

Solid Waste Management Plan Update

2023-2032



**Stark, Tuscarawas, Wayne Joint
Solid Waste Management District**

PREPARED BY:

GT ENVIRONMENTAL

September 2022



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SECTION i. Solid Waste Management District Information

Table i-1. Solid Waste Management District Information

SWMD Name	Stark-Tuscarawas-Wayne Joint Solid Waste Management District
Member Counties	Stark, Tuscarawas, and Wayne
Coordinator's Name (main contact)	David Held
Job Title	Executive Director
Street Address	9918 Wilkshire Blvd. N.E.
City, State, Zip Code	Bolivar, OH 44612
Phone	(800) 678-9839
Fax	330-874-2449
E-mail address	david@timetorecycle.org
Webpage	www.timetorecycle.org

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

Member Name	Representing
Stark County	
Janet Weir Creighton	County Commissioners
John Highman	Municipal Corporations (City of Canton)
Bob Fallot	Townships (Sandy Township)
Kirk Norris	Health Departments
Elaine Campbell	Industrial Generators (Mercy Development Foundation)
Pat Fallot	Citizens
Mark Cozy	Public

Member Name	Representing
Tuscarawas County	
Al Landis	County Commissioners
Joel Day	Municipal Corporations (City of New Philadelphia)
Matt Ritterbeck	Townships (Lawrence Township)
Michael Kopko	Health Departments
Tom Farbizo	Industrial Generators (Speedie Recycling)
Lee Finley	Citizens
David Bennett	Public

Member Name	Representing
Wayne County	
Becky Foster	County Commissioners
Mark Nussbaum	Municipal Corporations (City of Wooster)
Bill Cletzer	Townships (Congress Township)
Nicholas Cascarelli	Health Departments
Pamela Carter	Industrial Generators (Frito Lay)
Robert Holland	Citizens
Scott Myers	Public

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

Name	Al Landis
Street Address	125 E High Ave
City, State, Zip Code	New Philadelphia, OH 44663
Phone	330-365-3240
E-mail address	landis@co.tuscarawas.oh.us

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

Commissioner Name	County	Chairperson/President
Bill Smith	Stark	
Janet Weir Creighton		
Richard Regula		
Chris Abbuhl	Tuscarawas	
Al Landis		
Kerry Metzger		
Sue Smail	Wayne	
Becky Foster		✓
Ron Amstutz		

Technical Advisory Committee

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

CHAPTER 1. Introduction

A. Brief Introduction to Solid Waste Planning in Ohio

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

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

B. 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

On November 28, 1988, the county commissioners of all three counties formed the Stark-Tuscarawas-Wayne Joint Solid Waste Management District by resolution. The Board of Directors is comprised of the County Commissioners representing Stark, Tuscarawas and Wayne Counties. The District was created for the purpose of providing for, or causing to be provided for, the safe and sanitary management of solid wastes within all the incorporated and unincorporated territory of the counties.

The District's mission is to assure safe and sanitary disposal of solid waste for district residents and to reduce reusable or renewable wastes from entering landfills within the District. This will be accomplished through the development of residential, commercial, institutional and industrial programs that educate, promote, provide, implement and improve recycling opportunities that will preserve landfill space now and into the future.

The District's administration consists of one centralized office, which is located at 9918 Wilkshire Blvd, NE, Bolivar, Ohio 44612.

D. Waste Reduction and Recycling Goals

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

2020 State Plan Goals

Goal #1	The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.
Goal #2	The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector and at least 66 percent of the solid waste generated by the industrial sector.
Goal #3	The SWMD shall provide the following required programs: a Web site; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.
Goal #4	The SWMD shall provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identified target audiences using best practices.
Goal #5	The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.
Goal #6	The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.
Goal #7	The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.
Goal #8	The SWMD will use U.S. EPA's Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.
Goal #9	The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.
Goal #10	The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan

All 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 the ten goals.

CHAPTER 2. District Profile

A. Profile of Political Jurisdictions

1. Counties in the Solid Waste Management District

As its name suggests, the Stark-Tuscarawas-Wayne Joint County Solid Waste Management District (District) is a multi-county district comprised of Stark, Tuscarawas, and Wayne County.

2. County Overview

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

- The City of Canton in Stark County is the largest city in the District. In 2019, it had a population of 70,447 people which comprised approximately 12 percent of the District's population.
- The City of Massillon in Stark County had a population of 32,584 in 2019.
- The City of Wooster in Wayne County had a population of 26,394 in 2019.
- The City of New Philadelphia in Tuscarawas County had a population of 17,410 in 2019.
- There are 43 villages ranging in population from 171 people to 3,737 people.
- There are 55 townships ranging in population from 424 people to 51,679 people.

B. Population

1. Reference Year Population

After adjustments, the District had a total of adjusted population of 580,642 people in 2019. Table 2-1 presents the adjusted population, the largest city, and the population of the largest city in each county of the SWMD during the 2019 reference year:

Table 2-1. Population of the District in 2019

County		Largest Political Jurisdiction		
Name	Population	Community Name	Population	Percent of Total County Population
Stark	372,588	City of Canton	70,447	19%
Tuscarawas	92,133	City of New Philadelphia	17,410	19%
Wayne	115,921	Wooster	26,394	23%
Total	580,642			

Source(s) of information: Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township.” May 2020.

2. Population Distribution

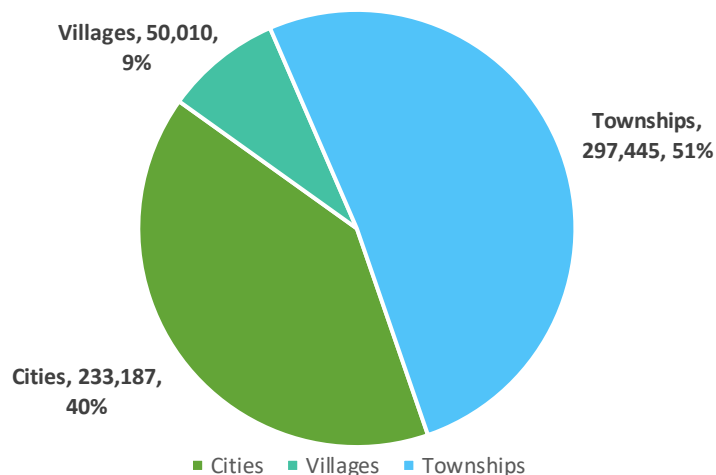
Table 2-2 below presents the distribution of the District’s population in cities, villages, and unincorporated areas.

Table 2-2. Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Townships
Stark	42%	5%	53%
Tuscarawas	38%	20%	41%
Wayne	36%	12%	52%

Source(s) of information: Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township.” May 2020.

Figure 2-1. 2019 District Population Distribution



According to the Ohio Development Services Agency's profile for the three counties, they are comprised of slightly more rural than urban areas. The bullet points below show the largest uses of land in the county:

- 50% of land use is agricultural
- 49% of land use is urban
- 1% of land cover was State Parks, Forests, Nature Preserves, Scenic Waterways, and Wildlife Areas

Large portions of the District's population are concentrated around the Canton area.

3. Population Change

The District's population is expected to increase by 1.8 percent (or 10,577 residents) from 2019 to 2032.

4. Implications for Solid Waste Management

As the information above illustrates, large portions of the District's population are concentrated in the City of Canton and surrounding areas. Data trends indicate that, while the population in the Canton area is decreasing slowly, residents are moving from the City of Canton to surrounding neighborhoods, thus dispersing the population over a greater geographical area. As populations increase in cities, villages, and townships surrounding Canton, there may be more opportunities to implement or expand residential recycling programs.

C. Profile of Commercial and Institutional Sector

The District has a strong commercial and institutional sector. The District is home to ten colleges and universities, including:

- | | |
|---------------------------------------|--|
| • The College of Wooster | • Stark State College |
| • Kent State University-Stark Campus | • Walsh University |
| • Brown Mackie College - North Canton | • Kent State University at Tuscarawas |
| • Malone University | • University of Akron Wayne College |
| • University of Mount Union | • Ohio State University Agricultural Technical Institute |

Cultural points of interest include the Pro Football Hall of Fame, the National First Ladies' Library, Historic Canton Palace Theatre, Schoenbrunn Village (the first Protestant settlement in Ohio), Warther Carvings Museum, World's Largest Cuckoo Clock, Orrville Railroad Museum, and the J. M. Smucker Company

Approximately 21,014 active businesses were located in the District in 2021. The following table presents the major commercial/institutional sector employers in the tri-county area.

Table 2-4. Major Commercial/Institutional Sector Employers in District

County	Company Name	Type of Business/Organization
Stark	Alliance Community Hospital	Service
Stark	Aultman Hospital	Service
Stark	Canton City Schools	Government
Stark	Synchrony Financial	Finances
Stark	Mercy Medical Center	Service
Stark	Stark County Government	Government
Stark	Stark State College	Service
Stark	Wal-Mart Stores Inc	Trade
Tuscarawas	Dover City Schools	Government
Tuscarawas	New Philadelphia City Schools	Government
Tuscarawas	Union Hospital	Service
Tuscarawas	Wal-Mart Stores Inc	Trade
Wayne	College of Wooster	Service
Wayne	State of Ohio	Government
Wayne	Wooster City Schools	Government
Wayne	Wooster Community Hospital	Service

Source(s) of information: Ohio Development Services Agency, "County Profiles - 2020 Annual Edition." May 2021.

The District's commercial/institutional sector is diverse, which contributes to the sector's stability. 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 governments and retail trade.

D. Profile of Industrial Sector

There are approximately 1,010 industries operating in the District. About 51% of District industries have an average employment of 10 or more individuals. Only a small percent of industries (8%) have a staff of greater than 100 employees. The top industrial sector employers are presented in the table below.

Largest Industrial Sector Employers

County	Company Name	Type of Business/ Organization
Stark	HeinzKraft Foods	Manufacturing
Stark	Nickles Bakery	Manufacturing
Stark	Republic Steel	Manufacturing
Stark	Shearer's Foods	Manufacturing
Stark	Timken Co	Manufacturing
Tuscarawas	Allied Machine & Engineering	Manufacturing
Tuscarawas	Dover Chemical Corporation	Manufacturing
Tuscarawas	Gradall Industries	Manufacturing
Tuscarawas	Lauren Manufacturing	Manufacturing
Tuscarawas	Marlite, Inc.	Manufacturing
Tuscarawas	nuCamp RV	Manufacturing
Tuscarawas	Zimmer Orthopedic	Manufacturing
Wayne	Artiflex Manufacturing	Manufacturing
Wayne	Frito-Lay Inc	Manufacturing
Wayne	Gerber Poultry	Manufacturing
Wayne	JM Smucker Co	Manufacturing
Wayne	Schaeffler Transmission	Manufacturing
Wayne	Will-Burt Co	Manufacturing
Wayne	Wooster Brush Co	Manufacturing

Source(s) of information: Ohio Development Services Agency, "County Profiles - 2020 Annual Edition." May 2021.

According to the Department of Job and Family Services' publication *2028 Job Outlook for the Cleveland-Elyria-Mentor Metropolitan Statistical Area (MSA)*, employment in manufacturing is projected to decrease by 6.5 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 30,000 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
The College of Wooster	2,004
Kent State University - Stark Campus	4,771
Brown Mackie College - North Canton	323
Malone University	1,667
University of Mount Union	2,403
Stark State College	11,654
Walsh University	2,779
Kent State University at Tuscarawas	2,168
University of Akron Wayne College	1,683
Ohio State University Agricultural Technical Institute	687
Total	30,139

*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 SWMD's historical and projected solid waste generation. The District's Policy Committee needs to understand the amounts and types of waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the District analyzed the amounts and types of waste that were generated within the SWMD in the past and that could be generated in the future.

The District 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

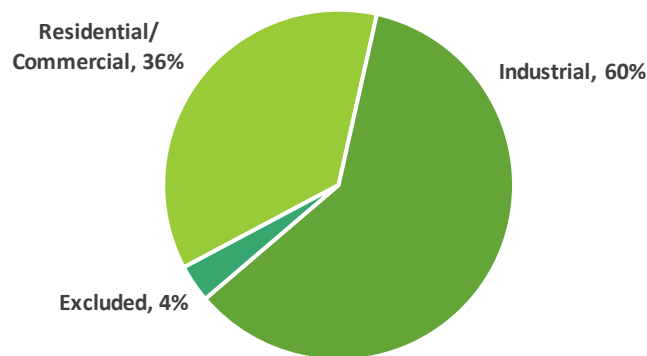
Table 3-1 shows the amounts of residential/commercial (R/C), industrial, and excluded waste generated within the District during 2019 (the reference year). The amount generated is defined by the tons disposed in landfills plus the tons recycled, composted, and otherwise diverted from landfill disposal.

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

Type of Waste	Tons Generated
Residential/ Commercial	725,325
Industrial	1,206,791
Excluded	69,365
Total	2,001,481

As demonstrated in **Figure 3-1**, the R/C sector generates the majority (36%) of the total waste generated in the District, followed by the industrial sector (60%). Excluded waste represents 4% of the total waste generated.

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



1. Residential/Commercial Waste Generated in Reference Year

In 2019, 725,325 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 6.84 pounds per person per day which is less than the statewide average of 7.10 PPD.

2. Industrial Waste Generated in Reference Year

In 2019, 1,206,791 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, 69,365 tons of excluded waste were generated in the District.

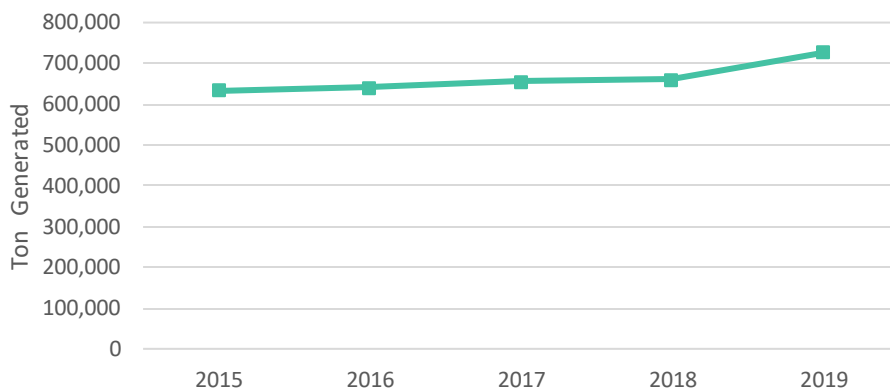
B. Historical Waste Generated

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		Excluded (tons)	Total Generated	Per Capita Generation (ppd)	Annual % Change Total Generation			Annual % Change In Total Tons
		Disposal	Recycled	Disposal	Recycled				R/C	Ind	Ex	
2015	586,524	488,922	143,397	345,666	1,024,434	80,728	2,083,147	19.5	-	-	-	-
2016	585,759	479,279	160,471	331,453	1,016,505	63,565	2,051,273	19.2	1%	-2%	-21%	-2%
2017	580,873	502,208	154,381	492,140	1,019,917	62,302	2,230,948	21.0	3%	12%	-2%	9%
2018	582,053	511,416	149,489	462,510	1,075,829	78,336	2,277,580	21.4	1%	2%	26%	2%
2019	580,642	508,986	216,339	390,597	816,194	69,365	2,001,481	18.9	10%	-22%	-11%	-12%

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 6.1 pounds per person per day.

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

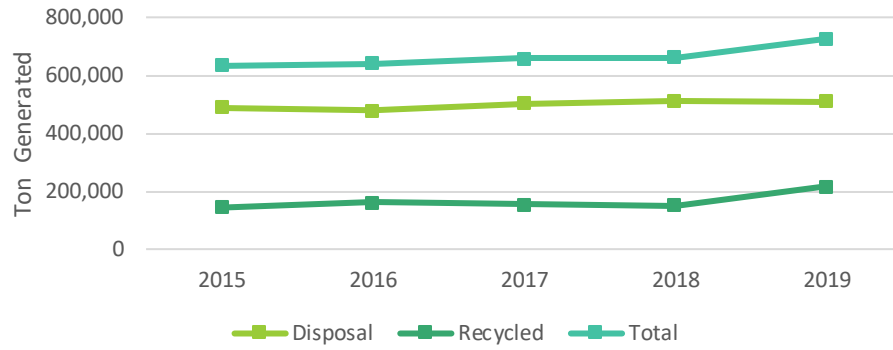
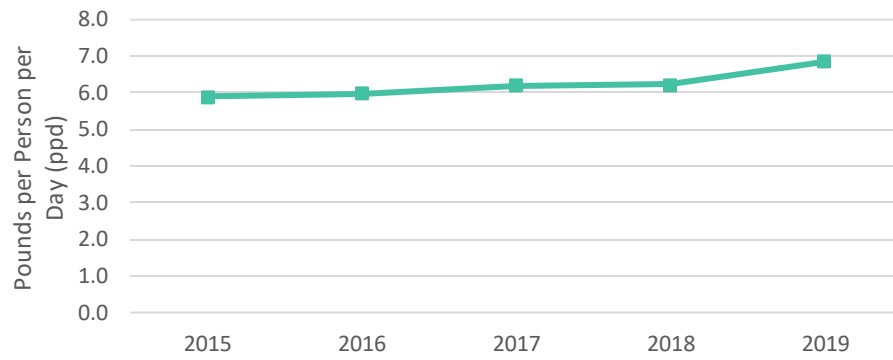


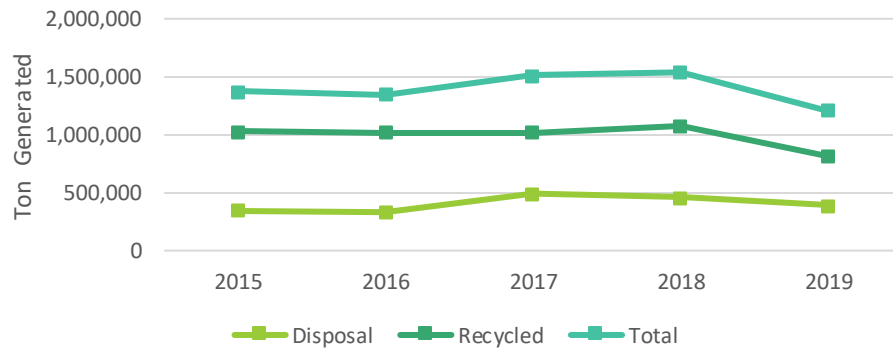
Figure 3-4. Residential/Commercial Waste Generation Per Capita



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. Annual changes in disposal ranged from -2% to 22% per year.

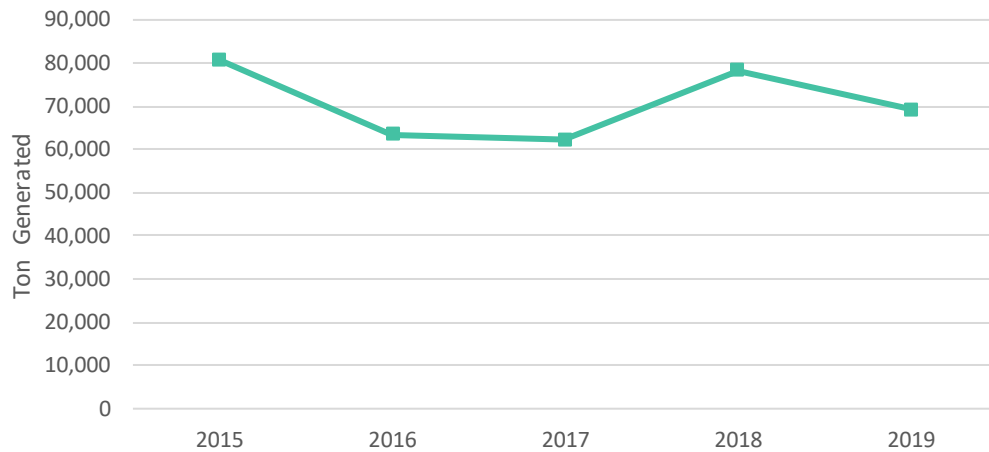
Figure 3-5. Industrial Waste Generation: 2015-2019



3. Historical Excluded Waste Generated

Annual quantities of excluded waste generated have generally been decreasing each year with the exception of 2018. From 2015 to 2019, volumes of excluded waste have ranged from a low of 62,302 tons in 2017 to a high of 80,728 tons in 2014.

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



C. Waste Generation Projections

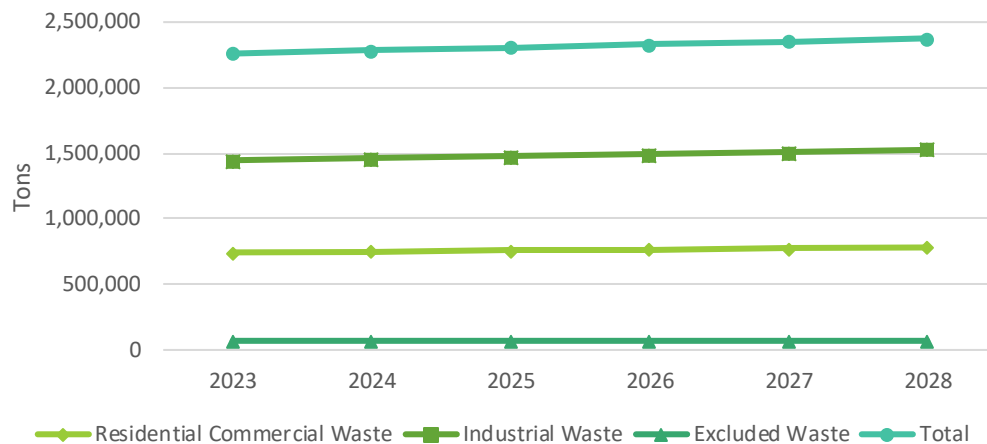
Table 3-2 demonstrates that waste generation within the District is expected to increase approximately 5% during the first six years of the planning period.

Table 3-2. Waste Generation Projections

Year	Residential Commercial Waste	Industrial Waste	Excluded Waste	Total
2023	743,875	1,457,189	69,365	2,270,429
2024	751,219	1,472,778	69,365	2,293,362
2025	758,649	1,479,820	69,365	2,307,835
2026	766,167	1,486,977	69,365	2,322,509
2027	773,773	1,494,249	69,365	2,337,387
2028	781,468	1,494,249	69,365	2,345,083

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

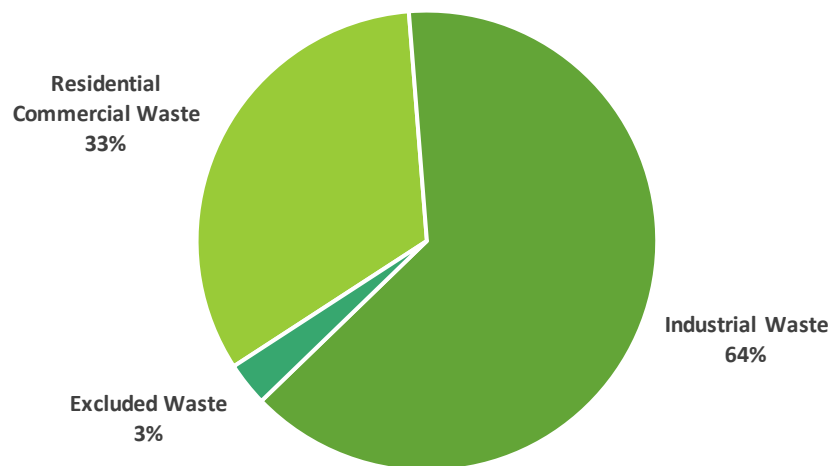
Figure 3-7. Waste Generation Projections



In general, generation for the residential/commercial and industrial sectors is projected to increase modestly, while excluded waste is projected to remain at 2019 levels. 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 (2023).

Figure 3-8. Total Waste Generation: 2023



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 1.20 percent based upon average percent change from 2015 to

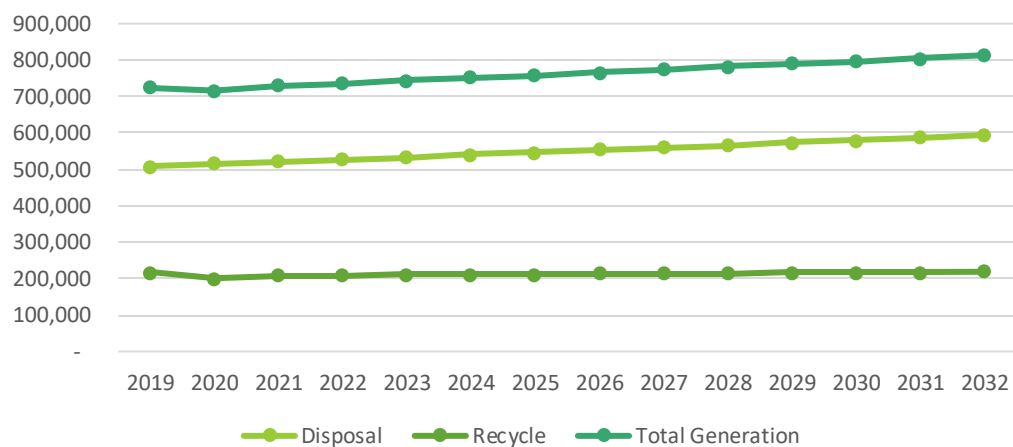
2019. **Table D-6** in Appendix D presents the residential/commercial waste disposal projections. The District considered three projection scenarios and selected this approach because it produced the most reasonable results based on historical trends.

Residential/commercial sector recycling is projected to increase from 208,163 tons in 2021 to 218,771 tons in 2032, or 5.1% 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: 2019-2032



2. Industrial Waste Projections

Waste generation in the industrial sector is normally influenced to a lesser degree by solid waste district programming than the generation totals from the residential/commercial sector.

In order to take a somewhat conservative approach and to address the historical variability and uncertainty associated with determining industrial

generation into the future, the following assumptions have been used to project industrial generation for planning purposes:

- **Recycling** – To project the total industrial sector recycling, the District used actual recycling totals for 2019 and 2020. From 2021 to 2032, recycling was projected to increase at half the average annual percentage increase from 2015 to 2018 (0.8%) to be conservative, for the remainder of the planning period. Industrial sector recycling in the District is generally stable and mature. A few very large metal-based industries tend to be responsible for notable increases or decreases. These fluctuations are typically caused by changes in the supply and demand for products related to industries that are impacted by fuel prices. These trends can be challenging to forecast; therefore, trends based on historic recycling totals were used to develop projections for this sector.
- **Disposal** – The average annual increase in industrial sector disposal tonnage was 3.25% from 2010-2019. The District assumed that the rate of increase in disposal experienced from 2010 through 2019 at half rate to be conservative. This rate of 1.62% was applied to the 2020 disposal tonnage (413,478 tons) then flatlined after 2027 for the planning period projections.

The result of these assumptions is that total waste generation for the industrial sector will increase from 2019 to 2032. The following figure presents the actual and projected totals of industrial sector recycling, disposal, and total generation from the reference year to the end of the planning period.

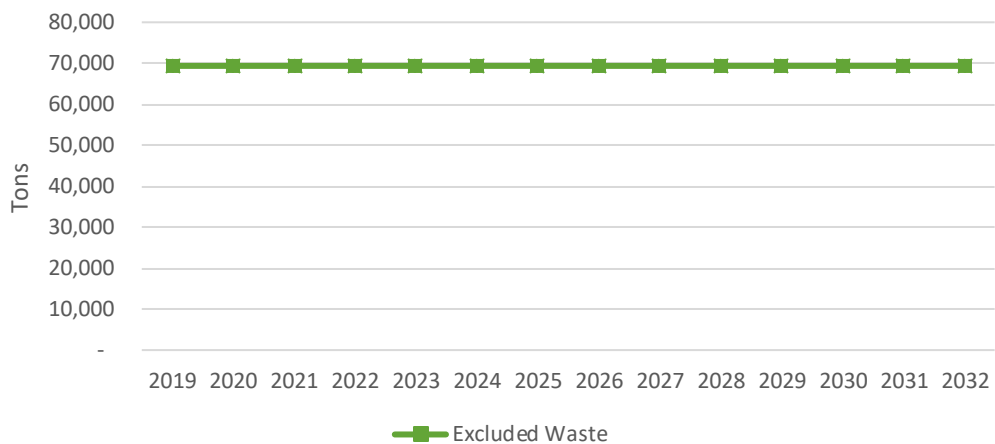
Figure 3-10. Industrial Waste Generation: 2019-2032



3. Excluded Waste

Excluded waste historically fluctuated annually from 2010 to 2019. Due to the noted variability in the amount of excluded waste disposed, this waste stream is projected from 2019 to 2032 to remain constant at the 2019 tonnage. For additional context of historical patterns, the following figure presents the actual and projected excluded waste totals from the reference year to the end of the planning period.

