2	13	20,843	-	20,843
Adjustments	0	0	0	0	800	50	0	0	120	1,060	6,500	0	0	8,530	-	8,530

Source of Materials	WG	EW	LAB	GL	FM	NFM	OCC	MxP	PL	W	CoM	UO	ST	Total	Adj.	Adj.Total
Adjusted Total	7	7	2	1,540	330	167	3,758	5,087	1,243	19	137	2	13	12,313		

NAICS = North American Industrial Classification System, LAB = lead-acid batteries, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, CoM = commingled, Adj. = Adjusted or Adjustments

Source(s) of Information: District recycling survey responses

Table E-2 contains tonnage collected by two processors and eight MRFs which receive materials generated in the District. Adjustments were made to avoid double counting of recyclables that are included in other tables.

Table E-3 reflects the tons of recycling reported to Ohio EPA by various businesses operating in the District.

Table E-3. 2019 Data Reported to Ohio EPA

Ohio EPA Data Source	PL	OCC	MxP	CoM	Other: Misc.	Total	Adj.	Adj. Total
Aldi	2	265	0	0	0	267		267
Big Lots	0	58	0	0	0	58		58
Kroger	65	1,706	4	0	40	1,815		1,815
Walmart Recycling in Ohio	60	1,602	5	0	200	1,867		1,867
Dollar General Corporation	0	380	4	0	0	384		384
United States Postal Service	7	20	382	0	0	410		410
Lowe's Companies, Inc.	2	176	0	0	30	208		208
Meijer Corporation	20	720	8	0	1	749		749
Target Corporate	6	217	0	3	1	227		227
Unadjusted Total	161	5,146	404	3	272	5,985	0	5,985
Adjustments						0		

PL = plastics, OCC = corrugated cardboard, MxP = mixed paper, CoM = commingled

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

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

Table E-4A includes the amount of recycling reported by the curbside and drop-off programs operating within the District, materials received by compost facilities, scrap tire recycling reported to Ohio EPA, and District special collections. There were no adjustment needed to avoid double-counting due to processors which receive these materials did not report to other surveys..

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

Other Sources of Data	WG	EW	FW	CoM	YW	ST	HHW	Totals	Adj.	Adj. Totals
Curbside	0	0	0	7,043	0	0	0	7,043	7,043	-
Drop-off Program	0	0	0	3,368	0	0	0	3,368	3,368	-
E-Waste Collection Programs	0	25	0	0	0	0	0	25	0	25
HHW Collection Programs	7	0	0	0	0	0	13	20	0	20
Community Leaf Collections	0	0	0	0	5,570	0	0	5,570	0	5,570
Ohio EPA Scrap Tire Data	0	0	0	0	0	6,982	0	6,982	0	6,982
Ohio EPA Compost Report	0	0	0	0	27,334	0	0	27,334	0	27,334
Food Scraps Hauler Data	0	0	1,837	0	0	0	0	1,837	0	1,837
Unadjusted Total	7	25	1,837	10,410	32,904	6,982	13	52,177	10,410	41,767
Adjustments	0	0	0	10,410	0	0	0	10,410		
Adjusted Total	7	25	1,837	-	32,904	6,982	13	41,767		

WG = white goods, HHW = household hazardous waste, EW = electronic waste, SC = Scrap Tires, FW = food waste, MxP = mixed paper, OCC = old corrugated cardboard, PL = plastics, CoM = commingled, YW = yard waste

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

Sample Calculations:

Commingled total – Adjustments = Adjusted Total

10,410 tons – 10,410 tons = 0 tons

Table E-5 represents the summation of tonnages shown in **Tables E-1A** through **E-4A**. The total tons in **Table E-5** is also consistent with the District’s residential/commercial recycling reported in the 2019 Annual District Report.

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

Material	Tons
Appliances/ "White Goods"	26
Household Hazardous Waste	13
Used Motor Oil	13
Electronics	33
Scrap Tires	7,010
Dry Cell Batteries	1
Lead-Acid Batteries	3
Food	14,137
Glass	1,540
Ferrous Metals	540
Non-Ferrous Metals	386
Corrugated Cardboard	13,317

Material	Tons
All Other Paper	6,605
Plastics	1,650
Textiles	240
Wood	4,735
Rubber	0
Commingled Recyclables (Mixed)	2,692
Yard Trimmings	32,904
Other (Aggregated)	435
Recycling Subtotals	86,278
Incineration	3
Grand Total	86,281

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

Table E-6, “Quantities Recovered by Program/Source,” presents a summary of the sources of residential/commercial sector recycling tonnage. Tonnage listed in this table reflects quantities that were adjusted to avoid double-counting, so this table does not reflect the true tonnage from each source.

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

Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	22,511
Buybacks	0
Scrap Yards	0
Processors	2,270
MRFs	10,043
Ohio EPA Commercial Retail Data	9,687
Curbside	7,043*
Drop-off Program	3,368*
E-Waste Collection Programs	25
HHW Collection Programs	20
Community Leaf Collections	5,570
Ohio EPA Scrap Tire Data	6,982
Ohio EPA Compost Report	27,334
Food Scraps Hauler Data	1,837
Total	86,278

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

The District did not track historical annual recycling data in a format that was consistent with the original E-7 tables (**Tables E-7 and E-7a1-3**), so a new table was developed. The

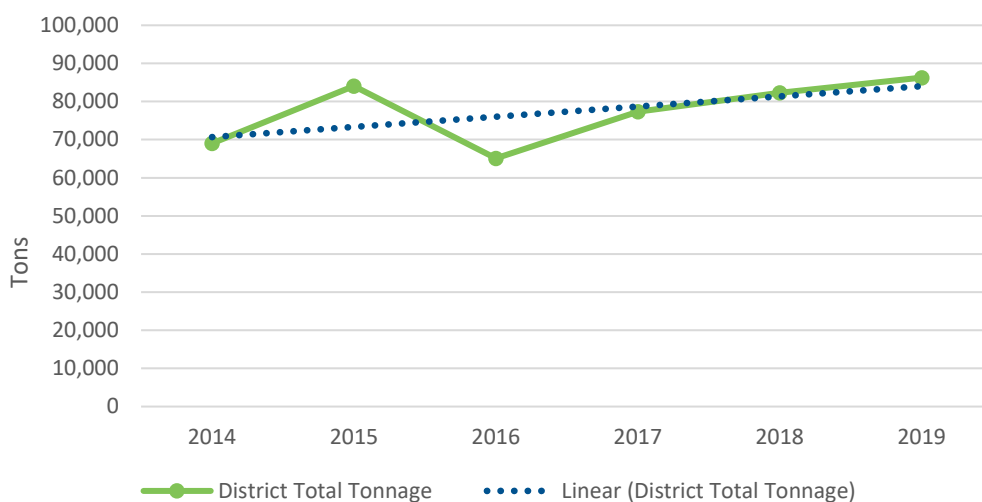
following table presents the District’s historical recycling analysis using a customized version of **Table E-7**.

Table E-7. Historical Recycling Analysis

Year	Residential/Commercial				Annual Percentage Change	Annual Tonnage Change
	Organics	Tires	Recycling	Total		
2014	17,737	4,012	47,265	69,014	---	---
2015	20,916	4,032	59,073	84,021	22%	15,007
2016	25,280	4,230	35,597	65,107	-23%	-18,914
2017	20,530	4,611	52,244	77,385	19%	12,278
2018	27,389	4,583	50,338	82,310	6%	4,925
2019	32,904	6,982	46,392	86,278	5%	3,968
Average Annual Percent Change					6%	
Average Tons over 6 Year Period					77,352	
Average Annual Tonnage Change					3,453	

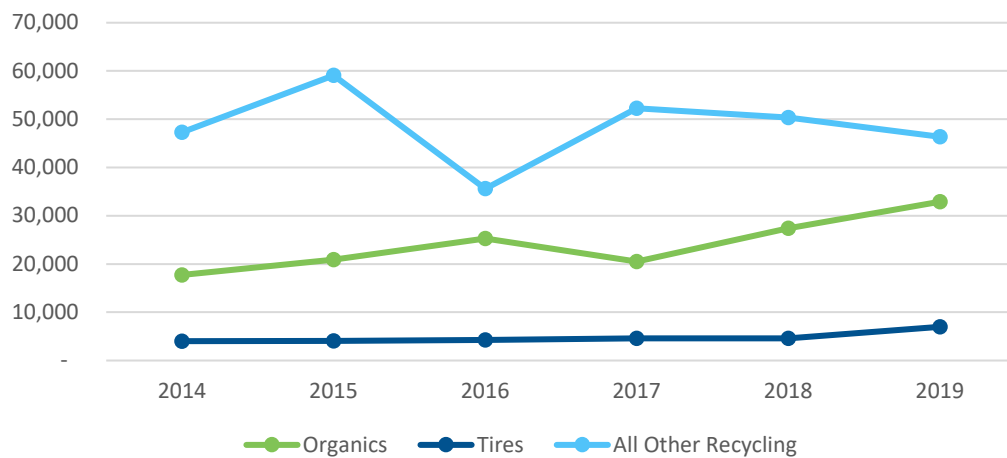
The District’s historical recovery for the residential/commercial sector over a five-year period spanning from 2014 through 2019 shows that total tons of recycling has remained relatively consistent during this time period.

Figure E-1. Historical Recycling Analysis: 2014-2019



When each of the three categories in **Table E-7** are examined separately, yard waste and scrap tire recovery have fluctuated the most. Recycling has dropped slightly over the five-year period. There was a great increase in recycling due to reported yard waste tonnages in the OEPA report. (See **Figure E-2**.)

Figure E-2. Historical Recycling by General Material Category: 2014-2019



Starting in 2021, the District has shifted away from surveying generators and processors/MRFs together and then reconciling for double counting. In 2021 and beyond, the District will be utilizing the following sources for demonstrating its residential/commercial recycling performance:

- Ohio EPA, District and Surveyed MRF/Processor Data (#2 and #3)
- Ewaste Collections (#7)
- HHW Collections (#8)
- Community Field Spread Leave Data (#9)
- Ohio EPA Scrap Tire Data (#10)
- Ohio EPA Compost Facility Data (#11)
- Ohio EPA Food Waste Hauler Data (#12)

The following table presents the District’s actual and projected residential/commercial recycling totals by program/source.

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

	Year	1	2	3	4	5	6	7	8	9	10	11	12	Totals
	2019	22,511	2,270	10,043	9,687	0	0	25	20	5,570	6,982	27,334	1,837	86,278
	2020	17,640	3,567	7,316	11,337	0	0	15	18	3,518	4,409	37,874	2,223	87,916
	2021	0	4,852	19,769	0	0	0	15	13	4,077	5,565	38,071	1,743	74,105
	2022	0	4,853	19,774	0	0	0	15	13.0	4,078	5,567	38,081	1,743	74,125
	2023	0	4,855	19,780	0	0	0	15	13.0	4,079	5,568	38,092	1,744	74,145
X	2024	0	4,856	19,785	0	0	0	15	13.0	4,080	5,570	38,102	1,744	74,165
First Year of Planning Period →	2025	0	4,857	19,790	0	0	0	15	13.0	4,081	5,571	38,112	1,745	74,185
	2026	0	4,859	19,796	0	0	0	15	13.0	4,084	5,575	38,139	1,745	74,226
	2027	0	4,862	19,810	0	0	0	15	13.0	4,087	5,579	38,166	1,747	74,279
	2028	0	4,865	19,824	0	0	0	15	13.0	4,090	5,583	38,193	1,748	74,331
	2029	0	4,869	19,838	0	0	0	15	13.1	4,093	5,587	38,220	1,749	74,384
	2030	0	4,872	19,852	0	0	0	15	13.1	4,096	5,591	38,247	1,750	74,436
	2031	0	4,876	19,866	0	0	0	15	13.1	4,099	5,596	38,280	1,752	74,496
	2032	0	4,880	19,883	0	0	0	15	13.1	4,103	5,600	38,313	1,753	74,560
	2033	0	4,884	19,900	0	0	0	15	13.1	4,106	5,605	38,345	1,755	74,624
	2034	0	4,888	19,917	0	0	0	15	13.1	4,110	5,610	38,378	1,756	74,688
	2035	0	4,892	19,934	0	0	0	15	13.1	4,113	5,615	38,411	1,758	74,751
	2036	0	4,897	19,951	0	0	0	15	13.1	4,117	5,620	38,448	1,759	74,820
	2037	0	4,901	19,970	0	0	0	15	13.1	4,121	5,625	38,485	1,761	74,892
	2038	0	4,906	19,989	0	0	0	15	13.2	4,125	5,631	38,522	1,762	74,964

1 = Commercial Survey

2 = Processors

3 = MRFs

4 = Ohio EPA Commercial Retail Data

5 = Curbside

6 = Drop-off Program

7 = E-Waste Collection Programs

8 = HHW Collection Programs

9 = Community Leaf Collections

10 = Ohio EPA Scrap Tire Data

11 = Ohio EPA Compost Report

12 = Food Scraps Hauler Data

Notes: In the Ohio EPA format the categories in Table E-8 should match categories in Table E-6. While some categories of historic data are easily extractable (such as tonnage reported by MRFs, many sources are not calculated in as straight-forward of a manner and some categories double-count other categories. For example, MRF tonnage includes some tonnage from commercial survey responses, curbside/drop-off tonnage, etc. Breaking down historical data into categories, then adjusting each category for double counting would be a labor-intensive process that ultimately will not provide useful figures because the figures would be adjusted for double-counting and not truly reflective of the quantity recycled from each source.

In **Table E-8**, actual tonnage was used for 2019, 2020 and 2021. Projections for each program/source were calculated using the following assumptions and methodology:

- **Commercial Survey:** No tonnage projected for future years. The District, starting in 2021, has moved away from surveying generators and processors/MRFs to avoid double counting issues. The District will rely on processor/MRF data along

with the data sources below. Tonnage are projected in the Processors and MRFs tonnage.

- **Processors:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **MRFs:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **Ohio EPA Commercial Retail Data:** Actual tonnage was used for 2019, 2020 and 2021. The District, starting in 2021, has moved away from surveying generators and processors/MRFs to avoid double counting issues. The District will rely on processor/MRF data along with the data sources below. Tonnage are projected in the Processors and MRFs tonnage.
- **Curbside:** Tonnage are projected in the Processors and MRFs tonnage.
- **Drop-off Program:** Tonnage are projected in the Processors and MRFs tonnage.
- **E-Waste Collection Programs:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **HHW Collection Programs:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **Community Leaf Collections:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **Ohio EPA Scrap Tire Data:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **Ohio EPA Compost Report:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.
- **Food Scraps Hauler Data:** Actual tonnage was used for 2019, 2020 and 2021. Tonnage is projected to increase with population growth from 2022 to 2038.

Appendix I discusses many initiatives that the District hopes will result in recycling greater volumes and reduced contamination. The success of many of these initiatives is influenced by the District but is ultimately dependent upon third-party participation, which the District cannot control or guarantee. Because of the uncertainty of data collection and program performance, the District has conservatively estimated recycling tonnage throughout the planning period based on population growth. Future recessions, economic activity, pandemics, natural disasters or other factors that effect waste generation and ultimately recycling and waste diversion programs can not be anticipated by the District.

In some circumstances, reduction of contamination may also reduce the reported recycling data. The District's previous initiatives with direct engagement has show that contamination represents 20-40% of the reported recycling that is reported by the District. In Appendix I and L, the District is focusing on changing behaviors on recycling through proper source separation to reduce contamination. With that, the tonnages may decrease from contamination reduction which may offset increases in recycling participation. This factor as well as others has caused the District to conservatively project recycling tonnages through the Plan Update.



APPENDIX F

INDUSTRIAL SECTOR REFERENCE YEAR RECYCLING

APPENDIX F. Industrial Reduction and Recycling Data

The District is not completing this section of the Plan Update as industrial recycling is not required to be tracked or projected per the 2020 State Solid Waste Plan and 4.1 Format.

Appendix H contains an analysis of the industrial sector.

Appendix I contains the District programs offered to the industrial sector, including the following:

1. Commercial and Industrial Waste Assessments and Assessments
2. Commercial and Industrial Technical Assistance
3. Commercial and Industrial Market Development and Scrap Tire Grant Assistance and Support
4. Commercial and Industrial Education
5. Commercial and Industrial Recycling Services



APPENDIX G

WASTE GENERATION

APPENDIX G. Waste Generation

A. Historical Year Waste Generated

The historical waste generation for the District (years 2015 through 2019) is shown in **Table G-1** below. Generation has been calculated based upon the sum of reported disposal and recycling for each year. Overall generation has remained somewhat steady. Out of the three sectors, the residential/commercial (R/C) sector has been the most stable. R/C per capita generation rates have ranged from 4.7 to 5.8 pounds per person per day (PPD) from 2015-2019. The per capita generation rate for total generation has ranged from 10.01 PPD in 2019 to 11.45 PPD in 2018.

Table G-1. Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial		Industrial		Total	Excluded (tons)	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled				
2015	327,694	238,942	84,021	55,469	220,730	671,251	72,089	11.22	-
2016	329,148	219,549	65,107	72,754	232,600	619,911	29,901	10.32	-0.08
2017	319,507	217,033	77,385	64,102	206,414	628,101	63,167	10.77	1.3%
2018	324,513	261,490	82,310	107,001	164,211	678,128	63,116	11.45	8.0%
2019	326,616	238,856	86,278	76,908	162,634	596,883	32,207	10.01	-12.0%

Note: PPD = Per capita pounds per person per day

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

Sample Calculations (2019):

Per capita generation rate = ((tons generated x 2000) ÷ 365) ÷ population)

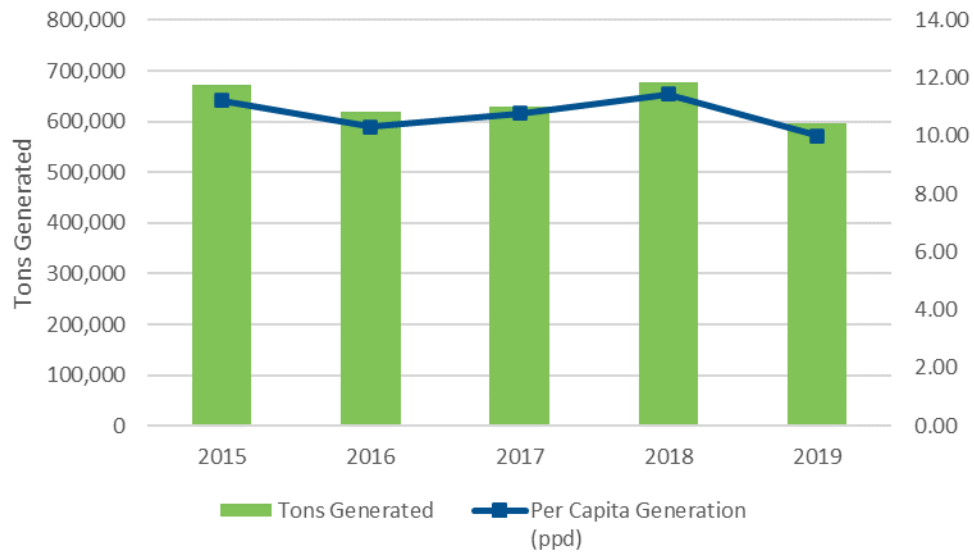
10.01 = (596,883 tons x 2,000) ÷ (365 x 326,616 residents)

Annual percentage change (R/C)= ((New year – old year) ÷ old year) x 100

-12.0% = (596,883 tons - 678,128 tons) ÷ 678,128 tons)

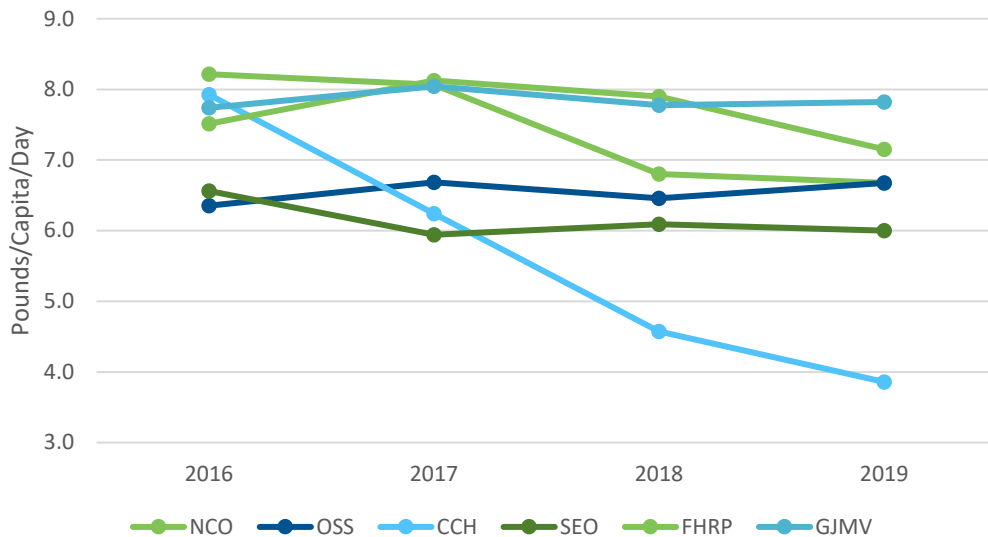
Figure G-1 shows the District's waste generation over a longer historical period. Both the tons generated and the generation rate have stayed steady since 2014.

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



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

Figure G-2. MSW Generation Rates for Selected Ohio SWMDs: 2016 - 2019



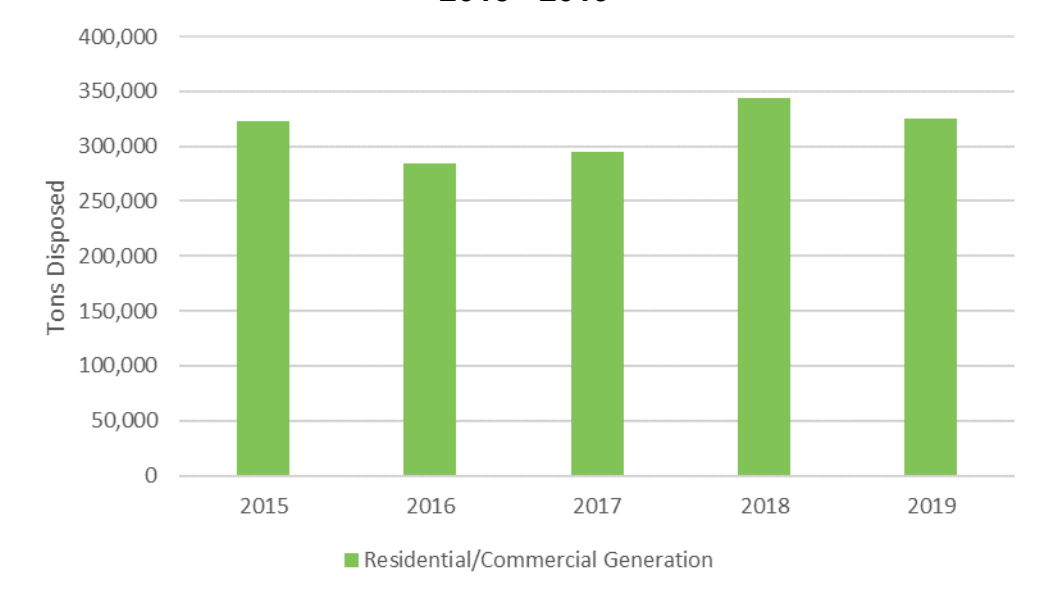
Most SMWDs that were analyzed in **Figure G-2** stayed consistent with generation rates from 2016 to 2017. Generation rates also consider increased data collection in the recycling data. By 2019, it had the third highest generation rate. Out of the comparable SWMDs, Carroll-Columbiana-Harrison SWMD had a significantly lower generation rate than all other SWMDs analyzed. Investigating Carroll-

Columbiana-Harrison SWMD’s programming may provide opportunities to the District to further reduce its generation rate.

1. Residential/Commercial Waste

Total residential/commercial waste generation in the District has fluctuated since 2015 as illustrated in **Figure G-3**. Disposal decreased approximately 86 tons from 2015 to 2019, while recycling increased nearly 2,250 tons or 2.7%.

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



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

Residential/Commercial Per Capita Generation Rates: 2015 - 2019

Year	Daily Per Capita Recycling (PPD)	Daily Per Capita Disposal (PPD)	Daily Per Capita (PPD)
2015	1.4	4.0	5.4
2016	1.1	3.7	4.7
2017	1.3	3.7	5.0
2018	1.4	4.4	5.8
2019	1.4	4.0	5.5

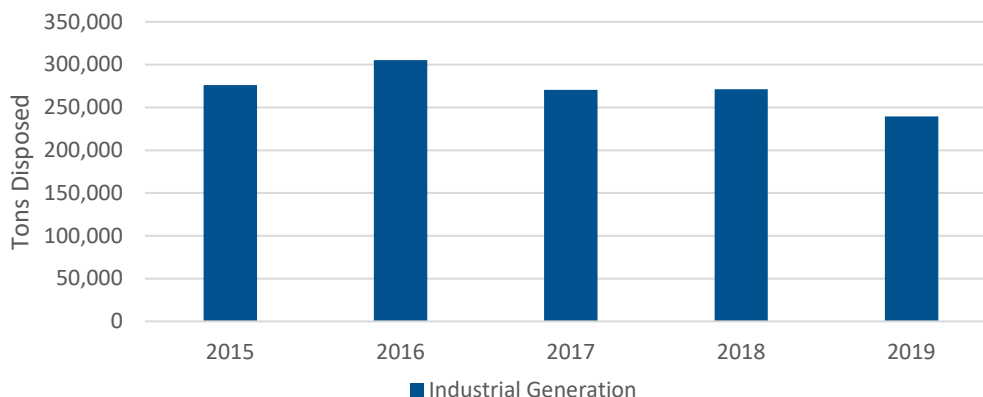
Per capita recycling rates have generally increased significantly over the past decade as drop-off recycling programs, municipal yard waste composting programs, and District recycling programs have been implemented, improved, and expanded throughout the county. Overall

generation increased a modest amount and disposal has increased approximately a half pound per person per day. The greatest change in the management of waste generated in the District is the increase in recycling.

2. Industrial Waste

Total industrial waste generation has fluctuated between 2015 and 2019. Overall industrial sector generation has generally been constant. While overall generation is consistent, the District does not anticipate that these totals will reach 2016 levels unless new or expansion of existing industries would occur in the District. Some major industries have closed or have reduced sales, which has impacted the waste generation rates and recycling rates. As demonstrated in the following figure, disposal totals have fluctuated and remained somewhat stagnant.

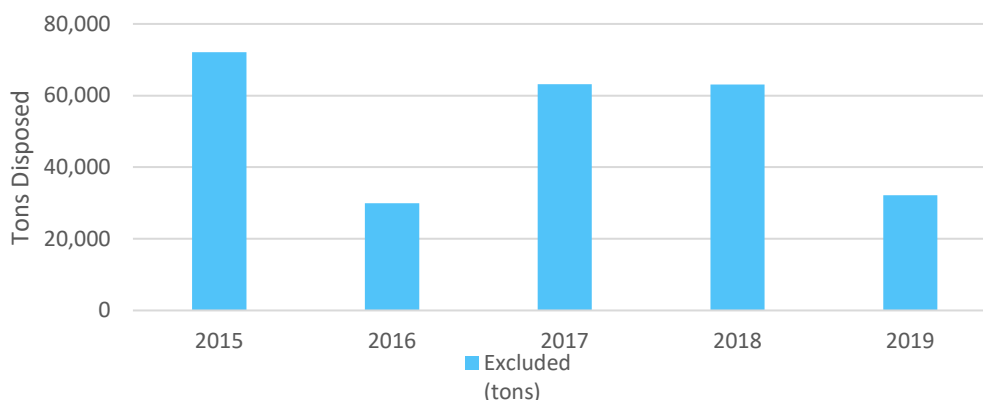
Figure G-4. District Industrial Waste Generation: 2015 - 2019



3. Excluded Waste

Excluded waste was determined to be less than 10.0 percent of the total waste disposed in the reference year.

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



B. Generation Projections

Generation projections for the District have been developed in Appendices D and E for disposal and recycling for the residential/commercial and disposal only for the industrial sector. These projections which are presented in detail in Appendices D, E and F, are summarized below in **Table G-2**. In general, residential/commercial disposal tonnages are expected to increase annually. Recycling for the residential/commercial sector is projected to increase each year of the planning period.

Industrial disposal is projected to remain constant throughout the planning period. Industrial recycling projections have been eliminated as they are no longer required.

Excluded waste projections were eliminated as they are less than 10% of the overall generation of the District.

Table G-2. Generation Projections

	Year	Population	Residential/ Commercial		Industrial		Excluded Waste	Total Tons	Per Capita Generation (ppd)	Annual % Change in Total Tons
			Disposal	Recycle	Disposal	Recycle	Disposal			
X First Year of Planning Period →	2019	326,616	238,856	86,278	76,908	162,634	0	564,676	9.47	-----
	2020	327,129	240,464	87,916	77,810	187,508	0	593,698	9.94	5.1%
	2021	327,218	242,082	74,105	78,722	187,508	0	582,418	9.75	-1.9%
	2022	327,306	243,712	74,125	79,645	187,508	0	584,990	9.79	0.4%
	2023	327,395	245,352	74,145	80,579	187,508	0	587,584	9.83	0.4%
	2024	327,483	247,003	74,165	81,524	0	0	402,692	6.74	-31.5%
	2025	327,571	248,666	74,185	82,480	0	0	405,331	6.78	0.7%
	2026	327,803	250,340	74,226	83,447	0	0	408,012	6.82	0.7%
	2027	328,035	252,025	74,279	84,425	0	0	410,728	6.86	0.7%
	2028	328,267	253,721	74,331	85,415	0	0	413,467	6.90	0.7%
	2029	328,499	255,429	74,384	86,416	0	0	416,228	6.94	0.7%
	2030	328,730	257,148	74,436	87,429	0	0	419,013	6.98	0.7%
	2031	329,012	258,879	74,496	88,454	0	0	421,829	7.03	0.7%
	2032	329,294	260,621	74,560	89,491	0	0	424,672	7.07	0.7%
	2033	329,576	262,375	74,624	90,541	0	0	427,540	7.11	0.7%
	2034	329,858	264,141	74,688	91,602	0	0	430,431	7.15	0.7%
	2035	330,140	265,919	74,751	92,676	0	0	433,347	7.19	0.7%
	2036	330,457	267,709	74,820	93,763	0	0	436,292	7.23	0.7%
	2037	330,773	269,511	74,892	94,862	0	0	439,265	7.28	0.7%
	2038	331,090	271,325	74,964	95,974	0	0	442,263	7.32	0.7%



APPENDIX H

STRATEGIC EVALUATION

APPENDIX H. Strategic Analysis

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

The following sections are included in Appendix H:

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

According to the 2020 State Solid Waste Management Plan, solid waste districts must prepare solid waste management plans that demonstrate progress towards achieving the following ten goals: The analysis contained in Appendix H evaluates the District's overall compliance with these 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. The industrial sector goal has been eliminated.

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, HHW, 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.

SECTION H-1. Residential Recycling Infrastructure Analysis

This analysis evaluates the performance of the existing residential recycling infrastructure in Allen, Champaign, Hardin, Madison, Shelby and Union Counties to determine if it is meeting the needs of the residential sector. As demonstrated in this section, the District has a robust recycling infrastructure with 77 drop-off recycling locations during the reference year. In addition, there are 20 non-subscription and 1 subscription curbside community in the District.

The first analysis conducted included a general infrastructure review for common recyclables generated by the residential sector. The following table identifies the common materials generated and if an outlet is available for the materials.

Recyclable Material	Local or Regional Outlet Availability	Availability
Aluminum containers	District Recycling Drop-Off Program Community Curbside Recycling Programs Local and Regional Scrap Yards	Daily to Weekly
Corrugated cardboard	District Recycling Drop-Off Program Community Curbside Recycling Programs	Daily to Weekly
Glass containers	District Recycling Drop-Off Program Community Curbside Recycling Programs	Daily to Weekly
Mixed paper	District Recycling Drop-Off Program Community Curbside Recycling Programs	Daily to Weekly
Newspaper	District Recycling Drop-Off Program Community Curbside Recycling Programs	Daily to Weekly
Plastic containers	District Recycling Drop-Off Program Community Curbside Recycling Programs	Daily to Weekly
Steel containers	District Recycling Drop-Off Program Community Curbside Recycling Programs Local and Regional Scrap Yards	Daily to Weekly

This broad-based analysis indicates a wide range of recycling services that covers the communities and most townships in the District. In addition, there are local and regional scrap yards that take some ferrous and non-ferrous metals.

A. Curbside Recycling

Curbside recycling in the District is operated by a system of for-profit and government agency operations. The District does not operate/provide for curbside recycling services. The District encompasses 128 communities. The standard set of single stream recyclable materials includes cardboard, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass.

Non-subscription (NS) curbside recycling means that residents do not have to opt-in or pay additional fees to participate. Non-subscription curbside recycling is

available to all residents in single-family homes and some low-volume (i.e., duplex-style) multi-family homes.

In contrast, residents who live in political subdivisions with subscription (S) based programs must contact their solid waste hauler and opt-in to a curbside recycling program for a fee.

At a minimum, curbside recycling programs in the District accepted the following materials:

- Corrugated cardboard/paperboard
- Mixed paper
- Newspaper
- Magazines
- Aluminum cans
- Steel/bi-metal cans
- #1–#2 plastic bottles and jugs
- Clear, green, and brown glass

Each city, village and township was responsible for establishing and operating their curbside recycling program.

1. Program Performance

In 2019, curbside recycling programs collected 7,043 tons. **Table H-1.1** presents the total tons recycled from community curbside programs during 2019. Population is based on 2019 estimates performed by the Ohio Development Services Agency (ODSA). The total occupied households per community was used to estimate curbside pounds per household (as reported by the United States Census Bureau).

Table H-1.1: Curbside Recycling Communities

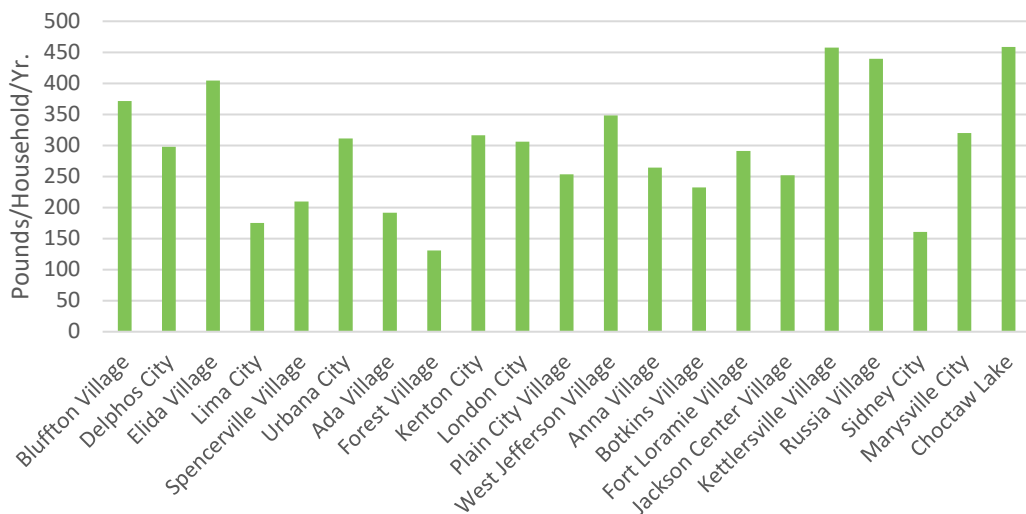
Community	County	Curbside Type	Pop	HH	Tons Recycled	Lbs/HH/ Yr	Lbs/Pers on/Year
Bluffton Village	Allen	NS	4,082	1,624	302	371	148
Delphos City	Allen	NS	6,937	2,759	411	298	118
Elida Village	Allen	NS	1,803	717	145	404	161
Lima City	Allen	NS	36,659	14,580	1,278	175	70
Spencerville Village	Allen	NS	2,161	859	90	210	83
Urbana City	Champaign	NS	11,404	4,465	695	311	122
Ada Village	Hardin	NS	5,544	2,109	202	192	73
Forest Village	Hardin	NS	1,431	544	36	131	50
Kenton City	Hardin	NS	8,180	3,112	492	316	120
London City	Madison	NS	10,328	3,538	542	306	105
Plain City Village	Madison	NS	4,586	1,571	199	253	87

Community	County	Curbside Type	Pop	HH	Tons Recycled	Lbs/HH/ Yr	Lbs/Pers on/Year
West Jefferson Village	Madison	NS	4,431	1,518	265	349	120
Anna Village	Shelby	NS	1,520	586	78	264	103
Botkins Village	Shelby	NS	1,158	447	52	232	90
Fort Loramie Village	Shelby	NS	1,523	588	85	291	112
Jackson Center Village	Shelby	NS	1,465	565	71	252	97
Kettlersville Village	Shelby	NS	170	66	15	457	176
Russia Village	Shelby	NS	664	256	56	440	169
Sidney City	Shelby	NS	20,449	7,890	633	161	62
Marysville City	Union	NS	24,667	7,941	1,271	320	103
Choctaw Lake	Madison	S	1592	545	125	458	157

Diversion Analysis by Household

Table H-1.1 demonstrates that curbside recycling rates ranged from 131 lbs. to 458 lbs. per household (hh) per year during the reference year. The following graph depicts the curbside recycling data by community for pounds per household per year recycled:

Figure H-1.1. Tonnage of Curbside vs Drop-Off Programs



According to The Recycling Partnership (TRP), on average, the national rate of recovery from curbside recycling is 300-350 lbs/hh/year. TRP suggests that a good target recovery rate for communities would be 400-450 lbs./hh/year. They report some high performing communities achieve a 600 lbs./hh/year on average. The District averages 295 lbs per household per year which is on the low end of TRP range and 100-105 lbs per household per year lower that TRP target for a good recovery rate.

Diversion Analysis Per Capita

Table H-1.1 demonstrates that curbside recycling rates per capita per year ranged from 50 lbs. to 176 lbs. during the reference year. The average for the reporting communities was 106 lbs per capita.

Using the national average of 2.51 people per household and TRP household data above, on average, the national rate of recovery from curbside recycling per capita is 171 lbs with a target of 159 – 179 pounds per capita. High performing national communities have reported per capita recovery rates of 239 lbs per capita.

The average achieved by reporting District curbside communities in 2019 was 65 pounds below the national average according to TRP. The average achieved by reporting District curbside communities in 2019 was 53 – 73 pounds below the TRP suggested target recovery rate per capita. The average achieved by reporting District curbside communities in 2019 was 133 pounds per capital below the highest performing communities nationally according to TRP.

Performance Compared to Previous Plan

In the previous Plan Update reference year, District curbside communities recycled 5,595 tons in 2013 as compared to 7,043 tons in 2019, the reference year for this Plan Update. The increase of 1,448 tons or 20% was realized through the implementation of the last Plan Update.

Performance Compared to Drop-Off Program

The curbside programs recycled 7,043 tons in 2019 as compared to the recycling drop-off program that recycled 3,368 tons in 2019. The difference is 3,675 tons. Curbside programs recycle 52% more than drop-off programs.

Geographic Analysis

From a geographical perspective, there are curbside programs in each of the six counties of the District with the following distribution:

- 5 programs in Allen County
 - ✓ 2 City
 - ✓ 3 Villages
 - ✓ 0 Township
- 1 programs in Champaign County
 - ✓ 1 Cities
 - ✓ 0 Villages

- ✓ 0 Townships
- 3 program in Hardin County
 - ✓ 1 City
 - ✓ 0 Villages
 - ✓ 0 Townships
- 1 program in Madison County
 - ✓ 1 City
 - ✓ 2 Villages
 - ✓ 0 Townships
- 7 program in Shelby County
 - ✓ 1 City
 - ✓ 6 Villages
 - ✓ 0 Townships
- 1 program in Union County
 - ✓ 1 City
 - ✓ 0 Villages
 - ✓ 0 Townships

Cost Analysis

The District understands that the cost per household for service provided is reasonable and cost effective. The communities utilize competitive bidding or proposal processes to procure for curbside services. The District has assisted several communities with their bid packages.

2. Education and Awareness

The District provides general information regarding acceptable materials for recycling in the county on its website but urges residents to check with their community for any variations in the posted guidelines. The District also provides a variety of programs and other types of support to municipalities for curbside recycling, including offering contracting assistance, special waste collections, and other services. See Appendix L for a discussion of Education and Awareness programs within the District.

Marysville Tagging Project

In 2018 and 2019, the District implemented an initiative from the solid waste plan (NCO-1.3) that involved a direct engagement program with residents. The initiative was to evaluate and develop a resident engagement program that will be designed to decrease contamination in curbside recyclables collected in single stream recycling communities that are processed by District facilities. The District will begin the evaluation phase by first conducting a waste characterization of single stream recyclables delivered to District facilities to better understand the types of materials in the stream that are not processable or recyclable.

The District will then develop an engagement process to target reduction in the key materials delivered to District facilities that are not acceptable. The resident engagement process may include the following options:

1. Spot checking program participation by inspecting curbside recycling set-out materials.
2. Providing residents with information on how to improve their participation in the program.
3. Engaging residents directly to provide education and awareness on the acceptable materials for their curbside single stream recycling program.
4. Engaging contracted haulers (Republic Services) in the single stream recycling communities that deliver collected materials to District facilities for processing.
5. Work with the targeted communities to ensure proper guidelines are available for residents via their web site or printed materials.

The planning for the project began in February of 2019 and the targeted community was selected to be Marysville. The following schedule depicts the activities that occurred for the project:

Campaign Tasks	Tentative Date(s)
Meeting with City, Republic Services, Union Recyclers Staff and NCO	Wednesday, February 13, 2019
Internship Selection Process	Advertise for Intern by End of February, 2019
Pre-Audit Conference Call	March 28, 2019
Audit at Union Recyclers to Determine Main Contaminants for Marysville	May 16 - Capture Residuals May 20 - Sample Residuals
Order Tags and Handouts	By April 2019
Hire Interns	By end of April 2019
Develop training documents	by May 13, 2019
Interns Starts	Monday, May 13, 2019
Meeting with City and Republic to Finalize Route Schedule	by May 15-16, 2019
9 Week Campaign	June 3, 2019 – August 4, 2019
Mail top issue to households	Monday, July 15, 2019

Campaign Tasks	Tentative Date(s)
Conduct Post Audit at Union Recyclers to Verify Reduction in Contaminants	August 1 - Capture Residuals August 5 - Sample Residuals
Presentation to City and NCO	Wednesday, October 30, 2019

The results of the project were as follows:

	May	August	% Change Difference
Plastics Total	57.9%	33.0%	43.0%
Collection Bags	2.4%	1.2%	50.0%
Trash/Other	14.6%	11.8%	19.2%
Total of greatest impact contamination	74.9%	46.0%	38.6%

The project was considered a great success and later won an award by the National Recycling Coalition for the 2019 Outstanding Outreach program by a public sector entity.



3. Strengths, Challenges, Opportunities

Strengths

- There are 20 non-subscription and 1 subscription curbside recycling programs in the District.
- There are 10 PAYT programs in the District.
- The District averaged 295 pounds per household per year which is in the average range for communities as determined by the Recycling Partnership.
- Every major community in each county of the District has curbside recycling.

Weaknesses/Challenges

- 107 communities in the District do not have curbside recycling.
- Curbside programs have significant amounts of contamination.

-
- District communities are performing below the ideal curbside program as indicated by the Recycling Partnership (295 lbs/hh/year versus 400 lbs/hh/year).
 - Direct engagement with residents is not happening outside of the pilot projects the District completed in its last Plan Update.
 - Only one consortium of villages exists for curbside trash and recycling contracts (Shelby County Villages).
 - Existing single hauler contracts require minimal education and no direct engagement initiatives.
 - Multi-family housing units are primarily excluded from single hauler and consortium contracts and are treated as commercial in most communities.

Opportunities

- Single hauler contract assistance (meetings, promotion, RFP assistance)
- New communities to target (no contracts, trash only, subscription)
- Evaluation of additional consortiums
- Consortiums (outside of Shelby) (meetings, promotion, RFP assistance)
- Third service on contracts (yard waste) (meetings, promotion, RFP assistance)
- Contamination reduction
- Participation growth
- Contacts include tagging and other education engagement
- Multi family housing included in contracts or city services

B. Drop-Off Recycling Infrastructure

The District coordinates the drop-off program that consists of 17 full-time sites and 40 part-time sites. The District, private sector and Van Wert SWMD provides service for these drop-off sites. These sites assist residents who do not have access to curbside recycling, such as residents living in multi-family housing units. The sites all accept the following materials:

- Plastic bottles and jugs
- Glass bottles and jars
- Steel food cans
- Aluminum cans
- Mixed paper (newspaper, magazines, copy paper, junk mail)
- Cardboard/paperboard

1. District Drop-off Programs (Reference Year)

Drop-Off Lists and Calendar

The District developed a detailed list of all drop-off sites and any associated pick-up schedule on its web site.

2. Analysis and Evaluation

In 2019, the annual tonnage collected from individual sites was 3,367 and ranged from .44 tons to 2,200 tons. The average tonnage collected at each site was 73 tons.

The following extrapolated data analysis indicated the following for 2019:

Pounds collected per capita/month:	1.72
Pounds collected per capita/year:	20.62
Pounds collected per month:	561,166
Tons collected per month:	280.58
Tons collected per year:	3,367

The following table presents the drop-off recycling infrastructure available in each community during the reference year.

Table H-1.2: Drop-off Recycling Sites during 2019

Name	County	Tons
Allen County Recyclers	Allen	2,200
Allen County, Delphos City - Marion Township	Allen	28.46
Allen County, Delphos City - Saint John High School	Allen	17
American Township Mobile Drop-off	Allen	20.54
Bath Township Mobile Drop-off	Allen	14.42
Cairo Village - Monroe Township Mobile Drop-off	Allen	6.45
Ford Motor Company	Allen	78.34
Gomer - Sugar Creek Township	Allen	22
Harrod Village - Auglaize Township Mobile Drop-off	Allen	7.66
Cenovus Refining (Formerly Husky (Premcor))	Allen	28.25
Lafayette Village - Jackson Township Mobile Drop-off	Allen	10.82
Neighborhood Relief Thrift Store, Allen County, Lima, Ohio	Allen	N/A
Perry Township	Allen	36.33
Spencerville - Amanda Township Mobile drop-off (This site closed in 2021)	Allen	43.88
Waste Management of NW Ohio	Allen	37.06
Christiansburg Village - Jackson Township Mobile Drop-off	Champaign	5.668
Mad River Township Mobile Drop-off	Champaign	3.3635

Name	County	Tons
Mechanicsburg - Goshen Township Mobile Drop-off	Champaign	5.3345
North Lewisburg Village - Rush Township Mobile Drop-off	Champaign	3.4755
Rosewood Village - Adams Township Mobile Drop-off	Champaign	2.152
St. Paris Township/Johnson Township Mobile Drop-off	Champaign	7.9065
Urbana - Salem Township Mobile Drop-off	Champaign	1.645
Urbana Township	Champaign	84.96
Wayne Township Mobile Drop-off	Champaign	2.055
Dunkirk Village - Blanchard Township Mobile Drop-off	Hardin	10.71
Kenton	Hardin	154.21
Kenton - Cessna Township	Hardin	2.8
Mt. Victory - Dudley Township	Hardin	3.5
Mt. Victory Village - Hale Township	Hardin	20.82
Amity Village - Canaan Township	Madison	6.8255
Choctaw Lake - Somerford Township	Madison	N/A
Lafayette - Deercreek Township	Madison	1.9835
London	Madison	0.27097
Madison County, Jefferson Township Mobile Drop-off	Madison	1.7565
Mt. Sterling Village - Pleasant Township	Madison	0.9045
Newport Village - Paint Township	Madison	
Oak Run Township	Madison	4.3285
Plumwood Village - Monroe Township	Madison	2.4545
Anna Village - Dinsmore Township	Shelby	4.71
Fort Loramie Village - McLean Township	Shelby	161.98
Houston Village - Loramie Township	Shelby	40.60
Jackson Center Village - Jackson Township	Shelby	92.73
Kettlersville Village - Van Buren Township	Shelby	5.25
McCartyville Village - VanBuren Township	Shelby	77.09
Sidney	Shelby	
Swanders Village - Franklin Township	Shelby	3.5
Allen Township	Union	1.25
Magnetic Springs Village - Leesburg Township	Union	0.83
Marysville	Union	334.34
Milford Center Village - Union Township Mobile Drop-off	Union	2.43
Paris Twp	Union	N/A
Plain City	Union	4.56
Plain City - Jerome Township Mobile Drop-off	Union	7.59
Raymond Village - Liberty Township Mobile Drop-off	Union	0.83
Richwood Village - Claibourne Township	Union	131.5
Unionville Center - Darby Township Mobile Drop-off	Union	2.124
York Center - York Township Mobile Drop-off	Union	0.44

3. Materials Accepted, Minimum Standards, Size of Container Analysis

The drop-off recycling program accepts a comprehensive mix of materials, which include:

Paper:

- Newspapers
- Mixed Paper
- Magazines
- Cardboard: Corrugated
- Cardboard: Box board
- Cardboard: Shoe Boxes

Cans/Containers:

- Aluminum Beverage Cans
- Steel, Tin, Bimetal Food Cans
- Glass Bottles and Jars
- Juice and Drink Cartons

Plastics:

- Plastic Bottles and Containers

Container sizes varies from 20-30 cubic yard roll-off containers to rear load packer trucks for the mobile collections.

4. District vs Other Solid Waste District Analysis

Comparing the District's program to others in the state. Districts were chosen based on contracting or supporting their drop-off program.

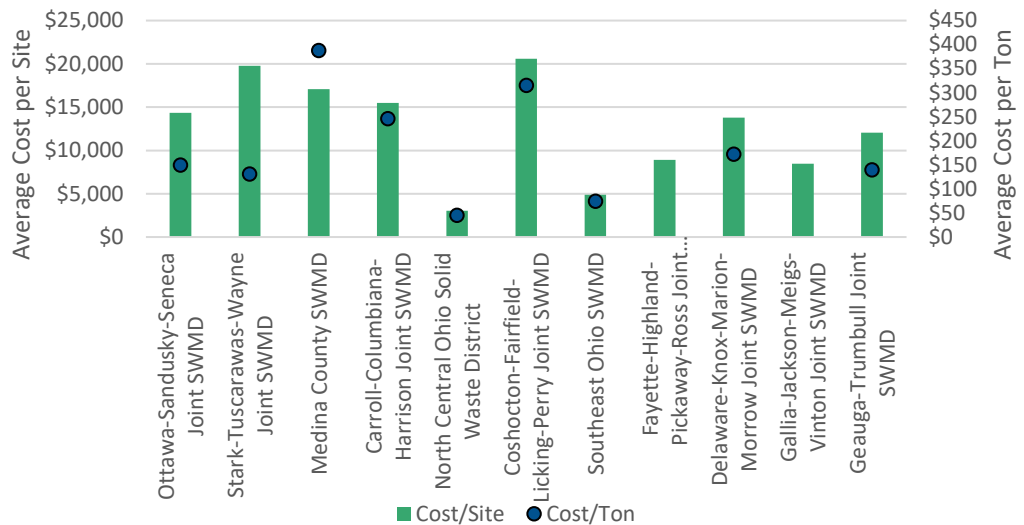
Drop-off Program Comparison to Other Districts

District	Data Year	Tons	Sites	Cost	Cost/ Site	Population	Cost/ Ton	Cost/ Capita	Hauler
Ottawa-Sandusky-Seneca Joint SWMD	2019	4,139	44	\$616,688	\$14,342	162,850	\$150	\$0.09	Contract
Medina County SWMD	2019	2,863	65	\$1,110,269	\$17,081	181,697	\$388	\$0.09	Contract
Carroll-Columbiana-Harrison Joint SWMD	2019	3,525	56	\$867,789	\$15,496	144,429	\$246	\$0.11	District
North Central Ohio Solid Waste District	2019	3,749	56	\$169,700	\$3,030	325,623	\$45	\$0.01	District
Coshocton-Fairfield-Licking-Perry Joint SWMD	2019	5,345	82	\$1,686,829	\$20,571	395,764	\$316	\$0.05	District/ Contract

District	Data Year	Tons	Sites	Cost	Cost/ Site	Population	Cost/ Ton	Cost/ Capita	Hauler
Southeast Ohio SWMD	2019	4,013	61	\$298,627	\$4,896	226,666	\$74	\$0.02	District/ Contract
Fayette-Highland-Pickaway-Ross Joint SWMD	2019	N/A	39	\$347,111	\$8,900	206,809	N/A	\$0.04	Contract
Delaware-Knox-Marion-Morrow Joint SWMD	2019	4,080	51	\$703,117	\$13,787	306,538	\$172	\$0.04	Contract
Gallia-Jackson-Meigs-Vinton Joint SWMD	2019	N/A	27	\$228,152	\$8,450	104,641	N/A	\$0.08	Contract
Geauga-Trumbull Joint SWMD	2019	3,868	45	\$541,861	\$12,041	293,029	\$140	\$0.04	Contract
Stark-Tuscarawas-Wayne Joint SWMD	2019	11,616	77	\$1,521,922	\$19,765	583,531	\$131	\$0.03	District

Contract rates for recycling vary based on who is servicing the drop-off, cost of tipping fees, and number of containers per site. These statistics were not available for this analysis. The following figure shows a comparison for the District and selected ten other districts to show the cost per site and ton relative to the District's. The District has the lowest cost per site and per ton of those compared.

**Drop-off Program Comparison to Other Districts:
Cost per Site and Cost per Ton**



5. Strengths, Challenges, Opportunities

Strengths

- There is a good infrastructure of full and part time sites located throughout the District
- Over 3,300 tons were recycled in 2019
- Some of the part time sites are staffed which reduces contamination issues
- The District's web site contains detailed flyers and schedules for all drop-off sites associated with the District

Weaknesses/Challenges

- Dumping and contamination at non-staffed sites is an issue at certain sites
- Different container systems are used for the various drop-off sites
- Signage is inconsistent from site to site

Opportunities

- Illegal dumping messaging
- Solid waste enforcement (hiring deputies to enforce open dump laws)
- Open dumping ORC language signs at sites
- Cameras at sites for enforcement
- Create District rules for enforcement
- Frontload dumpster service

SECTIONS H-2 and H-3. Business and Industrial Sector Analysis

This analysis considers both commercial/institutional **and** industrial businesses in the District since the District’s business assistance programs service both similarly.

This analysis evaluates existing commercial and industrial waste recovery, the existing recycling infrastructure, and the existing programs and services offered by the District or the private sector. The goal of this analysis is to help the District identify types of businesses that could be targeted for additional recovery and determine if additional infrastructure or assistance is required to increase recovery of business waste streams.

A. Business and Industry Profiles

The following sections discuss the largest companies and entities in the District based on their waste generation.

1. Commercial/Institutional Establishments

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

In 2019, the District’s list of commercial and industrial establishments includes the following:

Establishment Type	Quantity
Commercial and Institutional	2,869
Industrial	630

Table H-2.1 shows the top 50 waste generators that are commercial/institutional and industrial establishments.

Table H-2.1. Top 50 Commercial/Industrial/Institutional Generators

Company Name	Location
Honda - Marysville	Marysville
Honda - Anna	Anna
K T H Parts Industries Inc	Saint Paris
Precision Strip Inc	Kenton
Tower Automotive Inc	Bluffton
Ford Motor Co. - Lima Engine Plant	Lima
BBi Enterprises Group Inc.	Sidney
Nickles Bakery	Lima

Company Name	Location
Dana Driveshaft Manufacturing, LLC	Lima
Vanamatic Co	Delphos
Ross Aluminum Foundry LLC	Sidney
Nelson Packaging Co., Inc.	Lima
Allen County Pallet	Lima
General Dynamics Corp	Lima
Trinity Industries Inc	Lima
American Trim PC3	Sidney
Caraustar Saint Paris	Saint Paris
Copeland Corp	Sidney
Sidney Bakery	Sidney
Showa Aluminum Corp of America	Mount Sterling
Scroll Compressors, LLC	Sidney
Lakeview Farms, Inc.	Delphos
Procter & Gamble Manufacturing	Lima
Menards, Lima	Lima
Stephens Pipe and Steel	Mount Sterling
Marwil, Inc.	Fort Loramie
Durez Corporation	Kenton
Honda Development and Manufacturing of America, LLC.	Raymond
Accubuilt Inc	Lima
Veyance Technologies, Inc.	Marysville
Lima Pallet Company, Inc.	Lima
International Fiber Corp.	Urbana
I & K Distributors Inc	Delphos
Wal-Mart Stores Inc	Kenton
Wal-Mart Stores Inc	Lima
Wal-Mart Stores Inc	Lima
Wal-Mart Stores Inc	Marysville
Wal-Mart Stores Inc	Sidney
Wal-Mart Stores Inc	Urbana
Knief Enterprises LLC	Botkins
A & M Industrial Wood	Sidney
Norcold Inc.	Sidney
PTC Inc.	Lima
Eagle Print	Delphos
Trutec Industries	Urbana
Hardin County Solid Waste	Kenton
Hydro Aluminum North America	Sidney
Interstate Battery	Lima
Meijer	Lima
Kroger	Kenton
Toagosei America Inc.	West Jefferson
Marimor Industries Inc.	Lima
Stites Grocery	Lima
Hexa Americas, Inc.	Sidney

B. Business Recycling Infrastructure

There are a variety of recycling service providers and recyclers that are available to District businesses. **Table H-2.5** identifies key companies or establishments that accepted recyclables from District businesses during the reference year. This list is not exhaustive of all recycling opportunities available to the business sector.

Table H-2.5. Recyclers for District Commercial and Industrial Waste

Company Name	Street Address	City	State
Allen County Pallets	700 E Hanthorn Rd	Lima	OH
Allen County Recyclers Inc.	P.O. Box 1264	Lima	OH
Damar Products Inc.	516 Park	Clinton	OH
Gateway Confidential	4223 E 49th St	Cleveland	OH
Hardin Co Solid Waste & Recycling Facilities	45 Jones Rd	Kenton	OH
Ohio Recycling Inc	7837 SR 274	Chickasaw	OH
Recleim	1200 E Kibby St., Suite 8	Lima	OH
Union Recyclers	P.O. Box 712	Marysville	OH
Werlor Recycling	1420 Ralston Ave	Defiance	OH

Some of these recycling facilities will collect or accept waste from a business based on their proximity, amount available, and market value of the material. Select facilities provide drop-offs for businesses. In addition, the District is serviced by multiple hauling companies that are listed below.

Haulers	Address	City	State
A.J. Clark Removal LLC	P.O. Box 66	Milford Center	OH
Action Refuse	926 W Spring St	Lima	OH
All Things Rubbish	15152 Township Road 190	Arlington	OH
Allen County Refuse	1400 S. Metcalf	Lima	OH
Allied Waste Services	11164 Co Rd 4	Carey	OH
Art's Roll Off	PO Box 2039	Lima	OH
Bobcat Multi Works	2765 Co Rd 21	DeGraff	OH
Brown's Refuse	3737 Lawrence Road	Harrod	OH
Countryside Waste Service	6141 Depweg Rd	Celina	OH
Cyrus Concrete Construction	2322 Buttermilk Hill Rd	Delaware	OH
Griffith's Trash Pick Up Services	8225 Ft Amanda Rd	Cridersville	OH
H&S Haulers	3075 Eversole Rd	Columbus Grove	OH
Hastings Hauling	415 King St	Kenton	OH

Haulers	Address	City	State
Hemmelgran Services	624 N Knoop Johnston Rd	Sidney	OH
HW Mann & Sons Hauling	2614 Rocket Ave	Springfield	OH
J & N Hall-ers	2668 County Road 10	Ada	OH
Koogler's Refuse	7879 E. Lincoln Highway	Lima	OH
Lee's Hauling	1206 South Street	Piqua	OH
Lightner's Town & Country	228 Harrison St	Kenton	OH
M & M Refuse	P.O. Box 127	Columbus Grove	OH
Maharg Inc	3726 Monroe Rd Box 501	Celina	OH
Miller's Refuse	161 E Elm St	Ridgeway	OH
R.L.W.	PO Box 5	Lima	OH
Republic	956 S. Broadway	Lima	OH
Republic Waste Services	2946 St Rte 68 N	Bellefontaine	OH
Republic Waste Services	933 Frank Rd	Columbus	OH
Roberts (Jim) Hauling	406 E Peterson	Troy	OH
Roberts Refuse	1148 St Rte 55	Urbana	OH
Rumpke	1932 E Monument Ave	Dayton	OH
Rumpke Transportation	5474 Jaysville Saint Johns Rd.	Greenville	OH
Rumpke Waste Inc	819 Island Rd	Circleville	OH
Smith's Roll Off Container	2855 Oletha Ave	Springfield	OH
SV&E Refuse LLC	13250 St Rte 292	Kenton	OH
Village of Forest	PO Box 220	Forest	OH
Vince Refuse Service Inc	301 Neosha Ave	Springfield	OH
Waste Collection of Christiansburg	PO Box 296	Christiansburg	OH
Waste Management	3975 Wagner Ford Rd	Dayton	OH
Waste Management of OHIO	1550 E 4th St	Lima	OH
Wee Haul	731 Lindsey Rd	Sidney	OH

C. Landfill Diversion (Industrial Sector)

The landfill diversion analysis is being conducted for the industrial sector only. Recycling and disposal data can be isolated for the industrial sector, unlike the commercial sector which is combined with residential sector data.

In 2019, industrial businesses recycled approximately 162,633 tons of waste. The tons of industrial waste recycled, including the types of materials recycled, are discussed in more detail in Section *H-7, Diversion Analysis*.

As shown by **Figure H-2.2**, ferrous metals comprise the majority of industrial sector recyclables. **Table H-2.6** shows the quantity of material recycled by the industrial sector in 2019.

Table H-2.6. 2019 Industrial Recycling Tons by Material

Description	Tons
Food (Composted)	652.00
Glass	22.90
Ferrous Metals	105,243.65
Non-Ferrous Metals	14,044.97
Non-Exempt Foundry Sand ³	3,017.00
Corrugated Cardboard	8,289.28
All other paper	253.69
Plastics	5,737.36
Rubber (not including tires)	914.00
Textiles	0.00
Wood	23,421.76
Commingled Recyclables ⁵	197.06
Misc: Elastomer gel, Powder Coating, Slag, pelletized dust, purge solvent, zinc dust	403.00
Recovered Wood Pulp	405.00
Metal Drums	7.69
Lamps, Bulbs, and ballasts	3.40
Ballast	0.21
Styrofoam	21.00
Totals	162,633.96

As demonstrated in **Table H-2.6**, the highest recovered material reported by the industrial sector was ferrous metals followed by wood, non-ferrous metals, cardboard and plastics.

A historical evaluation of the industrial sector shows the following tonnage recycled by year:

- 2018, a total of 159,829 tons
- 2017 a total of 192,641 tons
- 2016 a total of 232,600 tons
- 2014 a total of 220,730 tons

One of the overriding variables affecting increases and decreases of materials recycled in the industrial sector is due to whether or not a particular business responded to the District's recycling survey in a given year. Other factors that contribute to variations in tonnage include economic factors, energy/fuel pricing, and other economic issues. Since Ohio EPA changed the industrial engagement

and goals in the State Plan, recycling tonnage is not going to be tracked by the District starting in 2023.

2. District Business and Industry Recycling Assistance Programs

The District provides direct assistance to businesses through the following programs/initiatives:

a. Waste Assessment & Audits: Waste Audits

The District assists businesses with waste audits for commercial businesses, industries, agricultural operations, and non-profit organizations upon request for no cost. Audits evaluate the waste streams of each business/industry, the current disposal practices and costs, current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting. In 2019, the District worked with Industrial Recyclers (Sidney) to discuss plastic recycling in 2019. The District met with Madison County to assist them with the development of an E-waste collection program for 2019. The District also worked with Mt. Sterling on purchasing a larger container for their recycle program.

b. Other Commercial/Institutional/Industrial Programs: Commercial and Industrial Technical Assistance

The District provided resources for the commercial and industrial sector on its website.

OEPA Market Development and Community Development Grants

The District provides technical assistance to businesses and communities regarding Ohio EPA grants as requested. In 2019, the District assisted UCO Industries with a Market Development Grant application.

D. Strengths, Challenges, Opportunities

Strengths

- The District offers waste audit assistance for the commercial and industrial sectors.
- Both sectors recycle a significant amount of materials annually.

Weaknesses/Challenges

- The District does not engage the commercial or industrial sector directly.
- Multi-family housing in communities is considered commercial and is left out of curb side recycling opportunities.

Opportunities

- Waste audits and assessments
- Develop consortiums for commercial entities
- Multi-family housing assistance

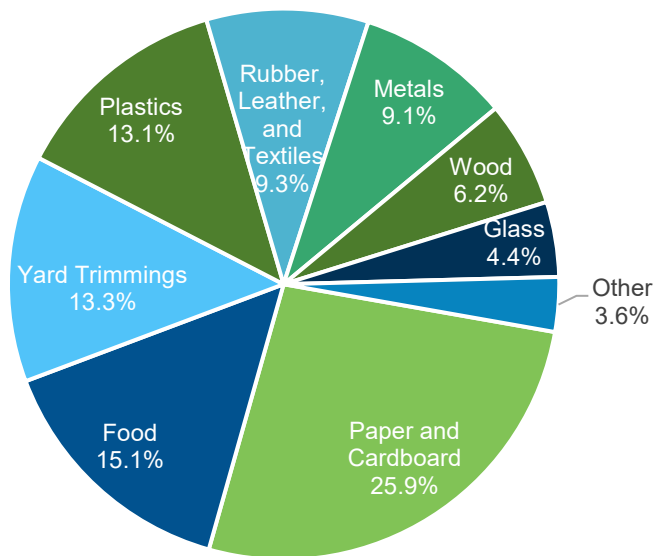
SECTION H-4. Residential/Commercial Waste Composition Analysis

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

A. Residential/Commercial Sector Waste Composition

According to U.S. EPA, paper and paperboard, food waste, and yard waste are the categories comprising the highest percentages of the residential/commercial waste stream by weight **before** any recycling takes place (see **Figure H-4.1**). Therefore, the District has targeted these waste streams for evaluating their management system in Sections B, C, and D of this analysis.

Figure H-4.1. U.S. Residential/Commercial Waste Composition by Weight: 2015



Source: US EPA. Advancing Sustainable Materials Management: 2015 Fact Sheet. July 2018.

The District’s recycling programs and facilities (curbside, drop-off, yard waste and MRFs) provide recycling opportunities for the majority of materials identified in the above composition. In 2019, the following were recycled:

Table H-4.1 Reference Year (2019) Recycling Data

Description	Res/Com	Industrial	Totals
Appliances	25.63		25.63
Lead-Acid Batteries	3.46		3.46
Dry Cell Batteries	1.07		1.07
Food (Composted)	14,137.07	652.00	14,789.07
Food (Other)			0.00
Glass	1,540.18	22.90	1,563.08
Household Hazardous Waste ²	12.88		12.88
Ferrous Metals	539.64	105,243.65	105,783.29
Non-Ferrous Metals	386.06	14,044.97	14,431.03
Non-Exempt Foundry Sand ³		3,017.00	3,017.00
Corrugated Cardboard	15,270.39	8,289.28	23,559.66
All other paper	6,604.95	253.69	6,858.64
Plastics	1,649.58	5,737.36	7,386.93
Rubber (not including tires)	0.00	914.00	914.00
Passenger Tires	7,009.92		7,009.92
Textiles	240.00	0.00	240.00
Used Oil ⁴	12.82		12.82
Wood	4,734.67	23,421.76	28,156.43
Yard Waste	32,903.78		32,903.78
Commingled Recyclables ⁵	2,691.62	197.06	2,888.68
Electronics (all residential)	32.52		32.52
Christmas Trees			0.00
Misc: Elastomer gel, Powder Coating, Slag, pelletized dust, purge solvent, zinc dust		403.00	403.00
Misc Metal			0.00
Other (OEPA)	435.04		435.04
Recovered Wood Pulp		405.00	
Metal Drums		7.69	7.69
Lamps, Bulbs, and ballasts		3.40	3.40
Ballast		0.21	0.21
Styrofoam		21.00	21.00
Totals	88,231.27	162,633.96	250,460.23

For the top three categories identified in the US EPA waste composition, the District reported the following recycled in 2019:

- Paper/cardboard – 30,418 tons
- Food waste – 14,789 tons
- Yard trimmings – 32,903 tons

These performance results were achieved through a combination of District programs and initiatives and the private sector facilities and generator programs.

B. Yard Waste Programs

3. Processing

Based on Ohio EPA reports, 22 Class II, III and Class IV composting facilities processed District yard waste in 2019. There were 15 located within the District. **Table H-4.2** identifies these facilities and the amount of material processed originating from within the District.

Table H-4.2 Class III and IV Compost Facilities and Processing Data

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
Compost Facilities						
Allen County						
YW1	Allen Correctional Institution	II		2338 North West Street, Lima	214	435
YW2	Lima Compost Facility/Wright Mulch Inc	II		1227 East Hanthorn Road, Lima	0	4,229
YW3	EOLM Lima Allen County Landfill Inc	IV		1500 Fort Amanda Road, Lima	0	109
YW4	Resource Recycling	III		1596 Neubrecht Road, Lima	0	144
YW5	Resource Recycling West	III		1596 Neubrecht Road, Lima	0	143
Champaign County						
YW6	Urbana Composting Facility	IV		1263 Muzzy Road, Urbana	0	3,977
Hardin County						
YW7	Hardin County Solid Waste Facility	IV		45 Jones Rd, Kenton	0	46
Madison County						
YW8	West Jefferson Composting Facility	IV		Mill Rd, West Jefferson	0	221
YW9	London Correctional Institution	II		1580 Ohio 56, London	0	78
YW10	R&SH CO LLC	III		9050 Amity Pike, Plain City	0	0
Shelby County						
YW11	Sidney Composting Facility	IV		690 Brooklyn Avenue, Sidney	0	1,101
YW12	Roe Transportation Inc	IV		3680 State Rte 47, Sidney	0	14,833
YW13	Village of Russia Composting Facility	IV		551 East Main Street, Russia	0	56
Union County						

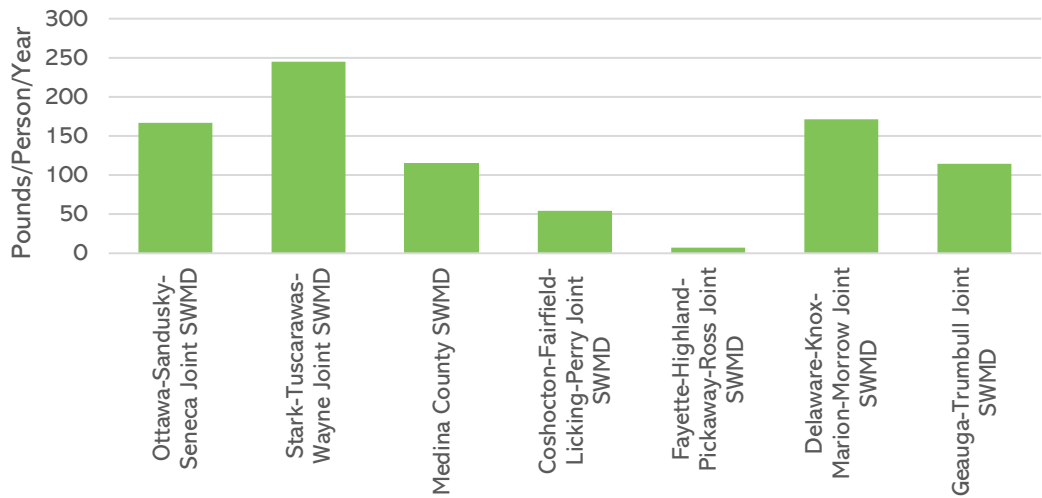
ID#	Facility or Activity Name	Class	Open to	Location	Tons Received from the SWMD	
YW14	Maintenance and Operations Center	IV		455 North Maple Street, Marysville	0	1,194
YW15	New Day Farms LLC Mad River East	III		27322 State Route 739, Raymond	0	0
YW16	New Day Farms LLC (Farm 3 Facility)	III		27400 Coder-Holloway Road, West Mansfield	0	0
YW17	New Day Farms LLC Mad River West	III		27322 Ohio 739, Raymond	0	0
In-District Facilities Total					214	26,566
Out-of-District Facilities						
YW18	Park Enterprise Construction Co Inc	IV		560 Barks Road West, Marion	0	159
YW19	Mad River Topsoil Inc	IV		5625 Old Lower Valley Pike, Springfield	0	2
YW20	Garick LLC Paygro Division	II		11000 Huntington Road, South Charleston	1	217
YW21	Cherokee Run Landfill Inc	IV		2946 US Rte 68 N, Bellefontaine	0	390
YW22	Price Farms Organics Ltd	II		4838 Warrensburg Road, Delaware	483	0
Out-of-District Facilities Total					484	767
Community Yard Waste Collection Programs						
Total					1	767
Mulching Operations						
None						
Total						0
Land Application						
None						
Total					0	0
Anaerobic Digestion						
None						DNR
Total					0	0
Hauler and Walmart Food Waste Data						
YW23	Hauler and Walmart				1,038	0

Many District communities are reliant upon these facilities for yard waste processing. Ohio EPA does not require Class II and IV composting facilities to indicate their annual processing capacity; therefore, the District is not able to evaluate whether there is sufficient yard waste processing capacity in the region or if facilities are operating near capacity limits.

The District’s recovery rate per capita in 2019 was 201 lbs/person based on 32,903 tons composted.

Figure H-4.2 represents recovery rates for the District compared to other selected, urban/rural mix solid waste management districts in Ohio.

Figure H-4.2 Yard Waste Recovery Rates Benchmark: 2019



Compared to other mixed urban/rural Districts in Ohio, the District recovers a higher than average quantity of yard waste per capita for 5 of the 6 districts evaluated. The District promotes composting as well as its yard waste programs.

Based on these results, no further analysis is deemed necessary regarding waste composition in the District.

1. Strengths, Challenges, Opportunities

Strengths

- A significant amount of the top 3-5 materials identified in the US EPA composition analysis are recycled in the District.

Weaknesses/Challenges

- No curbside community food waste collection programs exist in the District.
- Very little curbside yard waste opportunities exist in the District.

Opportunities

- Develop yard waste drop-off sites
- Curbside services for yard waste
- Food waste evaluation

SECTION H-5. Economic Incentive Analysis

In accordance with Goal 6 of the 2020 State Solid Waste Management Plan, the District is required to explore how to incorporate economic incentives into source reduction and recycling programs. For this analysis, the existing economic incentives that the District offers to encourage people to recycle will be evaluated. The District offers assistance to directly or indirectly provide economic incentives for greater recycling or waste reduction. For each of the financial assistance programs, a detailed process is explained in the District's Financial Assistance Manual which is updated regularly.

A. Recycling Assistance Grants

The District provides financial assistance funds for one-time expenses related to the start-up or improvement of curbside and drop-off recycling programs. Other recycling programs are also considered for funding per the District's policy for this program identified in the District's financial assistance guidance manual.

A financial assistance guidance manual defines requirements and the procedures to follow for entities seeking funds. Applicants must submit funding requests in advance of any proposed projects. This guidance document was updated during 2020 and is reviewed frequently.

In 2019, the District awarded 28 grants totaling \$74,417.15.

B. Community Clean-Up Grants

The District offers communities throughout the six-county area financial assistance for clean-up projects. Projects normally occur in the spring and allow residents to bring special items and bulk materials (such as mattresses and furniture) and other items not normally accepted by their trash hauler to a central collection area. Any political subdivision located within Allen, Champaign, Hardin, Madison, Shelby and Union Counties are eligible to apply. Additional details on funding criteria and allowable expenses were included in the District's financial assistance guidance manual, located in the District office.

A financial assistance guidance manual defines requirements and the procedures to follow for entities seeking funds. Applicants must submit funding requests in advance of any proposed projects. This guidance document was updated during 2020 and is reviewed frequently.

In 2019, the District awarded 22 grants totaling \$27,351.50.

C. Yard Waste Financial Assistance

The District offers communities, throughout the six-county region, financial assistance for managing yard waste (leaves, brush and wood). The projects

normally occur in the spring and fall. Typical projects in the past have involved grinding of yard waste for mulch.

D. Disaster Debris Management Financial Assistance)

The District annually budgets funds to provide financial assistance with unplanned solid waste management costs which are a direct result of disaster situations. In addition to the financial assistance, in the event of a natural disaster, the District offers the following technical assistance services to any County Emergency Management Agency (EMA) and/or local law enforcement in its jurisdiction:

- 1) Make District staff available 24 hours a day to respond to any solid waste disaster.
- 2) At the EMA's or local law enforcement request, the District Director will evaluate the situation to determine the process of clean-up and financial needs.
- 3) The District will coordinate with the local EMA, Ohio EPA district office and/or the local health department to establish disposal procedures and monitor debris sites to mitigate any impact on public health.

E. Outreach and Education Financial Assistance

The District offers outreach and education assistance funds for one-time expenses related to the education of District residents and students.

F. Scrap Tire Clean-Ups

The District offers assistance to county engineers, municipalities and townships with the costs of tire disposal and recycling associated with the clean-up of littered and illegally dumped tires. Under this program, the political subdivision is responsible for collecting the tires and then coordinating with the District for the proper disposal/recycling and hauling of the tires. The District will coordinate with a tire recycler/hauler to pick up the tires at a convenient time. The District can pay for the hauling and disposal fee. The contractor that the District is currently using shreds the tires for recycling applications.

G. Community Development Grant (Ohio EPA) Promotion and Assistance

The District continued to promote the Community Development Grant within the District. In 2019, The District was granted a Community Development Grant from Ohio EPA for a ballistic separator for the Union Recyclers new MRF expansion project. The District spent most of 2019 planning for the expansion. The equipment was not ordered in 2019 but is anticipated to be ordered and delivered by June 30, 2020.

The District applied for an Ohio EPA Community Development grant for a new roll-off truck to support the Union Recyclers MRF operations. The grant application process began in late 2019 with final submittal to OEPA in February of 2020.

The District assisted the City of Sidney with a grant application to Ohio EPA to conduct an education and outreach campaign for the City's curbside recycling program. The campaign will mirror the program the District conducted for the City of Marysville in 2019. The grant application process began in late 2019 with final submittal to OEPA in February of 2020.

H. Recycling Market Grant (Ohio EPA) Promotion and Assistance

The District continued to promote the Market Development Grant within the District Grant details were posted on the District's website. In 2019, the District assisted UCO Industries with a Market Development grant but did not serve as the governmental sponsor for UCO.

I. PAYT Programs

The District had 10 communities that operated a pay-as-you-throw (PAYT) waste collection program in conjunction with their non-subscription curbside recycling programs in 2019. This combination of programming is widely accepted as the most effective method for maximizing residential waste diversion. One of the reasons it is so effective is because it provides direct economic incentives to residents to recycle more and dispose less.

PAYT programs can be implemented in a variety of ways including a sticker system or cart-based programs. The combination of non-subscription curbside recycling and PAYT disposal is widely accepted as the most effective residential program pairing to maximize recycling.

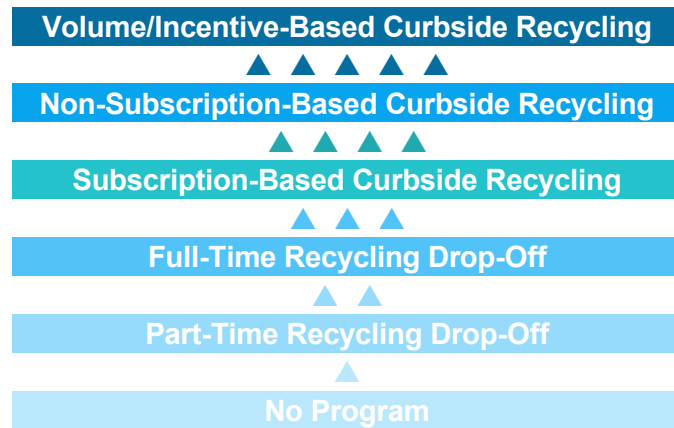
In addition to the type of curbside program (non-subscription, non-subscription/PAYT, subscription), other factors influence the performance of recycling programs. These factors include:

- **Ease of use:** Single stream programs require less sorting from residents and encourage participation by making recycling easy and less cumbersome than using multiple containers. Same-day collection as solid waste also improves a program's ease of use and makes the collection day easier to remember.
- **Container size:** Some communities allow residents to use their own containers for recycling, while other communities (or their contracted hauler) provide recycling containers. Small recycling containers or containers with no lid do not encourage residents to maximize their recycling efforts. The size of the container provided to residents should

provide adequate capacity to collect recycling, especially if collection is not weekly. Additionally, litter and debris can become an issue with open top containers because materials can escape the container on a windy day. Some communities that use open top containers instruct residents to forego setting out paper recycling if there is a chance of rain because of issues with collection and processing. This complicates recycling and makes residents store recyclables until a collection day that might be weeks away.

- **Variety of materials accepted:** Accepting more materials promotes increased waste diversion. Programs that do not accept corrugated cardboard, for example, will likely be less successful in terms of total quantities recycled than programs that do accept it.
- **Availability of program information:** Most communities post information about their curbside recycling program on their websites. Essential information for residents includes a list of materials accepted and how to prepare materials for collection, pick-up schedules, how to obtain an initial or replacement recycling bin, and contact information for questions. Tailoring information available to the community is also helpful to increasing participation (such as making information available in other languages for communities with significant populations of non-English speaking residents).
- **Education, Outreach, and Publicity:** Making sure residents are aware of their curbside recycling program and keeping them engaged with the program on a long-term basis can be accomplished using a variety of strategies. Examples include occasional reminders about the recycling program, such as a letter from the mayor or county commissioners, including a message on utility bills, providing printed materials at highly-frequented buildings such as city/township/village halls, displays/outreach at public events.
- **Automated vs. Manual Collection:** Automated recycling collection provides residents with a convenient wheeled cart for recyclables. This makes it easier for residents to recycle more.

The District continues to support PAYT programs when it makes sense for a community. The District recognizes that many communities have gone to a cart-based collection program that did not include the ability for residents to select different cart sizes (Shelby Villages, Marysville and Sidney). The District supports the following recycling program hierarchy:



Benchmarking for financial assistance programs was not conducted.

1. Strengths, Challenges, Opportunities

Strengths

- 10 District communities utilized a PAYT program elements in 2019.
- Grants are available to assist communities with having a PAYT programs as well as other recycling an diversion projects and programs.
- Grants are available to assist communities with clean-up projects.
- Grants are available to assist businesses with recycling and tire projects.

Weaknesses/Challenges

- Few companies take advantage of the EPA grants in the District.
- Agricultural tire collections are not a part of the District grant program.

Opportunities

- Add agricultural tire collection event to financial assistance program
- Revolving loan program

SECTION H-6: Restricted and Difficult-to-Manage Waste Streams Analysis

A number of materials, while not typically found in solid waste in large quantities, are not desired in a landfill. These materials include scrap tires, household hazardous wastes, Pharmaceuticals, lead-acid batteries, e-waste (or electronics), and appliances. The District or local communities have programs designed to address each of these materials.

A. Household Hazardous Wastes (HHW) & Pharmaceuticals Management

Permanent and Mobile HHW Collection

The District operated 3 permanent HHW facilities in 2019 in Allen, Shelby, and Union Counties during the months of April-October. A total of 20,920 pounds of HHW materials were collected in 2019. The total revenue of the program was \$21,365.50.