Figure 3-11. Excluded Waste Generation: 2019-2032



CHAPTER 4. Waste Management

Chapter 3 provided a summary of how much waste the Stark-Tuscarawas-Wayne Joint Solid Waste Management 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 districts. 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
2023	2,270,429	1,239,181	58,465	270,975	748,835
2024	2,340,220	1,248,776	58,465	274,475	758,504
2025	2,354,521	1,249,721	58,465	278,023	768,311
2026	2,369,020	1,250,676	58,465	281,622	778,257
2027	2,383,721	1,251,640	58,465	285,272	788,344
2028	2,398,626	1,252,613	58,465	288,974	798,574

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

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

³ "Composted" is the amount of yard waste sent to a compost facility.

⁴ "Transferred" is the amount sent to transfer stations prior to delivery to a landfill.

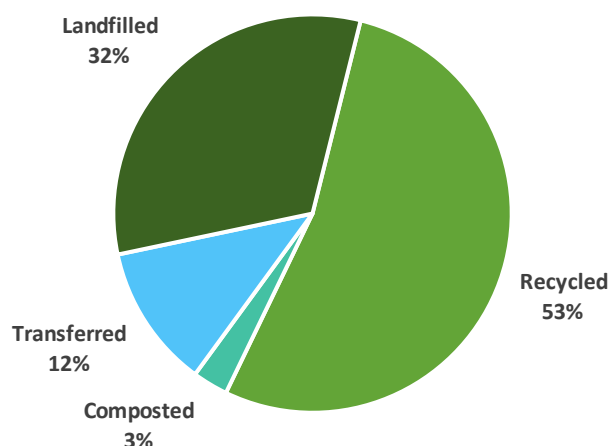
⁵ "Landfilled" plus the "Transferred" amount equals the total disposal.

Sources of information: Tables K-3, E-8, and D-6.

The following figure shows that recycling as a percentage of total generation for 2023 is projected to be 3 percent and compost is projected to be 12 percent while the amount of waste sent to transfer stations prior to final disposal in a landfill is approximately 55 percent. The tonnage sent directly to landfills for disposal is expected to be 33 percent of total generation.

The percentage of waste managed by each method is projected to remain the same in 2028.

Figure 4-1. 2023 Percent of Generation Managed by Each Method



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

1. Landfill Facilities

All the landfills which received waste directly (without first being processed at a transfer station) from the District during the reference year of 2019 are shown in **Table 4-2** below. This table illustrates that more than 97 percent of the direct-hauled waste was disposed at the American Landfill, Inc., Countywide Recycling & Disposal Facility, and Kimble Sanitary Landfill. These facilities are publicly-available but are owned by a private company. These three facilities also have many years of remaining capacity available for disposal as shown in **Table 4-2**.

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>					
American Landfill, Inc.	Stark	Ohio	318,796	44.82%	70
Republic Services Countywide Recycling & Disposal Facility	Stark	Ohio	206,362	29.01%	83
Kimble Sanitary Landfill	Tuscarawas	Ohio	164,453	23.12%	25
<i>Out-of-District</i>					
Geneva Landfill	Ashtabula	Ohio	12	0.00%	61.0
Athens-Hocking Reclamation Center	Athens	Ohio	5,939	0.83%	49.0
Crawford County Landfill	Crawford	Ohio	25	0.00%	22.0
Pine Grove Regional Facility	Fairfield	Ohio	0	0.00%	67.0
Hancock County Landfill	Hancock	Ohio	0	0.00%	28.0

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
Apex Environmental LLC	Jefferson	Ohio	114	0.02%	36.0
Carbon Limestone Landfill LLC	Mahoning	Ohio	64	0.01%	23.0
Mahoning Landfill Inc	Mahoning	Ohio	23	0.00%	48.0
Suburban Landfill Inc	Perry	Ohio	207	0.03%	66.0
Noble Road Landfill	Richland	Ohio	15,283	2.15%	20.0
Sunny Farms Landfill LLC	Seneca	Ohio	9	0.00%	8.0
Out-of-State					
Hoosier Landfill 2	Kosciusko	IN	3	0.00%	
Total			711,291	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 27% of the total waste ultimately sent for disposal was processed by transfer stations while approximately 73% 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			
In-District					
Kimble Transfer & Recycling - Canton	Stark	OH	229,114	89%	Kimble Sanitary Landfill
Out-of-District					
Apex Environmental LLC	Belmont	OH	336	0%	Apex Environmental LLC
Kimble Transfer & Recycling - Carrollton	Carroll	OH	1,724	1%	Kimble Sanitary Landfill
Broadview Heights Transfer Station	Cuyahoga	OH	2,991	1%	Noble Road Landfill
Cleveland Transfer/ Recycling Station	Cuyahoga	OH	8	0%	American Landfill
Kimble Transfer & Recycling Facility - Cambridge	Muskingum	OH	799	0%	Kimble Sanitary Landfill
Rumpke Waste Inc Richland County Transfer Facility	Richland	OH	8,525	3%	Noble Road Landfill

Facility Name	Location		Tons Accepted from District	% all District Waste Transferred	Final Waste Destination
	County	State			
Akron Central Transfer Facility	Summit	OH	6,755	3%	American Landfill
Kimble Transfer & Recycling - Twinsburg	Summit	OH	260	0%	Kimble Sanitary Landfill
Republic Services of Ohio LLC Akron Transfer Facility	Summit	OH	6,947	3%	Countywide Recycling & Disposal Facility
Out-of-State					
None					
Total			257,461	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 and Community Collection Programs Used by the District in the Reference Year

Facility Name	Location (County)	Tons Composted	Percent of all Material Composted
Earth 'N Wood Products Inc	Stark	45,966	50.30%
Mr Mulch	Stark	4,487	4.91%
Stark C & D Disposal Inc	Stark	938	1.03%
Uniontown Topsoil & Mulch LLC	Stark	670	0.73%
Warstler Bros Landscaping	Stark	83	0.09%
Weisgarber Trucking Inc	Stark	356	0.39%
Yoder Landscape & Nursery Inc	Stark	271	0.30%
Black Snake Composting Facility	Tuscarawas	41	0.04%
Bull Country Composting 1	Tuscarawas	12,488	13.67%
Kimble Sanitary Landfill	Tuscarawas	526	0.58%
Tuscarawas, Village of	Tuscarawas	59	0.07%
Kellys Kompost	0	30	0.03%
OARDC Ohio Agriculture Research	Wayne	15	0.02%
Orrville Composting Facility	Wayne	83	0.09%
Paradise Composting Class II2	Wayne	330	0.36%
Paradise Composting Class III2	Wayne	1,702	1.86%
Tope's	Wayne	56	0.06%
Village of Shreve	Wayne	135	0.15%
Wayne Lawn and Landscape	Wayne	49	0.05%
Zollinger Sand & Gravel Co	Wayne	757	0.83%
Andre Farms LLC	Fulton	586	0.64%
Number One Landscape	Medina	19	0.02%
Smith Bros Inc	Medina	1,123	1.23%
B-Sharp Property Maintenance	Summit	226	0.25%

Facility Name	Location (County)	Tons Composted	Percent of all Material Composted
Pro Tree & Landscape Co	Summit	66	0.07%
Village of Dennison - Tuscarawas County*	Tuscarawas	223	0.24%
Composting Program - Wayne County	Wayne	3,102	3.39%
Village of Brewster - Stark County*	Stark	800	0.88%
Canton Township - Stark County*	Stark	1,755	1.92%
Lake Township - Stark County**	Stark	3,732	4.08%
Nimishillen Township - Stark County**	Stark	1,615	1.77%
Perry Township - Stark County**	Stark	1,653	1.81%
Plain Township, Fire Station - Stark County**	Stark	5,406	5.92%
City of Dover - Tuscarawas County*	Tuscarawas	915	1.00%
Total		91,383	
Adjustments to avoid double counting		17,629	
Adjusted Total		73,754	

* The tonnage for this facility will be removed to avoid double counting. Tonnage included in Bull Country Composting.

** The tonnage for this facility will be removed to avoid double counting. Tonnage included in Earth N' Wood.

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 as well as data published by Ohio EPA.

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

Name of Facility	Location		Recyclables Accepted from District
	County	State	
<i>In-District</i>			
PSC Metals - Canton	Stark	OH	LAB,
Midwest Com-Tel	Stark	OH	EW
PSC - Wooster	Wayne	OH	LAB, FM, NFM
Little Shop of Bargains	Stark	OH	WG, FM, NFM, PI
Sanmandy	Wayne	OH	OCC, MxP, PI
Stoller Lawn & Garden	Wayne	OH	WG, LAB, Oil
Jedco Computers	Tuscarawas	OH	EW
FPT Massillon	Stark	OH	FM, NFM
FPT Canton	Stark	OH	FM, NFM
PSC Metals - Canton	Stark	OH	FM, NFM, Oil
Midwest Com-Tel	Stark	OH	DCB, EW
Akron Canton Waste Oil Co.	Stark	OH	Oil, Antifreeze
WM dba Wooster Hauling	Wayne	OH	FW, FM, ST, CoM
PSC Metals - Warmington Rd. in Navarre	Stark	OH	LAB, FM, NFM

Name of Facility	Location		Recyclables Accepted from District
	County	State	
FPT Massillon	Stark	OH	FM, NFM
FPT Canton	Stark	OH	FM, NFM
<i>Out-of-District</i>			
WM - Akron MRF - (Wayne)	Summit	OH	OCC, PI, CoM
Royal Oaks (Paper Retriever Program)	Cuyahoga	OH	MxP
Broadway Iron & Metal	Mahoning	OH	WG, LAB, FM, NFM
River Valley Paper Company	Summit	OH	OCC, MxP, PI
Medina Recycling	Medina	OH	OCC, MxP, PI, CoM
Rumpke Center City Recycling Hamilton County	Hamilton	OH	GI, FM, NFM, OCC, MxP, PI, CoM
<i>Out-of-State</i>			
None			

¹ AC = aluminum cans, SC = steel cans, GL = glass, PL = plastics, MxP = mixed paper, OCC = old corrugated cardboard, ONP = newspaper, TEX = textiles, WG = white goods, Oth = other.

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. Each landfill which received a substantial percentage of District-generated waste during 2019 is estimated to have a minimum of 25 years remaining capacity.

Transfer stations have not been an important factor in the District's waste management strategy in past years, and that situation is not expected to change during the planning period.

The amount of materials composted throughout the planning period is not expected to change significantly. As 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

Ohio EPA's Format requires the inclusion of a siting strategy in a solid waste plan update if the solid waste district determines that it will construct a solid waste facility to provide disposal capacity. This requirement follows from Ohio law [Ohio Revised Code, Section 3734.53(A)(8)].

The District Policy Committee has determined that sufficient disposal capacity exists for the entire planning period. The District does not anticipate constructing any solid waste facility or contracting with a private entity to do so on behalf of the District. As such, and in accordance with the Format 4.0, no siting criteria is necessary for 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 Policy Committee can also prevent the Board of Directors from designating facilities by withholding that authority in the Solid Waste Management Plan.

Even if the Policy Committee grants the Board of Directors the authority to designate in a Solid Waste Management Plan, the Board of Directors decides whether or not to act on that authority. If it chooses to use its authority to designate facilities, then the Board of Directors must follow the process that is prescribed in ORC Section 343.014. If it chooses not to designate facilities, then the Board of Directors simply takes no action.

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

1. Description of the SWMD's Designation Process

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.)

Decisions regarding designation, if implemented, or the granting of a designation waiver, if applicable, shall be made by the District, following a review of the request by the Policy Committee.

Where if 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 Policy Committee will evaluate each request for designation or waiver based upon, at least, the following general criteria:

- The facility's compatibility with the District's Solid Waste Management Plan.
- Other criteria as defined in Section C of this chapter.

The full procedure for granting a designation waiver is included in Appendix P.

For this plan update, the District is hereby authorized to establish facility designations in accordance with ORC Section 343.013, 343.014 and 343.015. A complete description of the District's designation policies is included in Appendix P.

2. List of Designated Facilities

There are currently no listed designated facilities for the solid waste generators for the reference year therefore Table 4-6 was omitted.

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

Program Category	Program / Action Name
Residential Recycling Infrastructure	
Curbside Recycling	Curbside Recycling Programs
	Curbside Expansion Efforts
	Curbside Re-Start Program
	PAYT Promotion Efforts
	Approach municipality regarding new curbside programs
	Target 2-3 villages without curbside programs
	Conduct workshops with 2-3 villages that do not have curbside programs
	Promote and utilize Program Startup Grants
	Promote and utilize mini-grants to incentivize communities
	Curbside: Hauler engagement session
	Drop-Off Recycling
Drop-Off Map	
Drop-Off Promotion Program	
Implement Curbside Recycling for Targeted Areas	
Community Assistance Program	
Work with drivers to cover part-time hours	
Incentive for drivers to enhance their safe driving ability	
Explore leasing truck benefits	
Additional camera systems for contamination	
Surveying activities at targeted drop-off sites	
Add open dump ORC language on signs at recycling drop-off sites	
Drop-off information sheet receptacle	
Explore recycling truck energy options	

Program Category	Program / Action Name
	Drop-off: Hauler engagement session Create temporary site signage about site-specific issues
Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials	
Business and Industrial Sector	Commercial/Institutional Recycling Assistance
	Waste Audits
	School Recycling Program
	Government Building Recycling
	Campaign to reduce commercial use of residential yard waste drop-off sites
	Commercial and Industrial Technical Assistance
	Waste Audit Manual
	Develop and promote resources to aid the commercial sector
	District program promotion with area chambers of commerce
Restricted & Difficult to Manage Wastes, Special Collection Events	Pharmaceutical Collection Sites
	Permanent HHW Collection
	Scrap Tire Program - Permanent Sites and Outreach Efforts
	Yard Waste Collection Sites
	Computer/Electronics Recycling End Use Audit
	Electronics Collection Program
	HHW Management Outreach Program
	Lead-Acid Battery Program
	Appliance Collection Program
	Food Waste Management Program
	Yard Waste Partnership Program
	Yard Waste Program Enhancement Initiative
	Expansion of HHW Collection
	Yard Waste: Incentivize site privatization
	Yard waste private sector to take material directly from residents
	Transition yard waste drop-off sites to existing or new private sector site
	Promote local food waste entities to schools and institutions
	Promote local food waste entities to restaurants/grocery stores
	HHW: Pop-up events in Tuscarawas and Wayne County
	Pop-up events in Tuscarawas and Wayne County
	Pharmaceuticals: Explore if DEA may be willing to incinerate drugs
	Pharmaceuticals: Encourage Stark County officials to participate in DEA takeback day
	Scrap Tires: Utilize the EPA scrap tire program would allow the cleanup of illegally dumped tires
	Scrap Tires: campaign to education residents on the local opportunities
	E-Waste/ Lead Acid Batteries/ Appliances: promotion of the Canton Recycle Center
	E-Waste: Work with communities to conduct their own E-waste events
	E-Waste: list of private sector retail and scrap yard locations
	Lead-Acid Batteries: list of private sector retail and scrap yard locations
	Appliances: list of private sector retail and scrap yard locations
	Promote the two Class II compost facilities in the District to accept more food waste for diversion.

Program Category	Program / Action Name
Education/Outreach	
Education/ Outreach	District website
	Recycling and Reuse Guide or Newsletter
	Education and Awareness Program
	Yard Waste Management Education and Outreach
	HHW Management Education and Outreach
	Special Events Initiative
	Waste Reduction Report Card
	Promote the bottle-cap-to-benches program
	Promote the litter collection kit loan program
	Promote the recycling container loan program
	Grow the District residential e-newsletter audience
	Continue to more actively engaging residents virtually
	Audience: Residents - Track the recycling tonnages per location over time
	Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs
Grants	Community Development Grant (Ohio EPA) Promotion and Assistance
	Recycling and Composting Infrastructure Enhancement Grant (for processors)
	Recycling Makes Sense Grant Program
	Recycling Market Grant (Ohio EPA) Promotion and Assistance
	Recycling Program Start-Up Grants (for political subdivisions)
	Recycling Drop-Off Clean-Up/Host Community Center
	Pay-As-You-Throw Grants
	Recycling Makes Sense Grant: Inform Communities
	Recycling Makes Sense Grant: Reprioritize program funding
	Recycling Makes Sense Grant: Restructure grant program
	Recycling Program Start-Up Grant: Inform Communities
	Recycling Program Start-Up Grant: Rename grant program
	Community Development Grant (Ohio EPA): Drop-off site improvements
	Community Development Grant (Ohio EPA): Inform Communities
	Recycling Market Grant: E-newsletter
	Recycling Market Grant: List of commercial and business contacts
Enforcement & Clean-up	Health Dept. Funding: Health Department Financial Assistance
	Sheriff Department Grants
	Health Department Grants
	Disaster Debris Management
	Health Department Financial Assistance: Operationally streamline program and expand in service
	Health and Sheriff Department Financial Assistance: Forward other funding avenues that could be utilized to enhance the programs
	Health Department and Sheriff Financial Assistance: written procedure manual
	Explore a more active partnership with ODOT
	Sheriff Department: Promote shared resources and knowledge between counties
	Training for Environment Enforcement Officers
	Review Disaster Debris Plan
	Recycling Drop-Off Clean-Up/Host Community Grants

Program Category	Program / Action Name
Other Programs	Audit Committee
	Data Collection and Database of Recycling Processors
	Political Subdivisions Contract Renewal Assistance
	Commercial/Industrial Sector: Annually update survey mail lists
	Research better survey instruments to aid in user friendliness and data accuracy as needed

B. Program Descriptions

Existing program and new program descriptions are available in Appendix H and Appendix I. Only new program descriptions are included in the following section.

1. Residential Recycling Infrastructure

Approach municipality regarding new curbside programs

A new initiative by the District is to approach the Mayor of the only municipality without a curbside program in the District about exploring a curbside program. This has been, to a certain extent, an ongoing activity and will continue.

Potential - Target 2-3 villages without curbside programs

The District could target 2-3 villages without curbside programs in the District with outreach and education flyers that summarize the value of curbside recycling programs. This activity would be based on the following criteria:

- Communities interest in developing curbside recycling programs.
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Potential - Conduct workshops with 2-3 villages that do not have curbside programs

The District could conduct workshops with 2-3 villages that do not have curbside programs in the District to promote curbside recycling and the technical assistance the District could provide in creating the program and funding opportunities. This activity would be based on the following criteria:

- Communities interest in conducting curbside recycling workshops.
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Promote and utilize Program Startup Grants

A new initiative by the District is to promote and utilize Program Startup Grants to incentivize communities to start a new curbside program via flyers, mailers, social media, or other direct engagement strategies. This initiative could include the following:

- Develop a list of communities to target including community contact or champion.
- Develop and or modify existing flyers, mailers, social media content.
- Submit the engagement media to each targeted community within the first 3 years of the new planning period.
- Measure the effectiveness of the engagement such as requested additional information by the community, requested meetings to discuss and other positive factors. Also measure negative factors such as no responses or requests for assistance or additional information.
- Determine based on the measurement metrics listed above if additional engagement activities would be warranted before the next plan update process.

Promote and utilize mini-grants to incentivize communities

A new initiative by the District is to promote and utilize mini-grants to incentivize communities to include recycling when they bid out curbside waste programs via flyers, mailers, social media, or other direct engagement strategies. This initiative could include the following:

- Develop a list of communities to target including community contact or champion.
- Develop and or modify existing flyers, mailers, social media content.
- Submit the engagement media to each targeted community within the first 3 years of the new planning period.
- Measure the effectiveness of the engagement such as requested additional information by the community, requested meetings to discuss and other positive factors. Also measure negative factors

such as no responses or requests for assistance or additional information.

- Determine based on the measurement metrics listed above if additional engagement activities would be warranted before the next plan update process.

Potential - Curbside: Hauler engagement session

The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent curbside recycling from expanding to rural and village communities in the District. This activity would be based on the following criteria:

- Haulers interest in attending the engagement session(s).
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Work with drivers to cover part-time hours

A new initiative by the District is to utilize existing full-time drivers to work weekend days/overtime hours to cover typical part-time driver hours. This is a management and staffing based activity and will occur as needed throughout the planning period.

Incentive for drivers to enhance their safe driving ability

A new initiative by the District is to incentivize full-time drivers to increase their certification from a Class B to a Class A CDL and continue to enhance their safe driving ability. This is a management and staffing based activity and will occur as needed throughout the planning period.

Explore leasing truck benefits

A new initiative by the District is to explore the benefits of leasing versus owning recycling trucks. This activity will be based on the following actions:

- Conduct an evaluation on the benefits and draw backs to leasing verses owning within the first three years of the new planning period.
- Based on the evaluation and presentations to the Board of Directors, additional evaluation may be required.

- Implementation or tabling of this initiative will be based on decisions from the Board of Directors.

Additional camera systems for contamination

A new initiative by the District is to employ additional camera systems and enforcement to reduce contamination and drop-off site abuse as the budget allows. This activity will be based on the following actions:

- Identification of highest contamination sites that do not have cameras.
- Evaluation of the costs for implementation of cameras per site identified.
- Presentation of the contamination metrics and costs for cameras to the Board of Directors (if needed due to the cost).
- Implementation of tabling of this initiative will be based on decisions from the Board of Directors.

Potential - Surveying activities at targeted drop-off sites

The District could conduct surveying activities at targeted drop-off sites to communicate participation requirements as well as to ascertain why residents use the sites and what they know on correct recycling. This potential initiative implementation could be based on the following criteria:

- Developing a list of potential drop-off sites that could be utilized for this initiative.
- District staff availability.
- Internship or volunteer opportunities for staffing.
- Local groups or organizations interested in conducting the survey work.
- District financial resources.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Add open dump ORC language on signs at recycling drop-off sites

A new initiative by the District is to add open dump ORC language on signs at recycling drop-off sites to drive home the message that dumping materials not accepted at the sites is against the law and there are penalties for breaking the law. The signs would contain the following language:

- No Dumping
Site under video surveillance!

Violators will be prosecuted
With a fine of up to \$500! RC. 3767.32

If you see illegal dumping,

- Each site will have the phone number of that county's sheriff's office
- This initiative will be implemented within the first 3 years of the new planning period.

Potential - Drop-off information sheet receptacle

The District could create an information sheet receptacle at each drop-off or targeted drop-off sites that includes detailed acceptable and non-acceptable materials for the program. This potential initiative implementation would be based on the following criteria:

- Developing a list of potential drop-off sites that could be utilized for this initiative.
- District staff availability.
- District financial resources.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Potential - Explore recycling truck energy options

The District could explore cost of compressed natural gas, fuel cell, electric, biodiesel, etc. for District collection vehicles to determine if long term cost savings could be achieved. This potential activity would be based on the following actions:

- Determine, within the first three years of the new planning period if this initiative can be completed or is warranted. If it is decided to move forward, then the following tasks would occur:
 - Conduct an evaluation on the benefits and draw backs to operating recycling drop-off trucks using natural gas, fuel cells, electric, biodiesel or other green energy fuels.
 - Based on the evaluation and presentations to the Board of Directors, additional evaluation may be required.
 - Implementation or tabling of this initiative would be based on decisions from the Board of Directors.

Potential - Drop-off: Hauler engagement session

The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent drop-off

recycling from expanding in the District. This activity would be based on the following criteria if it is decided to implement:

- Haulers interest in attending the engagement session(s).
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Create temporary site signage about site-specific issues

A new initiative by the District is to create temporary site signage about site-specific issues that could draw more attention than permanent signage and could be used across multiple sites. The District will first conduct the following:

- Determine the best type of portable sign that could be used.
- Develop strategy on sign display and messaging.
- Ensure adaptability of sign for multiple and changing messages.
- Determine the cost of the sign and how many would be needed.
- Obtain approval for the purchases if they exceed the amounts already budgeted.
- This initiative will be implemented within the first 5 years of the new planning period.

2. Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials

Develop and promote resources to aid the commercial sector

A new initiative by the District is to further develop and promote resources to aid the commercial sector on the District website. This activity will be based on the following actions:

- Evaluation of other solid waste districts and or governmental entities to determine the best engagement and design concepts.
- Evaluate the best messaging and content approach for commercial sector businesses.
- Work with the current District website developer on the level of change needed based on the evaluation details obtained above.

- Develop a content management plan to ensure messaging and content remains current over time.
- Assign content management duties to existing District staff member.
- Evaluation of the costs for implementation of changes to the website.
- Implement within the first 5 years of the new planning period.

Potential - District program promotion with area chambers of commerce

The District could work with area chamber of commerce initiatives to promote the District's programs and to provide technical assistance to this market segment.

This initiative could be included in the website initiative discussed above or as a separate engagement initiative as determined by the District.

Yard Waste: Incentivize site privatization

A new initiative by the District is to incentivize site privatization by offering funding infrastructure necessary for a site to privatize.

This initiative will be implemented by adjusting the appropriate District grant program to allow for this funding. Promotion of this grant will be conducted through existing communication initiatives utilized by the District.

The District will implement this initiative within the first 3 years of the new planning period.

Yard waste private sector to take material directly from residents

A new initiative by the District is to focus on at least one private sector facility in each county that accepts material directly from residents or community programs. This activity will be based on the following actions:

- Identification of the best organics management facility(s) in each of three counties of the District that can accept materials directly from residential generators.
- Develop a working relationship with the owner and or operator of each site.
- Develop an agreement between each facility as to what services, products, waste streams and or materials they are willing to accept from residents and conditions of delivery.
- Work with each facility to ensure the details of their operations are promotable to residents via the engagement platforms used by the District.

- Make available to District engagement platform subscribers the opportunities each facility provides to the community.
- Expand to other facilities as appropriate.
- Implement within the first 5 years of the new planning period.

Transition yard waste drop-off sites to existing or new private sector site

A new initiative by the District is to transition District funded drop-off sites to existing or new private sector sites as identified to reduce redundancy and cost. This activity will be based on the following actions as well as the results from the previous initiative:

- Identification of the organics management facility(s) in each of three counties of the District that can accept the same materials in the District yard waste drop-off system from residents which are close to existing drop-off sites. Also determine their capacity for additional materials.
- Develop a working relationship with the owner and or operator of each site.
- Determine if the organics management facility can replace any District drop-off sites in the vicinity.
- Displace current drop-off sites, if possible, based on the actions above.
- Implement within the first 5 years of the new planning period.

Potential - Promote local food waste entities to schools and institutions

The District could promote Paradise Composting, Earth N Wood/Kurtz Brothers and other local entities that offer food waste diversion/composting services to schools and institutions. This initiative may be combined with other initiatives listed above depending on their implementation and end results.

Potential - Promote local food waste entities to restaurants/grocery stores

The District could promote Paradise Composting, Earth N Wood/Kurtz Brothers and other local entities that offer food waste diversion/composting services to restaurants/grocery stores. This initiative may be combined with other initiatives listed above depending on their implementation and end results.

HHW: Pop-up events in Tuscarawas and Wayne County

A new initiative by the District is to evaluate pop-up events in Tuscarawas and Wayne County that could be added as needed if funding is available.

This initiative will be conducted as an evaluation and decision point on an annual basis though may be evaluated a second time closer to the end of the year to check in on how much funding remains and how it would be best utilized for the remainder of the year without going overbudget.. These events could also assist the District to establish partnerships in the local region that could lead to a permanent site and partnership.