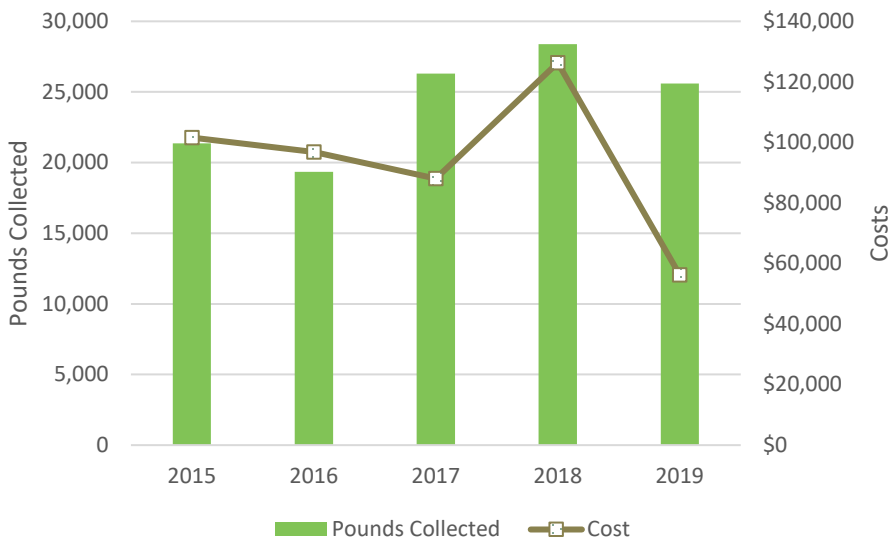
The District operated 3 Mobile HHW facilities in 2019 in Hardin, Madison and Champaign Counties during the months of April - October. A total of 4,837 pounds of HHW materials were collected in 2019. Total revenue from user fees was \$4,952.00.

The following flyer depicts the details of the HHW program. Individual flyers are available for each county in the District at www.ncowaste.org.

The District spent \$42,011.45 on advertising, supplies, equipment, labor to operate the fixed and mobile HHW program in 2019. The District spent \$14,200.36 on disposal and recycling services for all counties.

The total program revenue was \$26,320.50 and total costs were \$56,211.81 for a net cost of \$29,891.31.

The following chart depicts the cost and poundage collected from 2015-2019:



The District did not conduct a benchmark analysis with other districts as the District’s program is very unique (permanent and mobile with appointment system). The District evaluated the poundage collected and cost for the program. Cost have gone down as the program has evolved through the elimination of one-time capital expenses and lower promotional expenses.

HHW Management Outreach Program

The District conducted outreach regarding its HHW Management through the website (including listing locations that accept HHW) which includes detailed flyers on the permanent and mobile collection program (see below).

Anyone leaving items at the sites other than at their appointed time will be prosecuted for illegal dumping.

A minimum of a \$1.00 Per Pound Fee will be charged for all HHW Items and \$0.50 per Fluorescent Light Bulb
CASH OR CHECK ONLY

The following is a list of Household Hazardous Waste items accepted at the collection sites.
Please have a list of all your HHW items that you will be bringing before you call so that proper time may be allowed for your appointment.

Automotive Products Lubricants Batteries Solvents Cleaners Gasoline Kerosene Antifreeze Waste Oil (< 5 gallons container) Hobby Products Photographic Chemicals Chemistry Kits Pool Chemicals	Batteries Rechargeable Batteries Ni-Cd, NiMH, Lithium Lead Acid Batteries (vehicle) (NO Charge for LAB's ONLY) Alkaline- Discard in Trash Cleaning Products Household Cleaners Oven Cleaners Degreasers Wood/Metal Polishes Drain Cleaners Bleach Ammonia Moth Balls Shoe Polish	 Garden Products Fertilizers Pesticides Herbicides Poisons Other Garden Chemicals (No Farm Chemicals) Mercury Thermometers Thermostats	Home Maintenance Paint (latex* & oil) Paint Strippers/Thinners Lacquers/Varnish Sealants/Stains Turpentine Wood Preservatives Linseed Oil Mineral Spirits Glues/Adhesives Caulk/Roof Coating Asphalt Sealers Cement Sealers Pet Products Flea Powders Shampoos	Personal Care Nail Polishes Polish Removers Hair Treatments After Shaves Perfumes Other at No Charge Old Fireworks Ammunition Fluorescent Bulbs \$0.50 Per Bulb Fluorescent Tubes U Tubes Circular Tubes CFLs (Compact Fluorescent Lights)
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You will be required to sign a form stating that the items you have brought are from a residential household in Allen, Champaign, Hardin, Madison, Shelby or Union Counties.

Reminder: There is a \$1.00 per Pound Fee that will be charged for all HHW items.

Materials must be in their original containers and clearly marked for easy identification.
Please Note: This program is for Household Hazardous Waste ONLY.
By law we CANNOT accept Commercial, Industrial, Government, Medical, Church, Non-Profit, School or Farm/Ag Waste.

***How to Dispose of Latex Paint (Water Based Paint)**

Paint must be completely dried to a solid form and then it may be discarded with the household trash. Paint can be dried by removing the lid, and/or adding kitty litter, oil dry, sawdust, sand or a paint hardener to help dry the paint.

Please and Thank you!

- Don't dispose of materials into the storm sewer or septic system.
- Don't burn or bury leftover materials or containers.
- Don't mix materials together.

For additional information on proper disposal of Household Hazardous Waste visit our website at www.ncowaste.org

B. Scrap Tires

The District does not conduct a scrap tire collection program. The District provides a list of companies that accept or haul scrap tires on the District's web site at www.ncowaste.org.

The District continued to work with the Hardin County Transfer Station and County Engineer departments in the District to properly recycle scrap tires accumulated from small clean-ups and roadside litter project.

The District did produce the following poster in 2021 to educate residents and businesses on consequences of illegally dumping tires. In general, the District has only seen minor instances of dumped tires along roadways and properties in the six-county area.



No benchmarking with other districts was conducted since the District does not actively collect scrap tires. The District has engaged with other districts in Ohio on education and messaging for scrap tire management.

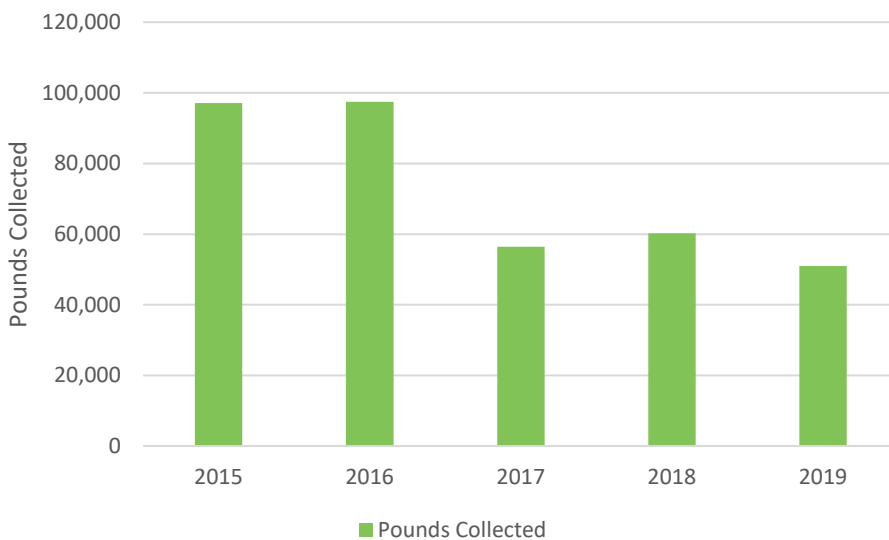
C. E-Waste

The District included electronic waste management in its education and awareness program primarily to promote collection events and in-district recyclers. There are permanent sites located at the Hardin County Transfer Station (operated by Keep Hardin County Beautiful and processed by Accurate IT), Shelby County Recycling Center, Union Recyclers (events only) and the District office in Allen County that accept E-Waste year round. Ohio Mulch in Plain City (Madison County) accepts E-Waste during its months of operation. Goodwill located in Allen, Champaign, Hardin, and Shelby Counties accept E-Waste (no TVs) during operating hours and are promoted by the District. Habitat for Humanity’s facility in Allen and Champaign counties accepts E-Waste during operating hours and are promoted by the District. The District also collects electronics at special events in the following counties: Allen, Champaign, Madison, Shelby and Union in 2019. The following are the tonnage statistics for 2019 by County:

- Allen County: 8.90 tons (Drop-off)
- Champaign: 0 Tons
- Hardin County: 2.93 tons (Drop-off)
- Madison: 4.02 Tons (Events)
- Shelby Counties: 3.02 Tons (Drop-off)
- Union County 6.62 Tons (Events)

The District provides a list of companies that accept or haul electronic waste on the District’s web site at www.ncowaste.org.

The following chart depicts the poundage collected from 2015-2019:



The District did not conduct a benchmark analysis with other districts as the District’s program is based on a model that is not practiced by many other districts.

D. Lead-Acid Batteries

Lead acid batteries as well as other household batteries are accepted in the District's permanent and mobile HHW program.

The District provides a list of companies that accept lead acid batteries on the District's web site at www.ncowaste.org.

E. Used Oil and Antifreeze

Used oil, antifreeze and other common residential oils are accepted in the District's permanent and mobile HHW program.

The District provides a list of companies that accept used oil and antifreeze on the District's web site at www.ncowaste.org.

F. Appliances

The District does not conduct any special collections for appliances.

The District provides a list of companies that accept appliances and scrap metal on the District's web site at www.ncowaste.org.

G. Medication and Prescriptions

The District does not conduct any special collections for medication or prescriptions.

The District provides a list of companies and or entities that accept medicines and prescriptions on the District's web site at www.ncowaste.org.

1. HHW Strengths, Challenges, Opportunities

Strengths

- The District provides HHW collections in all six counties in a controlled and economical system.
- The HHW program provides an opportunity for the District to educate residents on HHW management issues and other District initiatives.
- The District has a good infrastructure of third-party entities that accept scrap tires, appliances, E-waste, some HHW materials and batteries.
- The District strikes a good balance of active participation in special materials collection and promotion of existing infrastructure available to residents and businesses.

Weaknesses/Challenges

- No organized HHW reuse program exists in the District program.
- HHW collection is only available from April-October each year.
- Some minor open dumping of scrap tires in the District
- No collection events for appliances, pharmaceuticals and scrap tires
- Web site list of companies needs updated
- No active enforcement program for open dumping.

Opportunities

- HHW reuse program
- HHW satellite collection with community partners
- Scrap tire poster campaign (continuation and expansion of current initiative)
- Scrap tire illegal dumping campaign
- Improve web site lists for all special materials
- Scrap tire Sheriff enforcement program
- Appliance collection program events
- Pharmaceuticals - red bag collection program with DEA (Shelby program example)
- Pharmaceuticals - satellite collection with community partners
- E-waste - collect with mobile HHW program or events (CMH)
- E-waste - satellite collection with community partners
- E-waste - ensure R2 certified processors are used

SECTION H-7. Diversion Analysis

The table below shows the amounts of solid waste which were generated and diverted via recycling from 2015 to 2019. Overall, total recycling has grown each year between 2015 to 2019 (except 2016) despite the population varying slightly each year. Generation of solid waste typically has also fluctuated over the five-year period.

Table H-7.1. Disposal and Recycling in the District: 2015-2019

Year	Pop	Residential/ Commercial		Industrial		Excluded (tons)	Total	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled				
2015	327,694	238,942	84,021	55,469	220,730	72,089	671,251	11.22	-
2016	329,148	219,549	65,107	72,754	232,600	29,901	619,911	10.32	-0.08
2017	319,507	217,033	77,385	64,102	206,414	63,167	628,101	10.77	1.3%
2018	324,513	261,490	82,310	107,001	164,211	63,116	678,128	11.45	8.0%
2019	326,616	267,208	86,278	76,908	162,634	32,207	625,235	10.49	-7.8%

A. Residential/Commercial Sector

An analysis of the District's diversion rate and Goal #2 is below.

1. Analysis and Evaluation

The District's R/C recycling (or diversion) rate during the past five years has decreased from 26.02 to 24.41 percent (see **Table H-7.2**). The per capita diversion rate as measured in terms of pounds per person per day (PPD) has increased slightly from 1.40 PPD to 1.45 PPD between 2015 and 2019.

Table H-7.2. R/C Diversion Rates: 2015 – 2019

Year	Diversion Rate	
	Percent (%)	Per Capita
2015	26.02%	1.40
2016	22.87%	1.08
2017	26.28%	1.33
2018	23.94%	1.39
2019	24.41%	1.45

In order to achieve Goal #2, a district's R/C recycling rate must reach 25% diversion. NCO reached this goal in 2015 and 2017. NCO was below the goal in 2016, 2018 and 2019. NCO has historically chosen to meet Goal #1 of the State Plan because attainment for Goal #2 has been inconsistent. In the last Plan Update, the residential/commercial recycling rate was projected to be 24% in 2019 which matches the actual recycling rate achieved for 2019.

Compared to other similar SWMDs in Ohio, the diversion rate for the District is the fourth highest percentage recycled and fifth highest per capita recycled (**see Table H-7.3**). The similar districts in the analysis were chosen based on number of counties in the district. However, the STW SWMD has the highest population of all districts in this analysis which may impact the amount of recycling programming available. In 2019, the statewide R/C percentage recycling rate was 28.5% and the per capita recycled was 2.02, and therefore, NCO's percentage recycled and per capita recycling rates are lower than the statewide average.

Table H-7.3. R/C Diversion Rates for Other Ohio SWMDs: 2019

SWMD Name	Population	Res/Com Diversion Rate	
		Percent (%)	Per Capita
Coshocton-Fairfield-Licking-Perry SWMD	395,764	35.46%	2.17
Stark-Tuscarawas-Wayne SWMD	583,531	29.35%	2.03
Ottawa-Sandusky-Seneca SWMD	162,850	25.90%	1.57
NCO Solid Waste District	326,616	24.41%	1.45
Medina County SWMD	181,697	23.56%	1.51
Fayette-Highland-Pickaway-Ross SWMD	206,809	23.52%	1.29
Delaware-Knox-Marion-Morrow SWMD	306,538	22.83%	1.36
Geauga-Trumbull SWMD	293,029	13.31%	0.72
Gallia-Jackson-Meigs-Vinton SWMD	104,641	12.05%	0.53
Southeast Ohio SWMD	226,666	9.85%	0.55
Carroll-Columbiana-Harrison SWMD	144,429	4.03%	0.33

B. Industrial Sector

1. Analysis and Evaluation

The industrial recycling rates in the District for 2015 through 2019 are shown in **Table H-7.4**.

Table H-7.4. Industrial Recycling Rates for NCO: 2015 – 2019

Year	Diversion Rate	
	Percent (%)	Per Capita
2015	79.92%	3.69
2016	76.17%	3.87
2017	76.30%	3.54
2018	60.55%	2.77
2019	67.89%	2.73

Compared to the current Plan, which projected 268,639 tons of industrial recycling for 2019, the actual amount diverted in the reference year is 106,005 tons lower. The current Plan also projected an industrial recycling rate of 77.0% for 2019, which is higher compared to the actual estimated recycling rate of 67.89%. The reasoning for the significant over-projection was mostly due to the availability of recycling data from the industrial sector and several large facilities that reported less material being recycled than previously.

The District's industrial recycling rate for 2019 was around the median compared to other similar SWMDs as shown in **Table H-7.5**. The District was higher than STW, Medina, CFLP, CCH and GT but lower than OSS, FHPR and DKMM. The statewide average industrial recycling rate in 2019 was 67.09%, and the District is only slightly higher than the average.

Table H-7.5. Industrial Diversion Rate Comparison

SWMD Name	Industrial Diversion Rate
	Percent (%)
Ottawa-Sandusky-Seneca SWMD	81.92%
Fayette-Highland-Pickaway-Ross SWMD	78.31%
Delaware-Knox-Marion-Morrow SWMD	74.72%
North Central Ohio Solid Waste District	67.89%
Stark-Tuscarawas-Wayne SWMD	66.37%
Medina County SWMD	55.91%
Coshocton-Fairfield-Licking-Perry SWMD	54.05%

SWMD Name	Industrial Diversion Rate
	Percent (%)
Carroll-Columbiana-Harrison SWMD	19.80%
Geauga-Trumbull SWMD	14.68%
Southeast Ohio SWMD	7.70%
Gallia-Jackson-Meigs-Vinton SWMD	1.46%

1. Strengths, Challenges, Opportunities

The District has continued to improve their residential/commercial recycling programming throughout the years and has increased the recycling tons and rates. There is room to improve recycling quantities in the residential and commercial sectors in the District.

Strengths

- The District’s recycling rates are higher than most similar districts as well as the statewide recycling rates or near average.
- Residential/commercial recycling tonnages are similar than projected in the previous plan.

Weaknesses/Challenges

- The District’s recycling rate has not been above 25% consistently in the last five years.
- The District’s industrial recycling rate is lower than projected in the last Plan Update.

Opportunities

- **Education and Outreach** – The District could increase education and outreach for all programs to continue the upward trend of diversion. The strategies to increase education and outreach are included in Appendix L.

SECTION H-8. Special Program Needs Analysis

Ohio law gives districts the ability to fund activities that are not related to achieving the goals of the state's solid waste management plan. These program areas of allowable uses for SWMD funds collected under ORC Section 3734.57 are as follows:

- Section 3734.57(G)(3). Boards of Health, Solid Waste Enforcement
- Section 3734.57(G)(4). Counties, Road/Facility Maintenance
- Section 3734.57(G)(5). Boards of Health, Water Well Sampling
- Section 3734.57(G)(6). Out-of-state Waste Inspection
- Section 3734.57(G)(7). Enforcement of Anti-littering
- Section 3734.57(G)(8). Boards of Health, Training & Certification
- Section 3734.57(G)(9). Cities and Townships, road maintenance, public services, etc.

The policy committee is responsible for evaluating the performance of any existing programs and discuss if there is a need to add any special programs in this Plan Update. The programs presented in Section H-8 are all programs conducted or funded by the District which were identified and implemented through the previous Plan Update. They include:

- Disaster Debris Management
- Health Department Grants

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

A. Disaster Debris Management

The District continued to maintain a fund to provide financial assistance for cleaning up disaster debris and preparing plans and updates for managing disaster debris. The fund is intended to provide funding for managing disaster debris caused by non-declared natural disaster emergencies. The fund may cover up to 50% of the project costs for solid waste management for events that occur in the District. In order to obtain funding from the Disaster Debris Management Program, applicants must complete requirements detailed in the District's financial assistance guidance manual and submit funding requests in advance of any proposed projects. This manual was updated in 2020. Since the program's inception in 2007, no funds have been expended.

B. Health Department Financial Assistance

The District supplies grant funding to OEPA-approved health departments in the District annually for services such as solid waste inspection, enforcement, and well monitoring. Enforcement is defined as investigating open burning or open dumping cases.

The District provided funding to the following health departments in 2019: Champaign Co. Health \$3,971, Madison Co. Health \$4,253, Shelby Co. Health \$4,899, and Union Co. Health \$4,890 for a total of \$18,013.

1. Strengths, Challenges, Opportunities

Strengths

- The health department financial assistance program allows the District to partner with the health departments.
- The District’s disaster debris program offers the ability for communities to seek additional funding for clean-up.

Weaknesses/Challenges

- None

Opportunities

- None

SECTION H-9. Financial Analysis

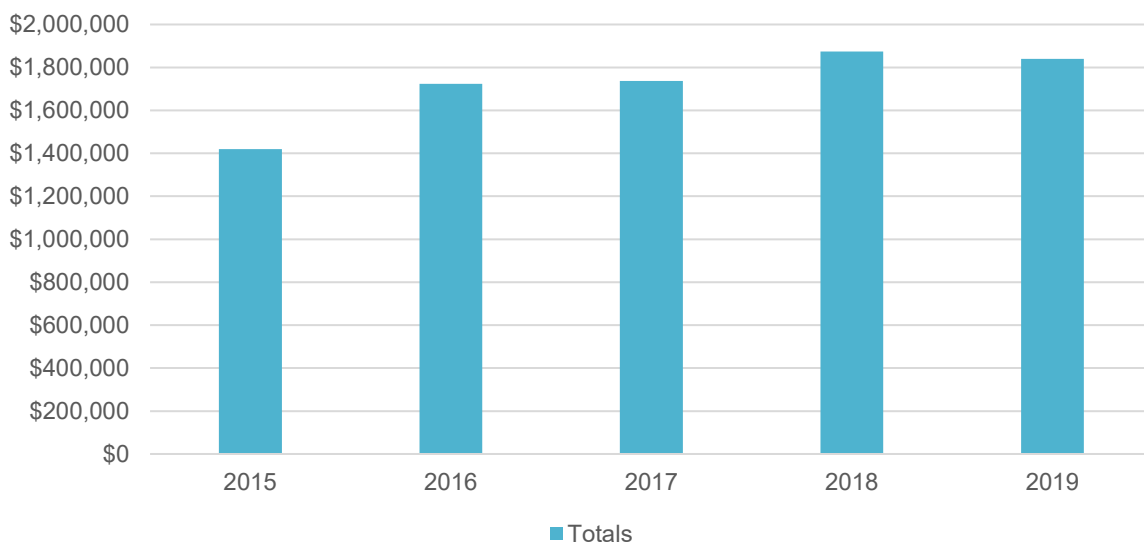
The financial analysis focuses on three areas: revenues, expenses, and District fund balances.

A. Revenues

From 2015 through 2019, the source of the majority of District revenue has come from the generation fee system of \$5.00 per ton collected for every ton of solid waste sent to an Ohio landfill or transfer station.

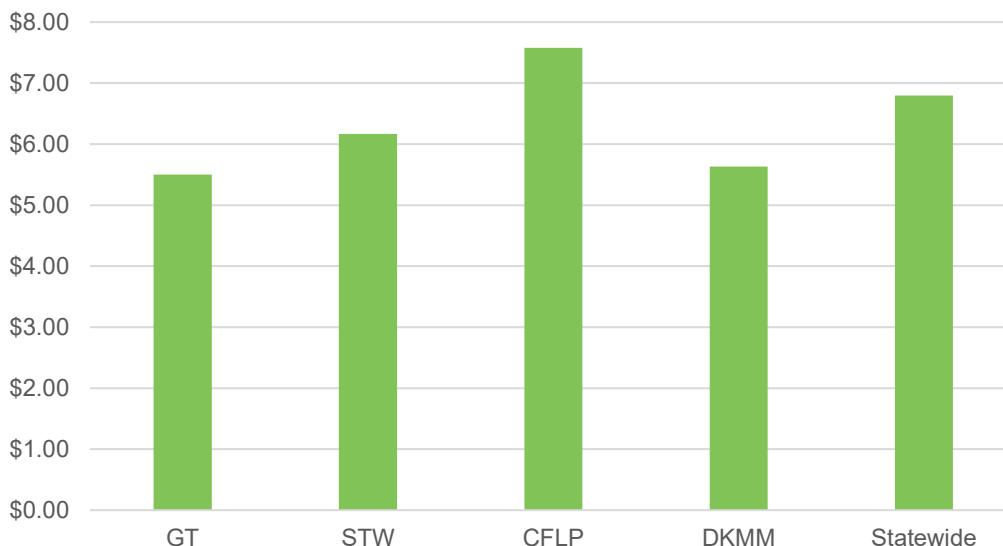
Figure H-9.1 shown below illustrates the increase of total District funding since 2015. In terms of dollars, the disposal fee revenue has increased from \$1,419,321 in 2015 to \$1,839,783 in 2019 with an average of \$1,350,716 during the five-year period depicted in the figure.

Figure H-9.1. Revenue for the District: 2015 – 2019



On a per person basis, the District collected an average of \$5.28 per capita during 2015 through 2019, ranging from \$4.33 to \$5.77 per capita. Compared to selected other SWMDs in Ohio, the District collects more money per person than several other districts. (See Figure H-9.2.) In addition, the District’s revenue per person is lower than the statewide average of \$6.80 per capita.

Figure H-9.2. Comparison of 201 Revenues Collected Among SWMDs



The District’s current Plan projected that approximately \$1,408,968 would be collected in revenues during 2019. The actual amount collected, \$1,839,783, is \$430,815 more than projected. The higher actual revenues are the result of higher landfilled tonnage subject to the generation fee compared to projected landfilled amount and pass-through grants.

In summary, the District’s major revenue streams appear to be very stable and should continue to provide sufficient money for operations.

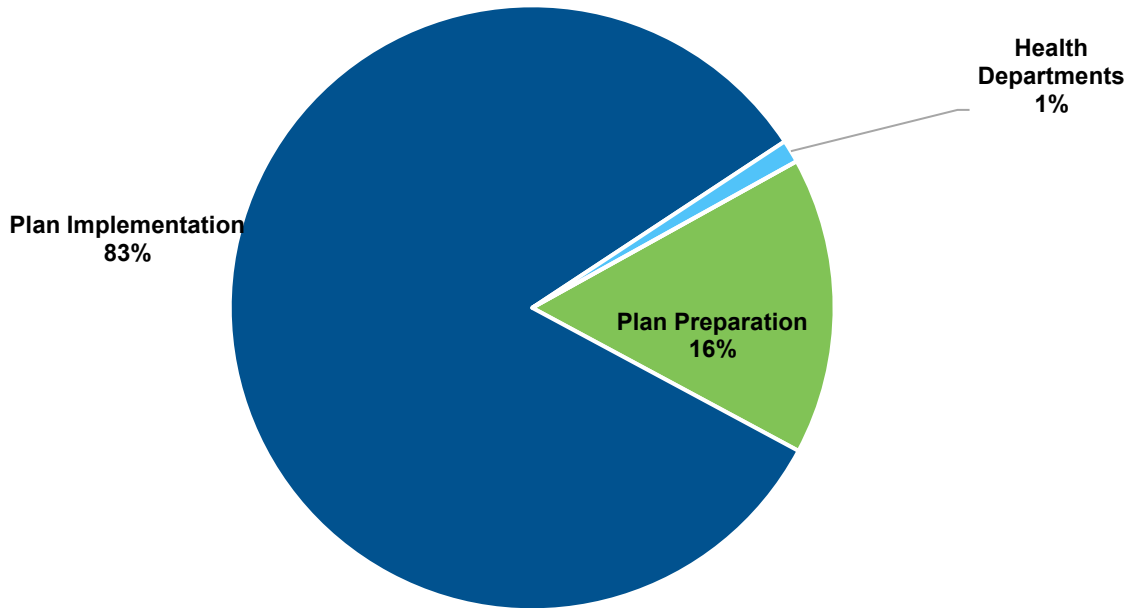
Starting in early 2021, the District eliminated its generation fee of \$5.00 per ton and replaced it with a contract fee through designation of \$6.00 per ton. The designated facilities are listed in Appendix P. The funding mechanism was changed due to the investment made in the Union Recyclers MRF and the associated loan obtained for the construction costs.

See Appendix O for further discussion on budget strategies for District programs.

B. Expenditures

The main expenditure for the District reported to Ohio EPA since 2015 has been plan implementation followed by plan preparation and health department support. The total expenditures for the District have ranged from a low of \$1.3 million in 2015 to \$1.5 million in 2019. The average overall expenditures during the five-year period was \$1.7 million annually. The total expenses for the District as projected in the current Plan were \$1.5 million for 2019, or approximately \$23,224 less than the actual expenditures.

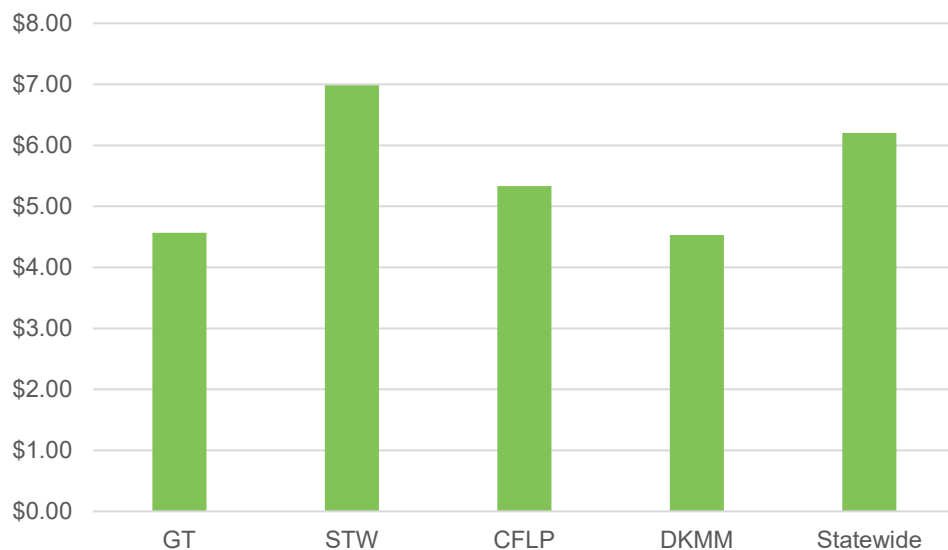
Figure H-9.3. District Expenditures: 2015 – 2019



Plan implementation makes up most of the District’s expenditures while most of the other expenditures stay relatively stable.

A comparison of the total expenditures per capita is shown in **Figure H-9.4.** the District (\$4.53 per capita) is below the statewide average per capita expenditure rate of the following selected solid waste management districts depicted.

Figure H-9.4. Comparison of District Expenditures Per Capita: 2019



See Appendix O for further discussion on budget strategies for District programs.

C. Balances

For 2019, the District’s expenditures were less than revenues, and the District’s account balance increased accordingly from \$2.6 million to \$2.9 million.

The current Plan projected a carry-over or year-end balance for 2019 of approximately \$1,867,458, which is lower than the actual balance (\$2,952,830). The actual balance has increased since 2015, primarily due to lower expenses and higher revenues than anticipated.

D. Strengths, Challenges, and Opportunities

Strengths

- District has stable financial position.

Weaknesses/Challenges

- None identified.

Opportunities

- Pay off Union Recyclers loan.

SECTION H-10. Regional Analysis

The purpose of the regional analysis is to consider regional opportunities for collaboration and partnerships and to also consider how the District's decisions may impact other stakeholders in the region. This analysis may result in the creation of a systematic plan to communicate, collaborate, and/or partner with the stakeholders identified through this process. This analysis may also indicate that the actions of the District and current regional initiatives are sufficient, and no further efforts are warranted.

A. Regional Stakeholders, Communication, Collaboration, and Partnerships

1. Stakeholders

The District's main stakeholders include but are not limited to the surrounding the solid waste districts and the District's residents, schools and institutions, commercial and industrial businesses, and community officials. Other stakeholders include recycling processors and MRFs, contractors, governmental agencies, hauling companies, non-profit organizations, solid waste management facilities, and any other generator or entity that is an essential part of the waste system.

2. Communication, Collaboration, and Partnerships

The District is committed to defining and solving issues in its area and region by collaborating with stakeholders. The District is home to 4 transfer facilities, 3 registered class II compost facilities, 6 class III compost facilities, and 8 class IV compost facilities. These facilities as well as the 28 out-of-District disposal facilities, 5 out-of-District compost facilities, and many total processors/MRFs are all considered regional stakeholders that the District maintains a good relationship with. Additionally, the District has provided technical assistance and grant opportunities to facilities as well. The District benefits from these relationships by having its generated materials handled properly, and these facilities benefit by retaining business.

Additionally, the District partners with county health departments to fund litter enforcement, landfill monitoring, dump site handling and more. These departments receive funding, and the District also benefits from the services.

Finally, the District works alongside institutions and communities in the six county area to implement recycling collection programs such as drop-offs, curbside programs, and special collections.

The District also partners with Van Wert County SWMD to assist with recycling drop-off services in Allen and Hardin counties.

B. Regional Impact Considerations

The District is home to many solid waste management facilities. Materials from other neighboring and regional districts use these facilities as well. The District makes sure to provide technical assistance to these facilities if requested, and this ensures that the facilities are available for use by the District as well as the other districts.

The District recently (early 2021) has designated where solid waste destined for transfer stations and or landfills shall occur. The designation process is described in Appendix P. The designated facilities reside in Ohio as well as in Indiana.

C. Conclusions and Challenges

The District has multiple stakeholders in its operation and, in return, is a stakeholder in others' operations. These stakeholders become partners with whom cooperation and collaboration is possible. The District is home to recycling processing and disposal capabilities for its region. The District has also served as a leader in implementing unique programs that other solid waste districts could consider partnering with or replicating.

However, developing joint programs and/or facilities could be difficult due to the following challenges:

- Regional economics
- Managing a joint resource
- Regional project controls
- Cost structure
- Guarantees and contracts for materials and end uses.

The District intends to continue the development of relationships and programs that can be modeled at the regional level if feasible with economics and markets making sense.

SECTION H-11. Data Collection Analysis

The State of Ohio classifies solid waste by three generation sectors: residential, commercial, and industrial. Solid waste districts are required to quantify the amount of solid waste that all generators source reduce, recycle, compost, incinerate, and dispose 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.

District staff devote time to overseeing and participating in a comprehensive data collection effort, as well as working with the District consultant.

A. Residential Sector

Residential sector recycling tonnages reported by communities includes data from curbside recycling programs, drop-off programs, yard waste collection and leaf field spreading. The District tracks special waste collection totals from program operated by the District and or District communities.

Data reported by communities for curbside and drop-off programs is cross-referenced against tonnage reported by community from the haulers that provide service to the residential sector for accuracy. If discrepancies are identified, they are investigated with the community and/or hauler.

1. Ohio EPA Data

The District uses the following Ohio EPA's annually published data when calculating residential recycling performance in conjunction with the residential data collection activities described above: Material Recovery Facility, Compost Facility Data Report, and Scrap Tire Data Report. This data is obtained from Ohio EPA's website:

<http://www.epa.ohio.gov/dmwm/Home/SWMgmtPlanning2.aspx>

The District ensures that double counting does not take place when using Ohio EPA data and District-collected data from communities and other third parties. No issues with using Ohio EPA data for the residential sector have been identified.

The District obtains data from private recycling companies that operate programs independent of those provided by an individual community. An example of this is the Royal Oaks Recycling program.

3. Residential Sector Data Gaps

The District is confident that the residential sector recycling data collected represents a nearly complete picture of the residential sector recycling activities that take place throughout the District. All major sources of recycling tonnage are captured by the District's current data collection activities. If there are gaps in data, the District estimates that they are negligible quantities.

B. Commercial/Institutional Sector

The District gathers data from two sources using a variety of methods to capture data from the commercial sector as described below:

1. Ohio EPA Data

The District uses the following Ohio EPA's annually published data for the commercial sector data: Material Recovery Facility and Commercial Recycling Data Report, Compost Facility Data Report, and Scrap Tire Data Report. This data is obtained from Ohio EPA's website:

<http://www.epa.ohio.gov/dmwm/Home/SWMgmtPlanning2.aspx>

The District ensures that double counting does not take place when using Ohio EPA data and District collected data from commercial entities and other third parties. No issues with using Ohio EPA data for the commercial/institutional sector have been identified.

4. Generator Data

The District sends a hard copy cover letter with a link to an online survey to targeted commercial sector generators to obtain recycling data each year. The list of recipients for the hard copy survey conducted through the mail is developed using the following steps:

- Generate base list of commercial institutions with at least 20 employees using a business database such as *Reference USA*.
- Cross-reference list to ensure key generators listed in the District's County Chamber of Commerce's directory are included.
- Search news articles from the previous calendar year to identify new businesses that should be added to survey list.

The online survey is updated annually. To collect reference year data, the District used a template created by Ohio EPA. Participation rates were underwhelming. Examples of the most up-to-date survey materials are available in Appendix R.

To collect reference year data for 2019, hard copy surveys were mailed to 2,869 commercial sector businesses in 2020 for 2019 data. Follow-up phone calls were made to the businesses with the largest number of employees if a response was not received by the deadline. The surveys yielded 22 new responses or a response rate of 0.77%.

Table H-11.1. Commercial Sector Mailed Survey Response Rate

Commercial Sector Mailed Survey	
Total Surveys Mailed	2,869
Total Responses Received	22
Response Rate	0.77%

Reminder e-mails were sent to survey recipients with email addresses obtained through past responded recipients 2 weeks before the deadline and a follow-up email was sent to survey recipients that did not respond by the deadline.

In addition, the District was able to move forward 71 responses from businesses that responded during the previous two years. The District confirmed that these businesses were still operating before including the responses in the reference year data. There was a total of 93 commercial sector responses from 2017-2019 gathered through paper or scanned in survey methods that were included in the annual data calculation. Most responses represented one business location, but some responses reflect recycling from more than one location.

Table H-11.2. Commercial Sector Total Survey Response Rate

Commercial Sector Mailed Survey	
Total Surveys Mailed	2,869
Total Responses Received	22
Single Year (2018) Response Rate	0.77%
Supplemented Response Rate (2016-2018)	3.24%

The District primarily relies upon generator data to compile commercial sector recycling totals. A large amount of broker/processor and hauler data is used. Better quality of data was achieved for 2019 due to a more accurate assessment from a processor on which tonnages were from the commercial or industrial sector. The potential for double-counting materials is addressed by comparing responses from generators with processors, haulers, and material recovery facilities. Each commercial business and institution is asked to provide the processor receiving their materials. For example, if a business reports recycling 200 tons of cardboard and also reports that this material was sent to ABC Processor, and that ABC Processor responded to the survey and reported received 1,000 tons of

cardboard from the District, then only the amount reported by ABC Processor would be included in the District's recycling totals, and not the 200 tons from the business. If processor data is used, tonnage reported by businesses that did not report which processor they used is also excluded from calculations.

5. Commercial Sector Data Gaps

The District is confident that it receives survey responses from the majority of key generators in the District, which is demonstrated in **Table H-11.2**. The District's survey efforts are robust, thoughtful, and continually improving. The District estimates that gaps in data are likely minimal compared to the overall tons reported.

C. Industrial Sector

The District gathers data from two sources using a variety of methods to capture data from the industrial sector as described below: Ohio EPA data and generator data. In Format v4.1, there is no requirement for districts to report industrial data on the Annual District Report. The District may choose to survey or not survey the industrial sector during the planning period.

1. Ohio EPA Data

The District uses the Ohio EPA Material Recovery Facility Report to gather industrial sector data from one local MRF. This data is obtained from Ohio EPA's website:

<http://www.epa.ohio.gov/dmwm/Home/SWMgmtPlanning2.aspx>

The District ensures that double counting does not take place when using Ohio EPA data and District collected data from industrial entities and other third parties. No issues with using Ohio EPA data for the industrial sector have been identified.

6. Generator Data

The District sends a hard copy mailed survey to targeted commercial sector generators to obtain recycling data each year. The industrial sector survey is conducted using the same methodology as the commercial sector survey, which is described previously in this section.

To collect reference year data for 2019, surveys were mailed to 630 industries in 2020 for 2019 data. Follow up phone calls were made to the industries with the largest number of employees if a response was not received by the deadline. The surveys yielded 14 new responses or a response rate of 2.2%.

Table H-11.3. Industrial Sector Mailed Survey Response Rate

Industrial Sector Mailed Survey	
Total Surveys Mailed	630
Total Responses Received	14
Response Rate	2.2%

Reminder e-mails were sent to survey recipients with email addresses obtained through past responded recipients 2 weeks before the deadline and a follow-up email was sent to survey recipients that did not respond by the deadline

In addition, the District was able to move forward 23 responses from industries that responded during the previous two years. The District confirmed that these industries were still operating before including the responses in the reference year data. There was a total of 37 industrial sector responses from 2017-2019 gathered through paper or scanned in survey methods that were included in the annual data calculation.

Table H-11.4. Industrial Sector Total Survey Response Rate

Industrial Sector Mailed Survey	
Total Surveys Mailed	630
Total Responses Received	14
Single Year (2018) Response Rate	2.2%
Supplemented Response Rate (2016-2018)	5.8%

Measures to eliminate double counting recycling data are described in the commercial section.

7. Industrial Sector Data Gaps

The District receives survey data from the majority of the key industrial sector facilities in the District, which is demonstrated in Table H-11.4. The District estimates that gaps in data are likely minimal compared to the overall tons reported.

C. Strengths, Challenges, and Opportunities

Strengths

- Out of the three sectors of waste generators, the District is most confident with the residential sector recycling data. The District will continue its current efforts.
- Mailing list of those to be surveyed is consistently reviewed and updated.
- High-volume generators are followed up with multiple times.
- Data is gathered from multiple sources and responses can be received multiple ways (email, fax, etc.) which makes it more convenient for respondents.
- Overall data collection has shown positive results for the District.

Weaknesses/Challenges

- Only .77% of commercial and 2.2% of industrial survey responses were collected for 2019 data.
- Some tonnage reported by commercial and industrial establishments requires follow-ups to determine whether it is creditable.
- Varying but sometimes significant amount of time required to solicit survey responses.
- Staffing changes at surveyed establishments; losing a contact person.
- Companies are not required to report.

Opportunities

- Evaluate contract fee designation tons are correct over time
- New survey instruments
- Web site registration system for commercial generators

SECTION H-12. Education and Outreach Analysis

This Section of Appendix H evaluates the District's existing education, outreach, and technical assistance efforts, which are described in detail in Appendix L. The purpose of this analysis in Appendix H is to determine whether the existing programs are effectively and adequately reaching each of the District's target audiences.

A. Target Audiences

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

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

1. Residents

The District provides educational opportunities for residents on its website. This includes:

- About NCO
 - ✓ NCO Board of Directors
 - ✓ NCO Staff
 - ✓ NCO Solid Waste Plan
 - ✓ Links
 - ✓ Surveys
 - ✓ Facility Designations
- Individual County Recycling Programs
 - ✓ Allen County Recycling Programs
 - ✓ Champaign County Recycling Programs
 - ✓ Hardin County Recycling Programs
 - ✓ Madison County Recycling Programs
 - ✓ Shelby County Recycling Programs
 - ✓ Shelby County Recycling Center
 - ✓ Union County Recycling Programs
 - ✓ Union Recyclers
- Waste Disposal
 - ✓ Landfills, transfer stations and CDD sites
 - ✓ Waste haulers

- Household Hazardous Waste
 - ✓ Latex Paint
 - ✓ Tires
 - ✓ Oil/Antifreeze
 - ✓ Auto Batteries
 - ✓ Rechargeable Batteries
 - ✓ Fluorescent Bulbs
 - ✓ Mobile HHW Program for Champaign, Hardin and Madison
 - ✓ Permanent HHW Program for Allen, Shelby and Union
 - ✓ Electronics and TVs
 - ✓ Appliances and Metal
 - ✓ Backyard Composting
 - ✓ Medicine and Drugs
- Funding Assistance
- Events and News

2. **Schools**

The District provides educational opportunities for students throughout the school year. This includes:

- Information on website including recycling and educational content
- Funding assistance for school recycling and education projects

8. **Commercial Businesses and Institutions**

The District provides educational and program opportunities to the business and institutional sector as follows:

- Information on website including recycling, waste disposal and hauler information
- Technical assistance on solid waste projects as requested
- Waste audits and assessments
- Information about EPA grant opportunities and potential sponsorship

9. **Industries**

The District provides educational and program opportunities to the industrial sector as follows:

- Information on website including recycling, waste disposal and hauler information
- Technical assistance on solid waste projects as requested
- Waste audits and assessments

- Information about EPA grant opportunities and potential sponsorship

10. Communities and Elected Officials

The District provides educational and program opportunities to community leaders and elected officials as follows:

- Information on website including recycling, waste disposal and hauler information
- Curbside and drop-off assistance
- Contracting and marketing assistance
- Grant opportunities
- Presentations
- Policy Committee engagement and technical assistance
- Board of Directors engagement and technical assistance

The District has transitioned from having contracted Program Coordinators to the use of District staff and its consultant to conduct the education and outreach program. The transition included the following strategy:

- Meet or exceed core goals and objectives of the current NCO solid waste management plan for curbside recycling, drop-off recycling, HHW and special waste recycling programs and District recycling facilities to increase recycling participation and decrease contamination
- Continue targeted community special event programs as directed by the Board and or District Director
- Transition to EPA objectives of targeted education and outreach initiatives that can demonstrate measurable results of improvement
- Provide more targeted and less mass promotional initiatives to be efficient and cost effective

The District began this effort in 2019 after the Program Coordinators retired. The first major initiative conducted by the District was to update the web site and developed new logo colors (see below), flyers and branding.