Criteria for determining whether to conduct pop-up collection events include:

- Budgetary availability
- Fairground schedule/location availability
- Partnership schedule/staff availability
- Attendance
- Time of year

Pharmaceuticals: Explore if DEA may be willing to incinerate drugs

A new initiative by the District is to explore if DEA may be willing to incinerate drugs collected at drop boxes as well as those collected at DEA collection event(s), reducing disposal cost. This initiative will be conducted as an evaluation and decision point on an annual basis.

Pharmaceuticals: Encourage Stark County officials to participate in DEA takeback day

A new initiative by the District is to encourage Stark County officials to participate in DEA takeback day for program consistency and cost reduction. This initiative will be conducted as an evaluation and decision point on an annual basis.

Scrap Tires: Utilize the EPA scrap tire program would allow the cleanup of illegally dumped tires

A new initiative by the District is to utilize the EPA scrap tire program for the cleanup of illegally dumped tires in District communities without straining the scrap tire budget. This initiative will be conducted as an evaluation and decision point on an annual basis.

Scrap Tires: campaign to educate residents on the local opportunities

A new initiative by the District is to conduct a Districtwide campaign to educate residents on the local opportunities to turn in old tires when buying new tires. This activity will be based on the following actions:

- Communicate with residents, via the District's engagement platforms, on the locations of the District sites that accept scrap tires.
- Implement within the first 5 years of the new planning period.

E-Waste/ Lead Acid Batteries/ Appliances: promotion of the Canton Recycle Center

A new initiative by the District is to provide additional promotion of the Canton Recycle Center and the free option it provides including e-waste, lead acid batteries, and appliances.

This initiative will include adding information on the District's website as well as routine messaging on its engagement platforms. This will be completed in the first year of the new planning period.

E-Waste: Work with communities to conduct their own E-waste events

A new initiative by the District is to work with communities to conduct their own E-waste events. The District would promote available mini-grant funding to communities through the e-newsletter developed from the ratification list.

E-Waste: list of private sector retail and scrap yard locations

A new initiative by the District is to develop comprehensive list of private sector retail and scrap yard locations that accept e-waste and then promote the list on the District's website. This activity will be completed in the first 2 years of the new planning period.

Lead-Acid Batteries: list of private sector retail and scrap yard locations

A new initiative by the District is to develop comprehensive list of private sector retail and scrap yard locations that accept lead acid batteries and then promote the list on the District's website. This activity will be completed in the first 2 years of the new planning period.

Appliances: list of private sector retail and scrap yard locations

A new initiative by the District is to develop comprehensive list of private sector retail and scrap yard locations that accept appliances and then promote the list on the District's website. This activity will be completed in the first 2 years of the new planning period.

3. Education/Outreach

Promote the bottle-caps-to-benches program

A new initiative by the District is to promote the bottle-caps-to-benches program which allows schools, church youth groups and community youth organizations to obtain the recycled-content benches/tables that they want while engaging the children. This initiative will be primarily completed through direct engagement with the schools through the District's environmental education program. This initiative can occur only if a company that recycles the caps can be secured.

Promote the litter collection kit loan program

A new initiative by the District is to promote the litter collection kit loan program encourages groups to help the environment while being cost efficient. This initiative will be targeted by the social media platforms the District uses. Promotion will occur year-round on the website and through other District media (social media, e-newsletter, and newsletter) as time and space allow.

Promote the recycling container loan program

A new initiative by the District is to promote the recycling container loan program which encourages event coordinators to incorporate recycling for no cost (to them or the District) while shifting the responsibility of collecting and transporting to them. Promotion will occur year-round on the website and through other District media (social media, e-newsletter, and newsletter) as time and space allow.

Grow the District residential e-newsletter audience

A new initiative by the District is to grow the District residential e-newsletter audience; e-newsletters could also be developed for governments, schools, and businesses. This activity will be based on the following actions:

- Identification of the schools, governments, and businesses to target for the e-newsletter.
- Annually send a flyer/email/communication to the identified entities to invite them to subscribe to the e-newsletter.

Continue to more actively engaging residents virtually

A new initiative by the District is to more actively engaging residents virtually via webinars, social media posts and paid ads, videos, etc., and continue

utilizing these outreach tools to reach a wider audience. This activity will occur during each year of the planning period as needed.

Potential - Audience: Residents - Track the recycling tonnages per location over time

The District could track the recycling tonnages per location over time. These tonnages could be compared to the community's population. If a community undertakes a major drop (15% or more) in recycling rates, the District may investigate the reason and could focus an education program on the available infrastructure.

4. Grants/Incentives, Facilities, Enforcement/ Clean-Up, & Other Programs

Potential - Recycling Makes Sense Grant: Inform Communities

The District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Recycling Makes Sense Grant: Reprioritize program funding

A new initiative by the District is to evaluate and reduce program funding as it was needed to balance the budget and maintain the budget levels of other well-utilized District programs (HHW, yard waste, etc.) but won't likely reduce the program's effectiveness since the majority of the grantees contract out their curbside program to private companies, don't require the funding to operate a successful program, and have historically indicated they use their funding on other proper public purposes aside from support for their recycling program. This activity will be based on the following actions:

- Evaluation of effectiveness of this program, considering the following factors: level of contamination, current markets for recyclable materials, community population size, program operation (private sector vs government):
 - Factors both programmatic and economic
- Based on the results of the evaluation above and with recommendations from the team, adjust program as needed.

Recycling Makes Sense Grant: Restructure grant program

A new initiative by the District is to restructure grant program to incentivize quality recyclables over quantity and continuance of curbside recycling by working with communities when their contracts are up for renewal. This initiative will be conducted by revising the grant agreement.

Potential - Recycling Program Start-Up Grant: Inform Communities

The District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Recycling Program Start-Up Grant: Rename grant program

Rename grant program to include enhancement/improvement of existing programs instead of just start-up of new programs. The District will review its current program and then adjust the name and criteria to reflect the goal of this initiative.

Community Development Grant (Ohio EPA): Drop-off site improvements

A new initiative by the District is to assist communities with drop-off sites who want to make site improvements beyond what can be funded through District grant programs by encouraging them to apply directly. Each year when the EPA grant comes out, the District may conduct a campaign on its social media platforms to promote the grant opportunity.

Potential - Community Development Grant (Ohio EPA): Inform Communities

The District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Potential - Recycling Market Grant: E-newsletter

The District could utilize its e-newsletter to provide information on this grant. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Potential - Recycling Market Grant: List of commercial and business contacts

The District could develop a list of commercial and business contacts through the website sign-up. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Health Department Financial Assistance: Operationally streamline program and expand in service

A new initiative by the District is to operationally streamline program and expand in service pending budgetary availability. This initiative involves annual budgetary planning and will coincide with this process.

Health Department and Sheriff Financial Assistance: Forward other funding avenues that could be utilized to enhance the programs

A new initiative by the District is to forward other funding avenues that could be utilized to enhance the programs (like Ohio EPA Community and Litter Grant funding as well as the scrap tire remediation program and mosquito control grant). This may be assessed each year as other grant and funding options become available or are identified.

Potential - Health Department and Sheriff Financial Assistance: written procedure manual

To combat differences in procedures between agencies, individual sanitarians, and deputies, as well as to combat staff turnover, a written procedure manual could be developed, and an annual meeting could be held to assess program procedures. The District may evaluate this need each year to determine if the manual can be developed or is needed.

Potential - Explore a more active partnership with ODOT

The District could explore a more active partnership with ODOT for litter cleanups or share resources to benefit the litter cleanup crew programs.

Sheriff Department: Promote shared resources and knowledge between counties

A new initiative by the District is to promote shared resources and knowledge between counties increasing cohesion of the programs across county lines. This initiative will be assessed each year as needed.

Training for Environment Enforcement Officers

A new initiative by the District is to have one of the Environment Enforcement Officers who is certified in the following training for District recycling drivers: load securement, pre-trip inspections, defensive driving, and extend this training to other local governments as needed. The certifications and/or training would occur with the first 5 years of the planning period.

Review Disaster Debris Plan

A new initiative by the District is to review the disaster debris plan consistently and update the plan as necessary. This may be reviewed annually and updated as needed.

Potential - Recycling Drop-Off Clean-Up/Host Community Grants

If the revenue stayed consistent or grew and funding for another program (ex: Recycling Makes Sense) was decreased or restructured, all sites could participate for a relatively small amount, which could increase consistency in operation and communication with sites.

Promote the two Class II compost facilities in the District to accept more food waste for diversion.

A new initiative by the District is to promote the two Class II compost facilities in the District to accept more food waste for diversion. This initiative may coincide with other initiatives already discussed in this Plan Update.

Commercial/Industrial Sector: Annually update survey mail lists

A new initiative by the District is to focus each year in making sure all survey mail lists are up to date, accurate and include the correct contact person.

Potential - Research better survey instruments to aid in user friendliness and data accuracy as needed

The District could research better survey instruments to aid in user friendliness and data accuracy as needed.

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).

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

Year	Projected Tons Collected	Residential/ Commercial WRR ¹
2023	210,007	28%
2024	210,942	28%
2025	211,887	28%
2026	212,841	28%
2027	213,805	28%
2028	214,779	27%

¹ "WRR" means waste reduction and recycling rate.

2. Industrial Recycling in the District

The following table shows the projected amount of waste reduction and recycling for the industrial sector during the first six years of the planning period. As illustrated in the table, the recycling tons collected are expected to increase steadily, but the overall waste reduction and recycling rate will likely decline because waste disposal volumes are anticipated to increase until the end of the planning period, then remain flat (see Table 5-2).

Table 5-2. Industrial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Industrial WRR ¹
2023	1,030,181	71%
2024	1,038,841	71%
2025	1,038,841	70%
2026	1,038,841	70%
2027	1,038,841	70%
2028	1,038,841	70%

¹ "WRR" means waste reduction and recycling rate.

3. Curbside and Drop-Off Recycling Inventory

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

Table 5-3. Curbside Recycling Services

ID#	Community Served	Service Provider	County	Ongoing Service
NSC1	City of Alliance	Kimble	Stark	Yes
NSC2	City of Canal Fulton	Republic	Stark	Yes
NSC3	City of Canton	City	Stark	Yes
NSC4	City of North Canton	Kimble	Stark	Yes
NSC5	Village of Hartville	Kimble	Stark	Yes
NSC6	Village of Hills and Dales	Kimble	Stark	Yes
NSC7	Village of Baltic	Kimble	Tuscarawas	Yes
NSC8	Village of Bolivar	Kimble	Tuscarawas	Yes
NSC9	Village of Dennison	Kimble	Tuscarawas	Yes
NSC10	City of Dover	Kimble	Tuscarawas	Yes
NSC11	Village of Gnadenhutten	Village	Tuscarawas	Yes
NSC12	City of New Philadelphia	City	Tuscarawas	Yes
NSC13	Village of Strasburg	Kimble	Tuscarawas	Yes
NSC14	Village of Sugarcreek	Kimble	Tuscarawas	Yes
NSC15	City of Uhrichsville	Kimble	Tuscarawas	Yes
NSC16	Village of Doylestown	Republic	Wayne	Yes
NSC17	City of Orrville	Kimble	Wayne	Yes
NSC18	City of Rittman	Kimble	Wayne	Yes
NSC19	Village of Marshallville	Kimble	Wayne	Yes
NSC20	City of Wooster	Waste Management	Wayne	Yes
SC1	City of Massillon	Kimble	Stark	Yes
SC2	Village of Navarre	Kimble	Stark	Yes
SC3	Bethlehem Township	Kimble	Stark	Yes
SC4	Village of Meyers Lake	Kimble	Stark	Yes
SC5	Canton Township	Kimble	Stark	Yes
SC6	Jackson Township	Kimble	Stark	Yes
SC7	Lake Township	Kimble	Stark	Yes
SC8	Lawrence Township	Kimble	Stark	Yes
SC9	Village of Limaville	Kimble	Stark	Yes
SC10	Lexington Township	Kimble	Stark	Yes
SC11	City of Louisville	Kimble	Stark	Yes
SC12	Marlboro Township	Kimble	Stark	Yes
SC13	Nimishillen Township	Kimble	Stark	Yes
SC14	Village of East Canton	Kimble	Stark	Yes
SC15	Osnaburg Township	Kimble	Stark	Yes
SC16	Village of Minerva	Kimble	Stark	Yes
SC17	Paris Township	Kimble	Stark	Yes
SC18	Perry Township	Kimble	Stark	Yes
SC19	Village of East Sparta	Kimble	Stark	Yes
SC20	Pike Township	Kimble	Stark	Yes
SC21	Plain Township	Kimble	Stark	Yes

ID#	Community Served	Service Provider	County	Ongoing Service
SC22	Village of Magnolia	Kimble	Stark	Yes
SC23	Village of Waynesburg	Kimble	Stark	Yes
SC24	Sandy Township	Kimble	Stark	Yes
SC25	Village of Beach City	Kimble	Stark	Yes
SC26	Village of Brewster	Kimble	Stark	Yes
SC27	Village of Wilmot	Kimble	Stark	Yes
SC28	Sugar Creek Township	Kimble	Stark	Yes
SC29	Tuscarawas Township	Kimble	Stark	Yes
SC30	Washington Township	Kimble	Stark	Yes

Table 5-4. Drop-Off Recycling Services

ID#	Name of Drop-off	Service Provider	County	Ongoing Service
FT-U1	Alliance Recycling Center	District	Stark	Yes
FT-U2	Canal Fulton City (Lawrence Township)	District	Stark	Yes
FT-U3	Canton City (Kimble Recycling)	District	Stark	Yes
FT-U4	Canton City (TimkenSteel)	District	Stark	Yes
FT-U5	Canton Township (Township Building)	District	Stark	Yes
FT-U6	Jackson Township (Recycling Station)	District	Stark	Yes
FT-U7	Lake Township (Hartville Flea Market)	District	Stark	Yes
FT-U8	Lake Township (Recycling Station)	District	Stark	Yes
FT-U9	Lawrence Township (County Outpost)	District	Stark	Yes
FT-U10	Lexington Township (Fire Station #2)	District	Stark	Yes
FT-U11	Louisville City (Louisville Service Center)	District	Stark	Yes
FT-U12	Massillon City (City Garage)	District	Stark	Yes
FT-U13	Massillon City (Recreation Center)	District	Stark	Yes
FT-U14	Minerva Village (Paris Township)	District	Stark	Yes
FT-U15	Navarre Village (Village Hall)	District	Stark	Yes
FT-U16	Navarre Village (St. Clement Church)	District	Stark	Yes
FT-U17	Nimishilen Township (Anthony Petitti Garden)	District	Stark	Yes
FT-U18	Nimishillen Township (Township Hall)	District	Stark	Yes
FT-U19	Osnaburg Township (Fire Station)	District	Stark	Yes
FT-U20	Paris Township (Robertsville)	District	Stark	Yes
FT-U21	Paris Township (Township Hall)	District	Stark	Yes
FT-U22	Perry Township (Administration Building)	District	Stark	Yes
FT-U23	Perry Township (Recycling Station)	District	Stark	Yes
FT-U24	Perry Township (Road Department)	District	Stark	Yes
FT-U25	Plain Township (Diamond Park)	District	Stark	Yes

ID#	Name of Drop-off	Service Provider	County	Ongoing Service
FT-U26	Plain Township (First Friends)	District	Stark	Yes
FT-U27	Plain Township (Saint Michael Church)	District	Stark	Yes
FT-U28	Plain Township (Taft Elementary)	District	Stark	Yes
FT-U29	Sugar Creek Township - Beach City Village (Behind Police Department)	District	Stark	Yes
FT-U30	Sugar Creek Township - Brewster Village (Street Department)	District	Stark	Yes
FT-U31	Tuscarawas Township (Township Office)	District	Stark	Yes
FT-U32	Wilmot Village (Sugar Creek Township)	District	Stark	Yes
FT-U33	Dover City (Parkside Buehlers)	Contract between District and Kimble	Tuscarawas	Yes
FT-U34	Lawrence Township (Bolivar Giant Eagle)	Contract between District and Kimble	Tuscarawas	Yes
FT-U35	New Philadelphia City (Buehlers)	Contract between District and Kimble	Tuscarawas	Yes
FT-U36	Dover City (Gale's Recycle It)	Contract between Gale's and Republic.	Tuscarawas	Yes
FT-U37	Chippewa Township (Street Garage)	District	Wayne	Yes
FT-U38	Apple Creek Village (Street Garage)	District	Wayne	Yes
FT-U39	Green Township (Buehler's Fresh Foods)	District	Wayne	Yes
FT-U40	Sugar Creek Township (Dalton Village - Village Garage)	District	Wayne	Yes
FT-U41	City of Wooster (Buehler's)	District	Wayne	Yes
FT-U42	City of Wooster (Wooster College)	District	Wayne	Yes
FT-U43	Sugar Creek Township (Kidron - Lehman Hardware and Appliances)	District	Wayne	Yes
PT-U1	Canton City Recycling Center	Contract between City and brokers	Stark	Yes
FT-R1	Marlboro Township (Township Garage)	District	Stark	Yes
FT-R2	Pike Township (Countywide RDF)	Republic	Stark	Yes
FT-R3	Pike Township (Fire Station)	District	Stark	Yes
FT-R4	Pike Township (Township Office)	District	Stark	Yes
FT-R5	Sandy Township (Administrative Building)	District	Stark	Yes
FT-R6	Village of Magnolia (Magnolia Park)	District	Stark	Yes
FT-R7	Washington Township (Township Office)	District	Stark	Yes
FT-R8	Dover Township (Kimble)	Contract between District and Kimble	Tuscarawas	Yes
FT-R9	Fairfield Township (Township Building)	Contract between District and Kimble	Tuscarawas	Yes
FT-R10	Jefferson Township (Township Garage)	Contract between District and Kimble	Tuscarawas	Yes
FT-R11	Sandy Township (Township Building)	Contract between District and Kimble	Tuscarawas	Yes
FT-R12	Franklin Township - Strasburg (Kraus Pizza)	Contract between District and Kimble	Tuscarawas	Yes
FT-R13	Sugarcreek Village (Baker's IGA)	Contract between District and Kimble	Tuscarawas	Yes
FT-R14	Warwick Township (Community Center)	Contract between District and Kimble	Tuscarawas	Yes
FT-R15	Washington Township (Township Garage)	Contract between District and Kimble	Tuscarawas	Yes

ID#	Name of Drop-off	Service Provider	County	Ongoing Service
FT-R16	Wayne Township (Township Building)	Contract between District and Kimble	Tuscarawas	Yes
FT-R18	Oxford Township (Street Department)	Contract between District and Kimble	Tuscarawas	Yes
FT-R19	Perry Township (West Chester Community)	Contract between District and Kimble	Tuscarawas	Yes
FT-R20	Baughman Township (Recycling Drop Off)	District	Wayne	Yes
FT-R21	Chester Township (Northwestern Elementary School)	District	Wayne	Yes
FT-R22	Congress Township - West Salem Village	District	Wayne	Yes
FT-R23	Creston Village (Canaan Township)	District	Wayne	Yes
FT-R24	Franklin Township (Township Hall)	District	Wayne	Yes
FT-R25	Salt Creek Township - Fredericksburg Village (Elementary School)	District	Wayne	Yes
FT-R26	Paint Township (Township Garage)	District	Wayne	Yes
FT-R27	Plain Township (Township Garage)	District	Wayne	Yes
FT-R28	Clinton Township - Shreve Village (East of Chicago)	District	Wayne	Yes
FT-R29	Wayne Township (Township Garage)	District	Wayne	Yes
FT-R17	Mill Township (Township Garage)	Contract between District and Kimble	Tuscarawas	Yes
FT-R30	Congress Township (Service Department)	District	Wayne	Yes
FT-R32	Milton Township (Township Garage)	District	Wayne	Yes
FT-R33	Smithville Village (Sam's Pizza & Heroes)	District	Wayne	Yes
FT-R34	Wooster Township (Valley College Grange)	District	Wayne	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 \$4.05 million. In the first year of the planning period (2023), revenue is projected to be \$4.10 million. Revenue is projected to increase annually with a projected 2032 revenue of \$4.55 million. Current revenue is generated through disposal fees and recycling revenue.

Projected expenditures were developed based on the programmatic needs identified in Appendix H, I, and L. During the first five years of the planning period, annual expenditures range from approximately \$4.24 to \$4.49 million. Based on projections, the District will have revenue to finance the implementation of the programs and initiatives described throughout this Plan Update. The District's expenses are projected to exceed revenues through the planning period which is projected to draw down the carryover balance from \$1.72 million to roughly \$757,000 in 2028.

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

Contracts (see Ohio Revised Code Sections 343.02 and 343.03)

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

Other Sources of Revenue

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

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

The following summarizes the actual funding sources for the District:

1. Disposal Fees

The District earned the majority of its revenue from tiered solid waste disposal fees in 2019. The disposal fee has always been the primary funding mechanism for the District. In 2019, the disposal fee schedule was \$1.00 per ton for in-district waste, \$2.00 per ton for out-of-district waste and \$1.00 per ton for out-of-state waste. The disposal fee yielded \$3,999,287 in revenue for the District in 2019.

In-District revenue from 2021 to 2032 is based on the tonnages projected in Appendix D. The Out-of-District and Out-of-State revenues is projected to increase by 1.27% and 1% each year from the averaged 2022 revenue based on 2017 to 2021. This percentage is based on the average percent increases from 2017 to 2021 by 1.27% for Out-of-District and conservative 1% Out-of-State.

2. Generation Fees

The District does not have a generation fee.

3. Designation Fees

The District does not have a designation fee.

4. Rates & Charges (Improved Parcels)

The District does not utilize rates and charges on improved parcels but reserves the right to implement at any point in the planning period.

5. Other Sources of Revenue

Other sources of revenue include:

- **Grants** – The District received grants from Ohio EPA in 2019 and 2021. Ohio EPA’s grants are competitive and not guaranteed; therefore, the District is not projecting grant revenue during the planning period.

Recycling Revenue – Since 2015, recycling revenue is credited to the District’s General Fund for interest and non-tier disposal fee revenue purposes; therefore, the District projected \$0 throughout the planning period.

Contingent Funding

The District reserves the right, on an as needed basis, to transfer recycling revenue from the general fund to the recycling revenue line item of the solid waste plan implementation fund. The purpose of any transfer would be to balance the budget during any month or year throughout the planning period. The District conservatively projected \$100,000 of recycling revenue transferred from the general fund to the plan implementation fund under this line item starting in 2023 through the end of the planning period. The District would conduct the transfer only if needed or required to ensure the District maintains a positive cash balance in any given year of the planning period.

- **Miscellaneous Revenue** – Miscellaneous revenue represents donations and other forms of miscellaneous revenue. From 2010 to 2015, miscellaneous revenue ranged from a low of \$111 in 2016 to a high of \$29,441 in 2020. Based on the previous years, the District projects a conservative \$0 per year throughout the planning period.

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 (2023 to 2028).

Table 6-1. Summary of Revenue

Year	Disposal Fees	Other Revenue	Total Revenue
		Recycling Revenue	
Reference Year			
2019	\$3,999,287	\$0	\$4,055,093
Planning Period			
2023	\$3,997,774	\$100,000	\$4,097,774
2024	\$4,049,700	\$100,000	\$4,149,700
2025	\$4,102,306	\$100,000	\$4,202,306
2026	\$4,155,600	\$100,000	\$4,255,600
2027	\$4,209,593	\$100,000	\$4,309,593
2028	\$4,256,902	\$100,000	\$4,356,902

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 (2023 to 2028) broken into specific expense categories.

Table 6-2. Summary of Expenses

Expense Category	Year						
	Reference	Planning Period					
	2019	2023	2024	2025	2026	2027	2028
Plan Monitoring/Prep.	\$10,468	\$12,120	\$12,241	\$43,864	\$12,487	\$12,612	\$12,738
District Administration	\$590,286	\$791,027	\$814,503	\$838,678	\$863,573	\$889,209	\$915,610
Recycling Collections	\$1,978,559	\$1,929,750	\$1,981,643	\$2,035,092	\$2,090,145	\$2,096,849	\$2,155,254
Special Collections	\$407,146	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Yard Waste/Other Organics	\$367,668	\$200,000	\$200,000	\$150,000	\$150,000	\$150,000	\$150,000
Education/Awareness	\$220,197	\$295,610	\$304,478	\$313,613	\$323,021	\$332,712	\$342,693
Emergency Debris Management	\$7,160	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$8,303	\$0	\$0	\$0	\$0	\$0	\$0
Health Dept. Enforcement	\$298,750	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000
Open Dump, Litter Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
Total Expenses	\$4,173,537	\$4,238,507	\$4,322,865	\$4,391,246	\$4,449,226	\$4,491,382	\$4,586,295

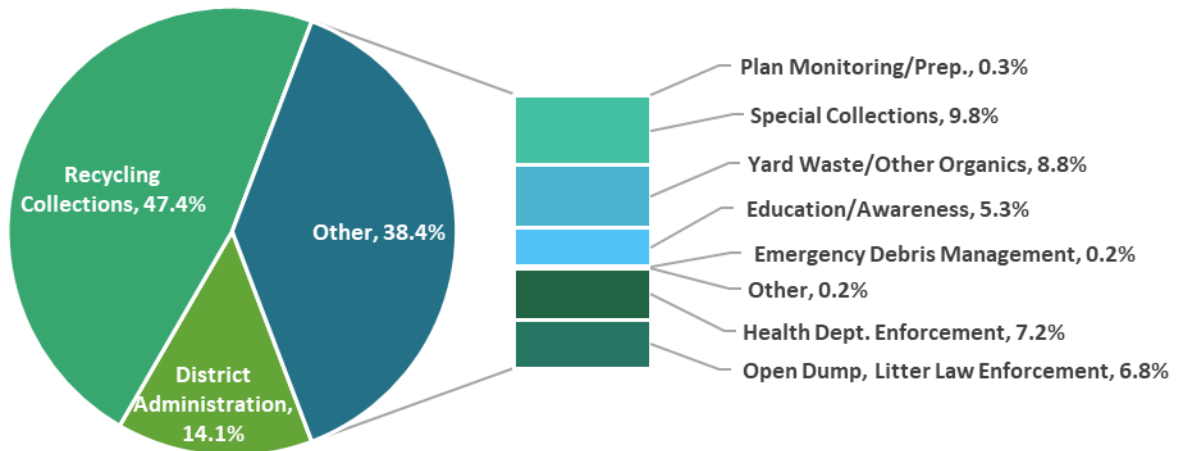
Source(s) of information: Plan Table O-7.

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

- **Plan Preparation/Monitoring** – Represents estimated expenses related to retaining a consultant for assistance with plan preparation for each 3-year update that will occur during the planning period.
- **Direct Administration** – Budget includes expenditures for District and Collection Center employee salaries, OPERS, workers' compensation, Medicare, life insurance, unemployment insurance, and health insurance. Expenditures are projected to increase 3% annually based on historic trends and District practices.
- **Recycling Collections** – Expenses reflect the cost of the drop-off recycling program, Recycling Makes Sense grants, Host Community Cleanup grants, and Program Startup grants.
- **Special Collections** – Includes expenses for the HHW program and the scrap-tire collection program.
- **Yard Waste/Other Organics** – Includes expenses for yard waste collection grants, Host Community Cleanup, and program startup grants for yard waste sites.
- **Education/Awareness** – Reflects expenditures for staff for educational presentations, advertisement, and promotion.
- **Emergency Debris Management** – No budget is allocated but funds as needed would be used from the fund balance.
- **Other** – No budget is allocated but funds as needed would be used from the fund balance.
- **Health Dept. Enforcement** – A flat amount of \$325,000 is allocated to this program until 2029 when the annual budget is reduced to \$300,000.
- **Open Dump, Litter Law Enforcement** – A flat amount of \$285,000 is allocated to this program.