The District also conducted a direct engagement education and outreach project for the City of Marysville in 2018-2019. This effort was a planned activity to test the theory of

direct engagement with measurable results. The District also conducted targeted mailings to residents in Marysville to try to reduce contamination. Both of these efforts did show measurable results of improvement and will become a more pronounced level of effort in this new Plan Update.

11. Education and Outreach Analysis

Targeted Audience Analysis

This analysis identifies the key audiences that District education and outreach initiatives are targeted towards:

Existing Programs/Initiatives	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Web Site	✓	✓	✓	✓	✓
Social Media	✓	✓	✓	✓	✓
Technical Assistance		✓	✓	✓	✓
Adult Education and Videos	✓		✓	✓	✓
School Age Children Education and Videos	✓	✓			
Commercial/Industrial Education			✓	✓	
Waste Audits/Assessments		✓	✓	✓	
Community and Elected Officials Education					✓
District Financial Assistance – Education and Outreach		✓			
Boots on the ground tagging and engagement for curbside and drop-off programs	✓				✓
Total Program per Group	5	6	6	6	6

This broad-based analysis indicates that all major audiences are reached by the District’s education and outreach initiatives and program.

Education and Outreach Metric Analysis

This District tracks the metrics for key education and outreach initiatives and or programs. The following occurred in 2019:

- Web sites daily visitors: 41
- Facebook connections: 282 followers
- LinkedIn connections: not tracked
- Press releases/articles: 658
- Newspaper/radio/TV ads: 33

- School age/adult presentations: 120
- School age students/adults reached: 5,000
- Prize contests: 2
- Prize contest entries: 700
- Flyers handed out: 532,617
- Phone call assistance: 400
- Email assistance: 3,000
- Total engagements: 548,821

Total engagements were tracked from 2017-2019 with the following results:

- 548,821 in 2019
- 647,246 in 2018
- 569,611 in 2017

All of the engagements listed above were designed to do the following:

- Educate on recycling correctly and often
- Understanding recycling competency among different age groups
- Make aware of District programs and events
- Teach recycling techniques

The District has been transitioning from full time program coordinators to targeted education and outreach since 2019. The SWOT analysis conducted for the Plan Update was designed to understand the new operations of the District's education and outreach program and to improve it under the new system.

B. Strengths, Challenges, Opportunities

Evaluating the educational opportunities and the audiences reached outlines areas of strength and challenges. There are also areas for improvement which create opportunities which are presented below.

Strengths

- The website is a great resource for residential, commercial, industrial and institutional sectors to find information on waste diversion activities and recycling and grant programs, and District staff are now able to update information on the website instantly.
- The transition from contracted Program Coordinators to District and consultant has gone well.

Weaknesses/Challenges

- The existing web site has reached its maximum capabilities and needs to be replaced.
- Pilot projects on targeted engagement with residents was successful but has not been done across the District.
- The District does not have student and teacher resources on its web site.
- The District's social media activities are lacking.
- The District's advertising needs improvement.
- Most ads and campaigns are not targeted but rather are intended for a broad audience, yet targeting ads can be more impactful.
- Direct engagement (Marysville and Sidney) were successful but have not been done in other parts of the District.

Opportunities

- New web site
- Targeted outreach by community and county
- MRF tours
- Education videos by topic and age group on web site
- More hands on with Students
- TV advertisements
- Youtube and Instagram, Tiktok videos and engagement
- Adult engagement
- Township association presentations
- Commissioner meeting presentations
- Rover tagging staff, drop-off surveying, HHW, MRF assistant

SECTION H-13. Recyclable Material Processing Capacity Analysis

This section outlines the current evaluation for processing facilities the District uses to meet the need for implementing initiatives to recover more material through existing or new services.

A. Processing Capacity

The District required processing for almost 88,000 tons of residential/commercial recyclables and almost 162,000 tons of industrial recyclables. There are several facilities that processed quantities of District-generated recyclables (not counting composting facilities) in 2019 including:

Facility Name	Sector	County	Type of Facility
Hardin County Solid Waste Facility	Residential/Commercial	Hardin	MRF ¹
Union Recyclers	Residential/Commercial	Union	MRF
Allen County Recyclers	Residential/Commercial	Allen	MRF
Rumpke Waste Recycling Columbus	Residential/Commercial/Industrial	Franklin	Recycling Transfer Station
Rumpke Recycling Dayton	Residential/Commercial/Industrial	Montgomery	Recycling Transfer Station
WM Recycling: Columbus	Commercial/Industrial	Franklin	Transfer Station
Rumpke Chillicothe	Commercial	Ross	Recycling Transfer Station
Dayton Glass Plant	Commercial	Montgomery	MRF
Shelby County Recycling Facility	Residential/Commercial	Shelby	MRF
Rumpke Center City Recycling Hamilton County	Residential/Commercial	Hamilton	MRF
Royal Oaks Recycling	Residential	Dayton / Cleveland	Processor

In addition, there are numerous other brokers, end processors and haulers that collect, process and or manage District commercial sector recyclables including:

- ACR
- all toners are returned to HP or staples to recycle
- Allen County Recyclers
- Allied
- Allied Waste
- Auglaize County Solid Waste District
- B & G Recycling
- B&G Auto and Recycling Center
- Battery Warehouse
- broker in Piqua

- Buck Creek Pallet
- Bull Creek Pallet
- Cellmark Recycling, Suffern NY
- City of Lima
- City of Urbana
- Environmental Specialist of Columbus
- ERG
- File 13 Union City Shred
- GateWay
- Gov.deals.com - sold old computers and printers online
- Gov.deals.com - sold the replaced appliances online
- Included in Agency's numbers - we take our cardboard to their dumpster
- Koharts Recycling
- Lima Pallet
- local recycler
- London Sanitation
- Mailed out of area to be recycled
- MATCO, London
- NCO SWD
- Ohio Automotive
- Ohio City Auto Salvage
- Ohio Recyclers
- OmniSource
- OSA and Allen
- OSU gameday
- Palnet USA, Williamstown, NJ
- Pratt Industries
- Quincy Recycling
- Recycled in Auglaize County
- Republic
- Republic Services
- Resource Recycle
- Riverdale School District
- Royal Oak Recycling
- Rumpke
- Safety Kleen
- Schwartz
- Shelby County Recycling Center
- Shred it
- Sims ACR
- They take loads to the recycling facility in Piqua every couple months
- Toledo Shredding
- Tractor Supply Store
- Union Recyclers
- Waste Management
- Whitakers Salvage Yard
- Wright Refuse
- Young's trash

Finally, there are numerous other brokers, end processors and haulers that collect, process and or manage District industrial sector recyclables including:

- Rumpke
- WM - Lima
- Allen County Recycling
- Other
- Used internally/shipping
- Resource One
- Quincy Recycling/Shred it
- Shred-It USA LLC, WestRock
- Industrial recycling
- Gateway Recycling
- WM
- Republic
- Greif
- Universal paper and Plastics, Inc.
- Allen County Recyclers
- Waste Management
- Recycler
- WestRock
- Allied Waste
- WESTEC
- Lima
- Royal Paper Stock Co.
- Midwest Iron & Metal
- Sims Recycling

- Dlubak Glass
- Sims brothers
- Cohen
- Harry Masser Co. Inc
- Omni Source
- Franklin Iron & Metal, OmniSource. ICS- Ohio
- Sims Bros
- Franklin Iron
- BG Auto and Recycling Center
- Fayette Recycling and Research Alloys
- Whitaker
- Midwest Iron & Metal/the Foundry Way
- Omni-Source
- Elsass
- Franklin Iron & Metal
- Resource One and Midwest Iron & Metal
- FPT
- WestRock, OmniSource
- Arch
- Hancock County Recycling Findlay, OH Hardin County Recycling Kenton, OH
- Advanced Plastic Recycling
- Poly Rec Tech
- Alllen County Recycling
- They regrind
- Hancock county
- Roe Enterprises
- Graber Lumber
- Lima Pallet
- Used internally, donate food burning stove
- GC Pallet and storage, Universal paper and Plastics, Inc., o'neil pallets
- Wright mulch
- S&D Pallets
- Innovative Organics
- American Recycling/Midwest
- Frenke's, Rubber Recycling Tech, DRI, LRP Solutions
- Liberty Tire Recycling, LLC
- Best One Tires
- Heritage
- HP
- Kurtz Brothers Celina
- Valicor
- Goodwill & Shelby County
- ERG
- Lighting Resources, LLC
- Lighting Resources
- ERG in Bowling Green
- Woodward Auto Parts
- Chemtron
- Mulched
- Whitaker Junk Yard, Sims Brothers, Franklin Iron
- Chemtron & Resource One
- Enviroserve & Resource One
- Mobile Fluid Recovery
- Tri Power Recycling
- PolySource
- PeerTrade
- Processor30
- Mauser Packaging Solutions
- Enviroserve
- B&D Recycling

No facilities reported to the District that they have any processing capacity issues.

The table below represents the total tons recycled by material in 2019 in both the residential/commercial and the industrial sectors.

Table H-13.1. Reference Year (2019) Total Material Recycled

Description	Res/Com	Industrial	Totals
Appliances	25.63		25.63
Lead-Acid Batteries	3.46		3.46
Dry Cell Batteries	1.07		1.07
Food (Composted)	14,137.07	652.00	14,789.07
Food (Other)			0.00
Glass	1,540.18	22.90	1,563.08
Household Hazardous Waste²	12.88		12.88
Ferrous Metals	539.64	105,243.65	105,783.29
Non-Ferrous Metals	386.06	14,044.97	14,431.03
Non-Exempt Foundry Sand³		3,017.00	3,017.00
Corrugated Cardboard	15,270.39	8,289.28	23,559.66
All other paper	6,604.95	253.69	6,858.64
Plastics	1,649.58	5,737.36	7,386.93
Rubber (not including tires)	0.00	914.00	914.00
Passenger Tires	7,009.92		7,009.92
Textiles	240.00	0.00	240.00
Used Oil⁴	12.82		12.82
Wood	4,734.67	23,421.76	28,156.43
Yard Waste	32,903.78		32,903.78
Commingled Recyclables⁵	2,691.62	197.06	2,888.68
Electronics (all residential)	32.52		32.52
Christmas Trees			0.00
Misc: Elastomer gel, Powder Coating, Slag, pelletized dust, purge solvent, zinc dust		403.00	403.00
Misc Metal			0.00
Other (OEPA)	435.04		435.04
Recovered Wood Pulp		405.00	
Metal Drums		7.69	7.69
Lamps, Bulbs, and ballasts		3.40	3.40
Ballast		0.21	0.21
Styrofoam		21.00	21.00
Totals	88,231.27	162,633.96	250,460.23

During the last two Plan Update processes, the District determined that market forces and solid waste generator requirements were transitioning from dual and multi-stream processing systems to single stream processing. This industry transition has completed and all major programs in the District now operate as a single stream program.

Single stream recycling involves the combination of all acceptable materials such as newspaper, magazines, cardboard, paperboard, plastic, glass and metals. This system is user friendly to residents as they only have to sort their recyclables from their trash and not to separate individual recyclables into separate collection containers for curbside or drop-off programs.

Based on the trend to single stream recycling, the District implemented the following short- and long-term strategies to address the processing needs of the District in the last two Plan Updates:

In-District Single Stream and Transfer Locations

The District assisted Union Recyclers and the Shelby County Recycling Center with financial and technical assistance to convert these MRFs to single stream. The assistance involved grant preparation and administration, management assistance, management oversight, contract management, procurement assistance, engineering assistance and generation technical assistance.

Shelby County Recycling Center

The District has a contract with the Shelby County Commissioners to operate the county-owned recycling center with District employees. The contract was initiated on November 30, 2010 and has been extended into the current year. The District does not own the buildings or the equipment but is responsible for the operation of the facility. This contract is not a competitively bid arrangement but an operating agreement between the District and the County.

The District maintains a separate account that is administered by the District for the purposes of depositing recyclables revenue from the operations of the facility and for paying operational expenses including labor and benefits, overhead, supplies, lease on facility and other miscellaneous expenses. The District does not utilize any of its generation fees (now contract fees through designation) or District excess fund balance to operate the facility. If a shortfall would occur in this special account, the District and the County would work together with each other's contingent funding policies to address any temporary cash flow issues. The District's contingent funding policy is located in Section VIII of the *Plan Update*.

The District has provided capital funding and annual grants to the facility in the past and currently which is part of other financial assistance programs in this *Plan Update*.

During 2013, the Shelby County Recycling Center underwent major upgrades in the design of the buildings. Changes included the addition of a new baler and conveyor system and the relocation of the processing area to expand the tipping floor's square footage. The improvements enabled the facility to process materials more efficiently which will support the growth of the facility. In 2014, the District also assisted this facility with the application of a glass recycling grant to enhance the single stream processing system. In 2017, the District assisted the County with the development and implementation of a 45KW solar power system (see pictures below). The solar project was partially funded by Ohio EPA and also included an eddy current machine to sort non-ferrous metals on the recycling line.



The solar power system was designed to power half of the energy needs of the recycling facility over a years time.

In 2019, this facility collected and processed 2,800 tons of commingled recyclables.

Union County Recyclers

Union County Recyclers made major updates to the MRF's processing capabilities by retrofitting the facility with equipment necessary to manage single stream recycling. In 2013, Union County Recyclers became fully functional with the upgraded equipment.

In 2014, the District assumed ownership of Union Recyclers for all equipment and buildings except for the property which is owned by the Union County Commissioners. The District entered into an agreement with a private operator to provide recycling services at Union Recyclers on January 17, 2014. The private operator is responsible for all facility operations including selling of all recyclable materials processed and paying all bills for the operation of the facility.

In addition, the District conducted a major renovation to Union Recyclers that included building a 20,000 square foot recycling facility that includes a complete new processing system. This planning for this investment began in 2018 with the construction project and system installation being completed in late 2020 and is operating at designed capacity

currently. The project required the District to borrow 2.6 million dollars from the Ohio Water Development Authority with a term of 2020-2040. The first payments to OWDA were made in 2021. The following figures depict the new operation:



The new improvements to this facility have increased its operating capacity significantly to more than twice the amount of recyclables currently being processed. In 2019, this facility collected and processed 6,998 tons of commingled recyclables.

Allen County Material Recovery Facility

The District officially terminated any further planning or consideration for this facility in 2019.

London Recycle Transfer Station

The District assisted the City of London with implementing a new drop-off site in 2007. The purpose of the site was to create an incentive for the City to implement a curbside recycling program. With no recycling facilities close to London, the creation of this facility made it convenient for London to accumulate recyclable materials at the site to be transported to a recycle center in the region.

This facility did not open officially until 2008 and is open 5 days per week from 8 am to 4 pm. The facility includes a full-time recycling drop-off station and trash transfer area for residents. The District invested over \$300,000 in this facility between 2007 and 2008. The site was designed with the following:

- 90' x 60' building
- 28' x 28' x 6" concrete slab and security fence area
- 1-4 cubic yard compactor for paper and cardboard
- 1-2 cubic yard compactor for commingled recyclables

- 3-40 cubic yard containers
- 1-33 cubic yard container for commingled recyclables
- 1-33 cubic yard container for paper and cardboard
- 1-33 cubic yard container for switch out

The District currently transports the recyclables from the London facility and delivers them to Union Recyclers for processing. In 2019, this facility collected 541 tons of commingled recyclables.

Hardin County Recycle Transfer Station

The District has assisted Hardin County with its recycle and solid waste transfer station. Past efforts have included technical assistance with the solid waste transfer station operation, disposal contracts and compactor issues. The facility also accepts recyclables that are compacted and then transferred to Union Recyclers. In 2019, this facility collected and processed 154 tons of commingled recyclables.

District MRF Account

The District created a special account to save funds for in-district recycling facility capital improvements and other special projects. The funds come from a generation fee increase that was implemented in 2010. The fund accumulates approximately \$300,000 annually (through 2020) and has been used to implement the initiatives listed above to date. With the implementation of the new contract fee through designation, the fund now generates approximately \$600,000 annually. The fund was increased to cover the debt costs of the Union Recyclers improvements from 2018-2021. The fund balance as of the end of 2019 was \$950,166.

The District supports the four facilities by providing technical, operational and financial support or promotion. The following facilities continued to operate during 2019:

- Hardin County Solid Waste and Recycling Facility
- London Recycle Transfer Station
- Shelby County Recycling Center
- Union County Recyclers

Hardin County Solid Waste and Recycling Facility and London continued to operate with no major changes. The District does not operate or own either of these two facilities. Assistance for these facilities in the reference year has only been in the form of technical assistance if requested.

Other Facility Processing Capacity Analysis

Organics Processing Capacity

The highest quantity of materials recycled include yard waste at 32,903 tons from the residential/commercial sector solely. The District's network of composting facilities has managed the generated yard waste tonnage. The District is home to 3 registered class II compost facilities, 6 class III compost facilities, and 8 class IV compost facilities. There are 3 Class IV and 2 Class II facilities that operated outside of the District that accepted materials in 2019. None of the facilities identified has reported to the District of any processing capacity issues.

1. Traditional Recyclables Processing Capacity

Traditional recyclables collected from curbside recycling programs, the District drop-off program, special collections, commercial/institutional facilities, and industries (including corrugated cardboard, paper, ferrous metal, non-ferrous metal, plastics, glass, and commingled recyclables) totaled 139,747 tons in 2019 (57% of the total recycling stream). In 2019, at least 20 different facilities reported processing traditional recyclables from the residential/commercial sector, and 8 different facilities reported processing traditional recyclables from the industrial sector. Having these facilities located in and around the District should continue to be a benefit to the District providing ample processing capacity for recyclables.

B. Strengths, Challenges, Opportunities

Sufficient in-District and out-of-District processing capacity was accessible in the reference year for recyclable materials and yard waste. However, markets for other materials such as wood, food scraps, and scrap tires may provide for new opportunities.

Strengths

- All facilities in and around the District have capacity for processing the District's recyclables.
- The District has invested heavily in the 4 facilities that either are operated by the District or have received assistance from the District which has greatly increased the capacity of recycle processing within the District.
- Multiple single-stream MRFs are located in the region of the District
- There are numerous outlets for yard waste composting in and around the District.

Weaknesses/Challenges

- The District has assumed up to 2.8 million dollars in debt for the Union Recyclers improvements.

Opportunities

- Maximize capacity
- Pay off debt for Union Recyclers
- MRF operations efficiency
- Private operation of District facilities



APPENDIX I

CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

APPENDIX I. Actions, Priorities, and Program Descriptions

A. Conclusions and Priorities from Appendix H

The District completed thirteen analyses which reviewed the District's existing recycling infrastructure and all of its programs and services in Appendix H. The analysis then identified strengths, challenges, and opportunities where applicable. Through this process, a total of 62 opportunities for improvements were identified. These improvements were considered, in this section, by the District and the Policy Committee for potential implementation in the new planning period. The recommendations are listed in Section B of this appendix and ranked to be prioritized.

The analyses in Appendix H demonstrated the District's countywide infrastructure and unique recycling facilities available to residents. The recommendations in Appendix H were created to improve programs and address gaps to increase awareness and collaboration with the District's audiences.

Appendix I describes the programs, actions or initiatives that the District may or will implement during the planning period. The program descriptions are contained in Section B which includes the District's implementation schedule.

Many of the programs and actions to be implemented by the District comply with one or more of the following ten goals contained within the 2020 State Solid Waste Management Plan:

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. The industrial sector goal has been eliminated.

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, HHW, 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.

This section outlines the suggested opportunities from Appendix H. The District reviewed the list of potential opportunities and programs and prioritized the list focusing on the actions which were determined to be most important and those which would require the least amount of difficulty in implementing. The step-by-step process which the District used to prioritize the list was as follows:

- The ranking consisted of the District assigning a value of between 1 and 3 to each initiative with 3 being the highest priority and 1 being the lowest priority.
- The priority ranking defined whether the District felt an initiative or program would be implemented under the following criteria:
 - ✓ Ranking of 1 – No implementation
 - ✓ Ranking of 2 – May Implement
 - ✓ Ranking of 3 – Implement
- The District then prioritized the results from the above steps.
- The list of prioritized possible actions was then presented to the Policy Committee with discussion from District personnel and the District's consultant. The Policy Committee either confirmed the District's prioritization and/or changed the priority.
- The results of this prioritization process and the programs/initiatives developed or continued are detailed in Section B as well as Chapter V of this Plan Update.

For any program or initiative deemed by the Policy Committee as may be implemented, the District reserves the right to implement at any point in the planning period at its discretion and approval from the Board of Commissioners. The Policy Committee agreed to this right being expressed in the Plan Update.

Opportunities from Section H-1: Residential Recycling Infrastructure Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Curbside Recycling	Single hauler contract assistance (meetings, promotion, RFP assistance)	1
	New communities to target (no contracts, trash only, subscription)	1
	Evaluation of additional consortiums	1
	Consortiums (outside of Shelby) (meetings, promotion, RFP assistance)	1
	Third service on contracts (yard waste) (meetings, promotion, RFP assistance)	1
	Contamination reduction	3
	Participation growth	2
	Contacts include tagging and other education engagement	3
	Multi family housing included in contracts or city services	2
Drop-Off Recycling Infrastructure	Illegal dumping messaging	3
	Solid waste enforcement (hiring deputies to enforce open dump laws)	1
	Open dumping ORC language signs at sites	3
	Cameras at sites for enforcement	2
	Create District rules for enforcement	1
	Frontload dumpster service	1

SECTIONS H-2 and H-3. Business and Industrial Sector Analysis		
Program Category	Suggested Action or Program Name	District Ranking
District Business and Industry Recycling Assistance Programs	Conduct waste audits and assessments	2
	Develop commercial consortiums	1
	Develop Multi family housing recycling programs	1

Opportunities from Section H-4. Residential/Commercial Waste Composition Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Yard Waste Programs	Develop yard waste drop-off sites	1
	Develop curbside yard waste programs with communities	1
Food Waste Composting Programs	Conduct a food waste analysis	1

Opportunities from Section H-5. Economic Incentive Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Community Development Grant (Ohio EPA) Promotion and Assistance	Promote grants to communities, local government and school districts	2
Recycling Market Grant (Ohio EPA) Promotion and Assistance	Promote grants to local businesses	2
Recycling Assistance	Add agricultural tire collections to program	1
	Create a revolving loan program	1
PAYT	Expand PAYT programs	1

Opportunities from Section H-6. Restricted and Difficult to Manage Waste Analysis		
Program Category	Suggested Action or Program Name	District Ranking
HHW	Reuse program	2
	Satellite collection with community partners	1
Scrap Tires	Poster campaign (continuation and expansion of current initiative)	2
	Illegal dumping campaign	2
	Web site list	3
	Sheriff enforcement program	1
E-Waste	Web site list	3
	Collect with mobile HHW program or events (CMH)	1
	Satellite collection with community partners	1
	Ensure R2 certified processors are used	3
Lead-Acid Batteries	Promote local and regional entities that accept batteries	3
Pharmaceuticals	Red bag collection program with DEA (Shelby program example)	1
	Satellite collection with community partners	1
Appliances	Develop web site list of local recyclers	3
	Conduct collection program events	1

Opportunities from Section H-8. Special Program Needs Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Community Clean-Up	None	n/a
Disaster Debris Management	None	n/a
County Health Department Assistance	None	n/a

Opportunities from Section H-11. Data Collection Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Commercial/Industrial Sector	Evaluate contract fee designation tons are correct over time	1
	Develop new survey instruments	1
	Develop web site registration system for commercial generators	1
	Develop web site request form for waste audits	1

Opportunities from Section H-12. Education and Outreach Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Education and Outreach	Develop new web site	3
	Targeted outreach by community and county (mailers and advertisements)	3
	Develop web site request form for education services	2
	Conduct MRF tours	1
	Education videos by topic and age group on web site for students	2
	Education videos on web site for adults on District programs and facilities	2
	TV advertisements	1
	Youtube and Instagram, Tiktok videos and engagement	1
	Adult engagement	1
	Township association presentations	1
	Commissioner meeting presentations	2
	District staff conduct targeted curbside tagging	1
	Seasonal staff for targeted tagging, drop-off surveying, HHW, MRF assistance	2

Opportunities from Section H-13. Recyclable Material Processing Capacity Analysis		
Program Category	Suggested Action or Program Name	District Ranking
Processing Capacity	Maximize capacity at Union Recyclers	1
	Evaluate Shelby County Recycling Center future operations	2
	Pay off debt at Union Recyclers	3
	Private or public operation of District facilities	2

B. Program Descriptions

This section contains the complete implementation schedule for the planning period. More detailed description of each program or initiatives for existing programs can be found in Appendix H.

All programs or initiatives that were listed in the category of “may be implemented” in Section A are not included in this section. If the District decides to implement these initiatives, the details will be developed at that time. Funding for any new program from this list would come from the District’s excess fund balance.

Name	Description	Start Date	End Date	Goals
Curbside and Drop-Offs	<p>All Curbside and Drop Off Programs Provided in Appendix J, Table J-1</p> <ul style="list-style-type: none"> • 20 Non-Subscription Curbside Recycling Programs • 1 Subscription Curbside Recycling Program • 9 Full Time Urban Drop-Off Recycling Programs • 9 Full Time Rural Drop-Off Recycling Programs • 6 Part Time Urban Drop-Off Recycling Programs • 31 Part Time Rural Drop-Off Recycling Programs <p>Target Audience: District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities and District Program Paid by: District or Communities Program Promotion: Web Site, Mailers, Direct Engagement District Expenses: Budget Line Item 2.d.2 (Drop-Off) Budget Line Item 1.b, 2.a.1 for Curbside Technical Assistance</p>	Existing	Ongoing	1, 2
New Drop-Off	<p>The District is planning on the possibility of implementing a part time recycling drop-off site in Union County. Targeted communities for this new drop-off site include Milcreek, Dover, Taylor, Jackson or Washington Townships. Because this Plan will be updated two more times before 2038, the District will finalize the implementation in the next Plan Update.</p> <p>Target Audience: Milcreek, Dover, Taylor, Jackson or Washington Townships Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities and District Program Paid by: District or Communities Program Promotion: Web Site, Mailers, Direct Engagement District Expenses: Budget Line Item 2.d.2</p>	2038	Ongoing	1, 2

Name	Description	Start Date	End Date	Goals
Curbside Recycling Expansion	<p>The District will continue to provide assistance to communities that are interested in implementing or expanding a non-subscription curbside recycling program.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities (Expansion) Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a. or 2.h.1</p>	Existing	Ongoing	1, 2
Curbside Recycling Creation	<p>The District’s historical assistance for communities that are considering either adding recycling to their trash contract or are interested in contracting for solid waste services that includes recycling:</p> <ul style="list-style-type: none"> • Meet with the community to discuss the option of contracts and solid waste services at the curb. • Survey residents on their willingness to participate in a new program (Kenton in 2019). • If a community decides to move forward with a program, provide assistance with RFP and contract development (Richwood and Milford Center in 2018). • Offer any assistance permitted under this Plan Update to assist with the program. <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: District Budget Line Item 1.b, 2.a., 2.h.1</p>	Existing	Ongoing	1, 2, 4, 7
Curbside Re-Start	<p>For any planned or existing curbside recycling program that ceases to operate during the planning period, the District will implement the following procedure:</p> <ul style="list-style-type: none"> • Meet with the operator of the curbside program to determine cause of program elimination. • Offer any assistance permitted under this Plan Update to re-start the program. • If the program cannot be re-started, the District will evaluate the options available including replacing the program with full time or part time recycling drop-off centers to ensure no loss in recycling access is realized. <p>If the elimination of a curbside recycling program does not cause the county to fall below the 80% recycling access goal</p>	Existing	Ongoing	1, 2

Name	Description	Start Date	End Date	Goals
	<p>requirement, the District reserves the right to not implement any substitute program.</p> <p>Target Audience: District Curbside Communities Service Area: District Curbside Communities Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities (Re-Start) Program Promotion: District Web Site, Direct Engagement District Expenses: Budget Line Item 1.b, 2.a., 2.h.1</p>			
Curbside Contract Tracking	<p>The District will continue to track all single hauler and consortium contracts throughout the District.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	1, 2
PAYT	<p>The District continues to support PAYT programs when it makes sense for a community. The District supports the recycling program hierarchy contained in Appendix H. This program includes:</p> <ul style="list-style-type: none"> • Technical assistance • Direct engagement with Community Officials <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	1, 2, 4, 7

Name	Description	Start Date	End Date	Goals
<p>Curbside Contamination Reduction</p>	<p>The District will begin a multi-stage contamination reduction initiative that includes the following:</p> <ul style="list-style-type: none"> • Educational flyers, resources, videos and information located on District web site • Assessment of contamination via loads delivered to District MRFs or third party MRFs for the purpose of identifying target communities and/or routes for education. • Targeted mailings of education information to communities and/or specific routes within communities across all six counties • Targeted tagging of curbside carts or bins for communities and/or specific routes within communities across all six counties with District staff as needed • Targeted tagging of curbside carts or bins for communities and/or specific routes within communities across all six counties with seasonal staff as needed and as budgets allow • Measure effectiveness of initiative as available or achievable • Other activities as determined to achieve goal <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Communities (Expansion) Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a., 2.g.1, 2.g.2 or 2.g.3</p>	<p>2024</p>	<p>Ongoing</p>	<p>1, 2, 3, 4</p>
<p>Drop-Off Evaluations</p>	<p>The District monitored a variety of elements regarding drop-off recycling locations, such as total tons of materials collected and contamination issues. The District may adjust the drop-off program on an as-needed basis when improvements are identified. Potential issues the District circumvents by evaluating the drop-off program on a continual basis are the following:</p> <ul style="list-style-type: none"> • Location of drop-off • Collection hours • Material accepted • Participant feedback on program • Estimated tonnage collected • Excessive abuse of drop-off sites from contamination or dumping • Underutilization of drop-off bins • Collection frequency that does not meet public needs (i.e., issues with over-flow) 	<p>Existing</p>	<p>Ongoing</p>	<p>1, 2</p>

Name	Description	Start Date	End Date	Goals
	Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Program Paid by: District Program Promotion: N/A District Expenses: Budget Line Item 1.b, 2.a.			
Closed Drop-Off Procedure	<p>For any planned or existing drop-off recycling program that ceases to operate during the planning period, the District will implement the following procedure:</p> <ul style="list-style-type: none"> • Meet with the operator of the drop-off program to determine cause of program elimination. • Offer any assistance permitted under this Plan Update to re-start the program. • If the program cannot be re-started, the District will evaluate the options available including replacing the program with full time or part time recycling drop-off centers in other areas of the county affected to ensure no loss in recycling access is realized. • If the elimination of a drop-off recycling program does not cause the county to fall below the 80% recycling access goal requirement, the District reserves the right to not implement any substitute program. <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	1, 2
Drop-Off Contamination Reduction	<p>The District will begin a multi-stage contamination reduction initiative that includes the following:</p> <ul style="list-style-type: none"> • Educational flyers, resources, videos and information located on District web site. • Assessment of contamination via loads delivered to District MRFs or third party MRFs for the purpose of identifying target communities and or sites for education. • Targeted mailings of education information to communities • Targeted inspections and engagement with participants for communities across all six counties with District staff as needed • Targeted inspections and engagement with participants across all six counties with seasonal staff as needed and as budgets allow • Measure effectiveness of initiative as available or achievable 	2024	Ongoing	1, 2, 3, 4

Name	Description	Start Date	End Date	Goals
	<ul style="list-style-type: none"> Other activities as determined to achieve goal <p>Target Audience: All District Communities Service Area: District Materials Collected: Illegally Dumped Materials Program Operator: District Program Paid by: District Program Promotion: Web Site, Mailers, Videos, Direct Engagement District Expenses: Budget Line Item 1.b, 2.a., 2.g.1, 2.g.2 or 2.g.3</p>			
<p>Illegal Dumping Signs at Drop-Off Sites</p>	<p>The District will target drop-off sites that are experiencing illegal dumping activities and install signs that discourage illegal dumping. The signs will communicate the Ohio law on illegal dumping and the possible consequences of breaking this law. Signs will be placed as needed throughout the planning period.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: Illegally Dumped Materials Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site, Social Media District Expenses: Budget Line Item 2.g.1, 2.d.2</p>	2024	Ongoing	4
<p>Illegal Dumping Messaging</p>	<p>The District will add messaging on its web site, flyers, social media and other engagement instruments as needed to educate residents and businesses on illegal dumping issues at the District drop-off system and or community areas.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: Illegally Dumped Materials Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site, Social Media District Expenses: Budget Line Item 2.g.1</p>	2024	Ongoing	4
<p>Ohio EPA Community Development Grants</p>	<p>The District provides technical assistance to communities regarding Ohio EPA grants as requested.</p> <p>Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	1, 2, 4

Name	Description	Start Date	End Date	Goals
<p>Commercial and Industrial Waste Audits and Assessments</p>	<p>The District assists businesses with waste audits for commercial businesses, industries, agricultural operations, and non-profit organizations upon request for no cost. Audits evaluate the waste streams of each business/industry, the current disposal practices and costs, current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting.</p> <p>Target Audience: All District Commercial, Industrial, Institutional Entities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement</p> <p>District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	2, 4, 5
<p>Commercial and Industrial Technical Assistance</p>	<p>The District provides technical assistance to the commercial and industrial sector as well as the institutional sector through direct engagement activities. The District is a technical resource for businesses and schools for recycling and solid waste questions as needed and requested. The District includes a vast array of resources on its web site for the benefit of residents and businesses.</p> <p>Target Audience: All District Commercial, Industrial, Institutional Entities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement</p> <p>District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	2, 4, 5
<p>Commercial and Industrial Market Development and Scrap Tire Grant Assistance</p>	<p>The District provides technical assistance to businesses regarding Ohio EPA grants as requested.</p> <p>Target Audience: All District Commercial, Industrial, Institutional Entities</p> <p>Service Area: District</p> <p>Materials Collected: OCC, Paper, Glass, Plastic, Metal</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement</p> <p>District Expenses: Budget Line Item 1.b, 2.a.</p>	Existing	Ongoing	2, 4, 5, 9
<p>Recycling Assistance Grants</p>	<p>The District provides financial assistance funds for one-time expenses related to the start-up or improvement of curbside and drop-off recycling programs. Other recycling programs are also considered for funding per the District's policy for this program identified in the District's financial assistance guidance manual.</p>	Existing	Ongoing	1, 2, 3, 4, 6, 7

Name	Description	Start Date	End Date	Goals
	Target Audience: All District Communities Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District and District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line 2.h.1			
Community Clean-Up Grants	<p>The District offers communities throughout the six-county area financial assistance for clean-up projects. Projects normally occur in the spring and allow residents to bring special items and bulk materials (such as mattresses and furniture) and other items not normally accepted by their trash hauler to a central collection area. Any political subdivision located within Allen, Champaign, Hardin, Madison, Shelby and Union Counties are eligible to apply. Additional details on funding criteria and allowable expenses were included in the District’s financial assistance guidance manual, located in the District office.</p> Target Audience: All District Communities Service Area: District Materials Collected: Trash, Litter, OCC, Paper, Glass, Plastic, Metal Program Operator: District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.e.5	Existing	Ongoing	2, 4
Yard Waste Financial Assistance	<p>The District offers communities, throughout the six-county region, financial assistance for managing yard waste (leaves, brush and wood). The projects normally occur in the spring and fall. Typical projects in the past have involved grinding of yard waste for mulch.</p> Target Audience: All District Communities Service Area: District Materials Collected: Yard waste. Leaves, brush Program Operator: District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.f	Existing	Ongoing	2, 6
Disaster Debris Management Financial Assistance	<p>The District annually budgets funds to provide financial assistance with unplanned solid waste management costs which are a direct result of disaster situations. In addition to the financial assistance, in the event of a natural disaster, the District offers the following technical assistance services to any County Emergency Management Agency (EMA) and/or local law enforcement in its jurisdiction:</p> <ul style="list-style-type: none"> • Make District staff available 24 hours a day to respond to any solid waste disaster. 	Existing	Ongoing	4

Name	Description	Start Date	End Date	Goals
	<ul style="list-style-type: none"> At the EMA's or local law enforcement request, the District Director will evaluate the situation to determine the process of clean-up and financial needs. The District will coordinate with the local EMA, Ohio EPA district office and/or the local health department to establish disposal procedures and monitor debris sites to mitigate any impact on public health. <p>Target Audience: All District Communities Service Area: District Materials Collected: Solid Waste Program Operator: District Communities Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.n</p>			
<p>Education and Outreach Financial Assistance</p>	<p>The District offers outreach and education assistance funds for one-time expenses related to the education of District residents and students.</p> <p>Target Audience: Any educational institution including primary and secondary schools, community colleges, colleges, universities, any governmental agency, non-profit organizations</p> <p>Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District Entities Listed Above Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.h.1</p>	<p>Existing</p>	<p>Ongoing</p>	<p>3, 4</p>
<p>Scrap Tire Clean-Up Financial Assistance</p>	<p>The District offers assistance to county engineers, municipalities and townships with the costs of tire disposal and recycling associated with the clean-up of littered and illegally dumped tires. Under this program, the political subdivision is responsible for collecting the tires and then coordinating with the District for the proper disposal/recycling and hauling of the tires. The District will coordinate with a tire recycler/hauler to pick up the tires at a convenient time. The District can pay for the hauling and disposal fee. The contractor that the District is currently using shreds the tires for recycling applications.</p> <p>Target Audience: All District Communities, County Engineers Service Area: District Materials Collected: Scrap Tires Program Operator: District Communities, County Engineers Program Paid by: District Program Promotion: Web Site, Direct Engagement District Expenses: Budget Line Item 2.e.1</p>	<p>Existing</p>	<p>Ongoing</p>	<p>2, 6</p>

Name	Description	Start Date	End Date	Goals
<p>Permanent HHW Collection</p>	<p>The District operated 3 permanent HHW facilities in 2019 in Allen, Shelby, and Union Counties during the months of April-October. This program operates per the following:</p> <ul style="list-style-type: none"> • Appointment based participation • User fee charged (\$1.00 per pound currently) • April – October collection days specific to County (see web site for actual days) <p>Target Audience: District Residents Service Area: District Materials Collected: HHW Materials Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget line item 2.e.1</p>	<p>2010</p>	<p>Ongoing</p>	<p>2, 6</p>
<p>Mobile HHW Collection</p>	<p>The District operated 3 Mobile HHW facilities in 2019 in Hardin, Madison and Champaign Counties during the months of April - October. This program operates in the same manner as the permanent HHW facility program including:</p> <ul style="list-style-type: none"> • Appointment based participation • User fee charged (\$1.00 per pound currently) • April – October collection days specific to County (see web site for actual days) • All collected materials delivered to one of the three permanent HHW facilities for packing and shipping <p>Target Audience: District Residents Service Area: District Materials Collected: HHW Materials Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget line item 2.e.1</p>	<p>2017</p>	<p>Ongoing</p>	<p>2, 6</p>
<p>Scrap Tires</p>	<p>The District does not conduct a scrap tire collection program. The District provides a list of companies that accept or haul scrap tires on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Scrap Tires Program Operator: District Communities Program Paid by: Tire Companies Program Promotion: Web Site District Expenses: Budget Line Item 1.b, 2.a.</p>	<p>Existing</p>	<p>Ongoing</p>	<p>2, 6</p>

Name	Description	Start Date	End Date	Goals
E-Waste	<p>The District included electronic waste management in its education and awareness program primarily to promote collection events and in-district recyclers. There are permanent sites located at the Hardin County Transfer Station, Shelby County Recycling Center, Union Recyclers (events only) and the District office in Allen County that accept E-Waste year-round. Other third-party entities in each county of the District also accept a variety of E-Waste which is included on the District’s web site or the individual entity’s web site.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Ewaste Program Operator: District and Communities Program Paid by: District and Communities Program Promotion: Web Site District Expenses: Budget Line Item 2.e.3</p>	Existing	Ongoing	2, 6
E-Waste R2 Certification Requirement	<p>The District will ensure that any contract used by the District directly is R2 certified. The District will also promote this standard to any community and or entity that is conducting their own E-Waste collection. The R2 certification is a nationally recognized certification that ensures the proper management of E-Waste by processors.</p> <p>Target Audience: Ewaste Contractors Service Area: District Materials Collected: Ewaste Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a</p>	2024	Ongoing	2, 6
Lead Acid Batteries	<p>Lead acid batteries as well as other household batteries are accepted in the District’s permanent and mobile HHW program.</p> <p>The District provides a list of companies that accept lead acid batteries on the District’s web site at www.ncowaste.org.</p> <p>Target Audience: District Residents and Businesses Service Area: District Materials Collected: Lead Acid Batteries Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>	Existing	Ongoing	2, 6