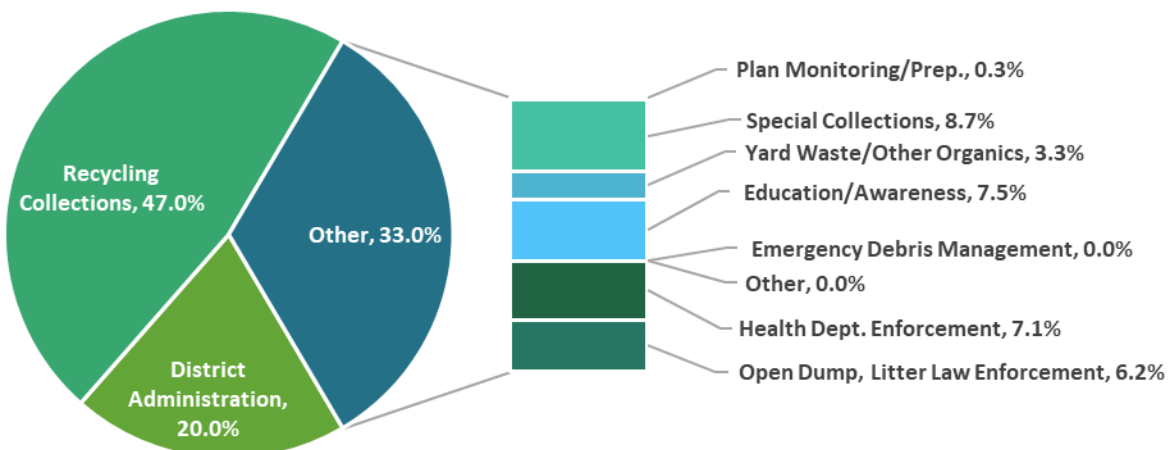
The following figure presents the distribution of expenses by category for the 2019 reference year. The top three expenditure categories include Recycling Collections (47.4%), District Administration (14.1%), and Special Collections (9.8%).

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 2028, the sixth year of the planning period, the top three expense categories include Recycling Collections (47.0%), District Administration (20.0%), and Special Collections (8.7%).

Figure 6-2. 2028 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 (2023 to 2028). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue fluctuates from \$4.0 to \$4.3 million; expenses fluctuate from \$4.2 to \$4.6 million annually. The District’s ending balance during the first six years of the planning

period ranges from a high of \$1.7 million in 2023 to a low of roughly \$757,000 in 2028. 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	\$4,055,093	\$4,173,537	-\$118,444	\$3,672,392
Planning Period				
2023	\$4,097,774	\$4,238,507	-\$140,733	\$1,721,552
2024	\$4,149,700	\$4,322,865	-\$173,165	\$1,548,387
2025	\$4,202,306	\$4,388,211	-\$185,906	\$1,362,482
2026	\$4,255,600	\$4,449,226	-\$193,625	\$1,168,856
2027	\$4,309,593	\$4,491,382	-\$181,789	\$987,067
2028	\$4,356,902	\$4,586,295	-\$229,393	\$757,675



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: **2023 to 2032**

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 Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) Board of Directors (Board) will use three criteria to determine if and when a material change in circumstances has occurred. A material change in circumstances shall be defined as a change that adversely affects the ability of the Board to:

- Assure waste disposal capacity during the planning period
- Maintain compliance with applicable waste reduction or access goals
- Adequately finance implementation of the Plan based on waste generation changes

The Ohio Environmental Protection Agency's (EPA) Plan Format v4.0 does not require that the *Plan Update* 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. However, the Format *recommends* that a process be included in Appendix A, and the District has developed procedures addressing material change in circumstances which are described below.

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 facility 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 the ORC 3734.53(A) 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 30 days of the closure of a facility 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 identified in the Plan Update. The District will consider a waste generation increase of 30% or greater within a calendar year (January through December) as grounds for the Board to be notified to review and then determine whether a material change in circumstance has occurred. A material change in circumstances has not occurred, however, if the District can secure arrangements to manage the increased waste volume at any other properly licensed and permitted solid waste management facility.

District staff, during the term of the Plan Update, will review waste generation figures and report to the Policy Committee and the Board quarterly any increase 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 or a material change in circumstances has occurred.

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.

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**

The District obtains revenues to finance implementation of the *Plan Update* from a disposal fee on solid waste received by in-district landfills as authorized by the ORC 3734.573. A significant reduction in the receipt of solid waste within or from outside of 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 Finance Director for the District monitors revenues and reports changes in financial condition to the Board at routine Board meetings. The Board will, based on recommendations from the Executive Director and Finance Director, review and revise the budgets and funding priorities to successfully 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. The District will consider a waste generation decrease of 30% or greater within a calendar year (January through December) as grounds for the Board to be notified to review and then determine whether a material change in circumstance has occurred. No material change in circumstances has occurred, however, where the Board is able to maintain critical programs at current funding levels through re-allocation of District funds, an increase in District fees, or creation of other funding mechanisms as permitted by the Ohio Revised Code and the Plan.

b. Change in the Solid Waste Management Facilities Identified or designated by the Plan

Solid waste management facilities are identified in the *Plan Update* to ensure waste disposal options for the District. The District currently is not designating any facilities but reserves the right to do so in this *Plan Update*. If the facilities identified should close, or for some reason they are not able to handle the District waste disposal while no other substitutes are provided, the District would determine a material change. 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 District has chosen to not identify specific trigger points in the above monitoring process. The District feels very comfortable that the above listed procedures will adequately serve the District in

determining if a material change has occurred based on the information and data at the time of the evaluation.

4. Procedures Where Material Change in Circumstances has Occurred

The Executive Director will monitor the implementation of the District Plan if they determine that there is a change in circumstances such that the Board should assess and determine whether a material change in circumstances has occurred. The Executive Director shall monitor the implementation of the District Plan, and provide the Board with the following:

- a. Monthly and annual reports regarding the operation of the District.
- b. Quarterly reports of District revenues derived from the tipping fees received by the District and revenues derived from other sources identified in Appendix O and Chapter 6 of the District Plan.
- c. Reports and analyses of information included in the quarterly and annual district reports to the Director of the Ohio Environmental Protection Agency.
- d. Reports that evaluate complaints by residents of the District that claim that there is a deviation from, or noncompliance with, the implementation of the District Plan. Reports regarding verified resident complaints shall include any action undertaken or proposed to address resident complaints.
- e. Reports that contain information received by the District from state or local officials or owners and operators of solid waste, collection, disposal, transfer or recycling operations, which indicate material noncompliance with, or material failure to implement, the District Plan. Any such reports shall include actions undertaken or proposed to address a verified material noncompliance with, or material failure to implement, the District Plan.
- f. Reports and recommendations from the District Policy Committee regarding the District Policy Committee's annual review of the progress of the District in implementing the District Plan.

Notification Procedure After Making a Determination of a Material Change in Circumstances

If at any time the Board determines that a material change in circumstances has occurred and a revision to the *Plan Update* is necessary, 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 the ORC 3734.55 (A) and (C).

The District shall constantly 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.**

None.

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

None.



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 50 communities that operated curbside recycling programs in 2019. (See **Table B-1a** and **B-1b**.)

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 of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NSC1	City of Alliance	Kimble	Stark	Contract between City and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	1,182	Y
NSC2	City of Canal Fulton	Republic	Stark	Contract between City and Republic	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, manual	Y	255	Y
NSC3	City of Canton	City	Stark	City Operated	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	1,706	Y
NSC4	City of North Canton	Kimble	Stark	Contract between City and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	1,241	Y
NSC5	Village of Hartville	Kimble	Stark	Contract between Village and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	182	Y
NSC6	Village of Baltic	Kimble	Tuscarawas	Contract between Village and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream	Y	51	Y
NSC7	Village of Bolivar	Kimble	Tuscarawas	Contract between Village and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	83	Y
NSC8	Village of Dennison	Kimble	Tuscarawas	Contract between Village and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream, Semi-automated	Y	167	Y
NSC9	City of Dover	Kimble	Tuscarawas	Contract between City and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	865	Y
NSC10	Village of Gnadenhutten	Village	Tuscarawas	Village Operated	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	147	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 of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NSC11	City of New Philadelphia	City	Tuscarawas	City Operated	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	484	Y
NSC12	Village of Strasburg	Kimble	Tuscarawas	Contract between Village and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	265	Y
NSC13	Village of Sugarcreek	Kimble	Tuscarawas	Contract between Village and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream, Semi-automated	Y	211	Y
NSC14	City of Uhrichsville	Kimble	Tuscarawas	Contract between City and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream, Semi-automated	Y	317	Y
NSC15	Village of Doylestown	Republic	Wayne	Contract between Village and Republic	Twice/ Month	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	128	Y
NSC16	City of Orrville	Kimble	Wayne	Contract between City and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	560	Y
NSC17	City of Rittman	Kimble	Wayne	Contract between City and Kimble	Once/ 2 weeks	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	327	Y
NSC18	Village of Marshallville	Kimble	Wayne	Contract between Village and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	32	Y
NSC19	City of Wooster	Waste Management	Wayne	Contract between City and Waste Management	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	N	1,470	Y
Totals									9,674	

¹**Materials Collected:** AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard

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 of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
SC1	City of Massillon	Stark	Contract between City and Kimble	Weekly	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	1,530	Y
SC2	Village of Navarre	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC3	Bethlehem Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC4	Village of Meyers Lake	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC5	Canton Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC6	Village of Hills and Dales	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC7	Jackson Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC8	Lake Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC9	Lawrence Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC10	Village of Limaville	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC11	Lexington Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC12	City of Louisville	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC13	Marlboro Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC14	Nimishillen Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC15	Village of East Canton	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC16	Osnaburg Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC17	Village of Minerva	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
SC18	Paris Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC19	Perry Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC20	Village of East Sparta	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC21	Pike Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC22	Plain Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC23	Village of Magnolia	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC24	Village of Waynesburg	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC25	Sandy Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC26	Village of Beach City	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC27	Village of Brewster	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC28	Village of Wilmot	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC29	Sugar Creek Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC30	Tuscarawas Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
SC31	Washington Township	Stark	DNR	DNR	AC, SC, GL, PL, MxP, OCC	Single stream, DNR	Y	N/A	Y
Totals								1,530	

¹**Materials Collected:** AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard

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

Approximately 11,204 tons of materials were recycled between 19 non-subscription and 31 subscription curbside recycling programs in 2019.

2. Drop-off Recycling Locations

Seventy-seven drop-off recycling locations are available to residents of the District. These sites accept a wide range of material types classified as a full-time drop-off. The tons of recyclables collected at the drop-offs totaled 11,616.46 tons. **Table 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 of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-U1	Alliance Recycling Center	District	Stark	District	Weekdays from 8AM to 4:30PM and Saturdays from 8AM to 12PM.	AC, SC, GL, PL, MxP, OCC	Y	DNR	Y
FT-U2	Canal Fulton City (Lawrence Township)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	214.25	Y
FT-U3	Canton City (Kimble Recycling)	District	Stark	District	Weekdays from 6AM to 4PM and Saturdays from 6AM to 12PM.	AC, SC, GL, PL, MxP, OCC	Y	DNR	Y
FT-U4	Canton City (Timken Steel)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	47.63	N
FT-U5	Canton Township (Township Building)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	250.95	Y
FT-U6	Jackson Township (Recycling Station)	District	Stark	District	Mon, Tues, Thurs, Fri, 9am-5pm, and Sat, 8am-4pm.	AC, SC, GL, PL, MxP, OCC	Y	1,197.33	N
FT-U7	Lake Township (Hartville Flea Market)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	256.54	N
FT-U8	Lake Township (Recycling Station)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	473.90	Y
FT-U9	Lawrence Township (County Outpost)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	113.41	Y
FT-U10	Lexington Township (Fire Station #2)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	63.70	Y
FT-U11	Louisville City (Louisville Service Center)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	402.53	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-U12	Massillon City (City Garage)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	27.39	Y
FT-U13	Massillon City (Recreation Center)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	261.54	Y
FT-U14	Minerva Village (Paris Township)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	222.93	Y
FT-U15	Navarre Village (Village Hall)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	179.82	Y
FT-U16	Navarre Village (St. Clement Church)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	65.75	Y
FT-U17	Nimishillen Township (Anthony Petitti Garden)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	176.62	Y
FT-U18	Nimishillen Township (Township Hall)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	191.60	Y
FT-U19	Osnaburg Township (Fire Station)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	103.64	Y
FT-U20	Paris Township (Robertsville)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	28.24	Y
FT-U21	Paris Township (Township Hall)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	54.53	Y
FT-U22	Perry Township (Administration Building)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	215.82	Y
FT-U23	Perry Township (Recycling Station)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	470.18	Y
FT-U24	Perry Township (Road Department)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	88.64	Y
FT-U25	Plain Township (Diamond Park)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	645.12	Y
FT-U26	Plain Township (First Friends)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	141.97	Y
FT-U27	Plain Township (Saint Michael Church)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	104.35	Y
FT-U28	Plain Township (Taft Elementary)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	270.15	Y
FT-U29	Sugar Creek Township - Beach City Village	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	54.60	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
	(Behind Police Department)								
FT-U30	Sugar Creek Township - Brewster Village (Street Department)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	171.72	Y
FT-U31	Tuscarawas Township (Township Office)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	193.74	Y
FT-U32	Wilmot Village (Sugar Creek Township)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	40.81	Y
FT-U33	Dover City (Parkside Buehlers)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	209.36	Y
FT-U34	Lawrence Township (Bolivar Giant Eagle)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	396.82	Y
FT-U35	New Philadelphia City (Buehlers)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	#REF!	Y	401.55	Y
FT-U36	Dover City (Gale's Recycle It)	Contract between Gale's and Republic.	Tuscarawas	Contract between Gale's and Republic.	Dawn to Dusk	AC, SC, ST	Y	75.68	Y
FT-U37	Chippewa Township (Street Garage)	District	Wayne	District	Mon-Fri, 7am-3:30pm, 2nd & 4th Sat, 9am-12pm.	AC, SC, GL, PL, MxP, OCC	Y	74.58	Y
FT-U38	Apple Creek Village (Street Garage)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	164.71	Y
FT-U39	City of Orrville (Buehler's Fresh Foods)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	108.29	Y
FT-U40	Dalton Village (Village Garage)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	194.14	Y
FT-U41	City of Wooster (Buehler's)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	264.10	Y
FT-U42	City of Wooster (Wooster College)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	34.05	N
Total								8,652.63	

¹**Materials Collected:** AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, HHW - Household Hazardous Waste, EW = Electronic Waste, ST = Scrap Tires

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 of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PT-U1	Canton City Recycling Center	District	Stark	District	Mon, Wed, Fri, 10am-2pm and except for legal holidays.	AC, SC, GL, PL, MxP, OCC, HHW, ST, EW	Y	43.07	Y
Total								43.07	

¹**Materials Collected:** AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, HHW - Household Hazardous Waste, EW = Electronic Waste, ST = Scrap Tires

The Canton Recycle Center has multiple service providers:

- Commingled (paper, cardboard, glass, metal cans, plastics): Kimble
- Tires: Waste Management
- Household Hazardous Waste: Clean Harbors
- Electronic Waste: Akron Canton Computer Recycling
- Metals: taken to different local scrap metal recyclers

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 of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-R1	Marlboro Township (Township Garage)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	87.63	Y
FT-R2	Pike Township (Countywide RDF)	Republic	Stark	Republic	Weekdays from 6:30AM until 4PM.	AC, SC, GL, PL, MxP, OCC	Y	DNR	Y
FT-R3	Pike Township (Fire Station)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	93.76	Y
FT-R4	Pike Township (Township Office)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	101.67	Y
FT-R5	Sandy Township (Administrative Building)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	73.97	Y
FT-R6	Village of Magnolia (Magnolia Park)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	40.63	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-R7	Washington Township (Township Office)	District	Stark	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	124.25	Y
FT-R8	Dover Township (Kimble)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	13.28	Y
FT-R9	Fairfield Township (Township Building)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	36.05	Y
FT-R10	Jefferson Township (Township Garage)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	65.62	Y
FT-R11	Sandy Township (Township Building)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	91.96	Y
FT-R12	Franklin Township - Strasburg (Kraus Pizza)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	154.05	Y
FT-R13	Sugarcreek Village (Baker's IGA)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	78.33	Y
FT-R14	Warwick Township (Community Center)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Weekdays from 7:30AM to 3:30PM, and Saturdays from 12PM to 7PM.	AC, SC, GL, PL, MxP, OCC	Y	55.16	Y
FT-R15	Washington Township (Township Garage)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	23.66	Y
FT-R16	Wayne Township (Township Building)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	44.84	Y
FT-R18	Oxford Township (Street Department)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	256.01	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-R19	Perry Township (West Chester Community)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	22.32	Y
FT-R20	Baughman Township (Recycling Drop Off)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	58.61	Y
FT-R21	Chester Township (Northwestern Elementary School)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	84.70	Y
FT-R22	Congress Township - West Salem Village	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	76.24	Y
FT-R23	Creston Village (Canaan Township)	District	Wayne	District	Weekdays from 7AM to 7PM, and Saturdays from 9AM to 12PM.	AC, SC, GL, PL, MxP, OCC	Y	59.71	Y
FT-R24	Franklin Township (Township Hall)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	56.28	Y
FT-R25	Salt Creek Township - Fredericksburg Village (Elementary School)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	59.50	Y
FT-R26	Paint Township (Township Garage)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	46.15	Y
FT-R27	Plain Township (Township Garage)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	51.00	Y
FT-R28	Clinton Township - Shreve Village (East of Chicago)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	196.33	Y
FT-R29	Wayne Township (Township Garage)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	104.39	Y
FT-R17	Mill Township (Township Garage)	Contract between District and Kimble	Tuscarawas	Contract between District and Kimble	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	222.45	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FT-R30	Congress Township (Service Department)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	50.54	Y
FT-R31	Kidron (Lehman Hardware and Appliances)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	98.74	Y
FT-R32	Milton Township (Township Garage)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	61.99	Y
FT-R33	Smithville Village (Sam's Pizza & Heroes)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	162.50	Y
FT-R34	Wooster Township (Valley College Grange)	District	Wayne	District	Dawn to Dusk	AC, SC, GL, PL, MxP, OCC	Y	168.44	Y
Total								2,920.76	

¹**Materials Collected:** AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, HHW - Household Hazardous Waste, EW = Electronic Waste, ST = Scrap Tires

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 of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
None									
Total								0	

¹**Materials Collected:** AC = aluminum containers, SC = steel containers, GL = glass containers, PL = plastic containers, MxP = mixed paper, OCC = cardboard, HHW - Household Hazardous Waste, EW = Electronic Waste, ST = Scrap Tires

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

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. 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	Trash Collection Service				Recycling Collection Service		
	PAYT	RES	COM	IND	RES	COM	IND
Public Sector							
Canton Sanitation Department		✓	✓		✓		
New Philadelphia City		✓	✓		✓		
Gnadenhutten Village		✓	✓		✓		
Private Sector							
123 Disposal, Inc.			✓				
Ace Roll-Off Service		✓	✓				
American Waste Management Services		✓	✓				
Bailey's Waste Service		✓	✓				
C. Martin Trucking		✓	✓	✓			
Cardinal Waste Service		✓	✓		✓	✓	
Cobra Rolloff		✓	✓	✓			
R & R Sanitation		✓	✓				
Darrel's Disposal LLC		✓	✓				
Earth 'N Wood Landscaping Supply		✓			✓		
J & J Refuse/Kimble Companies		✓	✓		✓	✓	
Toles and Son Waste Collection LLC		✓	✓				
Jim Bob's Refuse		✓	✓				
JMW Trucking Services			✓				
Kenstar Services		✓	✓				
Klein Hauling		✓	✓				
Jones Rolloff		✓	✓	✓			
Just Us Disposal		✓	✓				
Meta Waste		✓	✓				
Miller and Company		✓	✓	✓			
Miller's Reliable Waste Service		✓					
Pitstop Refuse		✓	✓				
Waste Management of Ohio (formerly listed as Metro)		✓	✓	✓	✓	✓	✓
Republic Service		✓	✓		✓	✓	
Rumpke Transportation		✓	✓		✓	✓	
Shaffing Hauling		✓	✓				
Spenser White Waste		✓	✓				
Stevens Hauling & Rubbish		✓	✓		✓		
Tippel's Rubbish Removal		✓	✓				
Tony's Hauling		✓	✓				
Trissel Rolloff		✓	✓				
Vaughn's Refuse		✓	✓				
Waste Management of Ohio		✓	✓		✓		
Whetstone Hauling		✓	✓				
William's Waste Service		✓	✓				

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						
Stark County						
YW1	Earth 'N Wood Products Inc	IV		5335 Strausser Street Northwest, North Canton, OH	0	45,966
YW2	Mr Mulch	IV		3704 12th Street Northwest, Canton, OH	0	4,487
YW3	Stark C & D Disposal Inc	IV		7280 Lisbon Rd, East Canton, OH	0	938
YW4	Uniontown Topsoil & Mulch LLC	IV		1916 Erie Avenue Northwest, Massillon, OH	0	670
YW5	Warstler Bros Landscaping	IV		4125 Salway Avenue Northwest, Canton, OH	0	83
YW6	Weisgarber Trucking Inc	IV		11506 Finebrock Road Southwest, Massillon, OH	0	356
YW7	Yoder Landscape & Nursery Inc	IV		215 Market Avenue Southwest, Hartsville, OH	0	271
Tuscarawas County						
YW8	Black Snake Composting Facility	IV	✓	Blacksnake Hill Road Northeast, Dover, OH	0	41
YW9	Bull Country Composting ¹	III		10316 Kohr Road Northwest, Dundee, OH	0	12,488
YW10	Kimble Sanitary Landfill	IV		3596 Ohio 39, Dover, OH	0	526
YW11	Tuscarawas, Village of	IV		522 E Cherry Street, Tuscarawas, OH	0	59
Wayne County						
YW12	Kellys Kompost	III		8624 Carr Road, Fredericksburg, OH	0	30
YW13	OARDC Ohio Agriculture Research	III		Selby Rd, Wooster, OH	0	15
YW14	Orrville Composting Facility	IV		Apple Ave, Orrville, OH	0	83
YW15	Paradise Composting Class II ²	II		4300 Mechanicsburg Road, Wooster, OH	239	91
YW16	Paradise Composting Class III ²	III		4300 Mechanicsburg Road, Wooster, OH	0	1,702
YW17	Paradise Lawn Care Inc ³	IV	✓	6203 Akron Road, Smithville, OH	0	465
YW18	Tope's	III	✓	7717 Dalton Fox Lake Road, North Lawrence, OH	0	56
YW19	Village of Shreve	IV		South Wells Street, Shreve, OH	0	135
YW20	Wayne Lawn and Landscape	IV	✓	1150 West Milltown Road, Wooster, OH	0	49
YW21	Zollinger Sand & Gravel Co	IV		11687 Wadsworth Road, Rittman, OH	0	757
In-District Facilities Total					239	69,267
Out-of-District Facilities						
YW22	Andre Farms LLC	II		13529 County Road L, Wauseon, OH	586	0
YW23	Number One Landscape	IV		3775 Ridge Rd, Medina, OH	0	19
YW24	Smith Bros Inc	IV		3087 Marks Road, Medina, OH	0	1,123
YW25	B-Sharp Property Maintenance	IV		6161 South Main Street, Clinton, OH	0	226

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
YW26	Pro Tree & Landscape Co	IV		5255 Akron Cleveland Road, Peninsula, OH	0	66
Out-of-District Facilities Total					586	1,435
Total					825	70,702
Community Yard Waste Collection Programs						
YW29	Village of Dennison - Tuscarawas County*					223
YW30	Lawrence Township - Tuscarawas County*					655
YW31	Composting Program - Wayne County				913	2,189
YW32	Village of Brewster - Stark County*					800
YW33	Canton Township - Stark County*					1,755
YW34	Lake Township - Stark County**					3,732
YW35	Nimishillen Township - Stark County**					1,615
YW36	Perry Township - Stark County**					1,653
YW37	Plain Township, Fire Station - Stark County**					5,406
YW38	City of Dover - Tuscarawas County*					915
Total					913	18,943
Mulching Operations						
	None					
Total					0	0
Land Application						
	None					
Total					0	0
Anaerobic Digestion						
YW39	Wooster Renewable Energy					DNR
Total					0	0
Hauler and Walmart Food Waste Data						
YW40	Hauler and Walmart				945	0
Grand Total					2,923	89,644

¹ The tonnage for this facility includes materials received from Stark County.

² Tonnage will be removed for Paradise Composting II due to double counting. This facility received tonnage from community yard waste collection programs.

³ Tonnage will be removed for Paradise Lawn Care, Inc. due to double counting. This facility received tonnage from community yard waste collection programs.

* The tonnage for this facility will be removed to avoid double counting. Tonnage included in YW9.

** The tonnage for this facility will be removed to avoid double counting. Tonnage included in YW1.

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 Rumpke’s MRF in Franklin 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	Weight of Material Accepted from SWMD (tons)
Rumpke Center City Recycling	Commercial	Hamilton	Ohio	MRF - single-stream recycling	0.79
Rumpke Center City Recycling	Residential	Hamilton	Ohio	MRF - single-stream recycling	0.94
Rumpke Recycling	Industrial	Montgomery	Ohio	MRF - single-stream recycling	197.27
Kimble Dover Facility ¹	Residential	Tuscarawas	Ohio	MRF - single-stream recycling	17,100.82
Total					17,299.82

¹ The tons accepted from the District by Kimble were determined by summing the tonnages for all the drop-offs serviced in Table B-2 that are under contract with Kimble.

Sources: "Ohio Material Recovery Facilities and Commercial Recycling - 2019," Ohio EPA; Drop-off Recycling Services contract with Kimble.



APPENDIX C
POPULATION DATA



APPENDIX C. Population Data

As of July 1, 2019, the population of the three counties (Stark, Tuscarawas, Wayne) comprising the District totaled 578,303. 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 580,642 for the reference year of 2019.

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

Community	Stark
Before Adjustment	370,606
Additions	
Village of Magnolia	250
Village of Minerva	1,698
City of Alliance	34
Subtractions	
None.	
After Adjustment	372,588
Community	Tuscarawas
Before Adjustment	91,987
Additions	
Village of Baltic	146
Subtractions	
None.	
After Adjustment	92,133
Community	Wayne
Before Adjustment	115,710
Additions	
Village of Creston	98
City of Rittman	117
Subtractions	
City of Norton	4
After Adjustment	115,921
Total District Adjusted Population	580,642

Sources of Information: Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township,” May 2020. <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. (See **Table C-1**.)