Name	Description	Start Date	End Date	Goals
Used Oil and Antifreeze	<p>Used oil, antifreeze and other common residential oils are accepted in the District's permanent and mobile HHW program.</p> <p>The District provides a list of companies that accept used oil and antifreeze on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Used Oil and Antifreeze Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>	Existing	Ongoing	2, 6
Appliances	<p>The District does not conduct any special collections for appliances.</p> <p>The District provides a list of companies that accept appliances and scrap metal on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Appliances Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>	Existing	Ongoing	2, 6
Medicine and Prescriptions	<p>The District does not conduct any special collections for medication or prescriptions.</p> <p>The District provides a list of companies and or entities that accept medicines and prescriptions on the District's web site at www.ncowaste.org.</p> <p>Target Audience: District Residents Service Area: District Materials Collected: Prescriptions Program Operator: District Program Paid by: District Program Promotion: Web Site District Expenses: Budget Line Item 2.g.1</p>	Existing	Ongoing	2, 6
Union Recyclers Loan Pay-Off	<p>The District's loan with OWDA is a simple interest loan that can be paid off early without penalty. The loan was initiated in 2020 with its term running 20 years. The payments are made twice per year in January and July. The District will strive to pay off the loan as early as possible as budget allows.</p>	2020	2040 or Sooner	None

Name	Description	Start Date	End Date	Goals
	Target Audience: N/A Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: N/a District Expenses: Budget Line Item 2.o			
Data Collection	<p>The District will utilize data from community recycling programs, MRF/Processor data and Ohio EPA data. Double counting will be minimized with the new data collection program.</p> <p>The data collected along with the plan implementation monitoring each year will be used to complete the Annual District Report as required by law.</p> Target Audience: District Communities, MRFs, Processors Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Online Data Collection District Expenses: Budget Line Item 1.b, 2.a.1	2023	Ongoing	1, 10
Data Collection	<p>The District will cease collecting data from the Industrial sector since the 2020 State Solid Waste Plan no longer requires districts to try and meet the industrial recycling goal of 66%. In addition, the District will cease collecting data from commercial and institutional entities to avoid double counting with MRF and processor data.</p> Target Audience: All District Communities Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 1.b, 2.a.1	2023	Ongoing	1, 10
District Web Site	The District web site will continue and be updated as needed. Target Audience: All District Communities, Institutions and Businesses Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Web Site, Direct Engagement and Social Media District Expenses: Budget Line Item 2.g.1	Existing	Ongoing	3, 4

Name	Description	Start Date	End Date	Goals
New District Web Site	<p>The new District web site was developed and refined in late 2021 and early 2022 and is being continually improved over time. The expense for the development of the new web site was covered under Budget Line Item 1.b and 2.g.1. Future expenses for the web site are covered below.</p> <p>Target Audience: All District Communities, Institutions and Businesses</p> <p>Service Area: District</p> <p>Materials Collected: N/A</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Web Site, Direct Engagement and Social Media</p> <p>District Expenses: Budget Line Item 2.g.1</p>	2022	2023	3, 4
Adult Education	<p>The District provides educational opportunities for adults throughout the year. This includes:</p> <ul style="list-style-type: none"> Information on website including recycling and educational content Conduct presentations as requested based on staff availability Direct engagement as discussed in other programming in this Plan Update <p>Target Audience: District Adults</p> <p>Service Area: District</p> <p>Materials Collected: N/A</p> <p>Program Operator: District</p> <p>Program Paid by: District</p> <p>Program Promotion: Direct Engagement, Web Site and Social Media</p> <p>District Expenses: Budget Line Item 2.a.1, 2.g.1</p>	Existing	Ongoing	3, 4
Adult Education	<p>Creation of topic and audience specific content videos to be housed on District web site. The District will develop videos using standard cell phone-based video equipment on various topics including, but not limited to the following:</p> <ul style="list-style-type: none"> Waste diversion and recycling Waste minimization and reduction Composting and compost facilities HHW minimization District special materials collection participation process District recycling facilities District HHW facilities (fixed and mobile) District recycling drop-off facilities Curbside recycling Contamination Other topics as determined 	2024	Ongoing	3, 4

Name	Description	Start Date	End Date	Goals
	<p>As videos are created, they will be categorized and housed on the District's web site for all visitors to view.</p> <p>Target Audience: District Adults Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>			
<p>School Age Children Education</p>	<p>The District provides educational opportunities for students throughout the school year. This includes:</p> <ul style="list-style-type: none"> Information on website including recycling and educational content Funding assistance for school recycling and education projects Conduct presentations as requested based on staff availability <p>Target Audience: District School Age Children Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1</p>	<p>Existing</p>	<p>Ongoing</p>	<p>3, 4</p>
<p>School Age Children Education</p>	<p>Creation of topic and audience specific content (school age children) videos to be housed on District web site. The District will develop videos using standard cell phone-based video equipment on various topics including, but not limited to the following:</p> <ul style="list-style-type: none"> Recycled content materials What happens to recycle materials Contamination Composting Alternatives to HHW District recycling facilities District HHW facilities (fixed and mobile) District recycling drop-off facilities Other topics as determined <p>As videos are created, they will be categorized and housed on the District's web site for all visitors to view.</p> <p>Target Audience: District School Age Children Service Area: District Materials Collected: N/A</p>	<p>2024</p>	<p>Ongoing</p>	<p>3, 4</p>

Name	Description	Start Date	End Date	Goals
	Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1			
Commercial and Industrial Education	The District provides educational and program opportunities to the business and institutional sector as follows: <ul style="list-style-type: none"> • Information on website including recycling, waste disposal and hauler information • Technical assistance on solid waste projects as requested • Waste audits and assessments • Information about EPA grant opportunities and potential sponsorship • In person presentations as requested when staff time is available Target Audience: District Commercial, Industrial and Institutional Entities Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1	Existing	Ongoing	3, 4, 5
Community and Elected Officials Education	The District provides educational and program opportunities to community leaders and elected officials as follows: <ul style="list-style-type: none"> • Information on website including recycling, waste disposal and hauler information • Curbside and drop-off assistance • Contracting and marketing assistance • Grant opportunities • Presentations • Policy Committee engagement and technical assistance • Board of Directors engagement and technical assistance • In person presentations as requested when staff time is available Target Audience: District Elected and Community Officials Service Area: District Materials Collected: N/A Program Operator: District Program Paid by: District	Existing	Ongoing	3, 4

Name	Description	Start Date	End Date	Goals
	Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 2.a.1, 2.g.1			
Shelby County Recycling Center	<p>The District has a contract with the Shelby County Commissioners to operate the county-owned recycling center with District employees. The District does not own the buildings or the equipment but is responsible for the operation of the facility. All money funding for the operation of the facility are Shelby County provided and come from the sale of recyclables, user fees and other revenue sources. This facility is not financially supported by the District for normal business operations. The District does provide financial assistance for recycling access and technical support.</p> <p>Target Audience: N/A Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: Shelby County Program Paid by: Shelby County Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.d.2, 2.h.2</p>	Existing	Ongoing	1, 2, 5, 6
Union Recyclers	<p>The District operates (through a private contract) the Union Recyclers facility. The Union County Commissioners owns the Union Recyclers real estate and lease it back to the District. All money funding for the operation of the facility are derived from the sale of recyclables, user fees and other revenue sources. This facility is not financially supported by the District for normal processing operations. The District does provide financial assistance for recycling access and technical support. The District does have a loan for the capital improvement to this facility which is covered under a separate program.</p> <p>Target Audience: N/A Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District (through private contract) Program Paid by: District Program Promotion: Direct Engagement, Web Site and Social Media District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.d.2, 2.h.2</p>	Existing	Ongoing	1, 2, 5, 6
Hardin County Transfer Station	<p>The District has assisted Hardin County with its recycle and solid waste transfer station for many years. Past efforts have included technical assistance with the solid waste transfer station operation, disposal contracts and compactor issues. The facility also accepts recyclables that are compacted and then transferred to Union Recyclers.</p>	Existing	Ongoing	1, 2

Name	Description	Start Date	End Date	Goals
	Target Audience: Harding County Service Area: Hardin County Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: Hardin County Program Paid by: Hardin County Program Promotion: N/A District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.h.1			
London Recycle Transfer	<p>The District assisted the City of London with implementing a new drop-off site in 2007. The purpose of the site was to create an incentive for the City to implement a curbside recycling program. With no recycling facilities close to London, the creation of this facility made it convenient for London to accumulate recyclable materials at the site to be transported to a recycle center in the region. The District currently transports the recyclables from the London facility and delivers them to Union Recyclers for processing.</p> Target Audience: London Service Area: London Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: London Program Paid by: London and District Program Promotion: N/A District Expenses: Budget Line Item 1.b, 2.a.1, 2.b.1, 2.h.1	Existing	Ongoing	1, 2
MRF Account	<p>The District created a separate MRF Account (within the District's general fund) to track revenue generated from a generation fee increase that was implemented in 2010. The generation fee revenue split to the MRF Account includes \$1.00/ton out of the \$5.00/ton generation fee to be utilized for in-district recycling facility capital improvements and other special projects. The revenue (\$1.00/ton) generated approximately \$300,000 annually (through 2020) and has been used to implement the initiatives listed above to date. With the implementation of the new contract fee through designation, the revenue now generates approximately \$600,000 annually (\$2.00/ton out of the \$6.00/ton contract fee). A portion of the MRF funding is utilized to pay-off the Union Recyclers loan in addition to the other activities listed above.</p> Target Audience: All District Owned MRFs Service Area: District Materials Collected: OCC, Paper, Glass, Plastic, Metal Program Operator: District and Shelby County Program Paid by: District Program Promotion: Direct Engagement District Expenses: Budget Line Item 2.b.1	Existing	Ongoing	1, 2



APPENDIX J

REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL I

APPENDIX J. Reference Year Opportunity to Recycle and Demonstration of Achieving Goal 1

The North Central Ohio Solid Waste District (District) is committed to achieving Goal 1 of the 2020 State Plan. This section demonstrates the District's achievement of Goal 1 in the reference year and the programs that will help maintain the achievement of Goal 1 throughout the planning period.

Residential Sector Opportunity to Recycle

The following table presents the recycling opportunities in the reference year and years 1, 5, 10, and 15 of the planning period, as well as the population credit received for each opportunity. Communities that have non-subscription curbside recycling and recycling drop-off sites, drop-off sites show a credit of zero. Municipalities are not permitted to have population credits exceeding 100%.

Table J-1a. Opportunity to Recycle

ID #	Allen Name of Community	2019		2024		2028		2033		2038	
		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside											
NSC1	Bluffton Village	4,082	4,082	4,000	4,000	3,969	3,969	3,931	3,931	3,893	3,893
NSC2	Delphos City	6,937	6,937	6,797	6,797	6,745	6,745	6,680	6,680	6,616	6,616
NSC3	Elida Village	1,803	1,803	1,767	1,767	1,753	1,753	1,736	1,736	1,720	1,720
NSC4	Lima City	36,659	36,659	35,919	35,919	35,644	35,644	35,299	35,299	34,963	34,963
NSC5	Spencerville Village	2,161	2,161	2,117	2,117	2,101	2,101	2,081	2,081	2,061	2,061
Subscription curbside											
None		0	0	0	0	0	0	0	0	0	0
Full-time, urban drop-off											
FT-U1	Allen County Recyclers	36,659	0	35,919	0	35,644	0	35,299	0	34,963	0
FT-U2	Ford Motor Company	36,659	0	35,919	0	35,644	0	35,299	0	34,963	0
FT-U3	Husky (Premcor) Refining	36,659	0	35,919	0	35,644	0	35,299	0	34,963	0
FT-U4	American Township - Neighborhood Relief Thrift Store	13,870	5,000	13,590	5,000	13,486	5,000	13,355	5,000	13,228	5,000
FT-U5	Shawnee Township - Waste Management of NW Ohio	12,083	5,000	11,839	5,000	11,748	5,000	11,635	5,000	11,524	5,000
Part-time, urban drop-off											
PT-U1	American Township Mobile Drop-off	13,870	2,500	13,590	2,500	13,486	2,500	13,355	2,500	13,228	2,500
PT-U2	Bath Township Mobile Drop-off	9,454	2,500	9,263	2,500	9,192	2,500	9,103	2,500	9,017	2,500
PT-U3	Delphos City - Marion Township	6,830	2,500	6,692	2,500	6,641	2,500	6,577	2,500	6,514	2,500
PT-U4	Delphos City - Saint John High School	6,937	2,500	6,797	2,500	6,745	2,500	6,680	2,500	6,616	2,500
Full-time, rural drop-off											
FT-R1	Perry Township	3,388	2,500	3,320	2,500	3,294	2,500	3,262	2,500	3,231	2,500
Part-time, rural drop-off											
PT-R1	Cairo Village - Monroe Township Mobile Drop-off	2,114	2,500	2,071	2,500	2,055	2,500	2,036	2,500	2,016	2,500
PT-R2	Gomer - Sugar Creek Township	1,214	2,500	1,189	2,500	1,180	2,500	1,169	2,500	1,158	2,500
PT-R3	Harrod Village - Auglaize Township Mobile Drop-off	2,652	2,500	2,598	2,500	2,579	2,500	2,554	2,500	2,529	2,500
PT-R4	Lafayette Village - Jackson Township Mobile Drop-off	2,909	2,500	2,850	2,500	2,828	2,500	2,801	2,500	2,774	2,500
PT-R5	Spencerville - Amanda Township Mobile drop-off	2,082	2,500	2,040	0	2,024	0	2,005	0	1,986	0
Total County Population		106,607		104,455		103,655		102,651		101,676	
Total Population Credit		86,642		83,100		82,712		82,226		81,753	
Percent of Population		81%		80%		80%		80%		80%	

ID #	Champaign		2019		2024		2028		2033		2038	
	Name of Community		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside												
NSC6	Urbana City		11,404	11,404	11,057	11,057	10,876	10,876	10,720	10,720	10,581	10,581
Subscription curbside												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, urban drop-off												
FT-U6	Urbana Township		14,295	5,000	13,860	5,000	13,633	5,000	13,437	5,000	13,263	5,000
Part-time, urban drop-off												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, rural drop-off												
None	None		0	0	0	0	0	0	0	0	0	0
Part-time, rural drop-off												
PT-R6	Christiansburg Village - Jackson Township Mobile Drop-off		2,542	2,500	2,465	2,500	2,424	2,500	2,389	2,500	2,359	2,500
PT-R7	Mad River Township Mobile Drop-off		2,744	2,500	2,660	2,500	2,617	2,500	2,579	2,500	2,546	2,500
PT-R8	Mechanicsburg - Goshen Township Mobile Drop-off		3,585	2,500	3,476	2,500	3,419	2,500	3,370	2,500	3,326	2,500
PT-R9	North Lewisburg Village - Rush Township Mobile Drop-off		2,556	2,500	2,478	2,500	2,438	2,500	2,403	2,500	2,371	2,500
PT-R10	Rosewood Village - Adams Township Mobile Drop-off		1,069	2,500	1,036	2,500	1,019	2,500	1,005	2,500	992	2,500
PT-R11	St. Paris Township/Johnson Township Mobile Drop-off		3,430	2,500	3,326	2,500	3,271	2,500	3,224	2,500	3,182	2,500
PT-R12	Urbana - Salem Township Mobile Drop-off		2,458	2,500	2,383	2,500	2,344	2,500	2,311	2,500	2,281	2,500
PT-R13	Wayne Township Mobile Drop-off		1,759	2,500	1,705	2,500	1,678	2,500	1,653	2,500	1,632	2,500
Total County Population			38,885		37,701		37,084		36,552		36,078	
Total Population Credit			36,404		36,057		35,876		35,720		35,581	
Percent of Population			94%		96%		97%		98%		99%	

ID #	Hardin		2019		2024		2028		2033		2038	
	Name of Community		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside												
NSC7	Ada Village		5,544	5,544	5,410	5,410	5,388	5,388	5,361	5,361	5,334	5,334
NSC8	Forest Village		1,431	1,431	1,396	1,396	1,391	1,391	1,384	1,384	1,377	1,377
NSC9	Kenton City		8,180	8,180	7,982	7,982	7,950	7,950	7,910	7,910	7,871	7,871
Subscription curbside												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, urban drop-off												
FT-U7	Kenton		8,180	0	7,982	0	7,950	0	7,910	0	7,871	0
Part-time, urban drop-off												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, rural drop-off												
FT-R2	Mt. Victory Village - Hale Township Mobile Drop-off		1,558	2,500	1,520	2,500	1,514	2,500	1,507	2,500	1,499	2,500
Part-time, rural drop-off												
PT-R14	Dunkirk Village - Blanchard Township Mobile Drop-off		1,502	2,500	1,466	2,500	1,460	2,500	1,452	2,500	1,445	2,500
PT-R15	Kenton - Cessna Township		493	2,500	481	2,500	479	2,500	477	2,500	474	2,500
PT-R16	Mt. Victory - Dudley Township		1,383	2,500	1,349	2,500	1,344	2,500	1,337	2,500	1,331	2,500
Total County Population			31,478		30,715		30,592		30,440		30,288	
Total Population Credit			25,155		24,788		24,729		24,655		24,582	
Percent of Population			80%		81%		81%		81%		81%	

ID #	Madison		2019		2024		2028		2033		2038	
	Name of Community		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside												
NSC10	London City		10,328	10,328	10,321	10,321	10,523	10,523	10,781	10,781	11,046	11,046
NSC11	Plain City Village		4,586	4,586	4,583	4,583	4,673	4,673	4,787	4,787	4,905	4,905
NSC12	West Jefferson Village		4,431	4,431	4,428	4,428	4,515	4,515	4,625	4,625	4,739	4,739
Subscription curbside												
SC1	Choctaw Lake		1,592	398	1,591	398	1,622	406	1,662	1,662	1,703	1,703
Full-time, urban drop-off												
None	None		0	0	0	0	0	0	0	0	0	0
Part-time, urban drop-off												
PT-U5	London		10,328	2,500	10,321	2,500	10,523	2,500	10,781	2,500	11,046	2,500
PT-U6	Jefferson Township Mobile Drop-off		7,445	2,500	7,440	2,500	7,586	2,500	7,772	2,500	7,962	2,500
Full-time, rural drop-off												
FT-R3	Choctaw Lake - Somerford Township		2,984	2,500	2,982	2,500	3,040	2,500	3,115	2,500	3,191	2,500
FT-R4	Mt. Sterling Village - Pleasant Township		3,144	2,500	3,142	2,500	3,203	2,500	3,282	2,500	3,363	2,500
Part-time, rural drop-off												
PT-R17	Amity Village - Canaan Township		2,660	2,500	2,658	2,500	2,710	2,500	2,777	2,500	2,845	2,500
PT-R18	Lafayette - Deercreek Township		975	2,500	974	2,500	993	2,500	1,018	2,500	1,043	2,500
PT-R19	Newport Village - Paint Township		572	2,500	572	2,500	583	2,500	597	2,500	612	2,500
PT-R20	Oak Run Township		542	2,500	542	2,500	552	2,500	566	2,500	580	2,500
PT-R21	Plain City Village		4,586	0	4,583	0	4,673	0	4,787	0	4,905	0
PT-R22	Plumwood Village - Monroe Township		1,799	2,500	1,798	2,500	1,833	2,500	1,878	2,500	1,924	2,500
Total County Population			45,591		45,559		46,452		47,592		48,760	
Total Population Credit			42,243		42,229		42,616		44,356		44,892	
Percent of Population			93%		93%		92%		93%		92%	

ID #	Shelby		2019		2024		2028		2033		2038	
	Name of Community		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside												
NSC13	Anna Village		1,520	1,520	1,493	1,493	1,481	1,481	1,466	1,466	1,452	1,452
NSC14	Botkins Village		1,158	1,158	1,138	1,138	1,128	1,128	1,117	1,117	1,106	1,106
NSC15	Fort Loramie Village		1,523	1,523	1,496	1,496	1,484	1,484	1,469	1,469	1,455	1,455
NSC16	Jackson Center Village		1,465	1,465	1,439	1,439	1,428	1,428	1,413	1,413	1,399	1,399
NSC17	Kettlersville Village		170	170	167	167	166	166	164	164	162	162
NSC18	Russia Village		664	664	652	652	647	647	641	641	634	634
NSC19	Sidney City		20,449	20,449	20,089	20,089	19,928	19,928	19,728	19,728	19,531	19,531
Subscription curbside												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, urban drop-off												
FT-U8	Sidney		20,449	0	20,089	0	19,928	0	19,728	0	19,531	0
Part-time, urban drop-off												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, rural drop-off												
FT-R5	Fort Loramie Village - McLean Township		3,290	2,500	3,232	2,500	3,206	2,500	3,174	2,500	3,142	2,500
FT-R6	Houston Village - Loramie Township		2,564	2,500	2,519	2,500	2,499	2,500	2,474	2,500	2,449	2,500
FT-R7	Jackson Center Village - Jackson Township		2,449	2,500	2,406	2,500	2,387	2,500	2,363	2,500	2,339	2,500
FT-R8	McCartyville Village - VanBuren Township		2,067	2,500	2,031	2,500	2,014	2,500	1,994	2,500	1,974	2,500
Part-time, rural drop-off												
PT-R23	Anna Village - Dinsmore Township		3,462	2,500	3,401	2,500	3,374	2,500	3,340	2,500	3,307	2,500
PT-R24	Kettlersville Village - Van Buren Township		2,067	0	2,031	0	2,014	0	1,994	0	1,974	0
PT-R25	Swanders Village - Franklin Township		3,332	2,500	3,273	2,500	3,247	2,500	3,215	2,500	3,182	2,500
Total County Population			48,590		47,733		47,351		46,878		46,409	
Total Population Credit			41,949		41,474		41,262		40,999		40,739	
Percent of Population			86%		87%		87%		87%		88%	

ID #	Union		2019		2024		2028		2033		2038	
	Name of Community		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside												
NSC20	Marysville City		24,667	24,667	27,271	27,271	28,077	28,077	29,114	29,114	30,188	30,188
Subscription curbside												
None	None		0	0	0	0	0	0	0	0	0	0
Full-time, urban drop-off												
FT-U9	Marysville		24,667	0	27,271	0	28,077	0	29,114	0	30,188	0
Part-time, urban drop-off												
PT-U7	Plain City - Jerome Township Mobile Drop-off		5,854	2,500	6,472	2,500	6,663	2,500	6,909	2,500	7,164	2,500
PT-U8	Paris Township		26,442	2,500	29,233	2,500	30,097	2,500	31,209	2,500	32,360	2,500
Full-time, rural drop-off												
FT-R9	Richwood Village - Claibourne Township		3,951	2,500	4,368	2,500	4,497	2,500	4,663	2,500	4,835	2,500
Part-time, rural drop-off												
PT-R26	Allen Township		2,596	2,500	2,870	2,500	2,955	2,500	3,064	2,500	3,177	2,500
PT-R27	Magnetic Springs Village - Leesburg Township		1,599	2,500	1,768	2,500	1,820	2,500	1,887	2,500	1,957	2,500
PT-R28	Milford Center Village - Union Township Mobile Drop-off		2,010	2,500	2,222	2,500	2,288	2,500	2,372	2,500	2,460	2,500
PT-R29	Raymond Village - Liberty Township Mobile Drop-off		2,236	2,500	2,472	2,500	2,545	2,500	2,639	2,500	2,736	2,500
PT-R30	Unionville Center - Darby Township Mobile Drop-off		2,307	2,500	2,551	2,500	2,626	2,500	2,723	2,500	2,823	2,500
PT-R30	Unionville Center - Darby Township Mobile Drop-off		2,307	2,500	2,551	2,500	2,626	2,500	2,723	2,500	2,823	2,500
New	Milcreek, Dover, Taylor, Jackson or Washington Township		1,377	0	1,522	0	1,567	0	1,625	2,500	1,685	2,500
Total County Population			55,465		61,320		63,132		65,464		67,879	
Total Population Credit			47,167		49,771		50,577		54,114		55,188	
Percent of Population			85%		81%		80%		83%		81%	

Sources of Information: Ohio Development Services Agency, 2021 Population Estimates by County, City, Village, and Township, June 2022.

Union County includes a possible new part time drop off site starting in 2038. The implementation of this site will be reassessed in the next Plan Update when updated population data is available.

All curbside programs operating during the reference year (2019) are expected to continue.

The District will continue to meet Goal 1 for each year of the planning period. All curbside programs and drop-offs operating during the reference year are expected to continue with the exception of the following:

- Spencerville-Amanda Township – Allen County
- Ford Motor Company – Allen Township

The District reserves the right to adjust (remove, add, change, modify) drop-off sites throughout the planning period for any of the following reasons:

- If new curbside programs come online
- Drop-off sites are abused and or have excess contamination
- Other access creditable programming or services develop that negates the need of any particular site
- Other reasons as determined by the Board of Directors

The District included all of the drop-off recycling sites in operation regardless of if they meet the criteria to be eligible for access credit toward achieving Goal 1. Some sites in the table are listed with a population credit of zero. These sites are located in cities, villages, or townships that provide non-subscription curbside recycling access. Communities with non-subscription curbside recycling programs have a population credit equal to 100% of the total population; therefore, additional population credit for drop-offs cannot be counted toward achieving Goal 1 because the access credit would exceed the total population of the political subdivision.

Summary of Recycling Infrastructure

The District has 20 non-subscription curbside recycling communities and 1 with subscription curbside recycling. Non-subscription curbside recycling provides 100% recycling access for the residents and subscription provides 25% recycling access. The drop-off program also adds access for the residents. There are 57 drop-off sites within the District which allow for additional recycling options. These drop-offs help multi-family housing have access to recycling too. Due to the non-subscription credits given to some of the programs, not all drop-offs receive access credit.

The District will monitor population projections over the planning period if additional recycling access is needed to meet the 80% access goal in any county of the District.

Table J-1b. Opportunity to Recycle Summary

Year	Population Data	County						Total
		Allen	Champaign	Hardin	Madison	Shelby	Union	
2019	Total County	106,607	38,885	31,478	45,591	48,590	55,465	326,616
	Credit	86,642	36,404	25,155	42,243	41,949	47,167	279,560
	% Access	81%	94%	80%	93%	86%	85%	86%
2024 (Year 1)	Total County	104,455	37,701	30,715	45,559	47,733	61,320	327,483
	Credit	83,100	36,057	24,788	42,229	41,474	49,771	277,418
	% Access	80%	96%	81%	93%	87%	81%	85%
2028 (Year 5)	Total County	103,655	37,084	30,592	46,452	47,351	63,132	328,267
	Credit	82,712	35,876	24,729	42,616	41,262	50,577	277,771
	% Access	80%	97%	81%	92%	87%	80%	85%
2033 (Year 10)	Total County	102,651	36,552	30,440	47,592	46,878	65,464	329,576
	Credit	82,226	35,720	24,655	44,356	40,999	54,114	282,070
	% Access	80%	98%	81%	93%	87%	83%	86%
2038 (Year 15)	Total County	101,676	36,078	30,288	48,760	46,409	67,879	331,090
	Credit	81,753	35,581	24,582	44,892	40,739	55,188	282,736
	% Access	80%	99%	81%	92%	88%	81%	85%

Tables J-2 and J-3 are not applicable to the District and have been omitted.

Commercial Sector Opportunity to Recycle

Table J-4. Infrastructure Demonstration for the Commercial Sector

Service Provider	Type of Recycling Service Provided	Cc	Mp	Sc	PI	W
Allen						
Griffith's Trash Pick Up Services	Buy Back, Scrap Yard, Hauler Collection	✓		✓		
P & K Hauling	Hauler Collection	✓	✓	✓	✓	
Rumpke Waste Inc.	Hauler Collection	✓	✓	✓	✓	
Waste Management, Inc.	Hauler Collection	✓	✓	✓	✓	
Allen County Recyclers Inc	Hauler Collection	✓	✓	✓	✓	✓
Lima Pallet Company	Pallet Refurbisher					✓
Ohio Wood Recycling	Pallet Refurbisher					✓
Allen County Pallet	Pallet Refurbisher					✓
Mid-Ohio Wood Recycling	Drop-off					✓
Champaign						
Republic Waste Services	Hauler Collection	✓	✓	✓	✓	
Waste Management, Inc.	Hauler Collection	✓	✓	✓	✓	
Rumpke Waste Inc.	Hauler Collection	✓	✓	✓	✓	
Hardin						
Republic Waste Services	Hauler Collection	✓	✓	✓	✓	
Waste Management, Inc.	Hauler Collection	✓	✓	✓	✓	
Rumpke Waste Inc.	Hauler Collection	✓	✓	✓	✓	
Madison						
Rumpke Waste Inc.	Hauler Collection	✓	✓	✓	✓	
Waste Management, Inc.	Hauler Collection	✓	✓	✓	✓	
Shelby						
Hemmelgarn Roll Off Services	Hauler Collection			✓		✓
Republic Waste Services	Hauler Collection	✓	✓	✓	✓	
Rumpke Waste Inc.	Hauler Collection	✓	✓	✓	✓	
Waste Management, Inc.	Hauler Collection	✓	✓	✓	✓	
Union						
Rumpke Waste Inc.	Hauler Collection	✓	✓	✓	✓	
Local Waste	Hauler Collection	✓				
Republic Waste Services	Hauler Collection	✓	✓	✓	✓	
Waste Management, Inc.	Hauler Collection	✓	✓	✓	✓	

CC = corrugated cardboard, MP = mixed paper, SM = scrap metals, PL = plastics, W = wood pallets and packaging

Table J-4, “Infrastructure Demonstration for the Commercial Sector,” presents drop-offs, buy backs, scrap yards, haulers, pallet refurbishers, and material

recovery facilities that provide recycling opportunities to the commercial/institutional sector. The total number of recycling opportunities in the District's jurisdiction for five materials designated for the commercial sector to demonstrate compliance with Goal 1 are as follows:

- Corrugated cardboard: 20
- Mixed paper: 18
- Scrap metals: 20
- Plastics: 18
- Wood pallets and packaging: 5

Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate

In the reference year, the District residential/commercial sector achieved a 24.41% waste reduction and recycling rate, which falls short of the 25% requirement to achieve Goal 1. The waste reduction and recycling rate for the R/C sector is projected to not meet or exceed the 25% requirement throughout the planning period based on anticipated volumes of recycling from scrap yards, processors, MRFs, retailers that report to Ohio EPA, scrap tire recyclers, HHW programs, recycling drop-off programs, curbside recycling programs, and organics diversion facilities as well as the growth in solid waste disposal tonnages projected.

2. Industrial Waste Reduction and Recycling Rate

The Ohio EPA eliminated the industrial percentage goal. The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.

Appendix I contains the District programs offered to the industrial sector, including the following:

- Commercial and Industrial Waste Assessments and Evaluations
- Commercial and Industrial Technical Assistance
- Commercial and Industrial Market Development Grant Assistance and Support

3. Encouraging Participation

The District will encourage residents, commercial, industrial and institutional generators to participate in available recycling infrastructure using a variety of outreach, education, and incentive programs, including the following:

- **Waste Assessment & Audits**
The District will continue to offer programming to assist industries with recycling implementation and technical assistance as needed.
- **Grant Programs**
The District provides assistance to local businesses in identifying opportunities for grants and/or loans from federal and state sources to fund pollution prevention and waste minimization opportunities
- **Education for Waste Assessment & Audits**
The District provides education/technical assistance, guidelines and methodology for performing waste audits to help businesses identify alternatives to waste generation, methods for collection and marketing of recyclable materials.
- **Commercial/Institutional Education & Outreach**
The District provides assistance may include guidelines and methodology for waste audits, providing methods for collecting and marketing secondary materials, or grant application assistance
- **Industrial Education & Outreach**
The District provides assistance may include guidelines and methodology for waste audits, providing methods for collecting and marketing secondary materials, or grant application assistance

Appendices I and L include detailed information about each program.



APPENDIX K

WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL

APPENDIX K. Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2

Even though the District has chosen to demonstrate compliance with Goal 1 of the State Plan, the District will strive to achieve Goal 2 as well, which states that the District will recycle or reduce at least 25% of the solid waste generated by the residential/commercial sector.

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 meet the state’s WRR goal for the residential/commercial sector for each year of the planning period.

Table K-1. Annual Rate of Waste Reduction: Residential/Commercial Solid Waste

	Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate	Per Capita Waste Reduction & Recycling Rate (ppd)
First Year of Planning Period	2019	326,616	86,278	238,856	325,134	26.54%	1.4
	2020	327,129	87,916	240,464	328,379	26.77%	1.5
	2021	327,218	74,105	242,082	316,187	23.44%	1.2
	2022	327,306	74,125	243,712	317,837	23.32%	1.2
	2023	327,395	74,145	245,352	319,497	23.21%	1.2
	2024	327,483	74,165	247,003	321,169	23.09%	1.2
	2025	327,571	74,185	248,666	322,851	22.98%	1.2
	2026	327,803	74,226	250,340	324,566	22.87%	1.2
	2027	328,035	74,279	252,025	326,303	22.76%	1.2
	2028	328,267	74,331	253,721	328,052	22.66%	1.2
	2029	328,499	74,384	255,429	329,812	22.55%	1.2
	2030	328,730	74,436	257,148	331,584	22.45%	1.2
	2031	329,012	74,496	258,879	333,375	22.35%	1.2
	2032	329,294	74,560	260,621	335,181	22.24%	1.2
	2033	329,576	74,624	262,375	336,999	22.14%	1.2
	2034	329,858	74,688	264,141	338,829	22.04%	1.2
	2035	330,140	74,751	265,919	340,671	21.94%	1.2
	2036	330,457	74,820	267,709	342,529	21.84%	1.2
	2037	330,773	74,892	269,511	344,403	21.75%	1.2
2038	331,090	74,964	271,325	346,289	21.65%	1.2	

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:

$$\begin{aligned} 2019 \text{ Waste Generated} &= 2019 \text{ Waste reduced and recycled} + 2019 \text{ waste disposed} \\ 325,134 \text{ tons} &= 86,278 \text{ tons} + 238,856 \text{ tons} \end{aligned}$$

$$\begin{aligned} 2019 \text{ Waste Reduction \& Recycling Rate} &= (2019 \text{ Waste Reduced \& Recycled} \div 2019 \text{ Waste Generated}) \\ &\quad \times 100 \\ 26.54\% &= (86,278 \text{ tons} \div 325,134 \text{ tons}) \times 100 \end{aligned}$$

$$\begin{aligned} 2019 \text{ Per Capita Waste Reduction \& Recycling Rate} &= (2019 \text{ tons recycled} \times 2,000) \div 365 \div \text{population} \\ 1.4 \text{ PPD} &= ((86,278 \text{ tons} \times 2,000) \div 365 \text{ days/year}) \div 326,616 \text{ residents} \end{aligned}$$

Table K-1 demonstrates that the District did exceed the requirements of Goal 2 to reduce and recycle at least 25% of the solid waste generated by the residential/commercial during the reference year. With new initiatives that the District plans to implement during the planning period (see Appendix I), the tons of recycling will increase but the rate decreases because disposal is growing faster than recycling.

Even though the recycle rate for the industrial sector is no longer required by the Ohio EPA, the District surveyed the industrial sector and therefore was able to document the industrial sector data and projection for waste reduction.

Table K-2 and **K-3** have been eliminated. The District is not completing this section of the Plan Update as industrial recycling is not required to be tracked or projected per the 2020 State Solid Waste Plan and 4.1 Format.

Appendix H contains an analysis of the industrial sector.

Appendix I contains the District programs offered to the industrial sector, including the following:

1. Commercial and Industrial Waste Assessments and Assessments
2. Commercial and Industrial Technical Assistance
3. Commercial and Industrial Market Development and Scrap Tire Grant Assistance and Support
4. Commercial and Industrial Education
5. Commercial and Industrial Recycling Services



APPENDIX L

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

APPENDIX L. Minimum Required Education Programs: Outreach and Marketing Plan and General Education Requirements

This section discusses 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
- (4) a speaker or presenter.

The District met these requirements in the reference year.

1. Website

The District maintained several pages of information within its general website for the NCO Solid Waste District. The District's main page can be accessed at <https://ncowaste.org>.

The website is regularly updated and includes the District's contact information, recycling information by County, HHW information, waste disposal information, funding assistance information, detailed schedule on District events and recycling drop-off and HHW days, drop-off recycling

locations for traditional and special materials, District news, educational services and materials, other links and more.

Name	Start Date	End Date	Goal
Website/Social Media	Ongoing	Ongoing	3, 4

2. Comprehensive Resource List

The District’s website serves as a resource guide for each County in the District. Under <https://ncowaste.org>, the sections for information include:

- Latex paint
- Tires
- Oil/antifreeze
- Auto batteries/lead acid batteries
- Fluorescent bulbs
- Electronics and TVs
- Appliances and metal
- Yard waste
- Back yard composting
- Medications
- Waste disposal

Starting in 2022, the District will be overhauling its web site to a new platform with more useful and user-friendly features.

Name	Start Date	End Date	Goal
Website/Social Media	Ongoing	Ongoing	3, 4

3. Inventory of Available Infrastructure

On the District’s website, a page is reserved for each county in the District that depicts the following infrastructure:

- Curbside programs
- Full time recycling drop-off sites
- Part time recycling drop-off sites
- Mobile and rural recycling drop-off sites
- HHW sites
- Recycling facilities and scrap yards
- Non-profit and for-profit recycling service providers
- Yard waste programs and compost sites
- Transfer stations
- Landfills
- Waste haulers

- Demolition sites

The District also keeps an up-to-date Plan Update readily available on the District’s website. The Plan Update contains the following information for available infrastructure:

Solid Waste Management and Disposal Infrastructure, including:

- Landfill facilities
- Transfer facilities
- Scrap tire facilities
- Incinerators/waste-to-energy facilities

Waste Reduction and Recycling infrastructure, including:

- Curbside recycling services
- PAYT trash collection services
- Drop-off recycling locations (privately and publicly owned/operated)
- Composting facilities
- Yard waste collection programs
- Recycling centers
- Materials recovery facilities & other facilities for processing recyclable materials

Name	Start Date	End Date	Goal
Website/Social Media	Ongoing	Ongoing	3, 4

4. Speaker/Presenter

The District has taken the stance to provide education and awareness engagement using the following strategies, initiatives and services:

- Targeted education and awareness engagement through mailers, web site, social media and advertising.
- Speakers requested as needed for school age children up to adult groups.
- Tours of District recycling facilities.
- Engagement with participants at District HHW and mobile recycling drop-off programs.
- County fair and special event participation as requested.
- Community engagement at city/village/township council meetings as needed.
- Business engagement through technical assistance and waste assessments as requested.

Name	Start Date	End Date	Goal
Adult Education and School Age Children Education	Ongoing	Ongoing	3, 4

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

The District has existing programs which address the five required target audiences (Table L-1 below). The following section is organized by the target audience.

Table L-1. Target Audiences Addressed by Existing Programs

Existing Programs/Initiatives	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Web Site	✓	✓	✓	✓	✓
Social Media	✓	✓	✓	✓	✓
Technical Assistance		✓	✓	✓	✓
Adult Education and Videos	✓		✓	✓	✓
School Age Children Education and Videos	✓	✓			
Commercial/Industrial Education			✓	✓	
Waste Audits/Assessments		✓	✓	✓	
Community and Elected Officials Education					✓
District Financial Assistance – Education and Outreach		✓			
Boots on the ground tagging and engagement for curbside and drop-off programs	✓				✓
Total Program per Group	5	6	6	6	6

1. Audience: Residents

a. Overview

The District provides a website for residents, businesses, non-profits, institutions and government to find appropriate information on the many program opportunities to recycle (see Appendix H and L). The District also has targeted newspaper and direct mailer advertisements on District programs and/or initiatives. Additionally, the District provides flyers, brochures, and surveys to improve programs.

The District uses its tools for reaching out to residents to publicize the infrastructure available. A focus on recycling right in drop-off and

curbside recycling programs will improve the overall operations at the District’s facilities and improve recycling rates.

Name	Start Date	End Date	Goal
Adult Education	Ongoing	Ongoing	3, 4
Adult Education – Videos	2024	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

One of the best ways to reach residents as an audience is to have a presence on social media. Studies suggest that approximately 80% of Americans are on at least one social media platform. Social media can be used to advertise events and messages, answer questions from residents, and time messages at certain times of the day and week. The District uses Facebook and LinkedIn to help promote recycling infrastructure and collection events to its residents. The District will improve its uses of social media and will also investigate other social media platforms such as Instagram, Twitter, Truth, Snap Chat, TikTok and others to determine if any additional platforms should be used.

The District will also continue to use direct mail, flyers, newspaper advertisement and other forms of outreach to reach those residents who do not use the web site or social media. This initiative includes the following strategy:

- Conduct targeted education and outreach initiatives that can demonstrate measurable results of improvement through direct mailers as needed.
- Conduct boots on the ground tagging and direct engagement for curbside and drop-off programs to reduce contamination and increase correct recycling.
- Provide more targeted and less mass promotional initiatives to be efficient and cost effective.

In addition, the District, for this Plan Update, is planning on developing numerous videos by topic matter that will be housed on the District’s web site. The videos will be designed for adults and users of District facilities and programs. The video topics may include the following:

- Curbside recycling procedures
- Drop-off recycling procedures
- Permanent HHW participation procedures for all three sites
- Mobile HHW participation procedures for all three sites
- Shelby County Recycling Center drive through recycling procedures
- Union Recyclers drop-off participation procedures
- Composting
- Back yard composting
- E-Waste
- Batteries
- Other topics as determined

As the videos are created, they will be housed on the District's web site for use by any web site visitor. Videos may be published to YouTube as well depending on content and applicability.

Behavior Change Focus

The District has conducted two direct engagement programs for the cities of Marysville (2019) and Sidney (mid 2022). These engagement programs involved inspecting curbside recycling and providing information when source separation was incorrect. The Marysville project resulted in a 38% reduction in contamination. The Sidney project is projected to show similar results. These initiatives were planned in the previous Plan Update as a demonstration of how to positively effect behavior change on increasing recycling and reducing contamination. The District's purpose behind these initiatives was to test the theory of the action and then promote the engagement processes in future contracting of curbside services. This is a long-term strategy to convince communities that their contract for curbside services should include direct engagement initiatives (such as the tagging of recycling carts) in the request for proposals or bid specifications.

In addition, the District has conducted targeted mailers to residents on specific routes in Marysville in 2021 with a "Recycle Right" flyer. Observation of the incoming recyclables from these routes has shown some antidotal evidence of contamination reduction.