Population projections for entire planning period are shown below in Table C-2. Reference year 2019 populations represent the actual estimates for that year after applying the adjustments listed in Table C-1. Population for succeeding five-year projections (i.e., 2020 and 2025) have been determined individually for each county in the District by:

1. Calculating the percent change in population for each 5-year interval projection estimate in the Ohio Development Services Agency (ODSA) publication (“2010 to 2040 Projected Population for Ohio Counties- Summary 2010 to 2040 Projected”, April 2018. <http://www.development.ohio.gov/files/research/P6090.pdf>);
2. Multiplying the percent change calculated in “1” by prior 5-year estimate. For example, the unadjusted Stark County projection for 2020 has been calculated by:

$$\begin{aligned}
 \text{2020 unadjusted estimate} &= (\% \text{ change between 2019 and 2020 ODSA} \\
 &\quad \text{projections} \times \text{2019 unadjusted estimate}) \\
 &= (-0.93\% + 1) \times 368,210 \\
 &= 369,844
 \end{aligned}$$

3. Adding the adjustments to the unadjusted estimate. The adjusted 2020 population for Stark County would be:

$$\begin{aligned}
 \text{2020 adjusted estimate} &= 369,844 + 1,982 \\
 &= 373,724
 \end{aligned}$$

Table C-2 Population Projections

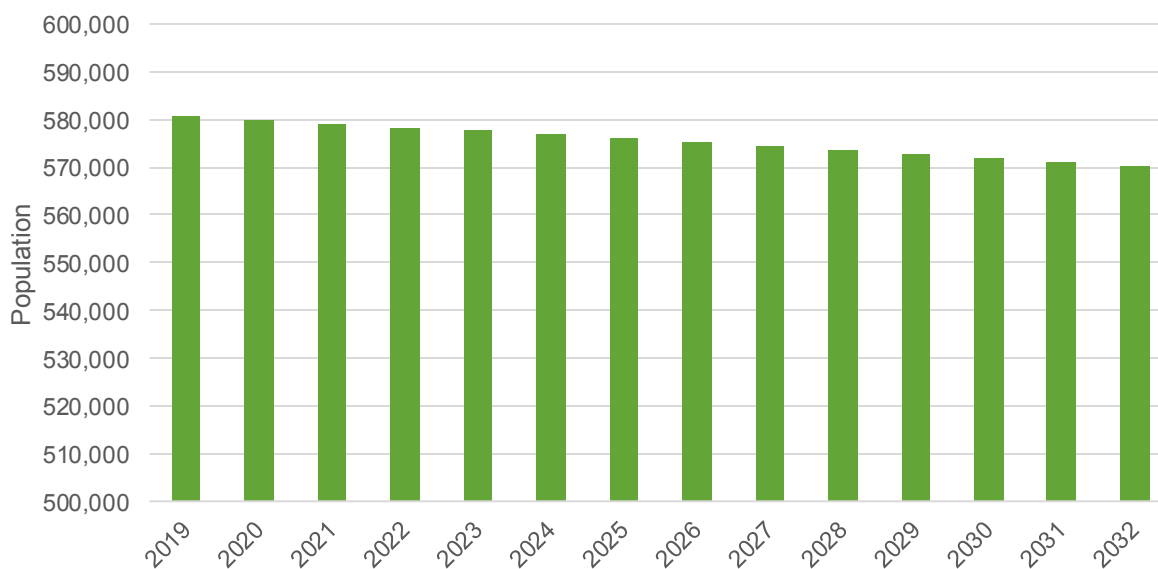
Year	Stark	Tuscarawas	Wayne	Total District Population
2019	372,588	92,133	115,921	580,642
2020	371,902	92,091	115,893	579,886
2021	371,216	92,049	115,864	579,130
2022	370,530	92,008	115,836	578,374
2023	369,844	91,966	115,808	577,618
2024	369,158	91,924	115,780	576,861
2025	368,448	91,874	115,685	576,007
2026	367,738	91,825	115,590	575,152
2027	367,028	91,775	115,495	574,297
2028	366,318	91,725	115,400	573,443
2029	365,608	91,676	115,305	572,588
2030	364,906	91,642	115,200	571,747
2031	364,204	91,608	115,095	570,906
2032	363,502	91,574	114,990	570,065

Source(s) of Information: Ohio Development Services Agency, “2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected,” April 2018.

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

The figure below shows a steady decrease in the population throughout the planning period. The population is expected to decrease by 1.1 percent from 2019 through the fifth year of the planning period (year 2027) and decrease by 1.8 percent by the end of the planning period.

Figure C-1. District Population: 2019 through 2032





APPENDIX D

DISPOSAL DATA



APPENDIX D. Disposal Data

A. Reference Year Waste Disposed

Almost 45 percent of the District waste, which was directly hauled for disposal in the reference year, was sent to the American Landfill in Stark County. The Republic Services Countywide Landfill received the second highest amount, at 29 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 Accepted from the SWMD			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<i>In-District Facilities</i>						
American Landfill, Inc.	Stark	OH	53,581	262,789	2,426	318,796
Republic Services Countywide Recycling & Disposal Facility	Stark	OH	118,254	61,007	27,101	206,362
Kimble Sanitary Landfill	Tuscarawas	OH	103,423	40,971	20,059	164,453
<i>Out-of-District Facilities</i>						
Geneva Landfill	Ashtabula	OH	0	0	12	12
Athens-Hocking Reclamation Center	Athens	OH	29	5,910	0	5,939
Crawford County Landfill	Crawford	OH	7	0	19	25
Pine Grove Regional Facility	Fairfield	OH	0	0	0	0
Hancock County Landfill	Hancock	OH	0	0	0	0
Apex Environmental LLC	Jefferson	OH	111	0	3	114
Carbon Limestone Landfill LLC	Mahoning	OH	0	9	55	64
Mahoning Landfill Inc	Mahoning	OH	0	23	0	23
Suburban Landfill Inc	Perry	OH	14	184	9	207
Noble Road Landfill	Richland	OH	128	15,088	67	15,283
Sunny Farms Landfill LLC	Seneca	OH	0	0	9	9
<i>Out-of-State Facilities</i>						
Hoosier Landfill 2	Kosciusko	IN	0	0	3	3
Total Direct Haul Waste Disposed in Landfills			275,547	385,981	49,763	711,291

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		Tons Received from SWMD		
	County	State	Industrial	Excluded	Total
<i>In-District Facilities</i>					
None			0	0	0
Total Waste Disposed in Captive Landfills			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 2020, in-District transfer facilities received about 229,000 tons of the transferred waste. The in-District Kimble Transfer & Recycling - Canton reported the highest tonnage received from the District.

Table D-2. Reference Year Waste Transferred

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
<i>In-District facilities</i>							
Kimble Transfer & Recycling - Canton	Stark	OH	205,274	4,426	19,414	229,114	Kimble Sanitary Landfill
<i>Out-of-District facilities</i>							
Apex Environmental LLC	Belmont	OH	336	0	0	336	Apex Environmental LLC
Kimble Transfer & Recycling - Carrollton	Carroll	OH	1,678	0	47	1,724	Kimble Sanitary Landfill
Broadview Heights Transfer Station	Cuyahoga	OH	2,975	0	16	2,991	Noble Road Landfill
Cleveland Transfer/ Recycling Station	Cuyahoga	OH	8	0	0	8	American Landfill
Kimble Transfer & Recycling Facility - Cambridge	Muskingum	OH	706	0	92	799	Kimble Sanitary Landfill
Rumpke Waste Inc Richland County Transfer Facility	Richland	OH	8,514	0	11	8,525	Noble Road Landfill
Akron Central Transfer Facility	Summit	OH	6,755.4	0.0	0.0	6,755	American Landfill
Kimble Transfer & Recycling - Twinsburg	Summit	OH	238	0	22	260	Kimble Sanitary Landfill

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
Republic Services of Ohio LLC Akron Transfer Facility	Summit	OH	6,947	0	0	6,947	Countywide Recycling & Disposal Facility
Out-of-state facilities							
None							
Total Transferred Waste			233,433	4,426	19,602	257,461	

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

Source(s) of Information: Ohio Environmental Protection Agency, “2020 Facility Data Report Tables,” February 17, 2021.

About 196 tons 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 Reference Year

Facility Name	Facility Type	Location		Waste Accepted from the SWMD			
		County	State	Residential/ Commercial	Industrial	Excluded	Total
Covanta Environmental Solutions, LLC	SF	Porter	IN	0.0	163.2	0.0	163.2
Eq Industrial Services Processing Facility	SF	Marion	IN	0.0	5.6	0.0	5.6
Medassure Of Indiana Treatment Facility	MW	Marion	IN	6.2	0.0	0.0	6.2
Stericycle Environmental Solutions, Inc.	RR	Marion	IN	0.0	0.1	0.0	0.1
Tradebe Treatment & Recycling, LLC	SF	Lake	IN	0.0	20.9	0.0	20.9
Total				6.2	189.7	0.0	195.9

Sources: OEPA Facility Data Report – 2019 (OEPA waste flows and facility data reports do not document the waste sent to Covanta Environmental Solutions), IDEM 2019
SF - Solidification Facility, MW - Medical Waste Processor, RR - Resource Recovery System

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 v4.0 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 (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	275,547	385,981	49,763	711,291	73.41%
Transferred	233,433	4,426	19,602	257,461	26.57%
Incinerated	6	190	0	196	0.02%
Total	508,986	390,597	69,365	968,948	100%
Percent of Total	53%	40%	7%	100%	

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

B. Historical Waste Analysis

Prior to 2017, the total waste disposal averaged roughly 875,000 tons annually. Then in 2017, a 20% increase in total disposal was documented, with a 5% increase in the residential/commercial sector and 48% jump up in the industrial sector. Over 1 million tons of disposal held in 2018 then dropped 8% in 2019 with the industrial sector being the largest contributor for the decline. In fact, the industrial waste disposal is documenting considerable fluctuation swings annually. See **Table D-5**.

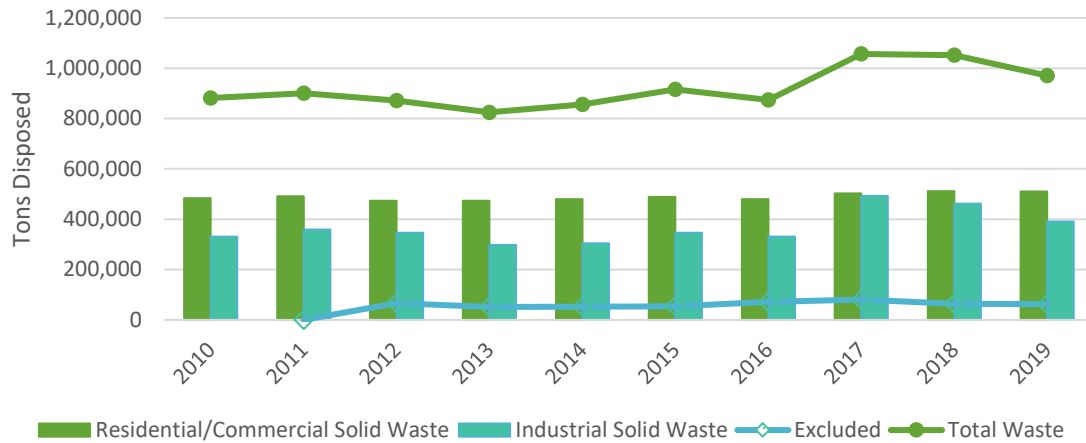
Table D-5. Historical Disposal Data: 2010-2019

Year	Population	Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (ppd)	Tons	Tons	Tons	Tons
2010	589,480	4.49	483,175	331,639	66,333	881,147
2011	582,688	4.61	490,745	358,609	51,362	900,716
2012	582,688	4.45	473,266	345,930	52,297	871,493
2013	594,070	4.36	472,815	298,329	53,625	824,769
2014	584,414	4.50	480,127	304,808	71,794	856,729
2015	586,524	4.57	488,922	345,666	80,728	915,316
2016	585,759	4.48	479,279	331,453	63,565	874,297
2017	580,873	4.74	502,208	492,140	62,302	1,056,650
2018	582,053	4.81	511,416	462,510	78,336	1,052,262
2019	580,642	4.80	508,986	390,597	69,365	968,948

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 11% increase in total tons disposed of between 2010 and 2019, the average annual rate of increase is 1.12%.

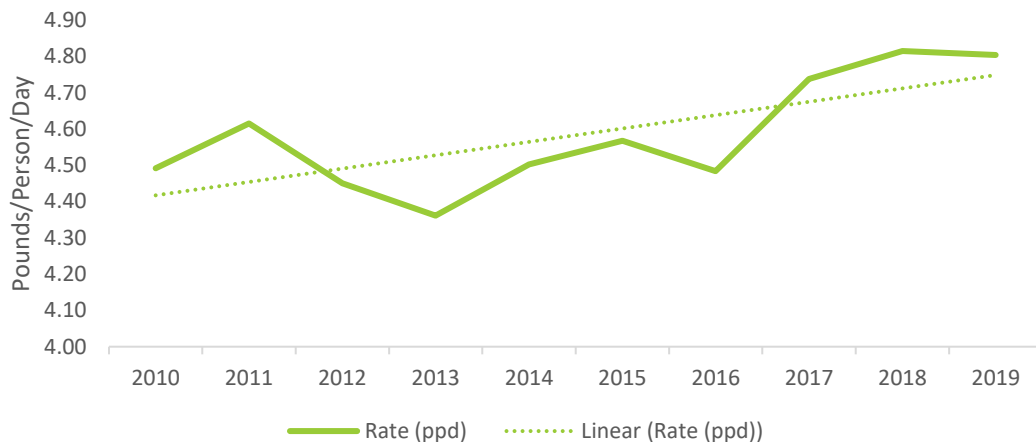
Figure D-1. District Disposal: 2010 – 2019



C. Residential-Commercial Disposal

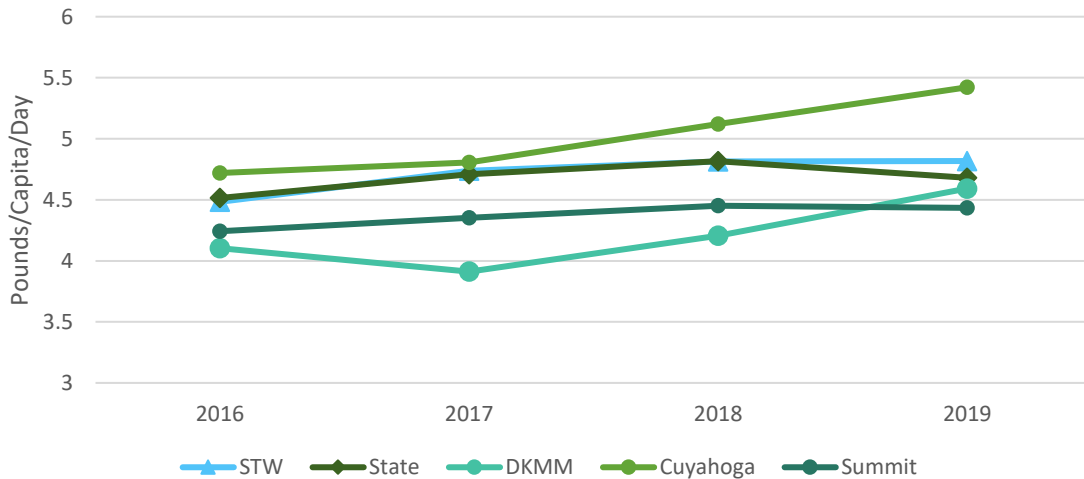
Residential/commercial (R/C) disposal has increased from 483,175 tons in 2010 to 508,986 tons in 2019. Between 2010 and 2019, the District’s annual percent rate of change in residential/commercial disposal was 0.61. Per capita disposal rate is historically trending up over this timeframe with an average of 4.68 pounds per person per day. Both 2018 and 2019 document unhistorical higher rates at 4.8 pounds per person per day or above. (See **Figure D-2.**)

Figure D-2. Residential/Commercial Per Capita Disposal Rate: 2010 - 2019



The R/C disposal rate for the District was compared with disposal rate for the state (Ohio), Delaware-Knox-Marion-Morrow, Summit-Akron, and Cuyahoga Solid Waste Districts, for state, , multi-county, and size. 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 through 2019 was higher than projected disposal from the most previously approved Plan. The largest difference between actual and projected was in 2019 where actual R/C disposal was more than 5.7% higher than projected (see the table below). R/C generation tons were projected in the previously updated Plan by :

- using the year 2015 disposal rate of 4.57 ppd as the basis for projections;
- applying the rate of change in the disposal rate based upon 2011 through 2015 data (-0.26 percent per year);

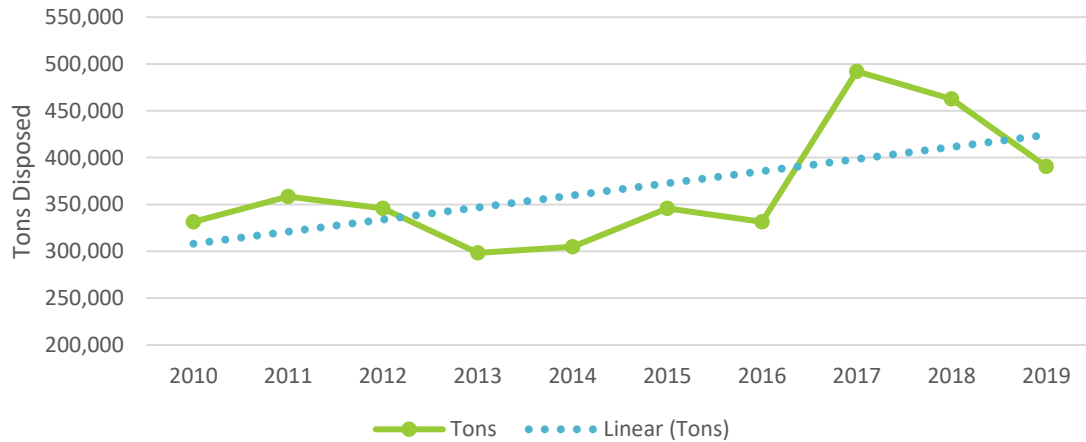
Actual vs. Current Plan Projections for Residential/Commercial Disposal: 2016-2019

Residential/Commercial Sector Tons Disposed			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2016	479,279	487,030	1.6%
2017	502,208	485,145	-3.4%
2018	511,416	483,266	-5.5%
2019	510,527	481,394	-5.7%

D. Industrial Sector Disposal

As shown in **Figure D-4**, industrial disposal increased from 2010 through 2019 (especially between 2016 and 2017), and then steadily decreased to 2019. The rate of increase in disposal lessened in 2015 and 2016, and the total industrial annual change in disposal rate in 2017 and 2018 remained at about a 9% increase.

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



The table below shows the annual rate of change in industrial disposal for 2016-2019.

Year	Annual Percentage Change
2016	--
2017	48.5%
2018	-6.0%
2019	-15.5%

Actual industrial disposal from 2016 through 2019 was higher 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:
2016-2019**

Industrial Sector Tons Disposed			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2016	331,453	344,248	-3.9%
2017	492,140	342,835	30.3%
2018	462,510	341,427	26.2%
2019	390,597	340,026	12.9%

Between 2017 and 2018, industrial disposal had increased by about 48%, and difference between actual and projected industrial disposal increased by almost 30%. The significant difference between the actual and projected industrial disposal due to the jump in industrial waste in 2017.

E. 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		Tonnage		
#	Description	2032 Projection	Highest during last ten years	2019
1	Assume disposal rate of change of population projected in Table C-2	499,715	511,416	508,986
2	Assume annual increase in tonnage of 0.61 percent based upon average percent change, 2010-2019	550,607		
3	Assume annual increase in tonnage of 1.20 percent based upon average percent change, 2015-2019	594,393		

Scenario 1 assumes a disposal rate of change of population projected in Table C-2. This scenario results in a very modest increase in tons disposed by the end of the planning period (approximately 499,715 tons).

Scenario 2 applies the average annual increase in tonnage of 0.61 percent based upon average percent change, 2010-2019.

Scenario 3 applies the average annual increase in tonnage of 1.26 percent based upon average percent change, 2015-2019

The District’s R/C disposal rate has fluctuated yearly since 2015 (4.57 ppd to 4.82 ppd), which is calculated to be a 1.20% 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 the increase in the disposal rate experienced during the last five 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. This estimate is approximately 102,000 tons less than the highest reported disposal amount during the last ten years (492,140 tons in 2017).

Tonnages Projected for Industrial Sector: 3 Scenarios

Scenarios		Tonnage		
#	Description	2032 Projection	Highest during last ten years	2021
1	Assume annual 0% change throughout the planning period	390,597	492,140	520,792
2	Assume annual increase in tonnage of 3.25 percent based upon average percent change, 2010-2019	591,651		
3	Assume annual increase in tonnage of half of the 3.25 percent based upon average percent change, 2010-2019. (1.62%) applied to the 2020 disposal tonnage 413,478 tons then flatlined after 2027	455,408		

Scenario 2 uses an assumed annual increase in tonnage of 3.25 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.

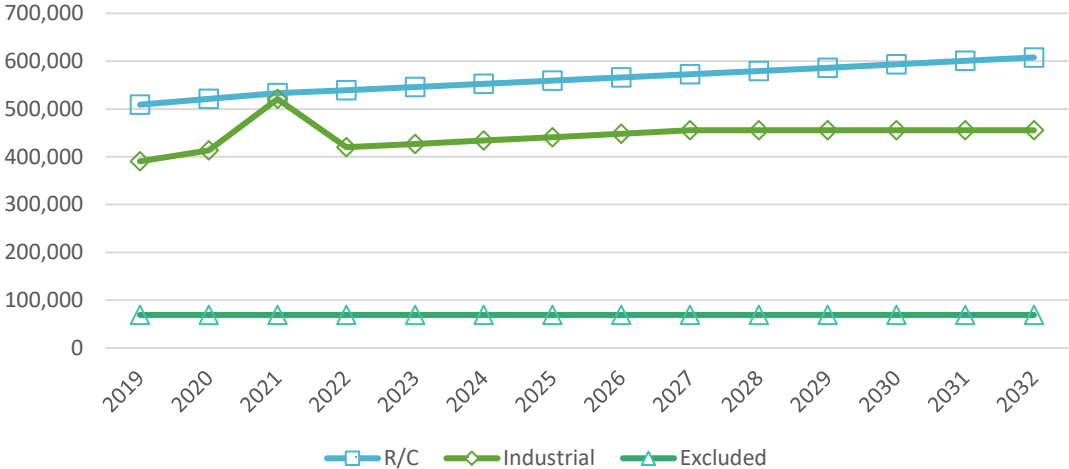
Due to the amount of excluded waste disposed being less than 10% of total waste generated, this portion of total disposal is projected from 2021 to the end of the planning period to remain constant at the average tonnage calculated for 2015 through 2019.

Table D-6. Waste Disposal Projections

	Year	Residential/ Commercial Solid Waste Tons	Industrial Solid Waste Tons	Excluded Waste Tons	Total Waste Tons
1st Yr. of Planning Period → X	2019	508,986	390,597	69,365	968,948
	2020	520,869	413,478	69,365	1,003,712
	2021	532,923	520,792	69,365	1,123,080
	2022	539,320	420,188	69,365	1,028,874
	2023	545,794	427,007	69,365	1,042,166
	2024	552,346	433,937	69,365	1,055,648
	2025	558,976	440,979	69,365	1,069,320
	2026	565,686	448,136	69,365	1,083,187
	2027	572,476	455,408	69,365	1,097,250
	2028	579,348	455,408	69,365	1,104,122
	2029	586,303	455,408	69,365	1,111,076
	2030	593,341	455,408	69,365	1,118,114
	2031	600,463	455,408	69,365	1,125,236
	2032	607,671	455,408	69,365	1,132,444

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: 2019-2032





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 2020 to the end of the planning period (2032) which are included at the end of this Appendix.

Table E-1A. Commercial Survey Results

NAICS	WG	LAB	DCB	FW	GL	HHW	FM	NFM	OCC	MxP	PL	R	ST	TX	UO	W	YW	CoM	EW	Other	Total	Adj.	Adj. Total
42	0	0	0	0	0	4	234	5	58	530	16	0	0	0	50	0	307	36	1	0	1,241	-67	1,174
44	1	14	2	0	0	0	366	1	1,226	12	0	773	119	0	3	1	0	0	1	0	2,517	-1,018	1,500
45	0	0	0	0	0	0	33	0	103	655	0	0	0	4,663	0	0	0	35	38	0	5,528	-35	5,493
48	0	1	0	0	0	0	3	2	0	0	3	0	6	0	0	0	0	0	0	0	16	0	16
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
53	0	0	0	0	0	0	0	0	83	3	56	0	0	0	0	133	0	8	0	0	284	0	284
54	0	0	0	0	3	0	1	0	17	1	16	0	0	0	0	13	2	21	1	0	74	-60	14
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	0	3,500	0	0	0	0	0	0	0	0	0	0	0	0	3,500	0	3,500
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	2	0	0	0	0	0	0	23	92	4	0	0	0	0	0	0	17	0	0	139	-32	108
62	15	0	0	0	0	0	50	10	4	384	0	0	0	0	0	0	0	19	0	0	481	-10	471
71	0	0	1	0	0	0	0	0	1	2	0	0	0	0	0	3	2	0	0	0	9	-8	0
72	0	0	0	0	0	0	0	0	83	1	0	0	0	0	0	0	0	0	0	122	206	-19	187
81	0	0	0	0	1	0	6	2	421	3,252	1	0	123	0	0	0	0	24	2	0	3,832	-3,696	136
92	0	0	0	0	1	0	0	0	25	112	8	0	0	0	0	0	0	2,421	0	0	2,566	-31	2,536
Total	17	18	3	0	5	4	693	3,520	2,044	5,043	105	773	248	4,663	53	150	310	2,581	43	122	20,394	-5,086	15,309
Adjustments	0	0	-1	0	-5	0	-68	-8	-1,379	-3,289	-25	0	-213	0	0	-3	-4	-90	-2	0	-5,086		
Adj. Total	17	18	2	0	0	4	626	3,512	665	1,734	80	773	36	4,663	53	147	307	2,490	41	122	15,309		

NAICS = North American Industrial Classification System, WG = white goods, LAB = lead-acid batteries, DCB = Dry-cell batteries, FW = food waste, GL = glass, HHW = household hazardous waste, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, R = rubber, ST = scrap tires, TX = textiles, UO = used oil, W = wood, CoM = commingled, YW = yard waste, EW = electronic waste, Adj. = Adjusted or Adjustments

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.
Scrap Tires (ST)	Adjustments were made to remove scrap tires that were included in Ohio EPA Scrap Tire Reports.
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 counted, so only tonnage reported to have been managed elsewhere was counted.

Data from a total of 110 commercial businesses and institutions was used to complete **Table E-1**. Companies and institutions reported recycling 20,394 tons of materials in 2019, with 5,086 tons subtracted to avoid double-counting.

Table E-2. 2019 Data from Other Recycling Facilities

Source of Materials	WG	LAB	DCB	GL	FM	NFM	OCC	MxP	PL	ST	UO	W	CoM	EW	Total	Adj.	Adj. Total	
Buybacks																		
None	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brokers																		
BR1	0	0	0	0	1	0	0	1	0	0	1	1	0	0	3	0	0	3
BR2	2	0	0	0	1	1	2	0	0	0	0	0	0	0	6	0	0	6
BR3	27	0	0	0	1,068	95	0	0	0	0	0	0	0	0	1,190	0	0	1,190
BR4	0	28	1	0	2,922	218	47	8	0	0	0	0	0	0	3,224	0	0	3,224
BR5	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	0	0	8
BR6	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	2
BR7	5	0	0	0	0	0	0	0	0	0	0	0	12	1	18	0	0	18
BR8	0	37	0	0	5,500	267	0	0	0	0	0	0	0	0	5,804	0	0	5,804
BR9	0	0	0	0	5,952	1,147	0	0	0	0	0	0	0	0	7,099	0	0	7,099
Total	34	65	1	0	15,444	1,728	49	16	0	0	1	1	12	3	17,354	0	0	17,354
Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Total	34	65	1	0	15,444	1,728	49	16	0	0	1	1	12	3	17,354	0	0	17,354
Processors																		
PR1	0	0	0	0	0	0	8,874	23,760	61	0	0	0	0	0	32,695	0	0	32,695

Source of Materials	WG	LAB	DCB	GL	FM	NFM	OCC	MxP	PL	ST	UO	W	CoM	EW	Total	Adj.	Adj. Total
PR2	0	0	0	0	0	1	254	657	5	0	0	5	22	0	944	0	944
PR3	0	0	0	0	4,040	2,059	0	0	0	0	0	0	0	0	6,098	0	6,098
PR4	0	0	0	0	5,453	100	0	0	0	0	0	0	0	0	5,552	0	5,552
PR5	0	0	0	0	0	0	0	0	0	0	0	0	5,723	0	5,723	0	5,723
PR6	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	0	21
Total	0	0	0	0	9,492	2,159	9,128	24,417	66	0	0	5	5,745	21	51,033	0	51,033
Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Adj. Total	0	0	0	0	9,492	2,159	9,128	24,417	66	0	0	5	5,745	21	51,033		
MRFs																	
MRF1	0	0	0	0	0	0	0	0	0	0	0	0	509	0	509	0	509
MRF2	0	0	0	89	0	0	0	0	0	0	0	0	0	0	89	0	89
MRF3	0	0	0	0	0	0	0	0	0	0	0	0	508	0	508	0	508
MRF4	0	0	0	0	0	0	319	241	3	0	0	0	3,512	0	4,075	0	4,075
Total	0	0	0	89	0	0	319	241	3	0	0	0	4,529	0	5,181	0	5,181
Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Adj. Total	0	0	0	89	0	0	319	241	3	0	0	0	4,529	0	5,181		
Grand Total	34	65	1	89	24,936	3,886	9,496	24,674	68	0	1	6	10,286	24	73,568		

WG = white goods, LAB = lead-acid batteries, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, ST = scrap tires, UO = used oil, W = wood, CoM = commingled, EW = electronic waste, Adj. = Adjusted or Adjustments

Source(s) of Information: District recycling survey responses

Table E-2 contains tonnage collected by six processors, nine brokers, or four MRFs which receive materials generated in the District. Adjustments were made in other tables to avoid double counting of recyclables that are included.

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	GL	PL	OCC	MxP	NF	FM	W	FW: C	FW: O	CoM	Other	Total	Adj.	Adj. Total
Aldi Inc Hinckley Division	0	10	1,192	0	0	0	0	0	109	0	0	1,311	0	1,311
Big Lots Corporation	0	0	131	0	0	0	0	0	0	0	0	131	0	131
Buehler's	0	32	1,029	8	0	0	0	0	0	0	10	1,080	0	1,080
Dollar General Corporation	0	0	1,575	9	0	0	0	0	0	0	0	1,584	0	1,584
Giant Eagle	0	120	2,561	28	0	0	0	0	0	0	0	2,709	0	2,709
Home Depot Corporation	0	1	141	0	0	0	301	0	0	0	27	469	0	469
Kohls Corporate Office & Headquarters	0	38	451	0	0	0	0	0	0	0	2	492	0	492

Ohio EPA Data Source	GL	PL	OCC	MxP	NF	FM	W	FW: C	FW: O	CoM	Other	Total	Adj.	Adj. Total
Lowe's Companies, Inc.	0	3	487	0	15	0	416	0	0	0	83	1,003	0	1,003
Richland County Recycling and Transfer Facility	0	0	84	0	0	0	0	0	0	0	0	84	0	84
Rumpke Center City Recycling Hamilton County	0	0	0	1	0	0	0	0	0	0	0	2	0	2
Sam's Club	0	15	610	1	0	0	169	0	0	0	38	833	0	833
Save-A-Lot	0	2	48	0	0	0	0	0	0	0	0	50	0	50
Target Corporate	0	12	421	3	10	0	0	0	0	6	2	455	0	455
United States Postal Service	0	7	20	382	0	0	0	0	0	0	0	410	0	410
Walmart Recycling in Ohio	0	155	5,567	14	3	0	0	0	0	0	342	6,080	0	6,080
Total	0	394	14,319	446	28	0	886	0	109	7	503	16,693	0	16,693
Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ad. Total	0	394	14,319	446	28	0	886	0	109	7	503	16,693		

Note: Aldi's, Big Lots Corporation, and Save-A-Lot are from Ohio EPA's 2018 MRF Report. Data for the reference year and previous two years may be used to calculate reference year recycling.

GL = glass, PL = plastics, OCC = corrugated cardboard, MxP = mixed paper, FM = ferrous metals, NFM = non-ferrous metals, W = wood, FW: C = food waste composted, FW: O = food waste other, CoM = commingled, Adj. = Adjusted or Adjustments

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, recycling by the Paper Retriever program, and materials recycled at the year-round HHW Center. The totals have been adjusted to avoid double-counting. For example, the 911 tons of commingled materials reported by political jurisdictions has been subtracted since it is assumed that this tonnage is reflected in the total tons reported to Ohio EPA by the MRF.

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

Other Sources of Data	HHW	EW	ST	FW	MxP	GL	FM	NF	OCC	PL	Tx	CoM	YW	Total	Adj.	Adj. Total
Ohio EPA Scrap Tire Data			12,274											12,274	0	12,274
Curbside												11,204		11,204	0	11,204
Drop-Off Program				4,091								6,209		10,300	0	10,300
Drop-Off Program for Yard Waste													16,753	16,753	0	0

Other Sources of Data	HHW	EW	ST	FW	MxP	GL	FM	NF	OCC	PL	Tx	CoM	YW	Total	Adj.	Adj. Total
Jackson Twp. Drop-Off		50	57		247	62	85	8	243	301	24	9		1,086	-62	1,024
District School Recycling Program					289	0	2	0	13	2	0	128	0	434	-0.27	434
District Government Recycling Program					59	0	0	0	1	1	0	64	0	125	-0.03	125
District Misc. Collections	105		354		0	0	1	0	0	0	0	18	0	479	-0.35	478
District Composting Program (Wayne Co.)				913									2,189	3,102	0	3,102
Ohio EPA Compost Report ¹				825									70,702	71,527	-18,867	52,660
Food Waste Hauler Data				945										945	0	945
Pharmaceutical Take-Back Programs	9													9	0	9
Paper Drop-offs					1,460									1,460	0	1,460
Total	113	50	12,685	2,684	6,145	63	88	8	258	304	24	17,632	89,644	129,699	-18,930	110,770
Adj.	0	0	-411	0	0	-63	0	0	0	0	0	0	-18,455	-18,929		
Adj. Total	113	50	12,274	2,684	6,145	0	88	8	258	304	24	17,632	71,189	110,770		

HHW = household hazardous waste, EW = electronic waste, ST = scrap tires, FW = food waste, MxP = mixed paper, GL = glass, FM = ferrous metals, NF = non-ferrous metals, OCC = old corrugated cardboard, PL = plastics, TX = textiles, CoM = commingled, YW = yard waste

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

Sample Calculations:

Yard Waste total – Adjustments = Adjusted Total

89,644 tons – 18,455 tons = 71,189 tons

The following table explains the adjustments made in Table E-4A.

Table E-4B. Other Data Adjustments by Material

Material	Adjustments
Glass (GL)	Commingled tonnage was not counted if data was collected from broker, processor or EPA, which was counted in another table.

Material	Adjustments
Yard Waste (YW)	Adjustments were made to the Ohio Compost Report to exclude District Composting Program from Wayne County and Drop-off program for Yard Waste to avoid crediting it twice.

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"	50.50
Household Hazardous Waste	117.32
Used Motor Oil	53.74
Electronics	115.66
Scrap Tires	12,310.15
Dry Cell Batteries	3.06
Lead-Acid Batteries	82.86
Food	2,792.83
Glass	89.72
Ferrous Metals	25,649.56
Non-Ferrous Metals	7,435.10
Corrugated Cardboard	24,737.51
All Other Paper	33,019.81
Plastics	846.53
Textiles	4,687.33
Wood	1,038.01
Commingled Recyclables (Mixed)	30,415.45
Yard Waste	71,495.83
Rubber (not including tires)	773.00
Other (Aggregated)	625.40
Recycling Subtotals	216,339
Incineration	0
Grand Total	216,339

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	15,309
Buybacks	0
Scrap Yards	17,354
Processors	51,033
MRFs/Processors/Brokers	5,181
Ohio EPA Commercial Retail Data	16,693
Ohio EPA Scrap Tire Data	12,274
Curbside	11,204
Drop-Off Program	10,300
Drop-Off Program for Yard Waste	16,753
Jackson Twp. Drop-Off	1,024
District School Recycling Program	434
District Government Recycling Program	125
District Misc. Collections	478
District Composting Program (Wayne Co.)	3,102
Ohio EPA Compost Report1	52,660
Food Waste Hauler Data	945
Pharmaceutical Take-Back Programs	9
Paper Drop-offs	1,460
Total	216,339

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

The following table presents the District's historical recycling analysis in **Table E-7**.

Table E-7. Historical Recycling Analysis

Year	Commercial Survey	Scrap Yards	Processors	MRFs/Processors/ Brokers	Ohio EPA Commercial Retail Data	Ohio EPA Scrap Tire Data	Curbside	Drop-Off Program	Drop-Off Program for Yard Waste	Jackson Twp. Drop-Off	District School Recycling Program	District Government Recycling	District Misc. Collections	District Composting Program (Wayne)	Ohio EPA Compost Report	Food Waste Hauler Data	Pharmaceutical Take-Back Programs	Paper Drop-offs	Totals
2015	9,260	7,866	39,036	9,917	7,812	11,868	10,028	11,002	0	1,227	442	109	142	6,768	25,206	1,530	7	1,177	143,397
2016	28,148	6,922	40,932	6,851	13,707	9,222	10,724	9,765	0	1,354	796	108	424	6,221	9,239	1,437	4	870	146,724
2017	13,255	5,712	46,891	2,930	15,225	11,739	11,005	11,777	0	1,355	818	109	558	4,373	24,985	1,503	7	969	153,211
2018	15,031	7,030	64,436	2,557	17,967	11,841	9,349	11,640	0	1,316	1,229	108	424	5,492	35,939	1,049	7	1,004	186,418
2019	15,309	17,354	51,033	5,181	16,693	12,274	11,204	10,300	16,753	1,024	434	125	478	3,102	945	945	9	1,460	216,339

Table E-6a2 Annual % Change

2015																			
2016	204%	-12%	5%	-31%	75%	-22%	7%	-11%	#DIV/0!	10%	80%	-1%	198%	-8%	-63%	-6%	-33%	-26%	2%
2017	-53%	-17%	15%	-57%	11%	27%	3%	21%	#DIV/0!	0%	3%	1%	32%	-30%	170%	5%	52%	11%	4%
2018	13%	23%	37%	-13%	18%	1%	-15%	-1%	#DIV/0!	-3%	50%	-1%	-24%	26%	44%	-30%	8%	4%	22%
2019	2%	147%	-21%	103%	-7%	4%	20%	-12%	#DIV/0!	-22%	-65%	16%	13%	-44%	47%	-10%	21%	45%	16%

Year	Commercial Survey	Scrap Yards	Processors	MRFs/ Processors/ Brokers	Ohio EPA Commercial Retail Data	Ohio EPA Scrap Tire Data	Curbside	Drop-Off Program	Drop-Off Program for Yard Waste	Jackson Twp. Drop-Off	District School Recycling Program	District Government Recycling	District Misc. Collections	District Composting Program (Wayne)	Ohio EPA Compost Report	Food Waste Hauler Data	Pharmaceutical Take-Back Programs	Paper Drop-offs	Totals
Average Annual % Change	42%	35%	9%	0%	24%	2%	4%	-1%	#DIV/0!	-4%	17%	4%	55%	-14%	49%	-10%	12%	9%	11%

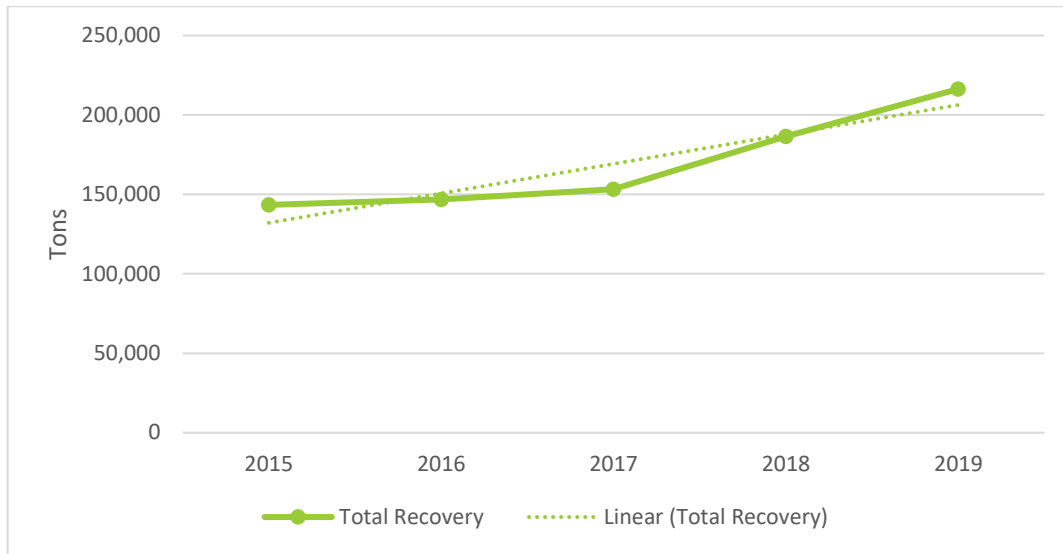
Table E-6a3 Tonnage Change/Year

2015																				
2016	18,888	-944	1,896	-3,066	5,895	-2,646	696	-1,237	0	127	354	-1	282	-547	-15,966	-93	-2	-307	3,328	
2017	14,893	-1,210	5,959	-3,921	1,518	2,517	281	2,012	0	2	22	1	134	-1,848	15,746	66	2	99	6,486	
2018	1,776	1,318	17,545	-373	2,742	102	-1,656	-137	0	-40	411	-1	-134	1,119	10,954	-454	1	35	33,208	
2019	277	10,324	-13,403	2,624	-1,274	433	1,855	-1,340	16,753	-291	-795	18	55	-2,390	16,721	-104	1	456	29,920	

Average Tonnage Change/Year	1,512	2,372	2,999	-1,184	2,220	102	294	-175	4,188	-51	-2	4	84	-917	6,864	-146	1	71	18,235
Average Tons of Material Over 5 Years	16,201	8,977	48,465	5,487	14,281	11,389	10,462	10,897	3,351	1,255	744	112	405	5,191	29,606	1,293	7	1,096	169,218

Most of the programs demonstrated growth or increases in tonnages diverted. Some programs show more variation in yearly tonnage amounts depending on how double counting was removed each year. The District’s historical recovery for the residential/commercial sector over a five-year period spanning from 2015 through 2019 shows growth at about 11%.

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



The following table presents the District’s 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	13	14	15	16	Total
2019	15,309	73,568	16,693	12,274	11,204	10,300	16,753	1,024	434	125	478	3,102	52,660	945	9	1,460	216,339
2020	13,617	58,209	34,404	11,120	11,517	9,856	0	642	319	82	555	3,106	56,048	1,068	9	580	201,132
2021	14,463	65,888	25,548	11,697	11,360	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	208,163
2022	14,607	66,547	25,548	11,697	11,474	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	209,080
2023	14,753	67,213	25,548	11,697	11,589	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	210,006
2024	14,901	67,885	25,548	11,697	11,705	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	210,942
2025	15,050	68,564	25,548	11,697	11,822	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	211,887
2026	15,201	69,249	25,548	11,697	11,940	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	212,841
2027	15,353	69,942	25,548	11,697	12,059	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	213,805
2028	15,506	70,641	25,548	11,697	12,180	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	214,779
2029	15,661	71,348	25,548	11,697	12,302	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	215,762
2030	15,818	72,061	25,548	11,697	12,425	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	216,755
2031	15,976	72,782	25,548	11,697	12,549	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	217,758
2032	16,136	73,509	25,548	11,697	12,675	10,078	8,637	0	376	104	517	3,104	54,354	1,007	9	1,020	218,771

- 1 = Commercial Survey
- 2 = Data from Other Recycling Facilities (includes Scrap Yards, Processors, and MRFs)
- 3 = Ohio EPA Commercial Retail Data
- 4 = Ohio EPA Scrap Tire Data
- 5 = Curbside
- 6 = Drop-Off Program
- 7 = Drop-Off Program for Yard Waste
- 8 = Jackson Twp. Drop-Off
- 9 = District School Recycling Program
- 10 = District Government Recycling Program
- 11 = District Misc. Collections
- 12 = District Composting Program (Wayne Co.)
- 13 = Ohio EPA Compost Report
- 14 = Food Waste Hauler Data
- 15 = Pharmaceutical Take-Back Programs
- 16 = Paper Drop-offs

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

- **Commercial Survey:** Historically the commercial survey data has shown greater variances from year to year. However, from 2018 to 2019, a 2% increase was documented. For future projections, tonnage is projected to increase more slowly at roughly 1% annually.
- **Data from Other Recycling Facilities:** Scrap yards, processors, MRFs, and buyback are aggregated into this category. Yearly variances are not uncommon and are mostly contributed to who responded and how double counting of materials was adjusted. Because of the fluctuations, future projections are conservatively projected at 1% annually through the planning period.
- **Ohio EPA Commercial Retail Data:** Historical five-year average annual percent change is 24%, demonstrating an average annual change of 2,220 tons annually. Due to uncertainty the tonnage is projected to remain flat throughout the planning period based on the 2020 total.
- **Ohio EPA Scrap Tire Data:** Historical five-year average annual percent change is 2%. Conservative estimates for the planning period hold the tonnage at 12,000 tons in 2021 and throughout the planning period.
- **Curbside:** Historical five-year average annual percent change is 4%. The District is planning minor modifications to the curbside program support already offered so expects steady but small increases of 1% annually in tonnage changes.
- **Drop-Off Program:** Historical five-year average annual percent change declined 1%. Tonnage is projected at 10,078 tons in 2021 and projected to remain flat throughout the planning period.
- **Drop-Off Program for Yard Waste:** Tonnage is typically included in the Ohio EPA Compost Report but for 2019 was separated. Year 2019 documented higher than average overall yard waste in all the programs. Because of this the District is conservatively estimating a flatlined tonnage of 8,637 tons from 2021 through the planning period.

- **Jackson Twp. Drop-Off:** Tonnage is projected at zero throughout the planning period due to the site discontinued in 2020.
- **District School Recycling Program:** Tonnage is projected to remain flat throughout the planning period based on the 2020 total. There are no planned changes to the program that the District is aware of at this time.
- **District Government Recycling Program:** Tonnage is projected to remain flat throughout the planning period based on the 2020 total. There are no planned changes to the program that the District is aware of at this time.
- **District Misc. Collections:** Tonnage is projected to remain flat throughout the planning period based on the 2020 total. There are no planned changes to the program that the District is aware of at this time.
- **District Composting Program (Wayne Co.):** Tonnage is projected to remain flat throughout the planning period based on the 2020 total. There are no planned changes to the program that the District is aware of at this time.
- **Ohio EPA Compost Report:** Tonnage is projected to remain flat throughout the planning period based on the 2020 total. There are no planned changes to the program that the District is aware of at this time.
- **Food Waste Hauler Data:** Tonnage is projected to remain flat throughout the planning period based on the 2020 total. There are no planned changes to the program that the District is aware of at this time.
- **Pharmaceutical Take-Back Programs:** Tonnage is projected to remain flat throughout the planning period.
- **Paper Drop-offs:** Tonnage is projected to double from 2020 to 2021 and hold constant from 2022 through 2032

Appendix I discusses many initiatives that the District hopes will result in recycling greater volumes. 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 when programs will be completed (such as waste audits or assessments), the District has conservatively estimated recycling tonnage throughout the planning period.



APPENDIX F

INDUSTRIAL SECTOR REFERENCE YEAR RECYCLING



APPENDIX F. Industrial Reduction and Recycling Data

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

A. Reference Year Recovery Data

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

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

31s

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

32s

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

33s

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

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

- **Table F-1, Industrial Survey Results**, which presents the total tons recycled by material and by NAICS code.
- **Table F-2, Data from Other Recycling Facilities**, which presents the total tons recycled by brokers and processors.
- **Table F-3, Other Recycling Programs/Other Sources of Data**, which presents data from miscellaneous sources (This table has been omitted for this plan as it was not applicable).

The District annually surveys industries located in the District to obtain recycling data. Existing industries that have responded to the District’s surveys in previous years are surveyed electronically. Survey recipients receive a cover letter explaining the purpose of the survey via mail through the U.S. Postal Service. The cover letter contains a link to the District’s online survey system (Alchemer). The District maintains a list of industries which is updated at least annually or when the District is aware of new industries in the counties. **Table F-1** presents the industrial sector recycling totals which were reported on the 2019 Annual District Report (ADR). Industries identifying the totals sent to scrap yards, processors, material recovery facilities, and brokers were adjusted to exclude materials as those tonnages were attributed to those entities.

Table F-1. Industrial Survey Results

NAICS	FW	GL	FM	NFM	OCC	MxP	PL	W	CoM	NFS	Total	Adj.	Adj. Total
22	0	0	0	0	0	0	0	0	0	0	0	0	0
31	1,064	0	66	2	124	3	6	39	45	0	1,347	-64	1,284
32	0	0	375	43	618	2,164	567	187	1,764	0	5,719	-725	4,994
33	1	5	492,349	4,574	244,929	47	54	616	167	0	742,742	-169	742,573
Total	1,065	5	492,790	4,619	245,671	2,214	626	843	1,975	0	749,808	-957	748,851
Adj.	0	-4	-159	-1	-341	-404	-12	0	-38	0	-957		
Adj. Total	1,065	1	492,631	4,618	245,331	1,810	615	843	1,938	0	748,851		

FW = food waste, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, W = wood, CoM = commingled, NFS = non-exempt foundry sand

Sample Calculation: OCC (Cardboard) Unadjusted Tonnage – Adjustments = OCC Adjusted Total

245,671.1 tons – 340.6 tons = 245,330.5 tons

The District annually surveys scrap yards, processors, material recovery facilities (MRFs), and brokers that are located in the District or facilities known to accept materials generated in the District. Similar to the process used for surveying industrial sector generators, the District maintains a list of these facilities that is regularly updated. New entities are added to the list throughout the year as they are identified. Each year during the preparation of the Annual District Report, a list of scrap yards and secondary materials processors and brokers is compiled based on NAICS codes using Reference USA, a business database and surveyed. This is performed to gather the necessary information from the new company so they can be added to District's online survey effort the following year. Follow-up requests are made via telephone and e-mail to entities that do not respond. **Table F-2** presents data reported by a broker and two processors that managed materials generated in the District during 2019. Adjustments were made to ferrous and non-ferrous metals material tonnages to exclude materials that were not creditable for recycling. Adjustments were also made to exclude commingled material tonnages the MRF to avoid double counting.

Table F-2. Data from Other Recycling Facilities

Data Sources	FW	GL	FM	NFM	OCC	MxP	PL	W	CoM	NFS	Total	Adj.	Adj. Total
Buybacks													
None	0	0	0	0	0	0	0	0	0	0	0	0	0
Brokers													
BR1	0	0	3,205	284	0	0	0	0	0	0	3,489	0	3,489
BR2	0	0	183	0	5,518	219	3,617	0	440	0	9,977	0	9,977
BR3	0	0	60	5	30,260	1,450	390	0	5,210	0	37,375	0	37,375
BR4	0	0	32,067	1,797	0	0	0	0	0	0	33,864	-33,864	0
Total	0	0	35,515	2,086	35,778	1,669	4,007	0	5,650	0	84,705	-33,864	50,841
Adj.			-32,067	-1,797	0	0	0	0	0	0	-33,864		
Adj. Total	0	0	3,448	289	35,778	1,669	4,007	0	5,650	0	50,841		
Processors													
PR1	0	0	116	20	0	0	0	0	0	0	136	0	136
PR2	0	0	5,785	62	0	0	0	0	0	0	5,848	0	5,848
PR3	0	0	0	0	0	0	0	10,320	0	0	10,320	0	10,320
Total	0	0	5,901	82	0	0	0	10,320	0	0	16,304	0	16,304
Adj.	0	0	0	0	0	0	0	0	0	0	0		
Adj. Total	0	0	5,901	82	0	0	0	10,320	0	0	16,304		
MRF's													
MRF1	0	8	5	3	30	128	23	0	0	0	197	0	197
MRF2	0	0	0	0	1	0	0	0	61	0	62	-61	1
Total	0	8	5	3	31	128	23	0	61	0	259	0	259
Adj.	0	0	0	0	0	0	0	0	-61	0	-61		
Adj. Total	0	8	5	3	31	128	23	0	0	0	198		
Grand Total	0	8	9,355	375	35,809	1,797	4,031	10,320	5,650	0	67,343		

FW = Food Waste, GL = Glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = corrugated cardboard, MxP = mixed paper, PL = plastics, W = Wood, CoM = commingled, NFS =

non-exempt foundry sand , PR = processor, BR = broker (ID assigned to protect business identity)

Table F-3, “Other Recycling Programs/Other Sources of Data” was not applicable to the District and has therefore been omitted.

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

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

Responses are thoughtfully reviewed to ensure materials are not handled by more than one entity surveyed. The data used to compile the industrial sector’s annual recycling totals are reported typically by generators. Supplemental tonnage is included in the annual industrial sector recycling totals when the District is confident that it was not reported by generators.

The following table presents the total 2019 industrial sector recycling totals from **Table F-1** and **Table F-2**.

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

Material	Quantity
Food	1,065
Glass	9
Ferrous Metals	501,985
Non-Ferrous Metals	4,993
Cardboard	281,139
Paper	3,607
Plastics	4,646
Wood	11,163
Commingled Recyclables (Mixed)	7,588
Non-Exempt Foundry Sand	0
Grand Total	816,194

Source(s) of Information: 2019 ADR Calculation Spreadsheets

Table F-5. Quantities Recovered by Program/Source

Data Source	Tons
Industrial Survey	748,851
Buybacks	0
Brokers	50,841
Processors	16,304
MRFs	198
Total	816,194

Source(s) of Information: Tables F-1 and F-3

B. Historical Recovery

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

Table F-6a. Historical Industrial Recovery by Program/Source: 2014-2019

Year	Industrial Sector		
	Tons	Annual Percentage Change	Annual Tonnage Change
2015	1,024,434	-----	-----
2016	1,016,505	-0.8%	-7,929
2017	1,019,917	0.3%	3,412
2018	1,075,829	5.5%	55,912
2019	816,194	-24.1%	-259,635
2015-2019 Average			
Average Annual Percentage Change			-4.8%
Average Tons Over 5 Year Period			990,576
Average Annual Tonnage Change			-52,060

Table F-6b. Historical Industrial Recovery by Program/Source: 2015-2018 (Removed Outliers)

Year	Industrial Sector		
	Tons	Annual Percentage Change	Annual Tonnage Change
2015	1,024,434	-----	-----
2016	1,016,505	-0.8%	-7,929
2017	1,019,917	0.3%	3,412
2018	1,075,829	5.5%	55,912
2019	816,194	-24.1%	-259,635
2015-2018 Average			

Average Annual Percentage Change	1.7%
Average Tons Over 5 Year Period	1,034,171
Average Annual Tonnage Change	17,132

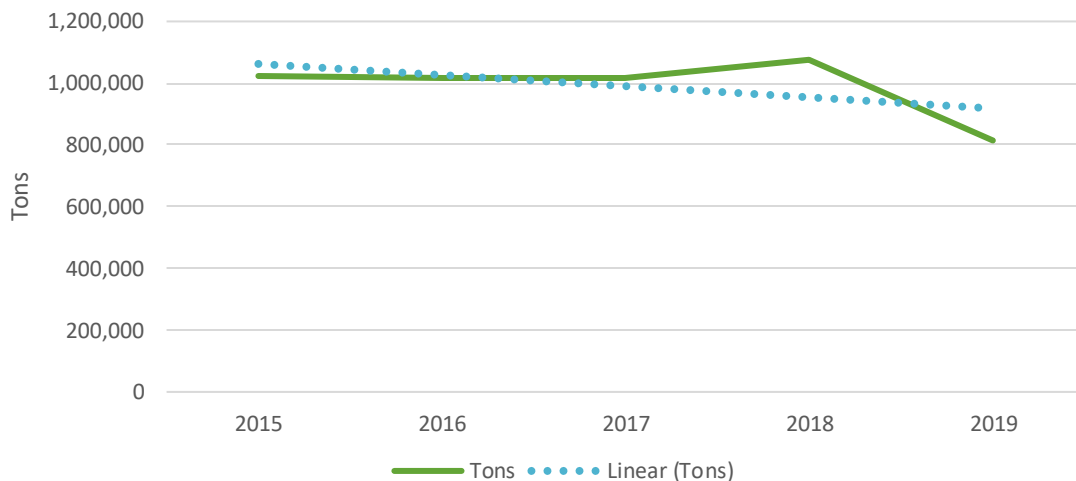
An examination of the recovery patterns over the five-year period reveals that in 2019, a low of 816,194 tons were recovered.

The most significant decrease over the 5-year period occurred from 2018 to 2019, when tonnage declined 24.1%. The drop in 2019 was due to a major industrial business reported lower tonnages compared to past years which came back up in 2020.

Over the five-year period, recovery decreased by an average of 52,060 tons, or 4.8%, annually. After removing the outliers for 2019, the average annual percentage change is 1.7%. The District believes this will be a more accurate trend to project industrial tonnage for the planning period.

The following figure presents the District’s historical industrial recovery totals from 2015 to 2019.