As a part of the overall strategy listed above, the District will also conduct targeted boots on the ground direct engagement for curbside recycling and drop-off recycling programs throughout the District. This initiative will include the following:

- District staff targeted tagging of curbside recycling containers throughout the year and across all 6 counties of the District. The tagging may be route specific and or neighborhood specific depending on contamination or low recycling issues.
- Seasonal staff targeted tagging of curbside recycling containers throughout the year or in the summer months and across all 6 counties of the District. The tagging may be route specific and or neighborhood specific depending on contamination or low recycling issues.
- District staff direct engagement with drop-off participants throughout the year and across all 6 counties of the District. The direct engagement would include observing recycling delivery at a site, how materials are separated, and any contamination issues observed. Staff would engage the participant to provide education materials and feedback based on what the resident brought to the site.
- Seasonal staff direct engagement with drop-off participants throughout the year and across all 6 counties of the District. The direct engagement would include observing recycling delivery at a site, how materials are separated, and any contamination issues observed. Staff would engage the participant to provide education materials and feedback based on what the resident brought to the site.

Seasonal staffing would be dependent on availability of qualified staff and budgetary considerations. District staff engagements will be dependent on staff availability.

Finally, in 2020, the District revamped its logo, web site and all flyers and information to better communicate to residents on where and how to recycle properly.

The Repeat Message

All social media postings, advertisements, posters, flyers, and other promotional material will have the same logo and branding to represent the District. Additionally, messages will be kept simple and repetitive in order for residents to remember the main message being communicated.

Measuring Results

The District uses a counter of visitors to the website, statistics of interactions from social media, and determining recycling rates and contamination percentages.

Measuring Effectiveness

The District is able to obtain recycling tonnage for the curbside and drop-off programs. Tonnage and contamination from before a recycling right campaign may be compared to the tonnage and contamination levels after a recycling right campaign. These campaigns may be direct or targeted as needed.

2. Audience: Schools

a. Overview

The District provides educational opportunities for students throughout the school year as requested. The District does not and has not focused on school age presentation for the last several Plan Updates. The District does provide, as requested, presentations in schools, day camps and special events.

Name	Start Date	End Date	Goal
School Age Children Education	Ongoing	Ongoing	3, 4
School Age Children Education – Videos	2024	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

The school audience needs interactive activities and visual aids. The presentations for this audience are focused on obtaining the attention and participation for the activities.

The District, for this Plan Update, is planning on developing numerous videos by topic matter that will be housed on the District’s web site. The videos will be designed for school age children and would be available for use by all area school teachers as a resource.

Behavior Change Focus

The District’s focus is to effect behavior change in school age children through the development and implementation of targeted

videos posted and categorized on the Districts' web site. Other educational information that is school age children focused will also be developed over time and placed on the web site. In addition, the District, for this Plan Update, is planning on developing numerous videos by topic matter that will be housed on the District's web site. The videos will be designed for school age children (grades pre-K-12) and teachers. The video topics may include the following:

- Recycling basics
- What is recyclable
- Composting worms
- Household hazardous waste
- Where does our waste go?
- Where does our recyclables go?
- Creating a school recycling program
- Curbside recycling procedures
- Drop-off recycling procedures
- Shelby County Recycling Center Tour
- Union Recyclers Tour
- Landfill tour
- Transfer station tour
- Composting
- Back yard composting
- E-Waste
- Batteries
- Other topics as determined

The Repeat Message

The District's messaging for schools will link recycling infrastructure in the schools along with curbside and drop-off programs. The message will be similar to what students and teachers may have seen on social media and in the videos.

Measuring Results

The District measures the school education programs by counting the number of video views, presentations and number of students that attended. The main focus for this Plan Update will be developing the videos, designing the new web site to house the videos by category, school age and topic matter and promoting the videos to the schools in the District.

Measuring Effectiveness

The District can use the data collected from the school programs to see participation trends on video views and presentation participation. The District will strive to increase the schools base fuse of the videos for this Plan Update. Expanding the number of different school districts that utilize the District video resources will increase the District’s visibility and student, faculty, and staff’s education for the District’s activities and infrastructure available.

3. Audience: Institutions & Commercial Businesses

a. Overview

The District provides educational and program opportunities to the business and institutional sector such as free waste assessments and audits, presentations, phone line, information on brochures and the website, and advice and contract assistance. These programs allow for the District to assist institutions & commercial businesses with access to infrastructure opportunities the business can take advantage of.

Name	Start Date	End Date	Goal
Commercial and Industrial Waste Audits and Assessments	Existing	Ongoing	1, 2, 4, 5
Commercial and Industrial Technical Assistance	Existing	Ongoing	2, 4
Ohio EPA Market Development and Scrap Tire Grants	Existing	Ongoing	1, 2, 4, 5, 9
Ohio EPA Community Development Grants	Existing	Ongoing	1, 2, 4

b. Outreach Methodologies

Audience Needs

The District understands that business needs are different than that of residents. The assistance provided to businesses or institutions includes the following:

- Web site provided resources and information
- Technical assistance on solid waste issues
- Waste audits and assessments
- Videos on District programs
- Assistance with Ohio EPA grants

The services above allow the District to connect to the commercial community and offer assistance with recycling and waste reduction program. In the long run, having the connection for waste reduction helps improve costs for the business and recycling efforts in the workplace, which in the long run, is what businesses are often concerned with.

Behavior Change Focus

The District will strive to effect behavior change in the following ways:

- Increased participation in District initiatives
- Increase participation rate for the commercial survey
- Increase commercial recycling

The Repeat Message

Messaging will be designed to achieve the behavior change listed above. At a minimum, common messaging, standard branding and frequency will be employed.

Measuring Results

The District can keep track of the number of business which inquire about audits, technical assistance, and presentations. Afterwards, the District can ask the business to submit recycling data and can track the tonnages for the following years. The District could also measure the number of calls from businesses on the phone line.

Measuring Effectiveness

The District can track the results listed above and the resulting recycling tonnages reported on annual surveys to measure the effectiveness of District-business relationships built.

4. Audience: Industries

a. Overview

The District provides industries with waste assessments, presentations, information through the phone line, brochures, website, advice, and contract assistance. The District helps industries with waste management assistance and possible infrastructure available in the region to recycle materials.

Name	Start Date	End Date	Goal
Commercial and Industrial Waste Audits and Assessments	Existing	Ongoing	1, 2, 4, 5
Commercial and Industrial Technical Assistance	Existing	Ongoing	2, 4
Ohio EPA Market Development and Scrap Tire Grants	Existing	Ongoing	1, 2, 4, 5, 9

b. Outreach Methodologies

Audience Needs

The industrial sector needs are much less than residents and commercial businesses. With the change in the 2020 State Plan regarding industrial recycling goals and assistance, the District will provide the following services to the industrial sector:

- Web site provided resources and information
- Technical assistance on solid waste issues
- Waste audits and assessments
- Videos on District programs
- Assistance with Ohio EPA grants

The services above allow the District to connect to the industrial sector and offer assistance with recycling and waste reduction program. In the long run, having the connection for waste reduction helps improve costs for the business and recycling efforts in the workplace, which in the long run, is what businesses are often concerned with.

The District will no longer survey the industrial sector with the start of this Plan Update. The surveying will end after the 2024 survey for 2023 data.

Behavior Change Focus

The District will strive to effect behavior change in the following ways:

- Increased participation in District initiatives

The Repeat Message

Messaging will be designed to achieve the behavior change listed above. At a minimum, common messaging, standard branding and frequency will be employed.

Measuring Results

The District can keep track of the number of business which inquire about audits, technical assistance, and presentations. The District could also measure the number of calls from businesses on the phone line.

Measuring Effectiveness

The District can track the results listed above to measure the effectiveness of District-business relationships built.

5. Audience – Communities & Elected Officials

a. Overview

The District has a good relationship with many communities and elected officials. The District works to keep good rapport and improve the recycling programs and infrastructure in District.

Name	Start Date	End Date	Goal
Community and Elected Officials Education	Existing	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

Communities and elected officials (including Policy Committee and Board of Directors for the District) would benefit from witnessing the works of the District programs. Having face-to-face interactions and invitations to events would increase rapport with the District and result in greater communication. Officials are often busy and may benefit from engagement with the District on changes or improvements with infrastructure in their communities as well as overall District programming. The District provides the following services to community leader and elected officials:

- Information on website including recycling, waste disposal and hauler information
- Curbside and drop-off assistance
- Contracting and marketing assistance
- Grant opportunities
- Presentations
- Policy Committee engagement and technical assistance

- ✓ Policy Committee guidance manual
- ✓ Engagement at meetings to discuss roles and responsibilities
- Board of Directors engagement and technical assistance
 - ✓ Engagement at meetings to discuss roles and responsibilities

Behavior Change Focus

The District engages with community leaders, elected officials and the governing boards of the District to educate, inform and provide them the tools for decision making. Decision making, based on sound advice, information and proper education is the best behavior change practice the District can implement.

The Repeat Message

The District can send emails for events and meeting invitations to communities & elected officials with a consistent message to keep officials up-to-date and in-the-know. This will allow more communication opportunities with the District as well.

Measuring Results

The District can keep track of the officials invited and ones which attend a meeting or presentation. This would allow the District to follow the participation.

In addition, the technical assistance portion of the services offered to community leaders and elected officials can be measured if new or improved programs are created.

Measuring Effectiveness

Determining the participation for the officials would allow the District to target future events to help get more officials involved with their communities and the opportunities they can help improve.

C. Outreach Priority

The District has identified lowering contamination rates and increasing correct recycling as an outreach priority. This priority would focus on drop-off recycling as well as curbside and business collection. Contamination increases costs for the District and the time on routes for the collection of materials. By focusing on the contamination amount, the District will increase education outreach and the District's presence to help communities reduce contamination. The District will create a branded campaign to recycle right and recycle often. All materials will include the District's logo and contact information, including flyers, direct mailers, advertisements and videos.

The District will incorporate all educational and outreach programs listed above and in Appendices H and I in the campaign to recycle right and recycle often. Programs will focus on the topic of recycling right and recycling often, how to do this, and why it is important. Messaging will be consistent with wording and branding. Messaging will also include actions in order to actively change behavior rather than just raising awareness.

1. Goal of the Outreach Priority

- Decrease contamination rate of residential recycling curbside and drop-off programs
- Increase public education of acceptable materials in the recycling stream

2. Target Audience(s)

- Residents
- Community Leaders
- Commercial, Institutional, and Industrial Businesses

3. Milestones

- Consistent signage for contamination education on all drop-off sites
- Advertisements and consistent messaging about recycling right
- Decreasing volume of contaminated materials each year
- Increase in recycling tonnage reported by businesses on surveys
- Increase in relationships built with businesses, schools, and community officials

4. Who Implements the Strategy

- The District provides promotion and education related to its programs

- The private haulers and processors will have a role in communicating to their customers on the proper way to recycle
- Community officials will manage their programs and engage with the District as needed

5. Measurement of Success

- Quantify the amount of correct and incorrect material in tons
- Reduction in contamination and residuals at the District's recycling facilities
- Reduced cost of operations at the District's recycling facilities from reduce contamination



APPENDIX M

**WASTE MANAGEMENT CAPACITY
ANALYSIS**

APPENDIX M. WASTE MANAGEMENT CAPACITY ANALYSIS

A. ACCESS TO PUBLICLY-AVAILABLE LANDFILL FACILITIES

The North Central Ohio Solid Waste District has zero in-District landfills. During the reference year, District-generated waste was directly hauled to 28 out-of-District landfills. These facilities had an average remaining capacity of more than 46 years. Twenty-four of the twenty-eight facilities had enough currently permitted capacity to last through the end of the District's planning period. As a result, the District has concluded that adequate landfill capacity is available to serve the needs of the District for the entire planning period.

Table M-1. Remaining Operating Life of Publicly-Available Landfills

Facility	Location	Years of Remaining Capacity ^a
<i>In-District</i>		
None		
<i>Out-of-District</i>		
Athens-Hocking Reclamation Center	Athens County, OH	47
Crawford County Landfill	Crawford County, OH	21
Defiance County Sanitary Landfill	Defiance County, OH	27
Pine Grove Regional Facility	Fairfield County, OH	89
SWACO Franklin County Sanitary Landfill	Franklin County, OH	41
Rumpke Sanitary Landfill	Hamilton County, OH	32
Hancock County Landfill	Hancock County, OH	24
Beech Hollow Landfill	Jackson County, OH	85
Cherokee Run Landfill Inc	Logan County, OH	40
Carbon Limestone Landfill LLC	Mahoning County, OH	31
Republic Services Inc Celina Sanitary Landfill	Mercer County, OH	0
Stony Hollow Landfill Inc	Montgomery County, OH	30
Port Clinton Landfill Inc	Ottawa County, OH	84
Suburban Landfill Inc	Perry County, OH	69
Pike Sanitation Landfill	Pike County, OH	42
Noble Road Landfill	Richland County, OH	12
Sunny Farms Landfill LLC	Seneca County, OH	18
American Landfill, Inc.	Stark County, OH	85
Evergreen Recycling & Disposal	Wood County, OH	49
Wood County Landfill	Wood County, OH	3
County Environmental Landfill of Wyandot	Wyandot County, OH	124
<i>Out-of-State</i>		
Bavarian Trucking Co Inc	Boone County, KY	15
National Serv-All Landfill	Allen County, IN	37
Jay County Landfill	Jay County, IN	82
Randolph Farms Landfill	Randolph County, IN	61
Caldwell Landfill	Shelby County, IN	47
County Line Landfill	Fulton County, IN	62
Sycamore Ridge Landfill	Vigo County, IN	30

Source(s) of Information: State-Level Project and Landfill Totals from the LMOP Database, 2021.

N/A = Not available

B. ACCESS TO CAPTIVE LANDFILL FACILITIES

No captive landfills exist within the District; therefore, **Table M-2** has been omitted.

C. INCINERATORS AND ENERGY RECOVERY FACILITIES

The District sent less than 10 percent of waste to incinerators. Therefore, **Table M-3**, "Incinerators and Energy Recovery Facilities Used by the District in the Reference Year," has been omitted.



APPENDIX N

**EVALUATING GREENHOUSE GAS
EMISSIONS**

APPENDIX N. EVALUATING GREENHOUSE GAS EMISSIONS

Greenhouse gas (GHG) emissions associated with solid waste management activities were estimated for the District using U.S. Environmental Protection Agency's Waste Reduction Model (WARM). The WARM was applied to reference year data and data projected for the sixth year of the planning period, or year 2029. Only residential/commercial waste has been included in the first and second analysis. Sources of waste or recyclables have been combined as necessary to create waste category totals corresponding to input entries available in the WARM. For instance, the "Mixed Recyclables" material category represents the sum of commingled recyclable materials that were notated on the reference year's Annual District Report.

The top half of **Table N-1** shown below provides the results from the WARM analysis, assuming that all waste recycled and composted in the reference year was disposed in landfills. The model estimates a net savings of 6,537.74 metric tons of carbon dioxide equivalents (MTCO₂E) using this assumption which is characterized as the baseline scenario. The second half of **Table N-1** represents the actual amounts recycled and composted in 2019 and is termed the alternative scenario. The alternative scenario results in a savings of 89,011.07 MTCO₂E.

Table N-1. Greenhouse Gas Emissions from All Recyclables in 2019

If Landfilled Model

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						6,537.74
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	13,316.78	-	NA	NA	3,404.38
Mixed Paper (general)	-	6,604.95	-	NA	NA	944.55
Food Waste	NA	14,137.07	-	-	-	7,664.83
Yard Trimmings	NA	32,903.78	-	-	-	(5,917.72)
Mixed Plastics	-	1,649.58	-	NA	NA	33.41
Mixed Electronics	-	32.52	-	NA	NA	0.66
Aluminum Cans	-	386.06	-	NA	NA	7.82
Steel Cans	-	539.64	-	NA	NA	10.93
Tires	-	7,009.92	-	NA	NA	141.98
Mixed Recyclables	-	2,691.62	-	NA	NA	246.90

If Recycled Model

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						(89,011.07)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	13,316.78	-	-	NA	NA	(41,752.60)
Mixed Paper (general)	6,604.95	-	-	NA	NA	(23,418.00)
Food Waste	NA	-	-	14,137.07	-	(2,488.29)
Yard Trimmings	NA	-	-	32,903.78	-	(4,814.22)
Mixed Plastics	1,649.58	-	-	NA	NA	(1,700.60)
Mixed Electronics	32.52	-	-	NA	NA	(25.67)
Aluminum Cans	386.06	-	-	NA	NA	(3,523.72)
Steel Cans	539.64	-	-	NA	NA	(988.66)
Tires	7,009.92	-	-	NA	NA	(2,637.86)
Mixed Recyclables	2,691.62	-	-	NA	NA	(7,661.45)

Combining the results from the two scenarios in **Table N-1** shows the GHG emissions saved within each material category, which is achieved by recycling and composting instead of landfilling all materials in the waste stream (see **Table N-2**). The total estimated GHG emissions savings is 95,548.81 MTCO₂E.

Table N-2. Net GHG Reductions for 2019: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (Alternative-Baseline)
Corrugated Containers	(45,156.98)
Mixed Paper (general)	(24,362.55)
Food Waste	(10,153.13)
Yard Trimmings	1,103.50
Mixed Plastics	(1,734.01)
Mixed Electronics	(26.32)
Aluminum Cans	(3,531.54)
Steel Cans	(999.59)
Tires	(2,779.84)
Mixed Recyclables	(7,908.35)
Net Totals	(95,548.81)

Note: "MTCO₂E" means metric tons of carbon dioxide equivalent.

Table N-3 shows the material categories as well as the amounts recycled and composted which were entered into the model. This first analysis compares reference year (2019) residential/commercial recycling data to projected data for year six of the planning period (2029). The top half of **Table N-3** provides results from the WARM analysis of actual residential/commercial recycling tonnage and MTCO₂E generation in 2019. The bottom half of the table represents the projected tonnage and MTCO₂E generation for year 2029.

Table N-3. Tons of Solid Waste Applied to WARM**2019 WARM Model**

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						(89,011.07)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	13,316.78	-	-	NA	NA	(41,752.60)
Mixed Paper (general)	6,604.95	-	-	NA	NA	(23,418.00)
Food Waste	NA	-	-	14,137.07	-	(2,488.29)
Yard Trimmings	NA	-	-	32,903.78	-	(4,814.22)
Mixed Plastics	1,649.58	-	-	NA	NA	(1,700.60)
Mixed Electronics	32.52	-	-	NA	NA	(25.67)
Aluminum Cans	386.06	-	-	NA	NA	(3,523.72)
Steel Cans	539.64	-	-	NA	NA	(988.66)
Tires	7,009.92	-	-	NA	NA	(2,637.86)
Mixed Recyclables	2,691.62	-	-	NA	NA	(7,661.45)

2029 WARM Model

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						(90,220.16)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	13,497.67	-	-	NA	NA
Mixed Paper (general)	-	6,694.67	-	-	NA	NA
Food Waste	-	NA	-	-	14,329.10	-
Yard Trimmings	NA	NA	-	-	33,350.73	-
Mixed Plastics	-	1,671.98	-	-	NA	NA
Mixed Electronics	NA	32.97	-	-	NA	NA
Aluminum Cans	-	391.30	-	-	NA	NA
Steel Cans	-	546.97	-	-	NA	NA
Tires	-	7,105.14	-	-	NA	NA
Mixed Recyclables	NA	2,728.18	-	-	NA	NA

The two scenarios in **Table N-3** above are combined into **Table N-4** below to show that the added GHG emissions between 2019 and 2029 by slightly decreasing recycling is 1,209.08 MTCO₂E.

Table N-4. Net GHG Reductions for 2029: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (2019 and 2029)
Corrugated Containers	(567.15)
Mixed Paper (general)	(318.10)
Food Waste	(33.80)
Yard Trimmings	(65.39)
Mixed Plastics	(23.10)
Mixed Electronics	(0.35)
Aluminum Cans	(47.86)
Steel Cans	(13.43)
Tires	(35.83)
Mixed Recyclables	(104.07)
Net Totals	(1,209.08)



APPENDIX O

FINANCIAL DATA



APPENDIX O. FINANCIAL DATA

This Appendix summarizes the District's funding mechanisms, projected revenues, and expenses for the planning period of 2024-2038. The District has prepared the budget section of this Plan Update to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.

The budget tables prepared for this Plan Update demonstrate that the District has the financial funding throughout the planning period to implement the planned programs and initiatives.

The Board of Directors (Board), with the advice and assistance of the Executive Director, will review and revise the budget as needed to implement the planned strategies, programs and/or activities as effectively as possible with the funds available. Revenues, not otherwise committed to an existing strategy, facility, program or activity may be used to increase funding to improve the effectiveness of an existing strategy, program or activity and to provide funding for a new strategy, facility, program or activity the Board concludes is justified based on the Executive Director's recommendations and the content of this Plan Update.

The District anticipates the need to revise the budget and reallocate funds as programs change or when otherwise determined to be in the best interest of the District. If the budget in this *Plan Update* is affected to the point that it must be revised, the District will first determine if a material change in circumstance has occurred. If a material change in circumstance has not occurred but budget revisions are needed that go beyond normal adjustments, the District may revise the budget per ORC Section 3734.56(E) and follow the appropriate ratification requirements to finalize the budget revisions.

The District is committed to implementing planned strategies, facilities, programs and/or activities in a cost-effective manner. The District is committed to improving the effectiveness and reduce the cost of all District strategies, facilities, programs and activities. The District Board is authorized to expend District funds among other uses included in the *Plan Update* when costs are reduced. Additionally, the Board is authorized to use revenues from reduced costs to provide grant funds or direct funding to evaluate, test and/or implement new strategies, facilities, programs and activities that are in compliance with this Plan Update and are not considered a "material change in circumstance" regarding the implementation of this Plan Update.

A. FUNDING MECHANISMS AND REVENUE GENERATED

1. Disposal Fees

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

2. Generation Fees

The District did receive revenue from generation fees in 2019 through 2020 and partially in 2021. The District transitioned to a contract fee through designation that will be discussed in the next section. The following table depicts the generation fee by year of the Planning Period:

Table O-2. Generation Fee Schedule and Revenue

Year	Generation Fee Schedule (\$ per ton)	Waste Disposed (tons)	Total Revenue from Generation Fee (\$)
2019	\$5.00	300,494	\$1,502,472
2020	\$5.00	282,416	\$1,412,082
2021	\$5.00	74,238	\$371,191
2022	\$0.00	0	\$0
2023	\$0.00	0	\$0
2024	\$0.00	0	\$0
2025	\$0.00	0	\$0
2026	\$0.00	0	\$0
2027	\$0.00	0	\$0
2028	\$0.00	0	\$0
2029	\$0.00	0	\$0
2030	\$0.00	0	\$0
2031	\$0.00	0	\$0
2032	\$0.00	0	\$0
2033	\$0.00	0	\$0
2034	\$0.00	0	\$0
2035	\$0.00	0	\$0
2036	\$0.00	0	\$0
2037	\$0.00	0	\$0
2038	\$0.00	0	\$0

The generation fee revenue totals listed above are fees collected from transfer stations and landfills within Ohio.

3. Contract Fees

The District implemented designation which includes a contract fee of \$6.00 per ton that is collected at each designated facility in early 2021. The list of designated facilities and the process of designation is included in Appendix P.

The District collected \$1,455,585 from the designated facilities in 2021 based on a partial year of contract fees through designation. The contract fees are based on the amount of tons delivered to a designated facility. The District also collected \$371,191 from the old generation fees in 2021 based on a partial year of generation fees. The District's historical amount of tons that the old generation fee was based on averaged 288,701 from 2015-2019. For 2018-2019, the tons averaged 307,541. The combination of the contract fees and generation fees in 2021 was \$1,826,776. Based on the information and historical data above, the District projects a flat 300,000 tons of solid waste that will generate \$1,800,000 in contract fee revenue for 2022. For the period 2023 – 2030, the tons are estimated to increase by 1% annually which reflects the projected annual increase in Appendix D. For the period 2032 through 2038, the tons remain flat. For the period 2022 through the end of the planning period, the contract fee through designation will be the main funding mechanism for the District.

Table O-3 depicts the actual and projected contract fees from 2019 – 2038.

Table O-3: Contract Fee Schedule and Revenue

Year	Contract Fee Schedule (\$ per ton)	Waste Disposed at Contracted Facilities	Total Contract Fee Revenue
2019	\$0.00	0	\$0
2020	\$0.00	0	\$0
2021	\$6.00	242,598*	\$1,455,585
2022	\$6.00	300,000	\$1,800,000
2023	\$6.00	303,000	\$1,818,000
2024	\$6.00	306,030	\$1,836,180
2025	\$6.00	309,090	\$1,854,542
2026	\$6.00	312,181	\$1,873,087
2027	\$6.00	315,303	\$1,891,818
2028	\$6.00	318,456	\$1,910,736

Year	Contract Fee Schedule (\$ per ton)	Waste Disposed at Contracted Facilities	Total Contract Fee Revenue
2029	\$6.00	321,641	\$1,929,844
2030	\$6.00	324,857	\$1,949,142
2031	\$6.00	324,857	\$1,949,142
2032	\$6.00	324,857	\$1,949,142
2033	\$6.00	324,857	\$1,949,142
2034	\$6.00	324,857	\$1,949,142
2035	\$6.00	324,857	\$1,949,142
2036	\$6.00	324,857	\$1,949,142
2037	\$6.00	324,857	\$1,949,142
2038	\$6.00	324,857	\$1,949,142

*Partial year of contract fee collection

4. ORC 343.08 Rates and Charges

The District does not receive revenue from charges on improved parcels in the District through the ORC 343.08 process for rates and charges.

The District reserves the right to implement a charge on improved parcels for which solid waste service are provided at any point in the planning period if deemed appropriate by the Board of Directors. If any implementation of projects requires or is deemed necessary to be funded by a ORC 343 rate or charge, the District will ratify an amended budget in accordance with ORC Section 3734.56(E).

The District does receive revenue from rates charged in the HHW program through the ORC 343.08 process for rates and charges. The District’s rates for HHW user fees are \$1.00 per pound for acceptable HHW materials and \$5.00 per visit for acceptable mercury containing devices. The revenue partially offsets the expenses of the program. These fees are included in Table O-5.

5. Loans

Table O-4 presents the loan that the District obtained in 2021 for the Union Recyclers MRF expansion project. The project involves borrowing \$2,596,789.75 to cover the cost of development, design and construction of the 20,000 sq ft expansion of Union Recyclers. The loan has a term of 20 years with an interest rate of 2.350%. The loan is a simple interest loan that can be paid off at any time. The District reserves the right to pay off this loan at anytime in the planning period. Savings from loan payments would

transfer to the District’s fund balance and/or incorporated into another planned initiative or possible initiative identified in Appendix I.

The following section defines the existing loan:

Table O-4. Loans

Year Loan Obtained	Outstanding Balance	Lending Institution	Loan Term (years)	Annual Debt Service
2019	\$0.00	n/a	n/a	n/a
2020	\$2,596,789.75	Ohio Water Development Authority	20	n/a
2021	\$2,545,561.69	Ohio Water Development Authority		\$168,863
2022	\$2,441,292.70	Ohio Water Development Authority		\$163,481
2023	\$2,334,559.00	Ohio Water Development Authority		\$163,481
2024	\$2,225,302.32	Ohio Water Development Authority		\$163,481
2025	\$2,113,463.02	Ohio Water Development Authority		\$163,481
2026	\$1,998,980.06	Ohio Water Development Authority		\$163,481
2027	\$1,881,790.94	Ohio Water Development Authority		\$163,481
2028	\$1,761,831.70	Ohio Water Development Authority		\$163,481
2029	\$1,639,036.86	Ohio Water Development Authority		\$163,481
2030	\$1,513,339.38	Ohio Water Development Authority		\$163,481
2031	\$1,384,670.66	Ohio Water Development Authority		\$163,481
2032	\$1,252,960.46	Ohio Water Development Authority		\$163,481

Year Loan Obtained	Outstanding Balance	Lending Institution	Loan Term (years)	Annual Debt Service
2033	\$1,118,136.88	Ohio Water Development Authority		\$163,481
2034	\$980,126.34	Ohio Water Development Authority		\$163,481
2035	\$838,853.50	Ohio Water Development Authority		\$163,481
2036	\$694,241.24	Ohio Water Development Authority		\$163,481
2037	\$546,210.64	Ohio Water Development Authority		\$163,481
2038	\$394,680.88	Ohio Water Development Authority		\$163,481

6. Other Sources of Revenue

a. Interest

Interest income from the District’s fund balance totaled \$50,077, \$17,542 and \$1,380 in 2019, 2020 and 2021 respectively. For 2022 through 2038, the District is projecting an annual interest revenue of \$15,000.

b. Grants

The District received a variety of grants from Ohio EPA from 2019-2021 (\$192,000, \$155,000 and \$300,000). Ohio EPA’s grants are competitive and not guaranteed; therefore, the District is not projecting grant revenue during the planning period.

c. Miscellaneous

The District received a variety of miscellaneous income from 2019-2021 (\$95,235, \$24,699 and \$163,941). Miscellaneous revenue can be from HHW fees, transfers, reimbursements and other miscellaneous revenue. For 2022 through 2038, the District is projecting an annual miscellaneous revenue of \$30,000.

Total other revenue amounted to \$337,312 during the 2019 reference year. During the first year of the planning period (2024), total revenue from other

sources is expected to be \$45,000. At the end of the planning period in 2038, total other revenue is projected to be \$45,000.

Table O-5. Other Revenue and Other Revenue Sources

Year	Interest	Grants	Miscellaneous	"Other Revenue" Total
2019	\$50,077	\$192,000	\$95,235	\$337,312
2020	\$17,542	\$155,000	\$24,699	\$197,241
2021	\$1,380	\$300,000	\$163,941	\$465,321
2022	\$15,000	\$0	\$30,000	\$45,000
2023	\$15,000	\$0	\$30,000	\$45,000
2024	\$15,000	\$0	\$30,000	\$45,000
2025	\$15,000	\$0	\$30,000	\$45,000
2026	\$15,000	\$0	\$30,000	\$45,000
2027	\$15,000	\$0	\$30,000	\$45,000
2028	\$15,000	\$0	\$30,000	\$45,000
2029	\$15,000	\$0	\$30,000	\$45,000
2030	\$15,000	\$0	\$30,000	\$45,000
2031	\$15,000	\$0	\$30,000	\$45,000
2032	\$15,000	\$0	\$30,000	\$45,000
2033	\$15,000	\$0	\$30,000	\$45,000
2034	\$15,000	\$0	\$30,000	\$45,000
2035	\$15,000	\$0	\$30,000	\$45,000
2036	\$15,000	\$0	\$30,000	\$45,000
2037	\$15,000	\$0	\$30,000	\$45,000
2038	\$15,000	\$0	\$30,000	\$45,000

7. Summary of District Revenues

The total revenue, comprised of generation fees then contract fees through designation and other revenue, was \$1,839,784 during the reference year. Revenue in the first year of the planning period (2024) is projected to be \$1,881,180. The following table presents a summary of the District's actual and projected total revenue from 2019 to 2038.

Table O-6. Total Revenue

Year	Generation Fees	Contract Fees	Other Revenue	Total Revenue
2019	\$1,502,472	\$0	\$337,312	\$1,839,784
2020	\$1,412,082	\$0	\$197,241	\$1,609,323
2021	\$371,191	\$1,455,585	\$465,321	\$2,292,097
2022	\$0	\$1,800,000	\$45,000	\$1,845,000
2023	\$0	\$1,818,000	\$45,000	\$1,863,000
2024	\$0	\$1,836,180	\$45,000	\$1,881,180
2025	\$0	\$1,854,542	\$45,000	\$1,899,542
2026	\$0	\$1,873,087	\$45,000	\$1,918,087
2027	\$0	\$1,891,818	\$45,000	\$1,936,818
2028	\$0	\$1,910,736	\$45,000	\$1,955,736
2029	\$0	\$1,929,844	\$45,000	\$1,974,844
2030	\$0	\$1,949,142	\$45,000	\$1,994,142
2031	\$0	\$1,949,142	\$45,000	\$1,994,142
2032	\$0	\$1,949,142	\$45,000	\$1,994,142
2033	\$0	\$1,949,142	\$45,000	\$1,994,142
2034	\$0	\$1,949,142	\$45,000	\$1,994,142
2035	\$0	\$1,949,142	\$45,000	\$1,994,142
2036	\$0	\$1,949,142	\$45,000	\$1,994,142
2037	\$0	\$1,949,142	\$45,000	\$1,994,142
2038	\$0	\$1,949,142	\$45,000	\$1,994,142

Source(s) of Information: Quarterly Fee Reports

B. COST OF IMPLEMENTING PLAN

1. Expenses

The projected budget, shown in **Table O-7**, was developed based on programmatic needs identified in Appendices H, I, and L.

2. Explanation of Expenses

Table O-7 includes actual expenses from 2019 to 2021, anticipated expenses from the District's approved budgets for 2022, and projected expenditures from 2023 to 2038. Line items explained below are numbered according to the corresponding line-item number in the District's Quarterly Fee Reports. Line items that did not have any expenditures projected throughout the planning period were omitted from the discussion below.

Deviations from the Quarterly Fee Report totals relates to Plan Preparation and Plan Monitoring. The budget line items listed in this Plan Update for these line items has been corrected and should be considered the proper budget for these expenses moving forward.

Projections were developed using the following assumptions or criteria:

1. *Plan Preparation and Monitoring*

1.a Plan Preparation – Budget includes estimated expenses related to retaining a consultant for assistance with plan preparation for each 5-year update that will occur during the planning period. Plan preparation time periods in this budget include 2021-2023, 2027-2029 and 2033-2035.

1.b Plan Monitoring – Budget includes estimated expenses related to District consultant and legal counsel for plan implementation and plan monitoring for the current solid waste plan being implemented. This line item also includes ADR related expenses for surveying, mail costs and consulting.

2. *Plan Implementation*

2.a District Administration

2.a.1 Personnel – Budget includes expenditures for District employee salaries. Expenditures are projected to increase 3.0% annually based on historic trends and District practices. This line item also included plan implementation tasks, technical assistance and other activities as indicated in Appendix I implementation schedule.

2.a.2 Office Overhead – Budget includes expenditures for OPERS, workers' compensation, Medicare, life insurance, unemployment insurance, and health insurance. This line item also includes the cost of utilities and office rent. Expenditures are projected to remain constant annually.

2.a.3 Other – Budget includes expenditures for equipment, travel, supplies, sundry, general plan implementation and vehicle purchases. The budget remains constant, except for when a new vehicle is purchased (2023-2025), throughout the planning period.

2.b Facility Operation

2.b.1 MRF/Recycling Center – Expenses related to the MRF account for the support of the District MRFs for capital projects and equipment purchases. Normal day to day operations of Union Recyclers and the Shelby County Recycling Center are not included in this Plan Update Budget. For the period 2019-2021, the District expended higher than normal amounts that were primarily related to the expansion project at Union Recyclers. This project was completed in 2021. For 2022 and beyond, expenses are projected to remain constant throughout the planning period at \$436,519. The District has historically budgeted (with exception of 2019-2021) a fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.d Recycling Collection

2.d.2 Drop-off – Expenses related to supporting the District Recycling Access for drop-offs. The District budget for the planning period remains constant each year at \$260,000. This expenditure is a part of the Recycling Assistance-Access Financial Assistance Program. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period. This line item also includes any one time planned expenses as indicated in Appendix I such new signage.

2.e Special Collections

2.e.1 Tire Collection – The cost of operating the program and contractor costs from the County Engineer and Townships. (\$5,000/year). Costs are projected to remain constant each year from 2023 to 2038. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.e.2 HHW Collection –The cost of operating the District's county-wide household hazardous waste collection and disposal program (\$60,000/year) starting in 2022. Costs are projected to remain constant each year from 2022 to 2038. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.e.3 Electronics Collection – The cost of operating the program and contractor costs (\$15,000/year) starting in 2022. Costs are projected to remain constant each year from 2022 to 2038. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.e.5 Other Collection Drives – The cost of the community clean-up grants offered each year of the planning period (\$30,000/year). Costs are projected to remain constant throughout the planning period. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.f Yard Waste/Other Organics

The cost to provide funding for leaf land application and other composting projects (\$5,000/year). Costs are projected to remain constant throughout the planning period. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.g Education/Awareness

2.g.1 Education Staff – Includes consulting costs for providing targeted education and outreach activities, web site management and other education/outreach tasks. This expense line item also includes partially funding the new initiatives discussed in Appendix I. Video production will be done in-house which will not incur any expenses.

Then new web site was developed in 2021 under this budget line item. Ongoing improvements and updates since the inception of the new web site are covered by this budget line item.

Costs associated to education and awareness programs are set at a flat \$50,000/year rate. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.g.2 Advertisement/Promotion – Includes consulting costs and third-party costs for targeted advertisement and promotion of District programs and contamination reduction direct engagement activities. The cost for any targeted direct engagement seasonal staffing (contamination reduction initiatives) costs as articulated in Appendix I would be accounted for in this line item. Costs associated to advertisement and promotion are set at a flat \$30,000/year rate. The

District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.g.3 Other – Includes education and awareness materials and supplies. Costs associated to other are set at a flat \$5,000/year rate. The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.h.1 General Market Development Activities

The cost of the Recycling Financial Assistance offered each year of the planning period (\$115,000/year). The financial assistance includes:

- Recycling Assistance – Start-Up/Improvement
- Outreach and Education
- Curbside/Drop-Off Direct Engagement Activities as Needed

The District has historically budgeted this fixed amount and rarely spends more than budgeted. Therefore, the fixed budget is projected for the planning period.

2.n Emergency Debris Management

This line item is a budgeted amount for the emergency fund. The District rarely expends funds under this line item. In the tear that no funds are allocated, the un-expended funds fall to the fund balance. For any given year where a request comes in that exceeds \$5,000, funding of the request would come from the fund balance. Funds could be applied for through the Disaster Debris Management grants. The cost of the Disaster Debris Grants offered each year of the planning period (\$5,000/year). Costs are projected to remain constant throughout the planning period.

2.o Loan Payment

This line-item budget included the bi-annual payments to the Ohio Water Development Authority for the Union Recyclers expansion loan. The payments are fixed at \$81,740.34 in January and July each year for a total of \$163,480.68.

3. Health Department Enforcement

In 2019, funding was provided to Ohio EPA-approved health departments in the District (Champaign, Madison, Shelby and Union counties) for a total of \$20,000/year for all 4 health departments for

solid waste enforcement. This amount was raised from \$18,013 to \$20,000 starting in 2022.

Budget Summary

The District started the 2019 reference year with a carry-over balance of approximately \$2.8 million. Based on revenue and expenditure projections discussed throughout this appendix, the District is expected to begin the planning period in 2024 with a carry-over balance of \$2.3 million end the planning period with a carry-over balance of \$2.9 million. Adequate funding is projected to be available to finance the implementation of this plan update. **Table O-8** presents a summary of the District's budget including revenue, expenditures, and fund balance.

Table O-8. Budget Summary

Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
2019	\$1,839,784	\$1,497,549	\$342,235	\$2,851,385
2020	\$1,609,323	\$2,463,560	-\$854,237	\$1,997,148
2021	\$2,292,097	\$1,898,348	\$393,749	\$2,390,897
2022	\$1,845,000	\$1,844,540	\$460	\$2,391,357
2023	\$1,863,000	\$1,882,340	-\$19,340	\$2,372,017
2024	\$1,881,180	\$1,890,374	-\$9,194	\$2,362,823
2025	\$1,899,542	\$1,898,649	\$893	\$2,363,716
2026	\$1,918,087	\$1,877,172	\$40,915	\$2,404,631
2027	\$1,936,818	\$1,885,951	\$50,867	\$2,455,497
2028	\$1,955,736	\$1,894,994	\$60,743	\$2,516,240
2029	\$1,974,844	\$1,904,307	\$70,536	\$2,586,776
2030	\$1,994,142	\$1,913,900	\$80,242	\$2,667,018
2031	\$1,994,142	\$1,923,781	\$70,361	\$2,737,379
2032	\$1,994,142	\$1,933,958	\$60,184	\$2,797,563
2033	\$1,994,142	\$1,944,441	\$49,701	\$2,847,264
2034	\$1,994,142	\$1,955,238	\$38,904	\$2,886,169
2035	\$1,994,142	\$1,966,359	\$27,783	\$2,913,952
2036	\$1,994,142	\$1,977,813	\$16,329	\$2,930,281
2037	\$1,994,142	\$1,989,612	\$4,531	\$2,934,811
2038	\$1,994,142	\$2,001,764	-\$7,622	\$2,927,190



APPENDIX P

DESIGNATION

APPENDIX P. DESIGNATION

A. STATEMENT AUTHORIZING/PRECLUDING DESIGNATION

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

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 or Board of County Commissioners (Board). 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 the authority to designate in a solid waste management plan, the Board decides whether or not to act on that authority. If it chooses to use its authority to designate facilities, then the Board must follow the process that is prescribed in ORC Section 343.014. If it chooses not to designate facilities, then the Board simply takes no action.

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

1. Authorization Statement to Designate

The Board of Directors of the District is hereby authorized to establish facility designations in accordance with Sections 343.013, 343.014, and 343.015 of the Ohio Revised Code. The facilities listed below in Section B of this Section are the only facilities designated for the disposal or transfer of municipal solid waste generated in this District. Any solid waste transfer, disposal facilities that are not designated will require designation or a waiver to accept solid waste generated within the District.

B. DESIGNATED FACILITIES

The currently designated facilities for the solid waste generators are shown in **Table P-1**.