Figure F-1. Historical Recycling Analysis: Industrial Sector (2015-2019)



C. Industrial Recovery Projections

According to Ohio EPA’s Plan Format v4.1, there is not an industrial reduction/recycling goal for the reference year. The reported data shows that the District achieved a 67.6% recycling rate in the industrial sector during the 2019 reference year.

To project the total industrial sector recycling, the District used actual recycling totals for 2019 and 2020. Conservatively, recycling was projected to increase at half the average annual percentage increase from 2015 to 2018 (0.8%) through 2023. In 2023 the recycling tonnage is projected to reach the 5-year average tonnage amount as calculated in Table F-6b, so projections beyond are flatlined for the remainder of the planning period. Industrial sector recycling in the District is generally stable and mature. A few very large metal-based industries tend to be responsible for notable increases or decreases. These fluctuations are typically caused by changes in the supply and demand for products related to industries that are impacted by fuel prices. These trends can be challenging to forecast; therefore, trends based on historic recycling totals were used to develop projections for this sector. See **Table F-7** for actual and projected industrial sector recycling totals.

Table F-7. Industrial Recovery Projections

Year	Totals
2019	816,194
2020	1,004,633
2021	1,013,078
2022	1,021,594
2023	1,030,181
2024	1,038,841
2025	1,038,841
2026	1,038,841
2027	1,038,841
2028	1,038,841
2029	1,038,841
2030	1,038,841
2031	1,038,841
2032	1,038,841



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. R/C per capita generation rates have ranged from 5.9 to 6.9 pounds per person per day (PPD) from 2015-2019. The per capita generation rate for total generation has increased from 18.9 PPD to 21.4 PPD.

Table G-1. Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial		Industrial		Excluded (tons)	Total Generated	Per Capita Generation (ppd)	Annual % Change Total Generation			Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled				R/C	Ind	Ex	
2015	586,524	488,922	143,397	345,666	1,024,434	80,728	2,083,147	19.5	-	-	-	-
2016	585,759	479,279	160,471	331,453	1,016,505	63,565	2,051,273	19.2	1%	-2%	-21%	-2%
2017	580,873	502,208	154,381	492,140	1,019,917	62,302	2,230,948	21.0	3%	12%	-2%	9%
2018	582,053	511,416	149,489	462,510	1,075,829	78,336	2,277,580	21.4	1%	2%	26%	2%
2019	580,642	508,986	216,339	390,597	816,194	69,365	2,001,481	18.9	10%	-22%	-11%	-12%

Note: PPD = Per capita pounds per person per day

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

Sample Calculations (2019):

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

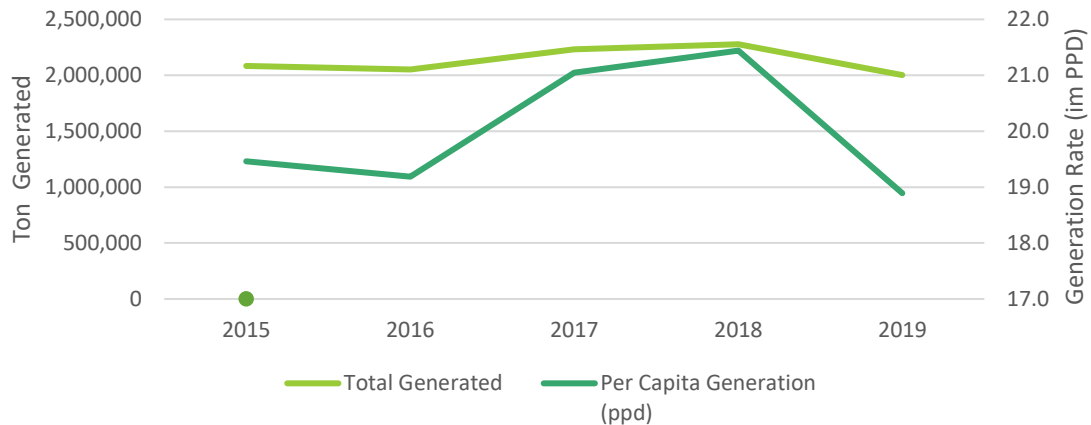
18.9 = (2,001,481 tons x 2,000) ÷ (365 x 580,642 residents)

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

-12.2% = (2,001,481 tons - 2,277,580 tons) ÷ 2,001,481 tons)

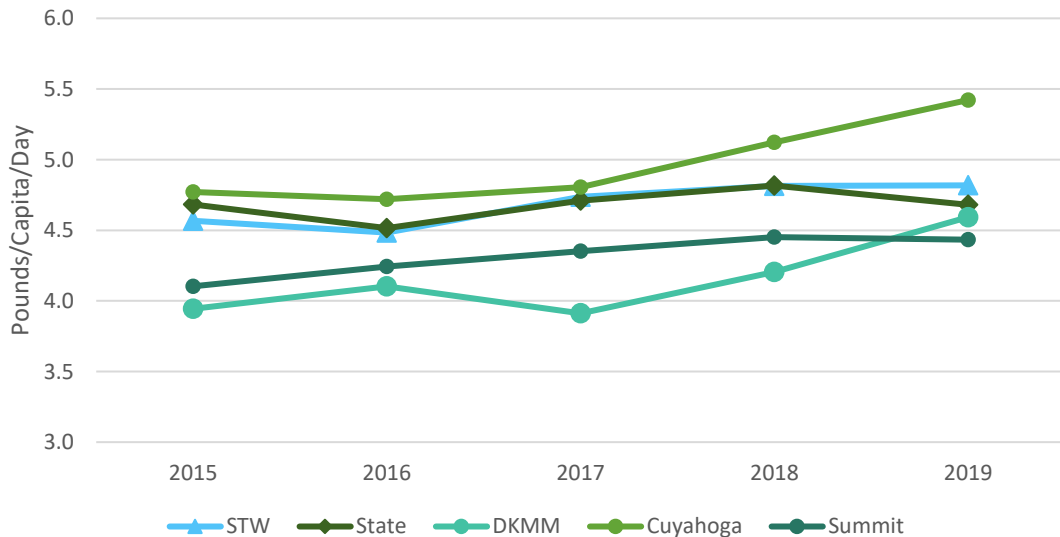
Figure G-1 shows the District's waste generation over a longer historical period. Both the tons generated and the generation rate have stayed steady since 2015.

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



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

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

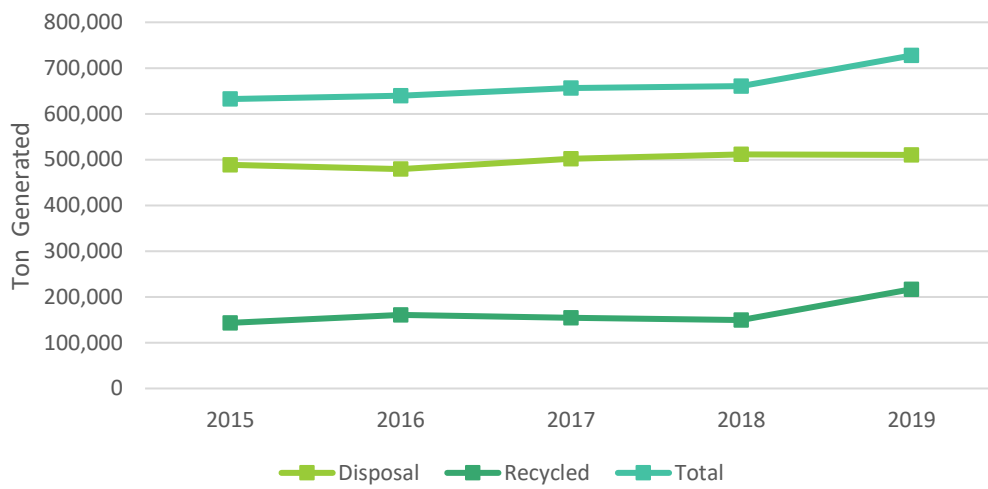


Most SMWDs that were analyzed in **Figure G-2** reduced generation rates from 2015 to 2019. Cuyahoga County SWMD and DKMM SWMD had slightly higher generation rates in 2019 compared to 2015. Generation rates also consider increased data collection in the recycling data. By 2019, the District had the second highest generation rate. Out of the comparable SWMDs, Summit-Akron had a significantly lower generation rate than all other SWMDs analyzed. Investigating Summit-Akron’s programming may provide opportunities to the District to further reduce its generation rate.

1. Residential/Commercial Waste

Total residential/commercial waste generation in the District has increased approximately 93,000 tons or 15% since 2015 as illustrated in **Figure G-3**. Disposal increased approximately 20,000 tons or 4% from 2015 to 2019, while recycling increased almost 73,000 tons or 51%.

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

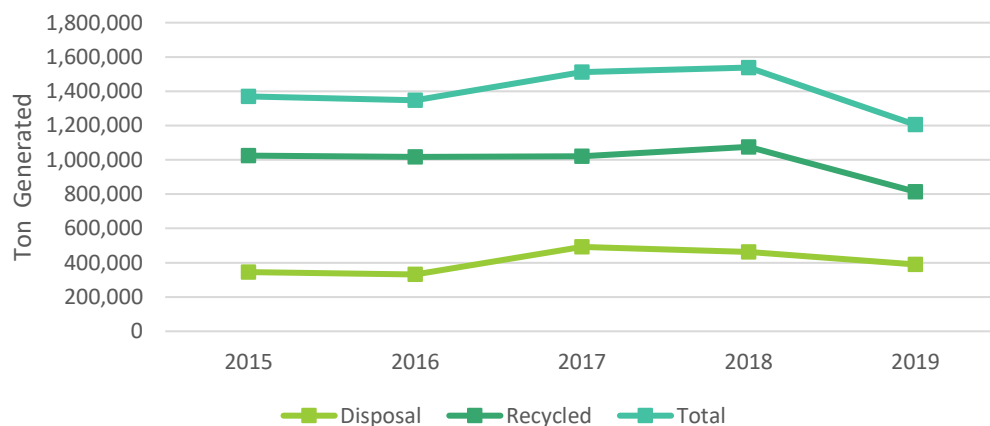
Year	Daily Per Capita Recycling (PPD)	Daily Per Capita Disposal (PPD)	Daily Per Capita (PPD)
2015	1.34	4.57	5.91
2016	1.50	4.48	5.98
2017	1.46	4.74	6.19
2018	1.41	4.81	6.22
2019	2.04	4.80	6.84

Per capita recycling rates have generally increased significantly over the past decade as drop-off recycling programs, yard waste composting programs, and curbside recycling programs have been improved throughout the counties. Overall generation increased a modest amount and disposal has increased almost a 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 declined from 2018 due to the decrease in industrial sales and higher accurate representation of data. Overall industrial sector generation has generally been decreasing from 2015 to 2019. Some major industries have closed or have reduced sales, which have significantly impacted the waste generation rates and recycling rates. As demonstrated in the following figure, disposal totals have decreased since 2015 while recycling has fluctuated and remained somewhat stagnant.

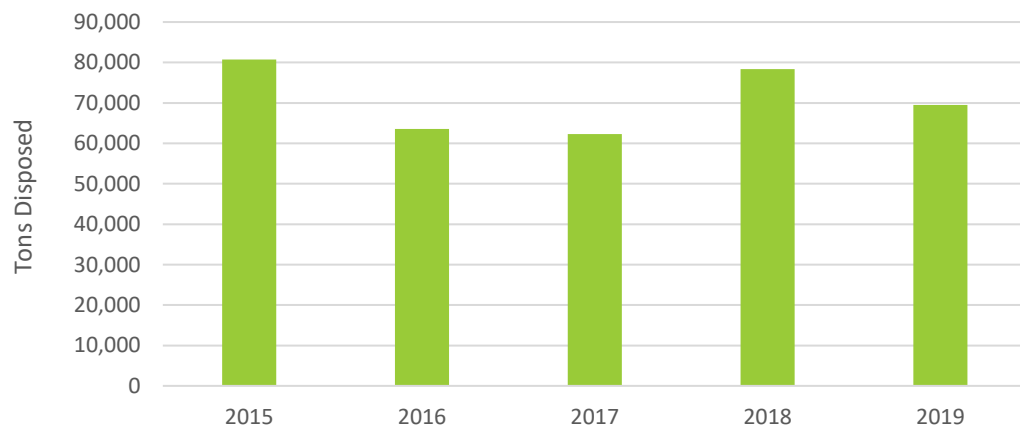
Figure G-4. District Industrial Waste Generation: 2015-2019



3. Excluded Waste

Excluded waste was determined to be less than 5.0 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 were developed in Appendices D, E and F for disposal and recycling for the residential/commercial and 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 through 2032.

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

Excluded waste is projected to remain constant at 2019 tons of 69,365 tons annually throughout the planning period.

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			
	2019	580,642	508,986	216,339	390,597	816,194	69,365	2,001,481	18.89	-----
	2020	579,886	515,096	201,132	396,936	1,004,633	69,365	2,203,703	20.82	10.1%
	2021	579,130	521,279	208,163	403,378	1,013,078	69,365	2,332,677	22.07	5.9%
	2022	578,374	527,536	209,080	409,924	1,021,594	69,365	2,247,763	21.30	-3.6%
First Year of Planning Period → X	2023	577,618	533,869	210,006	416,576	1,030,181	69,365	2,270,429	21.54	1.0%
	2024	576,861	540,277	210,942	423,337	1,038,841	69,365	2,293,362	21.78	1.0%
	2025	576,007	546,763	211,887	430,207	1,038,841	69,365	2,307,835	21.95	0.6%
	2026	575,152	553,326	212,841	437,188	1,038,841	69,365	2,322,509	22.13	0.6%
	2027	574,297	559,968	213,805	444,283	1,038,841	69,365	2,337,387	22.30	0.6%
	2028	573,443	566,690	214,779	451,494	1,038,841	69,365	2,345,083	22.41	0.3%
	2029	572,588	573,492	215,762	458,821	1,038,841	69,365	2,352,868	22.52	0.3%
	2030	571,747	580,376	216,755	466,267	1,038,841	69,365	2,360,746	22.62	0.3%
	2031	570,906	587,343	217,758	473,833	1,038,841	69,365	2,368,715	22.73	0.3%
	2032	570,065	594,393	218,771	481,523	1,038,841	69,365	2,376,779	22.85	0.3%



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, opportunities, and threats (SWOT) 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 Stark, Tuscarawas, and Wayne 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 30 subscription curbside communities in the District.

A. Curbside Recycling

Curbside recycling is a decentralized system of for-profit and government agency operations. The District does not operate/provide for curbside recycling services. The District encompasses 107 political entities. The standard set of single stream recyclable materials includes cardboard, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass.

1. Program Performance

In 2019, curbside recycling programs collected 11,204 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	2019 Population	2019 Occupied Households	Number of Drop-Offs	2019 Curbside Tons	Curbside Lbs./Household
City of Alliance	Stark	Non-subscription	21,446	8,859	1	1,182	267
City of Canal Fulton	Stark	Non-subscription	5,408	2,287	1	255	223
City of Canton	Stark	Non-subscription	70,447	31,981	3	1,706	107
City of North Canton	Stark	Non-subscription	17,176	7,129	0	1,241	348
Village of Hartville	Stark	Non-subscription	3,079	1,326	0	182	275
Village of Hills and Dales	Stark	Non-subscription	221	133	0	N/A	N/A
Village of Baltic	Tuscarawas	Non-subscription	776	233	0	51	435
Village of Bolivar	Tuscarawas	Non-subscription	970	439	0	83	378
Village of Dennison	Tuscarawas	Non-subscription	2,594	1,092	0	167	307
City of Dover	Tuscarawas	Non-subscription	12,723	5,083	2	865	340
Village of Gnadenhutten	Tuscarawas	Non-subscription	1,258	529	0	147	554
City of New Philadelphia	Tuscarawas	Non-subscription	17,410	7,361	1	484	131
Village of Strasburg	Tuscarawas	Non-subscription	2,688	1,168	0	265	454
Village of Sugarcreek	Tuscarawas	Non-subscription	2,234	902	1	211	469
City of Uhrichsville	Tuscarawas	Non-subscription	5,314	2,046	0	317	310
Village of Doylestown	Wayne	Non-subscription	3,067	1,267	0	128	202
City of Orrville	Wayne	Non-subscription	8,419	3,339	1	560	336
City of Rittman	Wayne	Non-subscription	6,506	2,711	0	327	241

Community	County	Curbside Type	2019 Population	2019 Occupied Households	Number of Drop-Offs	2019 Curbside Tons	Curbside Lbs./Household
Village of Marshallville	Wayne	Non-subscription	776	316	0	32	205
City of Wooster	Wayne	Non-subscription	26,394	10,977	2	1,470	268
City of Massillon	Stark	Subscription	32,584	13,630	2	1,530	225
Village of Narvarre	Stark	Subscription	1,812	739	0	N/A	N/A
Bethlehem Township	Stark	Subscription	3,523	450	0	N/A	N/A
Village of Meyers Lake	Stark	Subscription	565	333	0	N/A	N/A
Canton Township	Stark	Subscription	12,497	5,091	1	N/A	N/A
Jackson Township	Stark	Subscription	40,058	16,940	1	N/A	N/A
Lake Township	Stark	Subscription	26,911	11,226	2	N/A	N/A
Lawrence Township	Stark	Subscription	8,281	5,588	2	N/A	N/A
Village of Limaville	Stark	Subscription	144	80	0	N/A	N/A
Lexington Township	Stark	Subscription	5,233	2,276	1	N/A	N/A
City of Louisville	Stark	Subscription	9,360	3,847	1	N/A	N/A
Marlboro Township	Stark	Subscription	4,346	1,545	1	N/A	N/A
Nimishillen Township	Stark	Subscription	9,475	3,617	2	N/A	N/A
Village of East Canton	Stark	Subscription	1,576	627	0	N/A	N/A
Osnaburg Township	Stark	Subscription	3,994	2,295	1	N/A	N/A
Village of Minerva	Stark	Subscription	3,620	1,517	1	N/A	N/A
Paris Township	Stark	Subscription	3,750	2,240	2	N/A	N/A
Perry Township	Stark	Subscription	28,026	11,492	4	N/A	N/A
Village of East Sparta	Stark	Subscription	799	351	0	N/A	N/A
Pike Township	Stark	Subscription	3,137	1,625	3	N/A	N/A
Plain Township	Stark	Subscription	34,349	22,360	5	N/A	N/A
Village of Magnolia	Stark	Subscription	962	398	1	N/A	N/A
Village of Waynesburg	Stark	Subscription	908	378	0	N/A	N/A
Sandy Township	Stark	Subscription	2,033	1,512	2	N/A	N/A
Village of Beach City	Stark	Subscription	981	353	1	N/A	N/A
Village of Brewster	Stark	Subscription	2,153	835	1	N/A	N/A
Village of Wilmot	Stark	Subscription	304	130	1	N/A	N/A
Sugar Creek Township	Stark	Subscription	3,016	2,211	1	N/A	N/A
Tuscarawas Township	Stark	Subscription	5,828	2,244	1	N/A	N/A
Washington Township	Stark	Subscription	4,586	1,847	2	N/A	N/A

Table H-1.1 demonstrates that curbside recycling rates ranged from 107 lbs. to 554 lbs. per household (hh) per year during the reference year. Unfortunately, recovery data is not available for most of the subscription curbside programs to compare performance of subscription versus non-subscription.

For comparison, the following table shows the average pounds per household of curbside compared to those communities with curbside and drop-off. As seen the communities with one to two drop-offs available are achieving on average higher per household recovery.

Curbside Pounds per Household with Drop-offs

Number of Drop-offs	Average Curbside lbs/ Household*	Average Curbside + Drop-off lbs/ Household*	Average Population	Average Occupied Households	Number of Communities
0	337	337	4,019	1,660	11
1	285	392	10,983	4,550	5
2	278	347	23,900	9,897	3
3	107	112	70,447	31,981	1

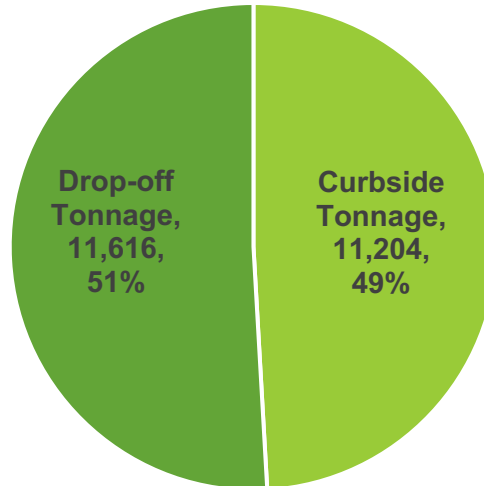
*Curbside programs with no reported tonnages were not included in the table.

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. Using the 400 lbs./hh/year as a benchmark, four communities are meeting or exceeding target recovery rates.

Best practices such as weekly collection, providing roll carts instead of bins, financial incentives, volume-based billing structure for waste, and increased education and outreach are proven ways to increase tonnage in a community. The District encourages these best practices to maximize the effectiveness of curbside recycling programs. While the District encourages these, both Canton and New Philadelphia prefer the smaller totes and from Table H.1-1 it appears they both are recovering less in their non-subscription curbside programs than other communities. Overall weekly collection programs are preferred by residents and result in greater compliance.

The following figure presents the total tons collected from curbside and drop-off programs by program type.

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



Curbside Challenges:

- Municipal program costs of operating curbside program exceed the rates charged to residents.
- Private sector is more equipped and has greater incentive to make efficiency upgrades, like automation, to stay at the forefront of the industry versus municipal programs.
- Trying to implement curbside recycling services in communities with no trash contract is difficult. Some local waste haulers are not equipped to provide curbside recycling and would not be competitive to provide the service which would result in lost contracts.

2. District Curbside Programs (Reference Year)

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 2019, the District provided information about potential Program Startup grant funding for curbside implementation to Lawrence Township (Tuscarawas County) and the Village of Minerva (Stark County).

Curbside Re-Start Program

There were no curbside cancellations during 2019. In the event of a cancellation, the District works to re-establish the curbside collection program if possible. When that is not possible, the District evaluates the community for a recycling drop-off site.

Community Assistance Program

While the District is striving to improve recovery rates across all District sites, in 2019 it focused on the following sites which were targeted due to high population or high dumping/contamination: Plain Township (specifically Diamond Park drop-off) in Stark County, Wooster Buehler's (Wayne County), New Philadelphia Buehler's (Tuscarawas County) and Mill Township (Tuscarawas County). In addition to working on installing the new bin decals and site signage at these locations and working with some of them on site improvements that may aid recovery (like cameras or fencing/gates), the District's Outreach Coordinator recruited some Master Recyclers and formed contamination teams at these locations, which allowed for in-person engagement with residents at those sites.

PAYT Promotion Efforts

There were no new pay-as-you-throw or volume-based programs implemented in 2019.

Implement Curbside Recycling for Targeted Areas

As stated previously, the District did provide information about potential Program Startup grant funding for curbside implementation to Lawrence Township (Tuscarawas County) and the Village of Minerva (Stark County); however, in lieu of the market changes, the District has prioritized offering support to communities with existing programs especially those with higher populations. As such, the District worked closely with the Cities of Canton and New Philadelphia because they operate their own collection programs and were also hit hard by the National Sword.

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 2019, the District provided information about potential Program Startup grant funding for curbside implementation to Lawrence Township (Tuscarawas County) and the Village of Minerva (Stark County).

3. 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.

4. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Most of the cities and several villages in the District have curbside recycling including all three of the largest cities in each county of the District, and the majority of these programs are non-subscription.
- A combination of community and private sector haulers/service providers meet the needs for curbside recycling which eliminates the need for the District to provide this service.

Weaknesses/Challenges

- Lack of strategies to implement new curbside recycling in political subdivisions.
- Limited support with political subdivisions when contracts are nearing renewal time to make contract adjustments that will maximize recycling collected.
- Limited ability for political subdivisions that operate their own programs to make upgrades that would maximize volume of recyclables collected or collection efficiency (example, upgrading to 65-gallon carts).
- Resistance to new curbside program implementation from waste management companies that do not offer recycling services.

Opportunities

- Approach the Mayor of the only municipality without a curbside program in the District about exploring a curbside program
- Target 2-3 villages without curbside programs in the District with outreach and education flyers that summarize the value of curbside recycling programs.
- Conduct workshops with 2-3 villages that do not have curbside programs in the District to promote curbside recycling and the technical assistance the District could provide in creating the program and funding opportunities.
- The District can promote and utilize Program Startup Grants to incentivize communities to start a new curbside program via flyers, mailers, social media or other direct engagement strategies.
- The District can promote and utilize mini-grants to incentivize communities to include recycling when they bid out curbside waste programs via flyers, mailers, social media or other direct engagement strategies.
- The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent curbside recycling from expanding to rural and village communities in the District.

Threats

- The waste management companies that provide service to the political subdivisions that operate their own programs increased rates for acceptance of recyclable materials due to the market decline, threatening the sustainability of those programs.
- The waste management companies that provide service to villages and cities are not interested in providing service to townships even though some have expressed interest.

B. Drop-Off Recycling Infrastructure

The District coordinates the drop-off program that consists of 76 full-time sites and 1 part-time site. The District collects 59 sites while 18 are collected by a private hauler. 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 Map

The District worked with its website company to create a facility locator tool on the District website which leads residents to drop-off sites for all different types of recyclables and special wastes and provides essential information about those sites like directions, phone number, etc.

Drop-Off Promotion Program

With the District's receiving a 2019 Community and Litter Grant for contamination awareness and reduction, we worked with several communities to help inform their residents about the new decals, signs and other changes.

2. Analysis and Evaluation

In 2019, the annual tonnage collected from individual sites ranged from 13 tons to 403 tons (Jackson Recycling Center had 1,197 tons but was not

included as outlier). The average tonnage collected at each site was 130 tons.

The total tons of traditional recyclables accepted was 11,616 in 2019 (see **Table H-1.3**). The following table presents the drop-off recycling infrastructure available in each community during the reference year.