Table P-1. Facilities Designated

Facility Name	Location		Facility Type	Year Designated
	County	State		
<i>In-District</i>				
Hardin Co. SW TS	Hardin	OH	TS	2020
Republic Services - Shelby Co. TS	Shelby	OH	TS	2020
Rumpke - Allen County TS	Allen	OH	TS	2020
WM of OH Lima TS	Allen	OH	TS	2020
<i>Out-of-District</i>				
Apex LF	Jefferson	OH	LF	2020
Athens Hocking Reclamation Center	Athens	OH	LF	2020
Carbon Limestone Landfill LLC	Mahoning	OH	LF	2020
Defiance Co. LF	Defiance	OH	LF	2020
Hancock Co. Sanitary LF	Hancock	OH	LF	2020
Kimble Sanitary LF	Tuscarawas	OH	LF	2020
Kimble Sanitary TS-Canton	Stark	OH	TS	2020
Kimble Sanitary TS-Twinsburg	Summit	OH	TS	2020
Kimble Sanitary TS-Cambridge	Guernsey	OH	TS	2020
Kimble Sanitary TS-Carrollton	Carroll	OH	TS	2020
Kimble Sanitary TS-Valley City	Medina	OH	TS	2020
Local Waste Services	Franklin	OH	TS	2020
Miami County Solid Waste & Recycling Facility	Miami	OH	TS	2020
Montgomery County Solid Waste Transfer and Recycling Facility	Montgomery	OH	TS	2020
Rep. Serv. - Celina LF	Mercer	OH	LF	2020
Rep Serv. - Pine Grove LF	Fairfield	OH	LF	2020
Rep. Serv. - Cherokee Run LF	Logan	OH	LF	2020
Rep. Serv. - Co. Environmental Oh Wyandot	Wyandot	OH	LF	2020
Rep. Serv. - Marion TS	Marion	OH	TS	2020
Rep. Serv. - Mt. Vernon TS	Knox	OH	TS	2020
Rep. Serv. - Reynolds Ave. TS	Franklin	OH	TS	2020
Rumpke - Richland Co. TS	Richland	OH	TS	2020
Rumpke - Greenville TS	Darke	OH	TS	2020
Rumpke - Delaware TS	Delaware	OH	TS	2020
Rumpke - Circleville TS	Pickaway	OH	TS	2020

Facility Name	Location		Facility Type	Year Designated
	County	State		
Rumpke - Columbus TS	Franklin	OH	TS	2020
Rumpke Sanitary LF, Inc.	Hancock	OH	LF	2020
Rumpke - Pike Co. San LF	Pike	OH	LF	2020
Rumpke - Noble Rd. LF	Richland	OH	LF	2020
Rumpke - Brown Co. San LF	Brown	OH	LF	2020
Rumpke - Crawford Co. LF	Crawford	OH	LF	2020
Rumpke - Beech Hollow LF	Jackson	OH	LF	2020
SWACO Jackson Pike Transfer Facility	Franklin	OH	TS	2020
SWACO Morse Road Transfer Facility	Franklin	OH	TS	2020
SWACO Franklin County Sanitary Landfill	Franklin	OH	LF	2020
WM Evergreen LF	Wood	OH	LF	2020
WM Stony Hollow LF	Montgomery	OH	LF	2020
WM Suburban S LF	Perry	OH	LF	2020
WM American LF	Stark	OH	LF	2020
WM Fairborn TS	Franklin	OH	TS	2020
WM Canal Winchester TS	Franklin	OH	TS	2020
WM Chillicothe TS - Mound	Ross	OH	TS	2020
Wood Co. LF	Wood	OH	LF	2020
Out-of-State				
Jay County Landfill	Jay	IN	LF	2020
Randolph Farms LF	Randolph	IN	LF	2020

The District has identified all solid waste facilities as well as those listed in Appendix D.

C. WAIVER PROCESS FOR THE USE OF UNDESIGNATED FACILITIES

The Board of Directors of the District developed the procedure established in a resolution adopted by the Board of Directors, September 26, 1994, and set forth in Appendix I, for a waiver process to allow exempt or other wastes to be disposed of at facilities other than those designated under Section E of this chapter.

The Ohio Revised Code provides that any person may apply for a waiver and states the findings necessary for Board approval of a waiver request. To parallel the statutory provisions regarding the consideration of a waiver request, the Waiver Process for the Use of Undesignated Facilities is revised. This Waiver Process clarifies those persons who may request a waiver and requests additional information be provided by the person requesting a waiver and requires that the person requesting the waiver explain the basis for the Board to grant the requested waiver. Any person or the legislative authority of a

municipal corporation or township may request a waiver authorizing the delivery of solid waste generated within the District to an undesignated solid waste transfer and disposal facility. The waiver request shall include the following:

1. The name, address, telephone number and email address of the person requesting the waiver.
2. The source and name of the generator of the solid waste included in the waiver request.
3. The name, address, telephone number and email address of the undesignated solid waste transfer and disposal facility where solid waste generated within the District will be delivered if the waiver is approved by the Board.
4. The estimated annual tonnage of the solid waste that will be delivered to the undesignated solid waste transfer and disposal facility covered by the waiver request.
5. An explanation describing how approval of the waiver request is not inconsistent with the projections contained in the District's initial or amended Plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code.
6. An explanation describing how the approval of the waiver request will not adversely affect implementation and financing of the District's initial or amended Plan pursuant to the implementation schedule contained in the District's initial or amended Plan under division (A)(12)(a) of section 3734.53 of the Revised Code.

Any waiver granted by the Board shall be included in a waiver agreement by and between the Board and the person granted the waiver. The waiver agreement shall contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver.



APPENDIX Q

DISTRICT RULE

APPENDIX Q. DISTRICT RULES

A. EXISTING RULES

According to Ohio Revised Code Section 3734.53(C), “the solid waste management plan of a county or joint district may provide for the adoption of rules under division (G) of section 343.01 of the Revised Code after approval of the plan under section 3734.521 or 3734.55 of the Revised Code.” The District reserves the authority for the Board to adopt rules under the provision of Ohio Revised Code.

The following summarizes the current and existing rules of the District:

1. **Rule # NCO-01**

CONSTRUCTION, ENLARGEMENT, OR MODIFICATION OF SOLID WASTE TRANSFER, DISPOSAL, RECYCLING, AND RESOURCE RECOVERY FACILITIES

(A) As used in this rule:

- (1) “Construct” means to create or install a solid waste facility at a location not currently used for that purpose.
- (2) “Disposal facility” means a solid waste facility for the placement of solid waste into the ground, or the conversion of solid waste into energy or compost materials, including sanitary landfills, incinerators, and composting facilities.
- (3) “Enlarge” means to alter a solid waste facility so as to increase the area of land occupied by components of the facility.
- (4) “Modify” means to alter a solid waste facility or the activities conducted at the facility in any of the following respects:
 - (a) A deletion, addition, or replacement of facility components or equipment that constitutes a significant change in facility operations.
 - (b) A change in the type of solid waste handled at the facility; or,
 - (c) A significant increase in the total capacity of the facility or amount of solid waste handled at the facility.
- (5) “Recycling facility” means a solid waste facility at which recyclable solid waste is separated from non-recyclable solid waste, or at which recyclable solid waste is accepted and stored for eventual reuse, including scrap tire facilities.
- (6) “Resource recovery facility” means a solid waste facility at which solid waste is processed to recover reusable substances.
- (7) “Solid waste” has the same meaning as defined in Section 3734.01, Ohio Revised Code; and

- (8) "Transfer facility" has the same meaning as "transfer station" as defined in OAC 3745-27-01.
- (B) After September 1, 1994, no person, partnership, firm, corporation, governmental body or other legal entity shall construct, enlarge, or modify a solid waste transfer, disposal, recycling or resource recovery facility in this District without obtaining prior approval from the Board of Directors of the District. Approval is not required for facilities described in Section 343.01 (J) (1) and (2), Revised Code.
- (C) The applicant for approval shall submit the following information and documents to the Board of Directors:
- (1) A written discussion of the following:
- (a) Type of facility.
 - (b) A description of and schedule for the construction, enlargement, or modification.
 - (c) Location of the facility.
 - (d) Identification of the type and amount of solid waste to be handled at the facility, including the source of the waste.
 - (e) Capacity of the facility before and after the construction, enlargement, or modification.
 - (f) Expected environmental impact and measures designed to minimize adverse impact, including measures for control of noise, odor, dust, litter, and vectors.
 - (g) Information required in the facility siting portions of the Solid Waste Management Plan.
 - (h) Effect of the facility on the operation of other like facilities in the District.
 - (i) Location and proximity of adjoining property and structures.
 - (j) Roads and streets that will be used for transport of material into and out of the facility, including a projection of traffic volume per unit of time.
 - (k) Hours of operation of the facility.
 - (l) Any other information requested by the Board of Directors.
- (2) The following documents:
- (a) A map showing the location of the facility.
 - (b) A diagram of the facility depicting site boundaries and the location of all structures and components of the facility; and
 - (c) A copy of the application to Ohio EPA for a permit to install, if an application has been prepared for the construction, enlargement, or modification.

- (D) Construction, enlargement, or modification of a solid waste facility shall conform to the information and documents submitted to and approved by the Board of Directors.

2. Rule # NCO-02

A rule governing the solid waste collection system within the Solid Waste District as authorized by Ohio Revised Code 9343.01 (G)(2), and the Solid Waste District's approved Plan, establishing an administrative procedure for refunding erroneously collected generation fees which have been forwarded to the District.

- (A) As used in this rule:

- (1) "Collection Agent" means any entity receiving solid waste from a generator located within the Solid Waste District for collection, transport, transfer, and/or disposal. Solid Waste from any generator may have more than one collection agent as there may be subsequent transfer of the waste as well as the fees imposed on the waste.
- (2) "Disposal Facility" has the same meaning as defined by the Ohio Administrative Code.
- (3) "Generation Fee" has the same meaning as defined by the Ohio Administrative Code.
- (4) "Grace Period" means the period of time after the payment of generation fee (the Solid Waste District) during which the final collection agent (facility operator or owner) may request refunds; acting as the agent of the generator or the generator's collection service provider.
- (5) "Solid Waste" has the same meaning as defined by Ohio Administrative Code.
- (6) "Solid Waste District" has the same meaning as defined by Ohio Administrative Code.
- (7) "Transfer Station" has the same meaning as defined by Ohio Administrative Code.

- (B) After January 1, 1997, no person, partnership, corporation, firm, governmental body, or other legal entity, who have collected generation fees from solid waste generators within the North Central Ohio Solid Waste District; or from the generator's collection entity, transfer station operator, or other service providers for disposal facilities outside of the Solid Waste District, shall be granted a request to investigate; and refund fees remitted to the Solid Waste District for erroneous fee payment(s), unless the request has

been received by the Solid Waste District within 90 calendar day “grace period” after the payment of the fees in question, except as provided in Paragraphs “E”, “F”, and “G” below.

- (C) All requests to the Solid Waste District for the return of erroneously-paid generation fees shall be made by the collection agent which originally remitted the erroneous fees to the Solid Waste District (transfer station or disposal facility operator/owner). All requests shall be made in writing, and accompanied by relevant documentation, in sufficient form and quantity to facilitate the Solid Waste District’s determination of the appropriateness of the requested refund. All requests and documentation that the fee in question have been (or will be) returned to the appropriate generator.
- (D) All requests for refunds shall be submitted to the Solid Waste District Office for processing. The Board of Directors for the Solid Waste District, or their designee, shall approve (or disapprove) all refunds within 90 days of the receipt of such a request. Repayment of erroneously paid fees shall occur within 14 calendar days of the approval of such an action.
- (E) The grace period shall begin in the statutorily defined date due for payment to the Solid Waste District of generation fees collected during the month in question, regardless of whether the actual payment has been received by the Solid Waste District on or before the prescribed date.
- (F) Requests for refunds of erroneously paid fees for which no Solid Waste District generator is involved; but the Solid Waste District received the revenue, should be directed to the Director of the Ohio EPA who is empowered to prescribe procedures for collecting and forwarding of fees. This Solid Waste District rule will be subordinate to the Director's instructions in such a matter.
- (G) Rule NCO 96-1 is subject to rulemaking authorities granted to Solid Waste Districts by the Ohio Legislature. Enforcement will occur to the degree relevant authority exists at the time a refund is requested.

3. Rule # NCO-03
DUTIES OF THE PUBLIC

(A) Notification of Residents for New Service

It shall be the duty of any person residing at a residential address covered by the PAYT Program where the person did not previously have Kenton PAYT service, to notify the Kenton PAYT Customer Service Representative by telephone or in writing of the new service requirement.

(B) General Duty for Acceptable Waste and Recyclables

It shall be the duty of any person at all times to cause acceptable waste and recyclables generated at residential units covered by the PAYT Program to be properly contained for collection by the District's authorized commercial hauler.

(C) Placement and Removal of Containers

Residents covered by the PAYT Program shall place properly containerized, acceptable waste and recycling container at their assigned point of collection not more than 12 hours prior to the scheduled collection time and shall remove any unacceptable waste and the recycling container from the assigned point of collection within 24 hours of collection.

4. Rule # NCO-04
PROHIBITED ACTIVITIES

(A) Scavenging

No person shall remove any acceptable recyclable material set out for collection by the authorized commercial hauler of the PAYT Program under contract with the District, unless authorized to do so by the District or the authorized commercial hauler.

(B) Use of Containers

Recycling containers, assigned to each residential property covered by the PAYT Program, and distributed by the District or its authorized commercial hauler, remains the property of the District. The authorized use of each recycling container is limited to those residing at the assigned address. Any other use is prohibited.

5. Rule # NCO-05
PENALTIES

Whoever violates any rule of the District enacted under Division (G) (2) of Section 343.01 of the Ohio Revised Code shall be fined not more than five thousand dollars (\$5,000).

6. Rule # NCO-06
USE OF SOLID WASTE AND RECYCLING SERVICES PROVIDED BY THE DISTRICT

All residential units located in the City of Kenton, Ohio that generate solid waste or recyclable materials shall utilize the services provided by the District for the collection, transportation, processing, or disposal of solid waste and recyclable materials.

7. **Rule # NCO-07**
ANTI-SCAVENGING

All solid waste and recyclable materials generated by a residential unit located in the City of Kenton, Ohio, and which is set out at the curbside or similar location for pick-up, shall be conclusively presumed to be unwanted and abandoned by the generator, and subject to the exclusive authority of the District or its authorized contractors to collect, transport, process or dispose of such solid waste and recyclable materials. No person other than the District or its authorized contractors shall collect, transport, process or dispose such solid waste or recyclable materials.

8. **Rule # NCO-08**
DEFINITIONS

“Residential unit” means a single-family dwelling, house, apartment, mobile home or trailer, as well as multi-family dwellings consisting of two, three or four dwelling units or apartments grouped under a common roof.

“District” means the North Central Ohio Solid Waste Management District, a joint solid waste management district established and maintained pursuant to Chapter 343 of the Ohio Revised Code, and which maintains its administrative offices at 212 North Elizabeth St., Ste 301, Lima, OH, 45801.

“Solid waste” means non-hazardous, unwanted household waste generated at a residential unit, and shall be interpreted consistent with the provisions of Chapters 3745-27 and 3745-37 of the Ohio Administrative Code.

“Recyclable materials” means the materials contained in solid waste that may be reconstituted into useable commodities, and which have been separated from solid waste and placed into a marked District recycling container for pick-up.

B. **RULE MAKING AUTHORITY – ORC 343.01**

The solid waste management plan provides the authority to the Board of County Commissioners to adopt, publish, and enforce all the rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

1. **ORC 343.01(G)(1)**

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of

directors of a joint district may adopt, publish, and enforce rules doing any of the following:

- (1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities covered by the plan, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code, except that the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order.
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density.
 - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful.
 - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district.
 - (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met.
 - (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

2. ORC 343.01(G)(2)

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

“Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility under general plans and specifications for the proposed improvement have been submitted to and approved by the Board of County Commissioners . . . as complying with solid waste management plan or amended plan of the District. The construction of such a facility . . .”

3. ORC 343.01(G)(3)

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district's solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district's solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

4. ORC 343.01(G)(4)

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

C. RULE MAKING AUTHORITY - ORC 3734.53

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

- (1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order.
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite

good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density.

- (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful.
 - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district.
 - (d) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met.
 - (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.
- (2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district.
 - (3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan.
- (3) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section

3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

D. PROPOSED RULES AND APPROVAL PROCESS

The following rule has been revised and shall become effective upon approval of this Plan Update:

The following rules are rescinded with the approval of this Plan Update:

- Rule # NCO-02
- Rule # NCO-03
- Rule # NCO-04
- Rule # NCO-05
- Rule # NCO-06
- Rule # NCO-07
- Rule # NCO-08

The following rule (NCO-01) has been revised and shall be adopted with the approval of this Plan Update:

Rule NCO-01

Requirement for Approval of Plans and Specifications for the Construction of Solid Waste Facilities.

No person, municipal corporation, township or other political subdivision, shall construct or modify any Solid Waste Disposal Facility (including a resource recovery facility) until general plans and specifications for the proposed improvement have been submitted to and approved by the Board of Directors of the North Central Ohio Solid Waste District as complying with District's Solid Waste Management Plan pursuant to Appendix S of the Plan –Siting Strategy for Facilities.

This rule does not apply to a Solid Waste Disposal Facility owned or operated by the District.

Proposed rules shall be adopted and enforced by the Board of Directors as provided in Section 343.01(G).



APPENDIX R

BLANK SURVEY FORMS AND RELATED INFORMATON



Suite D • 815 Shawnee Road • Lima, Ohio 45805
419/228-8278 • 822/553-6763 • FAX 419/229-2156
www.ncowaste.org

North Central Ohio Solid Waste District

Serving Allen, Champaign, Hardin, Madison, Shelby and Union Counties

February 2020

Dear Solid Waste/Recycling Manager:

THE NORTH CENTRAL OHIO SOLID WASTE DISTRICT NEEDS YOUR HELP.

Help us track local recycling efforts and fulfill our state reporting obligations by participating in a brief survey regarding the **total pounds/tons recycled by your workplace in 2019**. The data you provide will be combined with other businesses' data, so your individual company's or organization's information will not be identified. The information you supply will help us provide programs that meet the needs of our local community.

How to participate in our brief survey:

The survey asks for the total pounds/tons recycled in 2019, which can typically be found on hauler invoices or receipts from processors/brokers of recyclable materials. If weights are not provided to you, you may be able to request this information from your service provider. Only materials generated within Allen, Champaign, Hardin, Madison, Shelby, and Union Counties should be reported. Completing the survey should take only a few minutes.

Please complete your survey by **Friday, March 20, 2020** by following the steps below:

- Visit: bit.ly/NCO2019Broker
- Follow the instructions for completing the survey, check for accuracy, and click "Submit Survey".

If you have questions about the survey or would like to complete a paper survey, please contact Erin Oulton, the District's consultant, at GT Environmental. Erin can be reached at eoultan@gtenvironmental.com or 614-964-7284. A PDF version of the survey is also available on our web site at www.ncowaste.org.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

A handwritten signature in black ink that reads 'Jack DeWitt'.

Jack DeWitt
Executive Director

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5421188/NCO-2019-Brokers-Processors-Survey>



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How to participate in our brief survey:

The survey asks for the total pounds/tons recycled in 2019, which can typically be found on hauler invoices or receipts from processors/brokers of recyclable materials. If weights are not provided to you, you may be able to request this information from your service provider. Only materials generated within Allen, Champaign, Hardin, Madison, Shelby, and Union Counties should be reported. Completing the survey should take only a few minutes.

Please complete your survey by **Friday, March 20, 2020** by following the steps below:

- Visit: bit.ly/NCO2019Recycles
- Follow the instructions for completing the survey, check for accuracy, and click "Submit Survey".

If you have questions about the survey or would like to complete a paper survey, please contact Erin Oulton, the District's consultant, at GT Environmental. Erin can be reached at eoulton@gtenvironmental.com or 614-964-7284. A PDF version of the survey is also available on our web site at www.ncowaste.org.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

A handwritten signature in black ink that reads "Jack DeWitt".

Jack DeWitt
Executive Director

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5414578/NCO-2019-Commercial-Institutional-Survey>



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How to participate in our brief survey:

The survey asks for the total pounds/tons recycled in 2019, which can typically be found on hauler invoices or receipts from processors/brokers of recyclable materials. If weights are not provided to you, you may be able to request this information from your service provider. Only materials generated within Allen, Champaign, Hardin, Madison, Shelby, and Union Counties should be reported. Completing the survey should take only a few minutes.

Please complete your survey by **Friday, March 20, 2020** by following the steps below:

- Visit: bit.ly/NCO2019Compost
- Follow the instructions for completing the survey, check for accuracy, and click "Submit Survey".

If you have questions about the survey or would like to complete a paper survey, please contact Erin Oulton, the District's consultant, at GT Environmental. Erin can be reached at eoulton@gtenvironmental.com or 614-964-7284. A PDF version of the survey is also available on our web site at www.ncowaste.org.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

A handwritten signature in black ink that reads "Jack DeWitt". The signature is fluid and cursive.

Jack DeWitt
Executive Director

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5421434/NCO-2019-Compost-Survey>



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February 2020

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How to participate in our brief survey:

The survey asks for the total pounds/tons recycled in 2019, which can typically be found on hauler invoices or receipts from processors/brokers of recyclable materials. If weights are not provided to you, you may be able to request this information from your service provider. Only materials generated within Allen, Champaign, Hardin, Madison, Shelby, and Union Counties should be reported. Completing the survey should take only a few minutes.

Please complete your survey by **Friday, March 20, 2020** by following the steps below:

- Visit: bit.ly/NCO2019Hauler
- Follow the instructions for completing the survey, check for accuracy, and click "Submit Survey".

If you have questions about the survey or would like to complete a paper survey, please contact Erin Oulton, the District's consultant, at GT Environmental. Erin can be reached at eoulton@gtenvironmental.com or 614-964-7284. A PDF version of the survey is also available on our web site at www.ncowaste.org.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

A handwritten signature in black ink that reads "Jack DeWitt". The signature is written in a cursive, flowing style.

Jack DeWitt
Executive Director

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5421296/NCO-2019-Hauler-Survey>



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North Central Ohio Solid Waste District

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February 2020

Dear Solid Waste/Recycling Manager:

THE NORTH CENTRAL OHIO SOLID WASTE DISTRICT NEEDS YOUR HELP.

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How to participate in our brief survey:

The survey asks for the total pounds/tons recycled in 2019, which can typically be found on hauler invoices or receipts from processors/brokers of recyclable materials. If weights are not provided to you, you may be able to request this information from your service provider. Only materials generated within Allen, Champaign, Hardin, Madison, Shelby, and Union Counties should be reported. Completing the survey should take only a few minutes.

Please complete your survey by **Friday, March 20, 2020** by following the steps below:

- Visit: bit.ly/NCO2019ind
- Follow the instructions for completing the survey, check for accuracy, and click "Submit Survey".

If you have questions about the survey or would like to complete a paper survey, please contact Erin Oulton, the District's consultant, at GT Environmental. Erin can be reached at eoulton@gtenvironmental.com or 614-964-7284. A PDF version of the survey is also available on our web site at www.ncowaste.org.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

A handwritten signature in black ink that reads "Jack DeWitt". The signature is written in a cursive, flowing style.

Jack DeWitt
Executive Director

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5421496/NCO-2019-Industrial-Survey>

2019 Broker/Processor Recycling Survey

This recycling survey is being conducted by the North Central Ohio Solid Waste District to identify the type and amount of recyclables generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties during 2019.** The District will use this information for summary purposes only; no company's survey response will be reported individually. Your response to this survey will help measure District's progress toward state-mandated recycling goals and help us provide programs that meet local needs.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@gtenvironmental.com
 Fax: (614) 899-9255

If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

1. Contact Information (this information will be kept private):

Company Name: _____
 Company Mailing Address: _____
 Contact Name: _____ Number of Employees: _____
 Phone Number: _____ Email address: _____

2. Materials Recycled in 2019

Please complete the following table by reporting the amount of materials recycled in **2019** that were generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties.** Indicate whether materials were generated by residents, institutions, and commercial businesses (such as retail stores, office buildings, hospitals, or schools) or industrial (manufacturing) facilities using the "Quantity" columns below. You may estimate if necessary. Check the appropriate unit of measurement in the "Measurement" columns.

Material	Residential/ Institutional/ Commercial Quantity	Measurement	Industrial Quantity	Measurement
Mixed/Commingled Recycling		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Paper (Newsprint, Office, Glossy, Books etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Cardboard/Paperboard		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Glass		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Ferrous Metals (Steel, Iron): Do not report auto bodies or construction/ demolition materials such as rebar.		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Non-Ferrous Metals (Aluminum, Copper, Brass): Do not report auto bodies or construction/ demolition materials such as aluminum siding		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons

Material	Residential/ Institutional/ Commercial Quantity	Measurement	Industrial Quantity	Measurement
Plastics (#1-#7)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Other Plastic Bags/Film Plastics		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Wood (Except Pallets)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Wood - Pallets		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units
Food (Do NOT include Cooking Oil)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons
Appliances (White Goods)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Rubber (Not including Tires)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units
Used Tires		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons
Used Motor Oil (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Used Antifreeze (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units
Electronics (Residential: Computers, TVs, Cellphones, etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons
Rechargeable/Household Batteries		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Lead-acid Batteries (ex. Automotive Batteries)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons
Ink/Toner Cartridges		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Textiles (Clothing, Fabrics)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units
Non-Exempt Foundry Sand		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons
Yard Waste (Grass, Leaves, Branches)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons

3. Other Processors

If materials collected by your establishment that were reported above are sent to another company to be processed or recycled, please identify the type, quantity, and destinations of materials in the table below. This information is used to avoid double-counting material that has been recycled within Allen, Champaign, Hardin, Madison, Shelby and Union Counties.

Facility	Type of Recyclable	Amount

THANK YOU FOR YOUR HELP!

2019 Commercial Recycling Survey

This recycling survey is being conducted by the North Central Ohio Solid Waste District to identify the type and amount of recyclables generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties during 2019**. The District will use this information for summary purposes only; no company's survey response will be reported individually. Your response to this survey will help measure District's progress toward state-mandated recycling goals and help us provide programs that meet local needs.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@gtenvironmental.com
 Fax: (614) 899-9255

If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

1. Contact Information (this information will be kept private):

Company Name: _____

Company Mailing Address: _____

Contact Name: _____ Number of Employees: _____

Phone Number: _____ Email address: _____

I would like someone to reach out to me for more information about recycling options.

2. Does your organization recycle? (please check one)

Yes (CONTINUE)

No (END – Please return survey as directed above)

3. Materials Recycled in 2019

Please complete the following table by reporting the amount of materials recycled in **2019** that were generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties**. In the "Amount" column, enter the quantity recycled in 2019, then check the unit of measurement in the "Measurement" column. You may estimate if necessary. In the "Recycler" column, please indicate the hauler that collects the reported material or where the material will go after it leaves your establishment. The following chart may provide assistance with calculating cardboard recycling:

Cardboard Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked up (b)	No of Pickups per week (c)	Estimated Cardboard Recycled (Tons) (a) x (b) x (c) x 52 / 20
<i>Example</i>	<i>6 cubic yards</i>	<i>80% full</i>	<i>1 time/week</i>	<i>(6 x 0.80 x 1 x 52 / 20) = 12.48 tons</i>
1				
2				
3				
Total Cardboard Recycled in Tons (Enter in Cardboard row below)				

4. Materials Recycled in 2019 Survey

Material	Amount	Measurement	Name of Recycler or Hauler
Example: Mixed/Commingled Recycling	3.5	<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input checked="" type="checkbox"/> Tons	Recycling Brothers of Ohio
Mixed/Commingled Recycling		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Paper (Newsprint, Office, Glossy, Books etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Cardboard/Paperboard		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Glass		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Ferrous Metals (Steel, Iron): Do not report auto bodies or construction/ demolition materials such as rebar.		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Non-Ferrous Metals (Aluminum, Copper, Brass): Do not report auto bodies or construction/ demolition materials such as aluminum siding		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Plastics (#1-#7)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Other Plastic Bags/Film Plastics		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Wood (Except Pallets)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Wood - Pallets		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Food (Do NOT include Cooking Oil)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Appliances (White Goods)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Rubber (Not including Tires)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Used Tires		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Used Motor Oil (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Used Antifreeze (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Electronics (Residential: Computers, TVs, Cellphones, etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Rechargeable/Household Batteries		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Lead-acid Batteries (ex. Automotive Batteries)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Ink/Toner Cartridges		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Textiles (Clothing, Fabrics)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Non-Exempt Foundry Sand		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Yard Waste (Grass, Leaves, Branches)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	

THANK YOU FOR YOUR HELP!

2019 Compost Survey

Please complete the survey to the best of your ability. Only include information on organic materials that were generated within Allen, Champaign, Hardin, Madison, Shelby and Union Counties during 2019. The North Central Ohio Solid Waste District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further composted.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@gtenvironmental.com
 Fax: (614) 899-9255

If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

1. Contact Information (this information will be kept private):

Name of Facility: _____

Mailing Address: _____

Contact Name: _____

Phone Number: _____ Email address: _____

2. Description of Facility/Activity

1. Please select the operations at your facility (select all that apply):

Composting Residential Collection Mulching Land Application Anaerobic Digestion

2. Do you allow the public to drop-off yard waste materials? Yes No

3. Do you allow other businesses to drop-off yard waste materials? Yes No

4. If you send materials to another composting facility to be processed, please list the facility:

5. Designed Facility Processing Capacity: _____

6. Actual Tons per day: _____

7. Actual Tons per year: _____

8. Hours of Operation per Week: _____

3. Composting Tons in 2019

Please report the amount of materials **composted in 2019** that were **generated within Allen, Champaign, Hardin, Madison, Shelby and Union Counties** in the table below. Please report by whether materials were generated by the residential/commercial sector or the industrial sector. The data in the recycled column is used to calculate the District's progress in meeting state and local recycling goals. For data conversions assume the following: **2,000 pounds = 1 ton, 3 cubic yards = 1 ton.**

Material Generated in NCO	Residential/Commercial Material (Tons) (A)	Industrial Material (Tons) (B)	Total Material (Tons) (A+B)	Non-Compostables landfilled (TPY)	Final Compost Produced (TPY)
Grass					
Leaves					
Brush					
Food waste					
Animal waste					
Other:					
Other:					

Return the survey by email to eoulton@gtenvironmental.com, or fax to 614-899-9255.

THANK YOU FOR COMPLETING THIS SURVEY!

2019 Hauler Survey

Please complete the survey to the best of your ability. Only include solid waste/recycling tonnage that was generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties during 2019**. The North Central Ohio Solid Waste District will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@gtenvironmental.com
 Fax: (614) 899-9255

If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

1. Contact Information (this information will be kept private):

Company Name: _____
 Company Mailing Address: _____
 Contact Name: _____ Number of Employees: _____
 Phone Number: _____ Email address: _____

2. Solid Waste Services Provided in 2019

Please fill out the table below for all service areas **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties**. You may use the back of this survey if you need additional space to list communities serviced.

Key: **TC** Curbside Residential Trash Collection **CRC** Commercial Recyclables Collection
RC Curbside Residential Recyclables Collection **IRC** Industrial Recyclables Collection
PAYT Curbside Residential Pay-As-You-Throw **DO** Residential Recycling Drop-Off
YC Curbside Residential Yard Waste Collection

List the City, Township or Villages Serviced	Type of Service Provided (see key)	2018 Tons Collected Per Service Provided	Facility Used
<i>Example: City of Lima</i>	<i>Allen</i>	<i>CRTC RRDO CRC</i>	<i>10,500 tons 1,500 tons 2,000 tons</i>

2019 Industrial Recycling Survey

This recycling survey is being conducted by the North Central Ohio Solid Waste District to identify the type and amount of recyclables generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties during 2019**. The District will use this information for summary purposes only; no company's survey response will be reported individually. Your response to this survey will help measure District's progress toward state-mandated recycling goals and help us provide programs that meet local needs.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@gtenvironmental.com
 Fax: (614) 899-9255

If you have any questions or need assistance completing the survey,
 contact the District's consultant, Erin Oulton, at (614) 964-7284.

1. Contact Information (this information will be kept private):

Company Name: _____
 Company Mailing Address: _____
 Contact Name: _____ Number of Employees: _____
 Phone Number: _____ Email address: _____

I would like someone to reach out to me for more information about recycling options.

2. Does your organization recycle? (please check one)

- Yes (**CONTINUE**)
 No (**END – Please return survey as directed above**)

3. Materials Recycled in 2019

Please complete the following table by reporting the amount of materials recycled in **2019** that were generated **within Allen, Champaign, Hardin, Madison, Shelby and Union Counties**. In the "Amount" column, enter the quantity recycled in 2019, then check the unit of measurement in the "Measurement" column. You may estimate if necessary. In the "Recycler" column, please indicate the hauler that collects the reported material or where the material will go after it leaves your establishment. The following chart may provide assistance with calculating cardboard recycling:

Cardboard Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked up (b)	No of Pickups per week (c)	Estimated Cardboard Recycled (Tons) (a) x (b) x (c) x 52 / 20
<i>Example</i>	<i>6 cubic yards</i>	<i>80% full</i>	<i>1 time/week</i>	<i>(6 x 0.80 x 1 x 52 / 20) = 12.48 tons</i>
1				
2				
3				
Total Cardboard Recycled in Tons (Enter in Cardboard row below)				

4. Materials Recycled in 2019 Survey

Material	Amount	Measurement	Name of Recycler or Hauler
Example: Mixed/Commingled Recycling	3.5	<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input checked="" type="checkbox"/> Tons	Recycling Brothers of Ohio
Mixed/Commingled Recycling		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Paper (Newsprint, Office, Glossy, Books etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Cardboard/Paperboard		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Glass		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Ferrous Metals (Steel, Iron): Do not report auto bodies or construction/ demolition materials such as rebar.		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Non-Ferrous Metals (Aluminum, Copper, Brass): Do not report auto bodies or construction/ demolition materials such as aluminum siding		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Plastics (#1-#7)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Other Plastic Bags/Film Plastics		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Wood (Except Pallets)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Wood - Pallets		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Food (Do NOT include Cooking Oil)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Appliances (White Goods)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Rubber (Not including Tires)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Used Tires		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Used Motor Oil (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Used Antifreeze (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Electronics (Residential: Computers, TVs, Cellphones, etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Rechargeable/Household Batteries		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Lead-acid Batteries (ex. Automotive Batteries)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Ink/Toner Cartridges		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Textiles (Clothing, Fabrics)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Number/Units	
Non-Exempt Foundry Sand		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Yard Waste (Grass, Leaves, Branches)		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input type="checkbox"/> Gallons	
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons	

THANK YOU FOR YOUR HELP!



APPENDIX S

SITING STRATEGY

APPENDIX S. SITING STRATEGY

Section 343.01(G)(2) of the Ohio Revised Code authorizes the Board to adopt a rule requiring the submission of general plans and specifications to the Board for a determination by the Board that the proposed solid waste facility complies with the NCO Solid Waste District's Solid Waste Management Plan (the "Plan"). With the approval of this Plan, the following existing rule (NCO-01) will be revised and enacted:

Rule NCO-01

Requirement for Approval of Plans and Specifications for the Construction of Solid Waste Facilities.

No person, municipal corporation, township or other political subdivision, shall construct or modify any Solid Waste Disposal Facility (including a resource recovery facility) until general plans and specifications for the proposed improvement have been submitted to and approved by the Board of Directors of the North Central Ohio Solid Waste District as complying with District's Solid Waste Management Plan pursuant to Appendix S of the Plan –Siting Strategy for Facilities.

This rule does not apply to a Solid Waste Disposal Facility owned or operated by the District.

The following siting strategy shall govern proposals for the construction of a new solid waste facilities or the modification of an existing solid waste facility within the NCO Solid Waste District.

I. PURPOSE AND OBJECTIVE

The District's Siting Strategy for Solid Waste Disposal Facilities ensures that proposals to construct a new Solid Waste Disposal Facility within the District or modify an existing Solid Waste Disposal Facility within the District comply with the Solid Waste Management Plan ("Plan") and District Rules.

II. Rule

The District's revised rule NCO-01 requires that the District Board of Directors review and approve all proposals to construct any new Solid Waste Disposal Facility within the District or modify any existing in-District Solid Waste Disposal Facility. A "Solid Waste Disposal Facility" is any site, location, tract of land, installation, or building used for incineration, composting, sanitary landfilling, or other approved methods of disposal of solid wastes, including loads that contain solid waste mixed with other materials, or where

mixed solid waste or select solid waste streams are used as fuel to produce energy, heat, or steam. District Rule NCO-01 provides that:

No person, municipal corporation, township or other political subdivision, shall construct or modify any Solid Waste Disposal Facility (including a resource recovery facility) until general plans and specifications for the proposed improvement have been submitted to and approved by the Board of Directors of the North Central Ohio Solid Waste District as complying with District's Solid Waste Management Plan pursuant to Appendix S of the Plan –Siting Strategy for Facilities.

This rule does not apply to a Solid Waste Disposal Facility owned or operated by the District.

III. PROCEDURE IMPLEMENTING SITING STRATEGY

The Board shall not approve the construction or modification of a Solid Waste Disposal Facility within the District where the construction, modification, or operation of the improvement will:

- (a) Have a significant adverse impact upon the Board's ability to finance and implement the Plan, including but not limited to the efficient and economical operation of facilities and services provided by the District.
- (b) Materially and adversely affect the quality of life of residents within 1,000 feet of the proposed Solid Waste Disposal Facility.
- (c) Materially and adversely affect the local community, including commercial businesses within 1,000 feet of the proposed Facility, and the adequacy of existing infrastructure, emergency response, and other local government services that are relevant to the proposed Solid Waste Disposal Facility.

The Board has implemented a three-step procedure for reviewing a request to construct or modify a Solid Waste Disposal Facility.

STEP 1: Submittal of General Plans and Specifications.

Any Person proposing to construct a new Solid Waste Disposal Facility or modify an existing in-District Solid Waste Disposal Facility ("Applicant") shall:

- a. Provide general plans and specifications of the proposed facility to the Board. Such general plans and specifications shall include the following documents and information:
 - i. A description of the type of process(es) used by the facility (treatment, storage, disposal, transfer, recycling, resource recovery, or other processing, as defined by the Ohio Revised Code and Ohio Administrative Code), including the equipment and technology.

- ii. A description of the types of materials accepted by the Solid Waste Disposal Facility.
 - iii. Proposed processing and disposal capacity for the Solid Waste Disposal Facility.
 - iv. A detailed list of all regulatory approvals required for operation, including status of all permit/license applications.
 - v. A site plan for the proposed Solid Waste Disposal Facility showing the height and size of the facility, all proposed means of vehicle ingress/egress to the facility, traffic plan and abutting public/arterial streets or County/Township roads.
 - vi. A description of the management and control procedures to minimize the potential for debris, odors and air quality at the Solid Waste Disposal Facility.
 - vii. Notification of the proposed construction or modification to neighboring and surrounding property owners within 1,000 feet of the Solid Waste Disposal Facility.
 - viii. Any other information necessary for the Board to evaluate whether the proposed Solid Waste Disposal Facility complies with each of the criteria listed below.
- b. Adequately demonstrate to the Board that the construction or modification and subsequent operation of the proposed Solid Waste Disposal Facility will:
- i. Be consistent with the goals, objectives, projections and strategies contained in the Plan.
 - ii. Not adversely affect financing for the implementation of the Plan.
 - iii. Be adequately served by essential public facilities and services.
 - iv. Not create excessive additional requirements at public cost for public facilities or services.
 - v. Be in the best interest of the District, its residents and businesses.
- c. The Applicant shall submit any additional information that the Board requests to determine whether the construction or modification and subsequent operation of the proposed Solid Waste Disposal Facility will comply with the Plan.

STEP 2: Board Review.

Within sixty (60) days of receiving complete general plans and specifications from an Applicant, the Board shall determine whether the general plans and specifications submitted by the Applicant contain sufficient information for the Board to complete its review of the proposal, or if additional information is required. Within ninety (90) days of determining the Applicant has submitted a complete set of general plans and specifications, the Board shall determine whether the proposal complies with the criteria identified in Section III, above, which constitutes compliance with the Plan. The Board shall notify the Applicant of its decision in writing.

STEP 3: Development Agreement.

If the Board determines the proposed construction or modification and subsequent operation of a Solid Waste Disposal Facility complies with the Plan, the Applicant shall enter into a Development Agreement with the District which memorializes the obligations, and special terms and conditions, if any, that are the basis of the Board's determination. The Applicant shall have an ongoing obligation to comply with the Plan and the Development Agreement and shall construct and commence the operation of the Solid Waste Facility within 365 days of the Board's determination or the date specified in the Development Agreement, whichever is later.



APPENDIX T

MISCELLANEOUS PLAN DOCUMENTS

CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the NCO Solid Waste District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the 15 year period covered by the Plan Update are accurate and are in compliance with the requirements in the *District Solid Waste Management Plan Format*, revision 4.1.

David Strelow motion made by.

Beth Seibert seconded the motion.

Vote was taken and resulted as follows:

Policy Committee Members: YES: 24 NO: 0

Certified by:

Date:

Diane Lee

June 6, 2022

Resolution Adopting the Solid Waste Management Plan

Resolution # 2023-01

A RESOLUTION DECLARING THAT THE AMENDED SOLID WASTE MANAGEMENT PLAN FOR THE ALLEN-CHAMPAIGN-HARDIN-MADISON-SHELBY-UNION JOINT SOLID WASTE MANAGEMENT DISTRICT HAS BEEN ADOPTED.

Whereas, the Allen-Champaign-Hardin-Madison-Shelby-Union Joint Solid Waste Management District ("District") completed the draft amended Solid Waste Management Plan ("Plan") and submitted it to the Ohio Environmental Protection Agency for review and comment on June 21, 2022 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on August 5, 2022.

Whereas, the District's Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken these comments into consideration and incorporated changes into the amended Plan as appropriate.

Whereas the District has conducted a 30-day comment period from March 1, 2023 to March 30, 2023 and two public hearings were held on April 3, 2023 to provide the public an opportunity to have comment on the Plan.

NOW, THEREFORE, BE IT RESOLVED that the District Policy Committee:

1. Adopts the amended Plan as the District Plan in the form submitted for public comment and the public hearing plus any final clerical non-substantive changes.
2. Certifies that, to the best of its knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the District's Plan, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen-year period covered by the Plan, are accurate and are in compliance with the requirements of the District Solid Waste Management Plan Format Revision 4.1.
3. Directs that copies of the adopted Plan be delivered to the Boards of County Commissioners of Allen, Champaign, Hardin, Madison, Shelby and Union Counties and to the legislative authority of each municipal corporation and township under the jurisdiction of the District for ratification.

Motion made by Bruce Davis seconded by David Strelow

Results of Vote: Policy Committee Members: YES: 30 NO: 0

Certified by:

Linda D. Wuehrick
Vice Chair

Date:

4-24-23



APPENDIX U

RATIFICATION RESULTS



APPENDIX V

MISCELLANEOUS DOCUMENTS REQUIRED BY OHIO REVISED CODE

APPENDIX V. Inventory of Open Dumps and Other Disposal Facilities

A. Open Dumping Sites Inventory Requirement

Ohio Revised Code Section 3734.53 (A)(4) requires “...an inventory of open dumping sites for solid wastes, including solid wastes consisting of scrap tires and facilities for the disposal of fly ash and bottom ash, foundry sand, and slag within the district. The inventory shall identify each such site or facility and shall be accompanied by a map that shows the location of each of them.”

1. Existing Open Dumps and Waste Tire Dumps

The District conducted an inquiry with its own data base and its member health departments to ascertain if any known open dump or scrap tire sites are in existence with the District boundaries.

Site Location	Land Owner Contact Information	Site Description	Approximate Size of Site (acres)	Time Period Site has Existed	2019 Update
Allen County					
None					
Champaign County					
None					
Hardin County					
14771 County Road 209 Kenton, OH 43326	John Bennett Dump 14772 County Road 209 Kenton, OH 43326	Not Provided	Not Provided	Not Provided	Cleaned Up in 2021 but Additional Issues Identified after Clean Up.
Madison County					
None					
Shelby County					
None					
Union County					
None					

2. Ash, Foundry Sand, and Slag Disposal Sites

Table V-2 Existing Ash, Foundry Sand, and Slag Disposal Sites

Site Location (either address or description of site location)	Materials at Site (fly ash, bottom ash, foundry sand, and/or slag)
Allen County	
None	

Site Location (either address or description of site location)	Materials at Site (fly ash, bottom ash, foundry sand, and/or slag)
Champaign County	
None	
Hardin County	
None	
Madison County	
None	
Shelby County	
None	
Union County	
None	

B. Out-of-District Waste to be Disposed in District and Effect of Newly Regulated Waste Streams Requirement

Ohio Revised Code Section 3734.53 (A)(6) requires "...for each year of the forecast period, projections of the amounts and composition of solid wastes that will be generated within the district, the amounts of solid wastes originating outside the district that will be brought into the district for disposal or resource recovery, the nature of industrial activities within the district, and the effect of newly regulated waste streams, solid waste minimization activities and solid waste recycling and reuse activities on solid waste generation rates. For each year of the forecast period, projections of waste quantities shall be compiled as an aggregate quantity of wastes."

1. Out-of-District Waste to be Disposed in District and Effect of Newly Regulated Waste Streams Response

Appendix M evaluates landfill capacity and has determined that the District has ample capacity for landfilling based on current conditions throughout the planning period. Table K-1 includes the amount of solid waste generated, recycled and the amount of solid waste disposed.

During the reference year, 0 tons of solid waste and excluded waste was direct landfilled at in-District landfills. During this same year, 184,270 tons of solid waste and excluded waste was direct landfilled in facilities outside of the District and 32,005 tons were disposed directly at out of state facilities.

2. Newly Regulated Waste Streams

The District is not aware of any newly regulated waste streams that are generated or disposed in the District.

C. Expense Analysis Requirement

Ohio Revised Code Section 3734.53 (A)(10) requires "...an analysis of expenses for which the district is liable under section 3734.35 of the Revised Code."

1. Expense Analysis Response

The District does not provide funding under 3734.35 to any political subdivision.

D. Facility Identification Requirement and Facility Closure, Expansion, Establishment Schedule Requirement

Ohio Revised Code Section 3734.53 (A)(13) requires "...a schedule for implementation of the plan that, when applicable contains all of the following:

- (a) An identification of the solid waste disposal, transfer, and resource recovery facilities and recycling activities contained in the plan where solid wastes generated within or transported into the district will be taken for disposal, transfer, resource recovery or recycling.
- (b) A schedule for closure of existing solid waste facilities, expansion of existing facilities and establishment of new facilities. The schedule for expansion of existing facilities or establishment of new facilities shall include, without limitation, the approximate dates for filing applications for appropriate permits to install or modify those facilities under section 3734.05 of the Revised Code...."

1. Facility Identification Response

Appendix P includes a statement on identification of facilities: The District is identifying all Ohio licensed and permitted solid waste landfill, transfer and resource recovery facilities and all licensed and permitted out-of-state landfill, transfer and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Appendix B Inventories.

2. Facility Closure, Expansion, Establishment Schedule Response

Appendix M shows all in-District landfills and their remaining capacity, all of which far exceed the planning period needed capacity for this *Plan Update*. Therefore, the District is not aware of any closure activities for any licensed solid waste facilities during the planning period.

E. Source Reduction Program Requirement

Ohio Revised Code Section 3734.53 (A)(14) requires "...a program for providing informational or technical assistance regarding source reduction to solid waste generators or particular categories of solid waste generators, within the District. The plan shall set forth the types of assistance to be provided by the district and the specific categories of generators that are to be served. The district has the sole discretion to determine the types of assistance that are to be provided under the program and the categories of generators to be serviced by it."

1. Source Reduction Program Response

Appendix L includes plans for outreach and marketing and covering the topic of source reduction for solid waste generators for different categories of generators. Plans for the industrial sector also include technical assistance for source and waste reduction.



APPENDIX W

DISTRICT MAPS

APPENDIX W. District Map

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.”

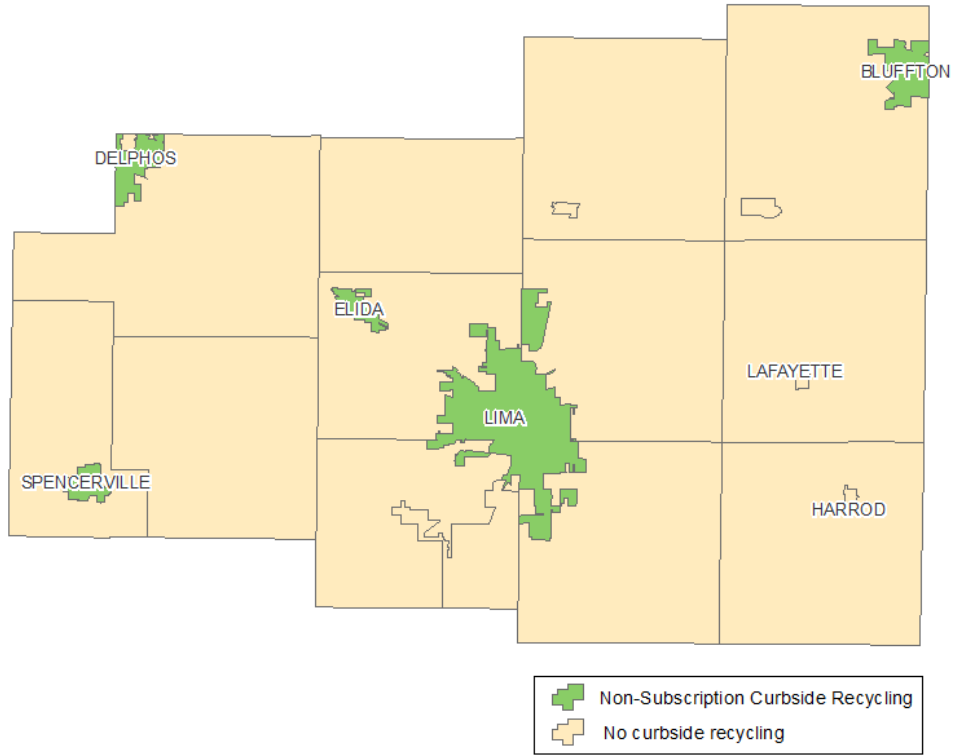
A. Solid Waste Management and Recycling Inventories Response

Appendix B of the Plan Update includes a recycling infrastructure inventory providing data and information on curbside recycling, drop-offs, and composting facilities/activities operating in the District. Appendix D includes an inventory of landfills and transfer facilities managing waste generated in the district. Appendix M, “Waste Management Capacity Analysis,” provides remaining disposal capacity for landfills.

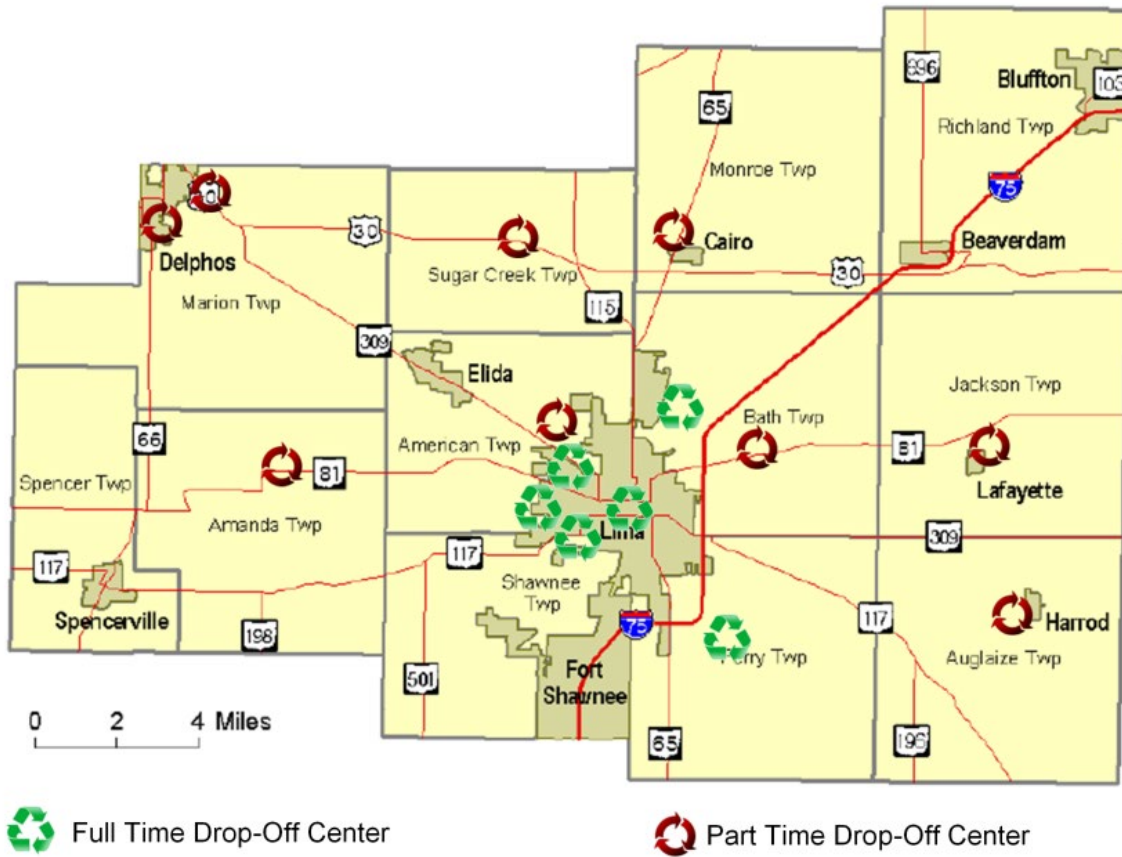
The following series of maps shows the location of each existing facility or activity in the District during the 2019 reference year.

Figure W-1. 2019 District Access to Drop-Off and Curbside Recycling

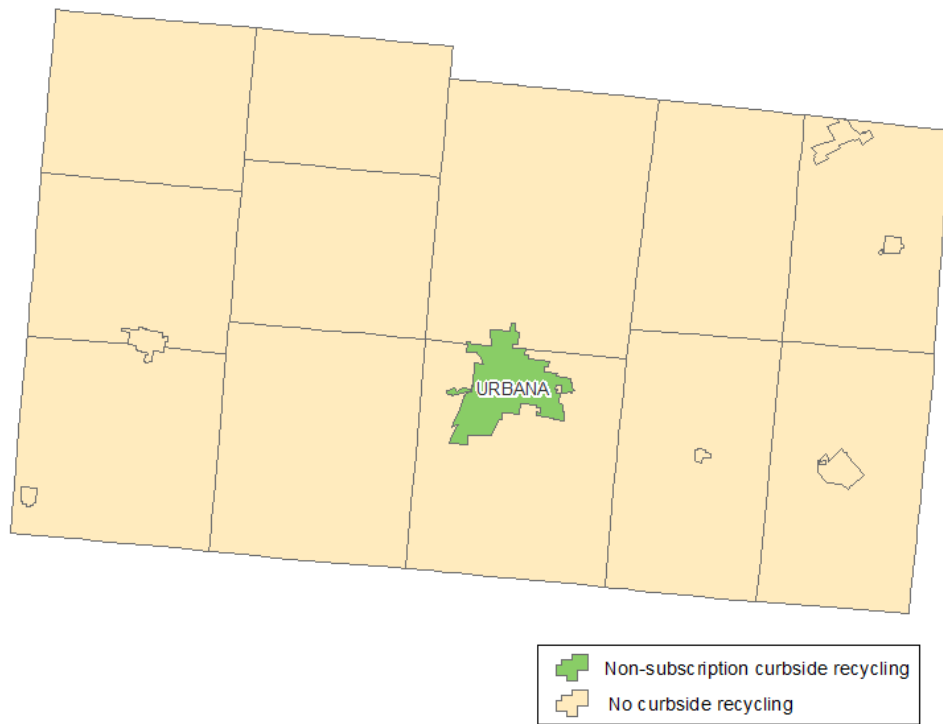
Allen County Curbside Recycling Programs



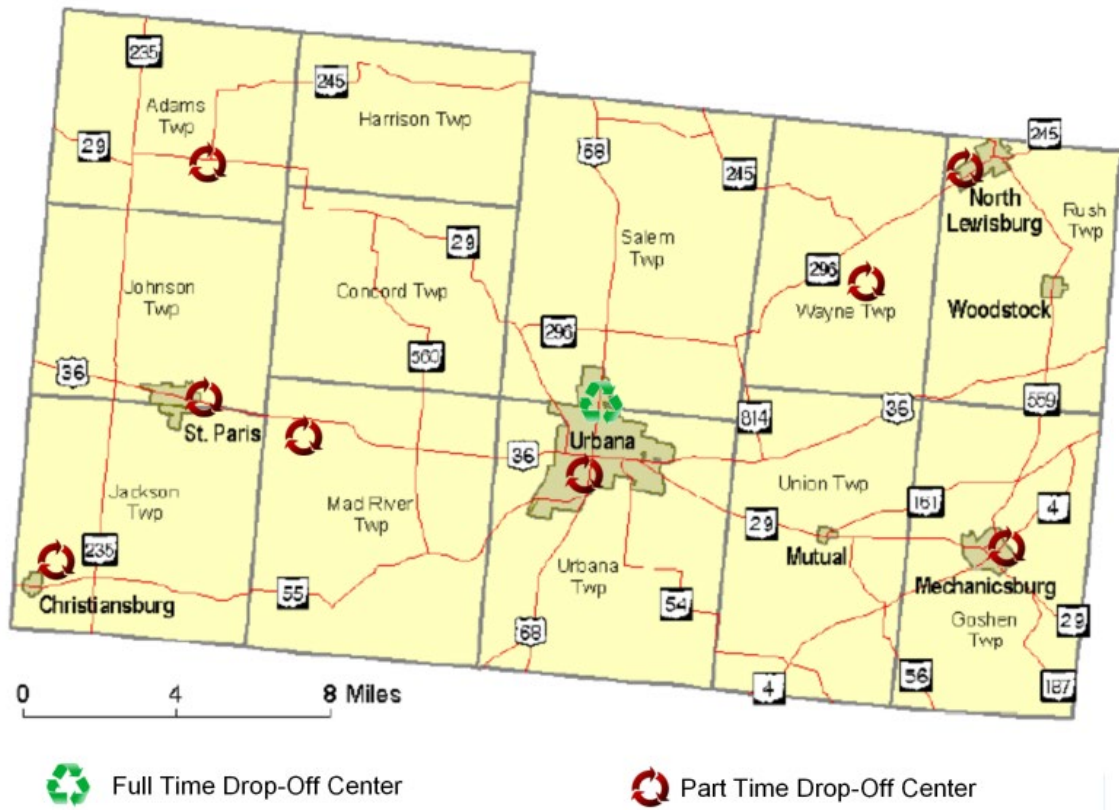
Allen County Drop-Off Recycling Program



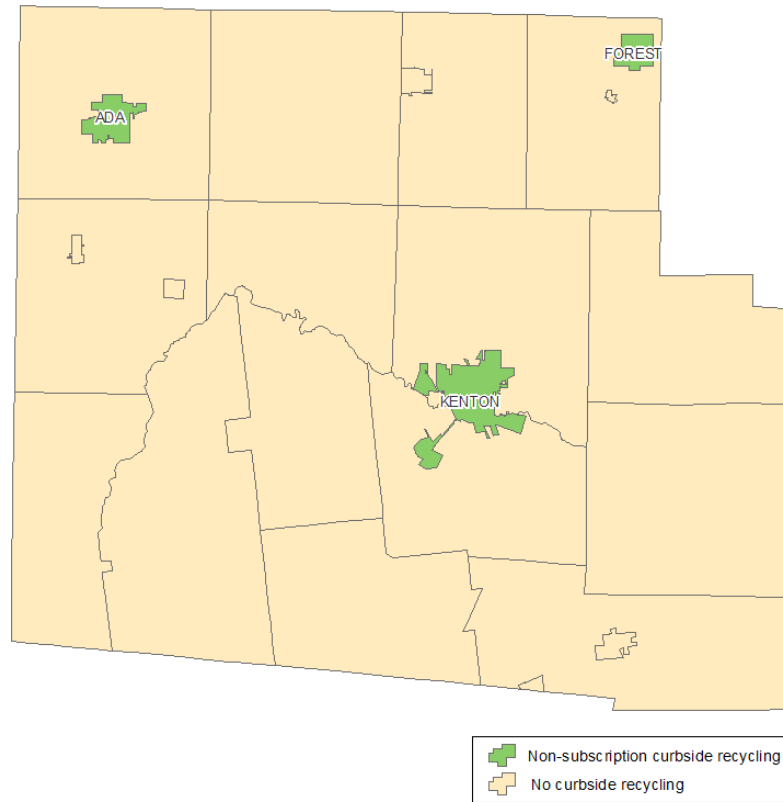
Champaign County Curbside Recycling Programs



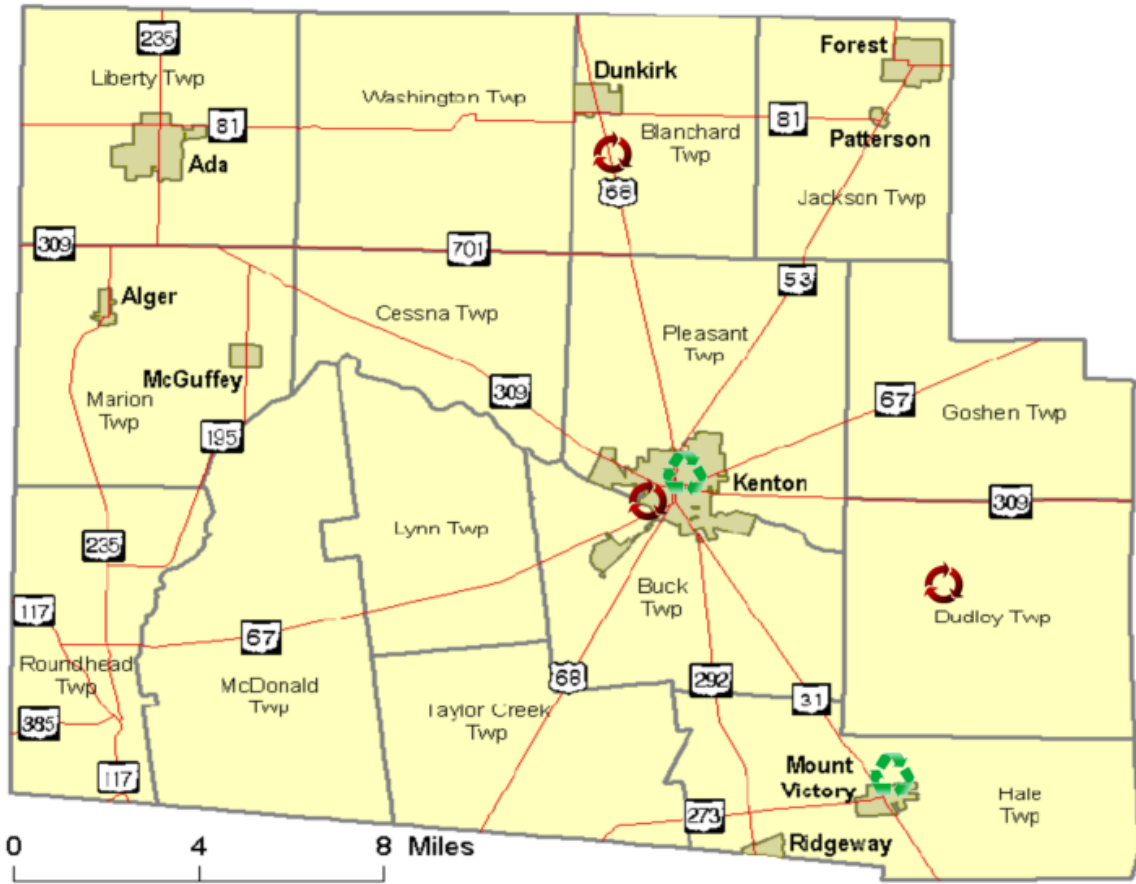
Champaign County Drop-Off Recycling Program




Hardin County Curbside Recycling Programs



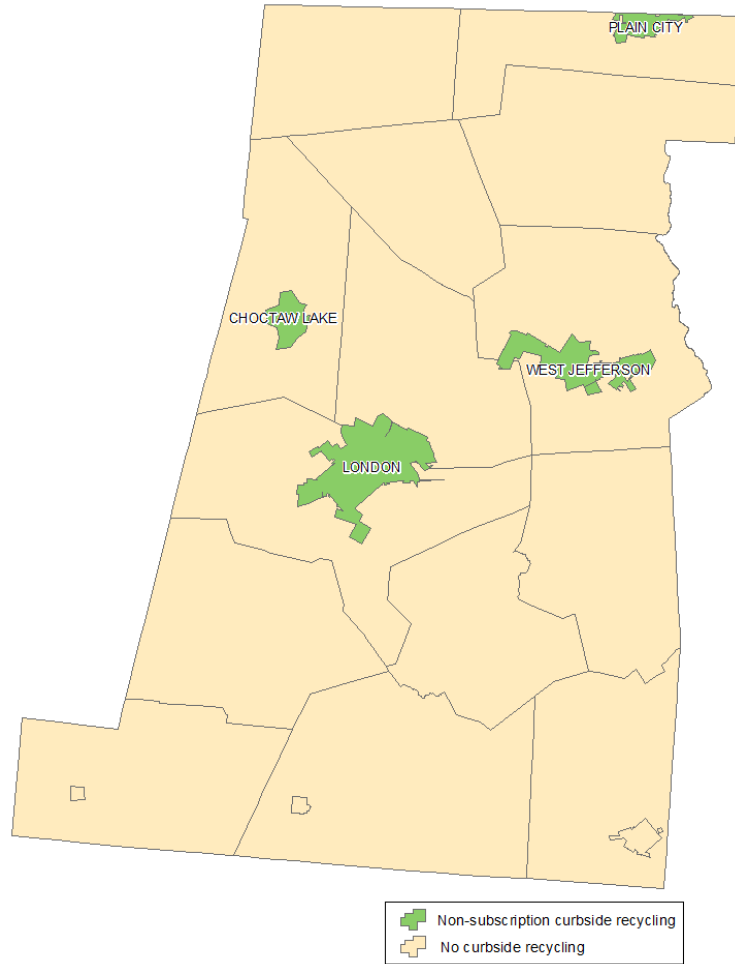
Hardin County Drop-Off Recycling Program



 Full Time Drop-Off Center

 Part Time Drop-Off Center

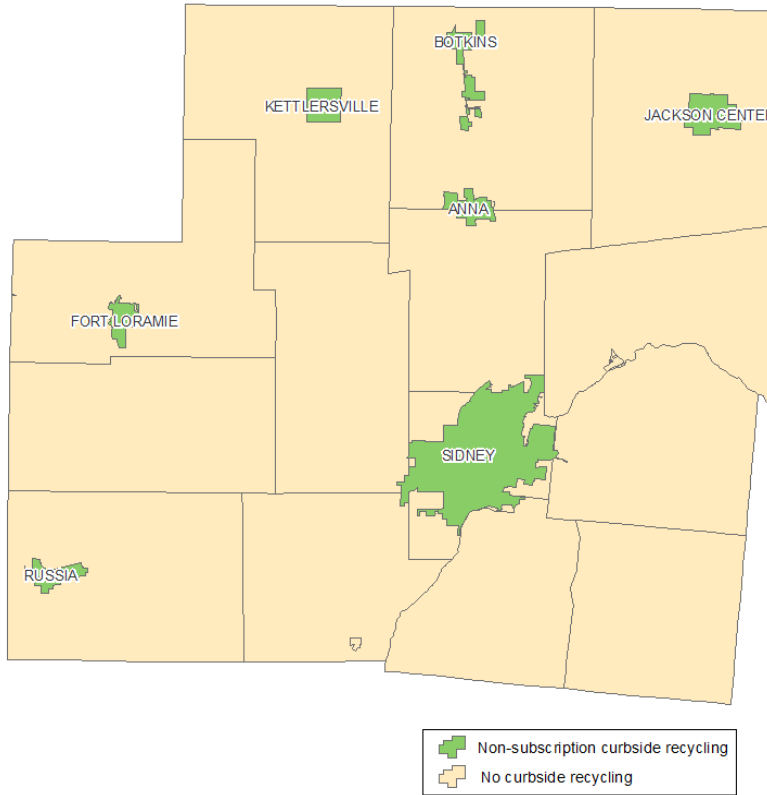
Madison County Curbside Recycling Programs



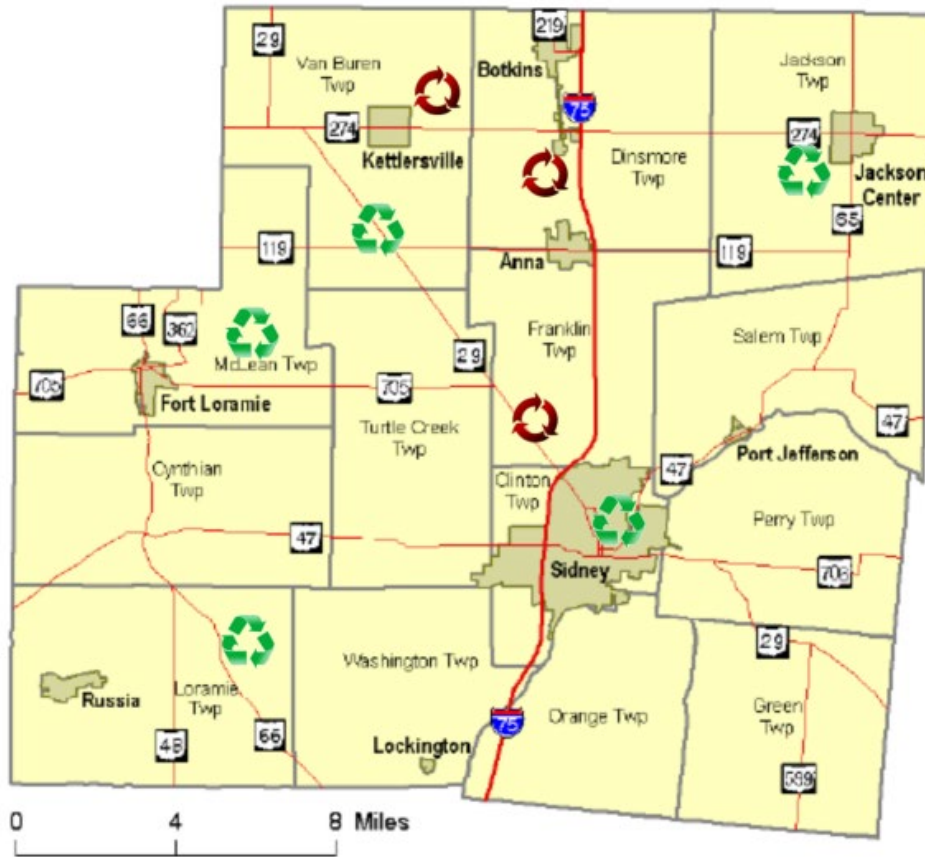
Madison County Drop-Off Recycling Program



Shelby County Curbside Recycling Programs



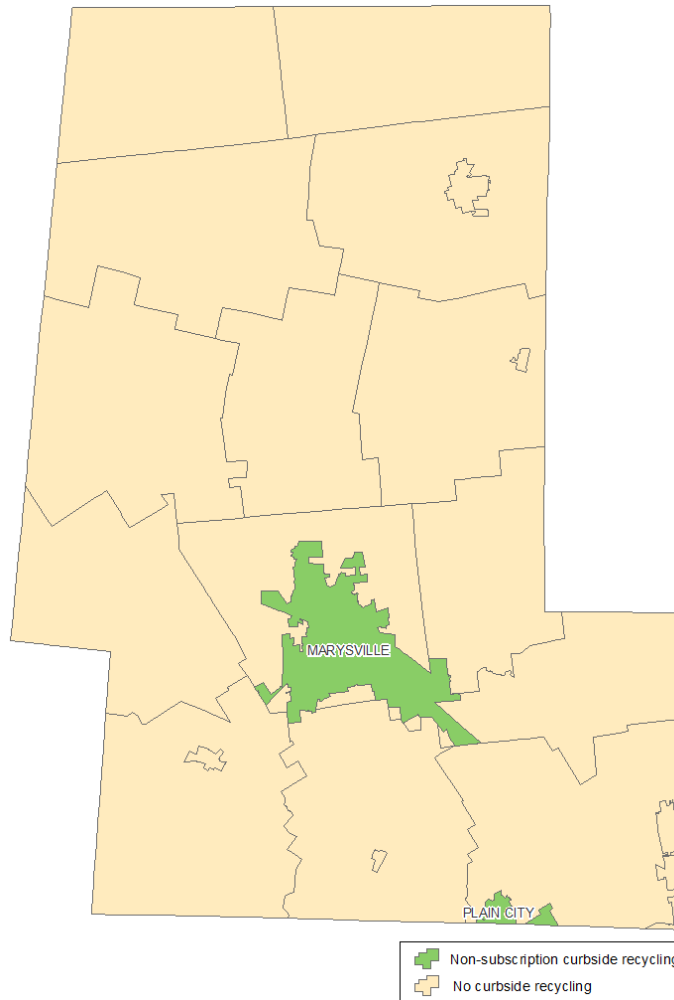
Shelby County Drop-Off Recycling Program



 Full Time Drop-Off Center

 Part Time Drop-Off Center

Union County Curbside Recycling Programs



Union County Drop-Off Recycling Program

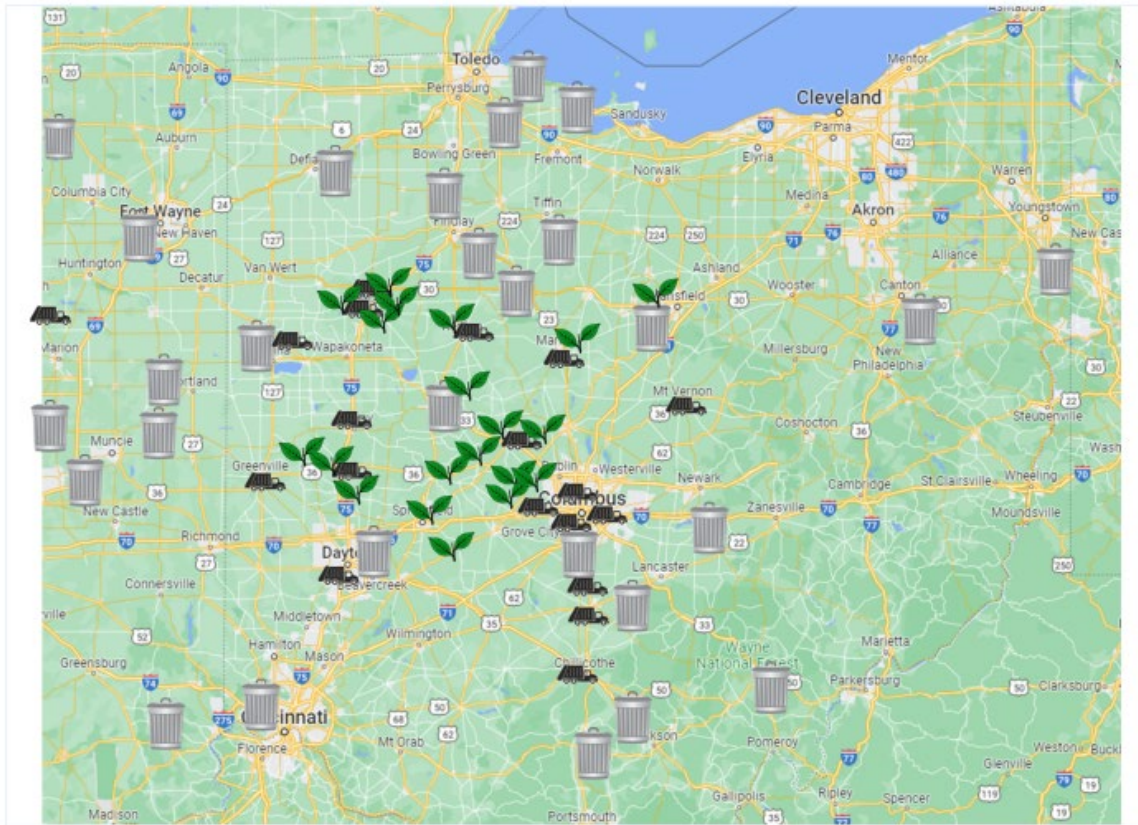


Full Time Drop-Off Center



Part Time Drop-Off Center

NCO Solid Waste District—Solid Waste Facilities Map



Landfill



Transfer Station



Compost Facility



APPENDIX X

SAMPLE DESIGNATION AGREEMENT

DESIGNATION AGREEMENT

THIS AGREEMENT made and entered into as of the ____ day of _____, 202__, by and between the Board of Directors (the "Board") of the North Central Ohio Solid Waste District ("NCOSWD" or the "District"), organized and existing under the Constitution and laws of the State of Ohio, with offices located at 815 Shawnee Road, Suite D, Lima, Ohio 45805 and, XXXXXXXXXXXXXXXXXX whose mailing address is 4XXXXXXXXXXXXXXXXX XXXXX (the "Contractor").

WHEREAS, NCOSWD is a solid waste management district established pursuant to Chapter 343 of the Ohio Revised Code (O.R.C.) for the purposes of preparing, adopting, and implementing a solid waste management plan, and providing for the safe and sanitary management of solid wastes within all of the incorporated and unincorporated territory of the District; and

WHEREAS, NCOSWD's amended Solid Waste Management Plan was approved by the Director of Ohio EPA on **June 21, 2017** (the "Plan"); and

WHEREAS, the Plan expressly authorizes the Board to designate facilities pursuant to O.R.C. Sections 343.01(I)(2), 343.013, 343.014 and 3734.53(E); and

WHEREAS, NCOSWD intends to invite any solid waste disposal or transfer facility that timely submits a request to be designated to the Board, to enter into a Designation Agreement authorizing the facility to receive solid waste generated within the District in accordance with the provisions of O.R.C. 343.01(I)(2), NCOSWD's Plan and rules, and this Designation Agreement; and

WHEREAS, the Contractor owns and operates a solid waste facility located at **4262 Morse Rd, Columbus, OH 43230** (the "Solid Waste Facility"), which the Contractor desires to make available for the disposal or transfer of solid waste generated within the District.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein, the parties fully incorporate the foregoing recitals herein, and further agree as follows:

Section 1. The Board designates the Solid Waste Facility pursuant to the Plan and Sections 343.01(I)(2) and 343.014 of the Ohio Revised Code as a solid waste facility authorized to receive solid waste generated within the District for disposal or transfer. It is the understanding of the parties hereto that:

- A. Pursuant to Section 343.01(I)(2) of the Ohio Revised Code, solid waste generated within the District may be delivered only to a solid waste disposal or transfer facility designated by the Board unless a waiver has been granted by the Board.
- B. In addition to the Solid Waste Facility, the Board may designate other solid waste disposal or transfer facilities to receive solid waste generated within

the District; and

- C. The Board and the District do not intend to require any person, municipal corporation, township, or other political subdivision located within NCOSWD, to deliver, or cause to be delivered, any solid waste to any particular designated solid waste facility.

Section 2. The Contractor shall not discriminate against solid waste generated within the District with respect to the posted rates charged by the Solid Waste Facility (exclusive of all State, Local and Solid Waste District Fees, and any future government applied taxes, surcharges, Solid Waste District Fees and host community fees) for the disposal, transfer or processing of solid waste received at the Solid Waste Facility.

Section 3. The Contractor agrees to pay to NCOSWD a monthly Designation Fee of Six and 00/100 Dollars per ton (\$6.00/ton) for each ton of solid waste generated within the District delivered to the Solid Waste Facility as the point of first delivery after the solid waste is removed from the generator's premises. Beginning in the month following the Commencement Date, as defined in Section 4, below, the Contractor shall forward to NCOSWD each month, on or before, the last day of the month, the amount of the Designation Fees to be paid on the tonnage of solid waste generated within the District that the Solid Waste Facility received during the preceding month. If the Solid Waste Facility does not have weight scales for measuring the amount of solid waste delivered to the Solid Waste Facility, the amount of Designation Fees to be paid by the contractor shall be computed on the basis of three (3) cubic yards equals one (1) ton of solid waste. NCOSWD shall apply the Designation Fee uniformly to solid waste disposal and transfer facilities designated by the Board to receive solid waste generated within the District. NCOSWD shall have the right to increase or decrease the amount of the Designation Fee payable hereunder; provided, however, that any such increase or decrease of the Designation Fee shall be applied uniformly to all solid waste facilities designated by the Board. NCOSWD shall provide Contractor with at least thirty (30) days advance written notice before an increase or decrease of the Designation Fee goes into effect.

Section 4. The Commencement Date shall be February 1, 2021. NCOSWD shall provide Contractor written notice of the Commencement Date within ten (10) days following the Board's adoption of the resolution of final designation.

Section 5. For purposes of this Designation Agreement, "solid waste" shall have the same meaning as Section 3734.01(E), including but not limited to, automotive shredder residue, pulverized construction and demolition debris, petroleum contaminated soil, and drilling waste that is acceptable for disposal as solid waste.

Section 6. The Contractor shall forward to NCOSWD a fully completed Designation Fee Certification Statement, a copy of which is attached hereto as Appendix A and fully incorporated herein by reference, at the same time the Contractor forwards payment of the Designation Fee.

Section 7. The Contractor shall operate and maintain the Solid Waste Facility in

compliance with state and federal environmental regulations applicable to the site where the Solid Waste Facility is located.

Section 8. The Contractor shall permit representatives of District, at NCOSWD's sole expense, to inspect and obtain copies of daily log sheets that are maintained by the Solid Waste Facility for incoming and outgoing solid waste as required by Ohio EPA (or, if the facility is not located within Ohio, such other state and local environmental agencies having jurisdiction over the Solid Waste Facility). Any such inspection or copying requested by the District shall be conducted during the Solid Waste Facility's normal business hours and the District shall give the Contractor at least twenty-four (24) hours prior notice of any such inspection or copying. In the event that the District requests copies of daily log sheets, the Contractor agrees to make such copies available to the District within a reasonable time and may charge the District not more than ten cents (\$0.10) per page for providing the copies.

Section 9. In the event of the breach of this Agreement by the Contractor, the Contractor shall, upon written notice from NCOSWD describing the breach, promptly proceed to remedy the breach. In case such remedial action is not taken or not diligently pursued within thirty (30) days of such written notice, NCOSWD may at any time thereafter (regardless of whether the Contractor cures such breach following the expiration of the thirty (30) day cure period) terminate this Agreement and the Solid Waste Facility's status as a designated facility for the receipt of solid waste generated within the District. Nothing in this Agreement shall be construed to create a right to or remedy in money damages for NCOSWD based on any allegedly excessive disposal rate charged to any municipal corporation, township or other local political subdivision or agency or any individual, corporation, partnership, association or other entity that delivers solid waste to the Solid Waste Facility. NCOSWD and the Contractor shall also have the right to terminate this Agreement and the designation of the Solid Waste Facility for any reason or for no reason, upon providing ninety (90) days advance notice in writing to the other party.

Section 10. This Agreement shall become effective on the Commencement Date, and will terminate on December 31, 2030, unless terminated earlier pursuant to the terms provided herein. This Agreement may be extended for an additional five (5) years upon the mutual written consent of the District and the Contractor.

Section 11. This Agreement may be assigned by the Contractor to any successor in interest at the Solid Waste Facility with the consent of NCOSWD, which consent shall not be unreasonably withheld.

Section 12. Written notice required to be given under this Designation Agreement shall be sufficient if delivered personally or mailed by certified mail with return receipt requested with proper postage to Mr. Jack DeWitt, Executive Director, North Central Ohio Solid Waste District, 815 Shawnee Road, Suite D, Lima, Ohio 45805, and to _____ . Any change in address must be given in like manner.

Section 13. This Agreement represents the entire agreement of the parties as to its subject matter and supersedes all other prior written or oral understandings. This Agreement may

be modified or amended only by a writing signed by both parties.

Section 14. No waiver, discharge, or renunciation of any claim or right of NCOSWD arising out of breach of this Agreement by the Contractor shall be effective unless in writing and signed by the Board.

Section 15. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Ohio.

Section 16. Nothing hereby shall be construed as creating any personal liability on the part of any officer or agent of the Board or NCOSWD.

Section 17. If any provision of this Agreement is in any way unenforceable, such provision shall be deemed stricken from this Agreement and the parties agree to remain bound by all remaining provisions. The parties agree to negotiate in good faith a replacement provision for any provision so stricken.

Section 18. This Agreement shall be binding upon and shall inure to the benefit of, and be enforceable by and against, the respective successors and assignees of each.

IN WITNESS WHEREOF, the parties have hereunto set their hands on this ____ day of _____, 202__.

**BOARD OF DIRECTORS OF THE
NORTH CENTRAL OHIO SOLID
WASTE DISTRICT**

CONTRACTOR (insert name)

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

By: _____

By: _____

Its: Executive Director

Its: _____

Date: 11/23/2020

Date: _____