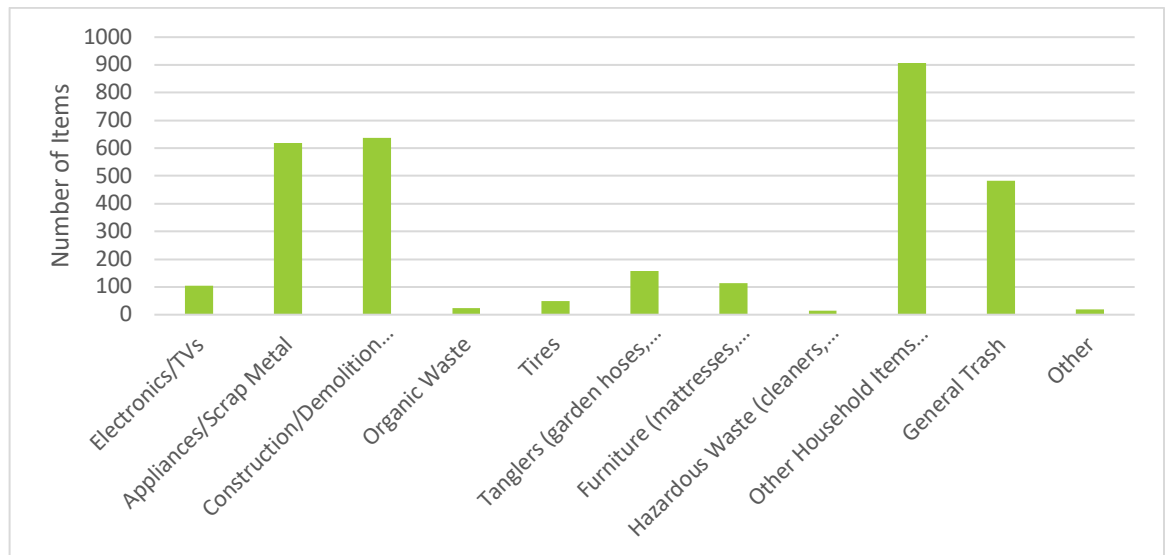
Table H-1.2: Drop-off Recycling Sites during 2019

Community	County	Number of Drop-Off Sites	Drop-off Tonnage	Has Curbside Program?
City of Alliance	Stark	1	0	Non-subscription
City of Canal Fulton	Stark	1	214	Non-subscription
City of Canton	Stark	3	91	Non-subscription
Canton Township	Stark	1	251	Subscription
Jackson Township	Stark	1	1,197	Subscription
Lake Township	Stark	2	730	Subscription
Lawrence Township	Stark	2	510	Subscription
Lexington Township	Stark	1	64	Subscription
City of Louisville	Stark	1	403	Subscription
City of Massillon	Stark	2	289	Subscription
Village of Minerva	Stark	1	223	Subscription
Village of Navarre	Stark	2	246	Subscription
Nimishillen Township	Stark	2	368	Subscription
Osnaburg Township	Stark	1	104	Subscription
Paris Township	Stark	2	83	Subscription
Perry Township	Stark	4	797	Subscription
Plain Township	Stark	5	1,213	Subscription
Village of Beach City	Stark	1	55	Subscription
Village of Brewster	Stark	1	172	Subscription
Tuscarawas Township	Stark	1	194	Subscription
Village of Wilmot	Stark	1	41	Subscription
Marlboro Township	Stark	1	88	Subscription
Pike Township	Stark	3	195	Subscription
Sandy Township	Stark	2	166	Subscription
Village of Magnolia	Stark	1	41	Subscription
Washington Township	Stark	2	148	Subscription
City of Dover	Tuscarawas	2	285	Non-subscription
City of New Philadelphia	Tuscarawas	1	402	Non-subscription
Village of Sugarcreek	Tuscarawas	1	78	Non-subscription
Dover Township	Tuscarawas	1	13	No
Fairfield Township	Tuscarawas	1	36	No
Franklin Township	Tuscarawas	2	210	No
Jefferson Township	Tuscarawas	1	66	No
Mill Township	Tuscarawas	1	222	No
Oxford Township	Tuscarawas	1	256	No

Community	County	Number of Drop-Off Sites	Drop-off Tonnage	Has Curbside Program?
Warwick Township	Tuscarawas	1	55	No
Wayne Township	Tuscarawas	2	149	No
City of Orrville	Wayne	0	108	Non-subscription
City of Wooster	Wayne	2	298	Non-subscription
Sugar Creek Township	Wayne	1	99	Subscription
Village of Apple Creek	Wayne	1	165	No
Baughman Township	Wayne	1	59	No
Chester Township	Wayne	1	85	No
Chippewa Township	Wayne	1	75	No
Congress Township	Wayne	1	51	No
Village of Creston	Wayne	1	60	No
Village of Dalton	Wayne	1	194	No
Milton Township	Wayne	1	62	No
Paint Township	Wayne	1	46	No
Salt Creek Township	Wayne	1	59	No
Village of Shreve	Wayne	1	196	No
Village of Smithville	Wayne	1	163	No
Village of West Salem	Wayne	1	76	No
Wooster Township	Wayne	1	168	No
Total		22	11,616	0

Figure H-1-2 shows the most common items dumped at the drop-off locations is household items such as clothing, shoes, bedding, and toys.

Figure H-1.2. Materials Dumped and Removed at Drop-off Locations

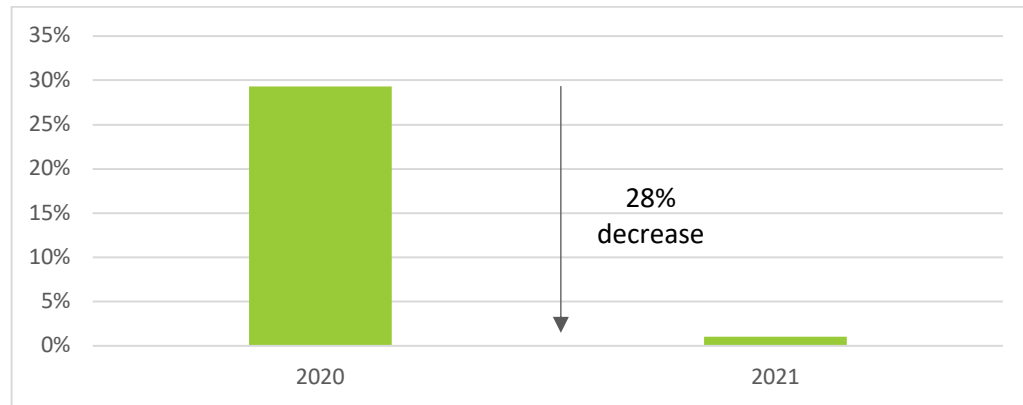


Drop-off location improvements like gates and cameras helped to deter dumping and identify illegal dumpers. More enforcement of illegal dumping

curtailed future dumping. Prompt clean-up of contamination and dumped items also curtailed future contamination and dumping.

Figure H-1-3 shows the measured percentage of contaminated loads at the drop-off locations between 2020 and 2021.

Figure H-1.3. Measured Percentage of Contaminated Loads at Drop-off Locations

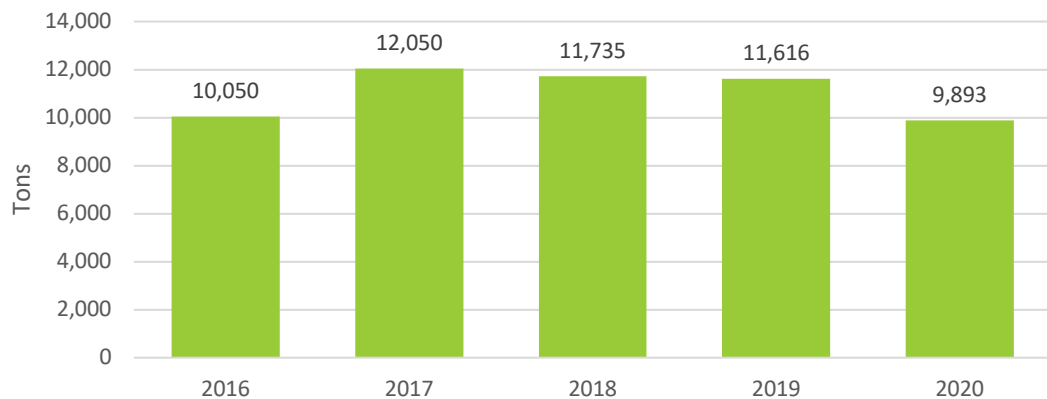


The number of contaminated loads declined by 28% in 2021 by implementing additional best practices. In August of 2020, the District had completed the tasks of adding clear signage and bin decals on all containers. This made a tremendous positive impact to decrease the number of contaminated loads.

Drop-off Challenges:

- Dumping at drop-off locations at drop-off locations in denser populated/more urban areas as well as bins located closer to apartment buildings.
- Placement of clothing/household item donation bins near recycling drop-off bins tend to increase contamination and dumping.

Figure H-1.4. Tons of Drop-off Recyclables 2016-2019



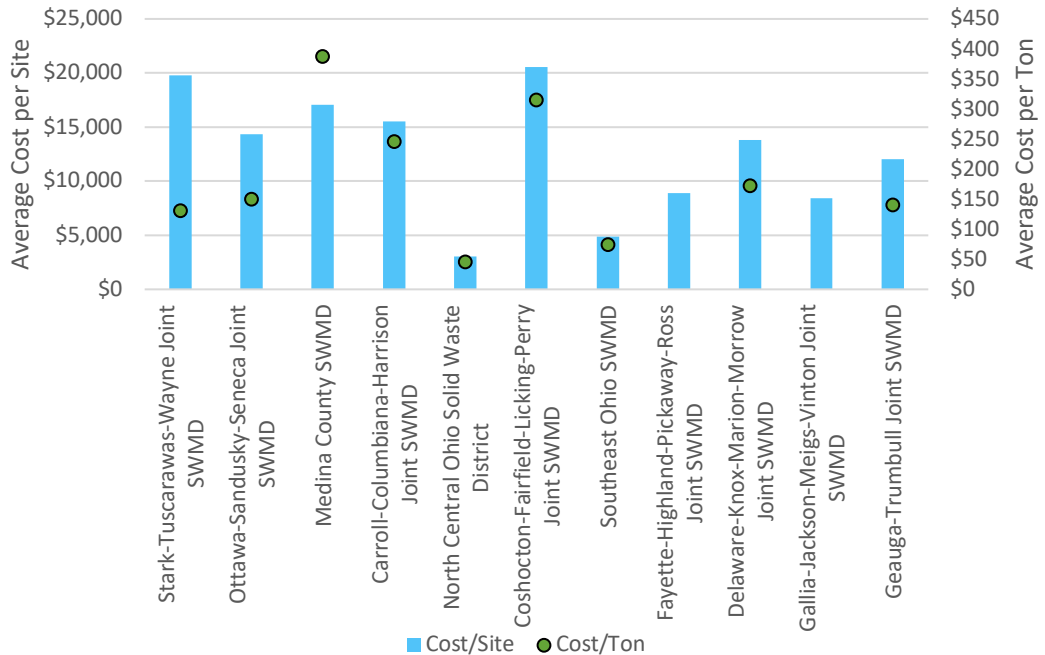
Comparing the District's program to others in the state. Districts were chosen based on contracting or supporting their drop-off program.

Table H-1.3: Drop-off Program Comparison to Other Districts

District	Data Year	Tons	Sites	Cost	Cost/ Site	Population	Cost/ Ton	Cost/ Capita	Hauler
Stark-Tuscarawas-Wayne Joint SWMD	2019	11,616	77	\$1,521,922	\$19,765	583,531	\$131	\$0.03	District
Ottawa-Sandusky-Seneca Joint SWMD	2019	4,121	43	\$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
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

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 second highest number of sites and cost in the group of eleven. Though this shows the program cost to be higher than some other Districts, it shows the importance the District has for providing recycling access to their residents. As shown in Figure H-1.3, the District has a higher cost per site, but there is a lower average cost per ton collected by the program.

Figure H-1.5. Drop-off Program Comparison to Other Districts: Cost per Site and Cost per Ton



3. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Excellent data on the drop-off program.
- All of the District’s drop-off locations have been strategically chosen to maximize the accessibility of each site to the public.
- All District drop-off sites now have updated decals, the highest volume sites have new signage, and the sites with the most dumping have camera systems or have been relocated/redirected to a site with better infrastructure.
- Lytx’s DriveCam coaching program has improved driver safety.

Weaknesses/Challenges

- The "evolving ton," whereby actual tonnage collected has decreased, but volume is increasing resulting in increased expenses.
- Dumping and contamination at District sites continues though it has significantly decreased.
- Acquiring and retaining part-time drivers has been a struggle.
- Messaging and outreach to residents to collect acceptable recycling
- Fueling our fleet of trucks may not be the most cost efficient.
- Lack of community and private sector involvement in drop-off recycling has required the District to take an active role in providing this service.

Opportunities

- Utilize existing full-time drivers to work weekend days/overtime hours to cover typical part-time driver hours.
- Incentive full-time drivers to increase their certification from a Class B to a Class A CDL and continue to enhance their safe driving ability.
- Continue exploring the benefits of leasing versus owning recycling trucks.
- Employ additional camera systems and enforcement to reduce contamination and drop-off site abuse as the budget allows.
- Conduct surveying activities at targeted drop-off sites to communicate participation requirements as well as to ascertain why residents use the sites and what they know on correct recycling.
- Add open dump ORC language on signs at recycling drop-off sites to drive home the message that dumping materials not accepted at the sites is against the law and there are penalties for breaking the law.
- Create an information sheet receptacle at each drop-off or targeted drop-off sites that includes detailed acceptable and non-acceptable materials for the program.
- Explore cost of compressed natural gas, fuel cell, electric, biodiesel, etc. for District collection vehicles to determine if long term cost savings could be achieved.
- The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent drop-off recycling from expanding in the District.
- Create temporary site signage about site-specific issues that could draw more attention than permanent signage and could be used across multiple sites.

Threats

- Conditions at drop-off can lead to political subdivision to ask for removal of site.
- Overflow of bins can attract dumping.
- Lack of infrastructure can aid illegal dumping.

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

This analysis considers both commercial **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 number and type of businesses in Stark, Tuscarawas and Wayne Counties, the largest employers, and geographic considerations. The District used the *U.S. Business Database. Rep. Reference USA. Web. 1 Sept 2021* for this analysis.

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 property.

Based on this definition, there were approximately 6,900 commercial/institutional establishments in STW during the reference year. **Table H-2.1** shows the number of commercial/institutional establishments within each North American Industry Classification System (NAICS) code.

Table H-2.1. Commercial/Institutional Establishment Statistics

NAICS Code	NAICS Description	Number of Commercial/ Institutional Establishments
42	Wholesale Trade	729
44-45	Retail Trade	3,029
48-49	Transportation and Warehousing	369
51	Information	347
52	Finance and Insurance	1727
53	Real Estate and Rental and Leasing	833
54	Professional, Scientific, and Technical Services	1701

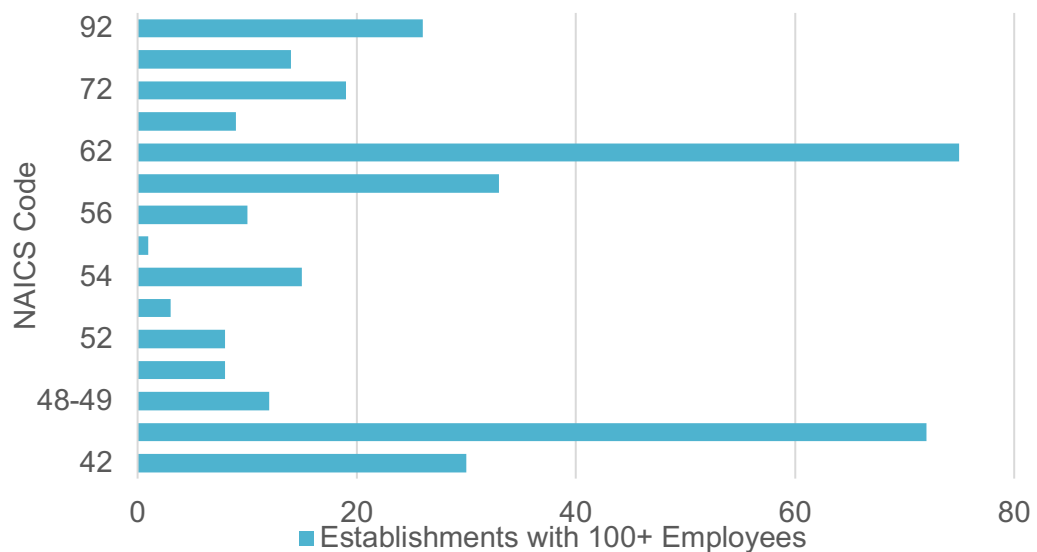
NAICS Code	NAICS Description	Number of Commercial/ Institutional Establishments
55	Management of Companies and Enterprises	35
56	Administrative and Support and Waste Management and Remediation Services	763
61	Educational Services	580
62	Health Care and Social Assistance	5,410
71	Arts, Entertainment, and Recreation	402
72	Accommodation/Food Service	1346
81	Other Services (Except Public Administration)	2848
92	Public Administration	895

Source: U.S. Business Database. Rep. Reference USA. Web. 1 Sept 2021

As shown in **Table H-2.1**, the majority of commercial/institutional businesses in the District are health care and social assistance entities, retail trade enterprises, and businesses providing other services.

Based on the District’s analysis, 65 or approximately 1.2% of all commercial and institutional establishments have at least 100 employees. **Figure H-2.1** shows the number of establishments in each NAICS code that have at least 100 employees.

Figure H-2.1. Establishments with at Least 100 Employees



Source: U.S. Business Database. Rep. Reference USA. Web. 1 Sept 2021
 The types of businesses that have the most establishments that employ at least 100 people include NAICS code 44 (retail trade), NAICS code 62 (health care and social assistance), and 42 (wholesale trade).

Table H-2.2 identifies the top employers in the District (for all sectors).

Table H-2.2. Top Employers in the District (450+ employees)

Company Name	City	NAICS	Employees
Atlas Technologies	Canton	48	3,800
Aultman Hospital	Canton	62	3,500
Cleveland Clinic Mercy Hospital	Canton	62	2,076
Elms Country Club	North Lawrence	71	1,200
Canton City Offices*	Canton	92	1,000
Fisher Foods Inc*	North Canton	44	824
Aultman Alliance Community Hospital	Alliance	62	777
LuK USA LLC	Wooster	81	750
Universal Media Syndications	North Canton	54	700
YMCA	Canton	62	601
Aultcare	Canton	52	600
Suarez Corp Industries	Canton	54	600
Coastal Pet Products Inc	Alliance	45	500
College-Wooster Andrews Library	Wooster	51	500
CommQuest Service	Canton	54	500
Fresh Mark Inc	Massillon	42	500
OARDC	Wooster	62	500
Superiors Brand Meats Inc	Massillon	44	500
Walmart Supercenter*	New Philadelphia	45	475
Ohio State University Ext	Wooster	61	450
University Of Mt Union	Alliance	61	450

Source: U.S. Business Database. Rep. Reference USA. Web. 1 Sept 2021

*Indicates establishment responded to the District’s annual recycling survey and that the business reported recycling during the reference year.

2. Industrial Establishments

Over 1,000 industrial businesses operated in the District during the reference year. Unlike commercial and institutional establishments, typically industrial businesses have just one location in the District. **Table H-2.3** shows the number of industrial business within each North American Industry Classification System (NAICS) code, as well as the average staff employed by each industrial business for each NAICS code.

Table H-2.3. Industrial Statistics

NAICS Code	NAICS Description	Number of Industrial Establishments
22	Utilities	7
31	Manufacturing: Food and Apparel	31
32	Manufacturing: Wood, Paper, Printing, Chemical, and Plastics	85
33	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.	204

Source: U.S. Business Database. Rep. Reference USA. Web. 1 Sept 2021

About 50% of industrial businesses have an employment of 10 or more individuals. Similar to commercial and institutional establishments, only a small percent of industrial businesses (7.6%) have a staff of greater than 100 employees. However, there are 25 industries with more than 250 employees; the top 25 industrial sector employers are presented in **Table H-2.4**.

Table H-2.4. Largest Industrial Sector Employers

Company Name	City	NAICS	Employees
Crisco	Orrville	31	1,800
Timken Co	North Canton	33	1,800
JM Smucker Co	Orrville	31	1,500
Fresh Mark Inc	Canton	31	999
Smucker Co	Orrville	31	800
Sugardale Foods Inc	Canton	31	800
Workshops	Canton	32	754
Alfred Nickles Bakery Inc	Navarre	31	700
Republic Steel	Canton	33	600
Case Farms Canton Div	Canton	31	500
Gradall Industries Inc	New Philadelphia	33	500
Pricefitters.Com	Louisville	33	500
Mac Trailer Mfg Inc	Alliance	33	467
M K Morse Co	Canton	33	400
Shearer's Foods Inc*	Massillon	31	400
Cooper-Standard	New Philadelphia	33	350
Republic Steel	Canton	33	350
Frito-Lay Inc*	Wooster	31	328
Aleris	Uhrichsville	33	300
Alliance Casting*	Alliance	33	300
Flex Technologies Inc*	Midvale	33	300
Hendrickson Trailer Coml	Canton	33	300
Marathon Petroleum Canton*	Canton	32	300
PTC Alliance Corp	Alliance	33	300
Republic Steel	Massillon	33	300

Source: U.S. Business Database. Rep. Reference USA. Web. 1 Sept 2021

*Indicates establishment responded to the District's annual recycling survey and that the business reported recycling during the reference year.

The District received recycling data from 5 out of 25 largest industries and 12 industries with over 100 employees in the District during the reference year.

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

Material	Company	Address	City	State
Scrap Metal	Broadway Iron & Metal, Inc.	300 S Mahoning Ave	Alliance	OH
Scrap Metal	FPT Canton	1514 Maple Ave NE	Canton	OH
Scrap Metal	Slesnick Iron & Metal	927 Warner Rd SE	Canton	OH
Cardboard, Mixed Paper	S Slesnick Company	700 3rd St SE	Canton	OH
Scrap Metal	PSC Metals, Inc.	359 State Ave NW	Massillon	OH
Cardboard, Scrap Metal	Gale's Recycle It	354 Florence Ave	Dover	OH
Scrap Metal	Speedie Salvage Scrap Recycling	7021 Eberhart Rd NW	Dover	OH
Scrap Metal	Wallick's Scrap Metal	6474 Baertown Rd NW	Dover	OH
Cardboard, Mixed Paper, Scrap Metal, Plastic	Wayco Recycling Center	7679 Burbank Rd	Wooster	OH
Wood	Millwood Inc.	8208 S Kohler Rd	Apple Creek	OH
Scrap Metal	PSC Metals, Inc.	3101 Varley Ave SW	Canton	OH
Scrap Metal	PSC Metals, Inc.	780 Warmington Rd SW	Navarre	OH
Cardboard, Mixed Paper, Scrap Metal, Plastic	Republic Services of Ohio LLC	964 Hazel Street	Akron	OH
Paper	River Valley Paper Company	120 East Mill Street #337	Akron	OH
Scrap Metal	Bennet's Appliance Centers	1300 W High St	Orrville	OH
Cardboard, Scrap Metal	Wayco Automotive Inc	7679 Burbank Rd	Wooster	OH
Electronics	JEDCO Computers	130 North Wardell St.	Uhrichsville	OH
Cardboard, Mixed Paper, Scrap Metal, Plastic	Sanmandy Enterprises	2454 Steiner Rd.	Creston	OH
Scrap Metal	FPT Cleveland	8550 Aetna Road	Cleveland	OH
Scrap Metal	FPT Massillon	741 3rd Street NW	Massillon	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 also process commingled recyclables, such as Kimble and Rumpke. Information on processing capacity in the region is provided in Section H-13.

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 814,433 tons of waste and disposed 390,597 tons. The tons of industrial waste disposed and recycled, including the types of materials recycled, are discussed in more detail in Section H-7, *Diversion Analysis*. **Figure H-2.2** provides the breakdown of the type of recyclables recovered during the reference year.

Figure H-2.2. 2019 Industrial Sector Recyclables Recovered by Material (in percent of total)



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 between 2015 and 2019.

Table H-2.6. 2015-2019 Industrial Recycling Tons by Material

Material	2015	2016	2017	2018	2019
Food	1,800	6,331	1,796	1,064	1,065
Glass	20	28	22	19	9
Ferrous Metals	720,534	723,862	695,856	733,148	501,985
Non-Ferrous Metals	5,546	4,010	4,046	543	4,993
Cardboard	236,013	240,826	283,233	297,673	281,139
Paper	12,733	16,102	4,725	2,304	1,845
Plastics	8,795	2,047	2,125	4,934	4,646

Material	2015	2016	2017	2018	2019
Wood	19,800	18,556	16,528	25,344	11,163
Commingled Recyclables (Mixed)	276	390	5,204	6,285	7,588
Rubber	-	-	-	773	-
Non-Exempt Foundry Sand	18,549	3,742	3,742	3,742	-
Incineration	-	-	2,640	-	-
Miscellaneous	367	302	-	-	-
Dry-cell batteries	3	2	-	-	-
Grand Total	1,024,434	1,016,197	1,019,917	1,075,829	814,433

As demonstrated in **Table H-2.6**, there have been fluctuations in these quantities during the last five years. 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. There was a great decrease in recycling due to a major processor sharing a detailed breakdown of commercial and industrial sector when in the past all of the broker's materials were said to be industrial. Other factors that contribute to variations in tonnage include economic factors, energy/fuel pricing, and other economic issues.

3. District Business and Industry Recycling Assistance Programs

The District provides direct assistance to businesses through information on its website, technical assistance, waste audits, and other services, including the following programs:

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 October 2019, a waste assessment was performed for the Akron-Canton Airport in partnership with Summit Reworks. The assessment included understanding current diversion programs in place, conducting a waste sort, and writing a results and recommendations report. The results are in the below table.

Day/Date of Waste Sort	Location	# of Bags Weighed	Total Sample Weight	Pounds				Percentage by Weight			
				Food Waste and Compostable Items (FS)	Single Stream Recyclables (SSR)	Other	Trash	Food Waste and Compostable Items	Single Stream Recyclables	Other	Trash
10/23/19	#1	10	93.5	54.0	5.0		34.5	57.50%	5.35%	0.00%	36.90%
10/23/19	#2	10	127.0	-	27.5		99.5	0.00%	21.65%	0.00%	78.35%
10/23/19	#3	10	72.0	9.0	15.0		48.0	12.50%	20.83%	0.00%	66.67%
10/23/19	#4	10	120.0	13.0	18.0		89.0	10.83%	15.00%	0.00%	74.17%
	TOTAL	40	412.5	76.0	65.5		271.0	18.42%	15.88%	0.00%	65.70%

The assessment provided the following recommendations for Akron-Canton Airport to implement:

- Maintain scrap metal, battery and automotive fluid recycling and add a method to track weights from these efforts. Re-evaluate existing cardboard recycling program.
- Utilize waste assessment results as a baseline to identify and restructure recycling, increase waste diversion and waste reduction efforts and to measure the impact of future recycling and waste reduction activities.
- Schedule an additional observation meeting to gather more information on how this food scrap and food waste can be managed through reduction or diversion practices. Implement a cooking oil collection for restaurants located onsite, if not currently collecting.
- Review procedures for future single stream recycling program based on operational decisions to collect and sort material and combine with cardboard collection for a complete single stream recycling operation.
- Create and oversee a plan to educate and monitor the quality of material collected through recycling, waste diversion, and waste reduction efforts. This includes assigning the responsibility of the airport’s sustainability goals to a member of the airport staff. (Note: The report included an example calculation sheet and measurement tool for the airport).
- Establish a method to measure and track the weight of material being collected in existing and new recycling/waste reduction/reuse efforts, including trash quantities.
- Pursue other environmentally sustainable solutions for the future of the airport. Research funding available through the Summit County for energy efficiency upgrades and air quality. Incorporate water bottle hydration stations for the general public.
- Review existing service level for the removal of solid waste/trash to establish perimeters of service to gather competitive bids for trash and recycling service.

b. Waste Assessment & Audits: Waste Audit Manual

The District completed the Waste Audit Manual in 2008. The manual was available on the website. Printed copies were available upon request. District continues to look at potential different ways to assist with waste audits.

c. Collection Services: Campaign to reduce commercial use of residential yard waste drop-off sites

The District provided assistance to established yard waste sites in the form of grant funding for signs and cameras to reduce commercial dumping. This was also communicated to host sites as a reminder; with the introduction of the Yard Waste Host Site Block Grant Program in 2018, the District was able to de-incentivize sites from encouraging commercial users at the sites as any hauling expenses that exceed the block grant amounts would have to be absorbed by the host sites.

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

The District provided resources for the commercial and industrial sector on its website which included information about grant opportunities, managing special materials such as food or construction waste, low-cost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals. Printed copies of the Waste Audit Manual and Office Recycling Guide were available upon request. In addition, waste audit assistance by District staff was available upon request. Audits could be requested via email, telephone, or by responding the Annual Recycling Survey. In 2019, audits were requested and assisted with for the Akron-Canton Airport in partnership with Summit Reworks.

D. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- The District offers waste audit assistance for the commercial and industrial sectors.
- Commercial businesses may use our facility locator to identify recycling options.
- Both sectors recycle a significant amount of materials annually.

Weaknesses/Challenges

- Royal Oaks locations are not advertised by District.
- Program is underutilized.

-
- The District doesn't fund bins or service for commercial businesses.
 - Lack of promotion of available recycling haulers and Ohio EPA's Materials Marketplace
 - The District doesn't fund bins or service for industrial businesses.

Opportunities

- Further develop and promote resources to aid the commercial sector on the District website
- Hire a commercial/industrial specialist to provide technical assistance, outreach and education and other value-added services to increase recycling and data collection on recycling activities throughout the District.
- Work with area chamber of commerce initiatives to promote the District's programs and to provide technical assistance to this market segment.

Threats

- Most businesses engage directly with the private sector where market forces drive the level of service and service options.

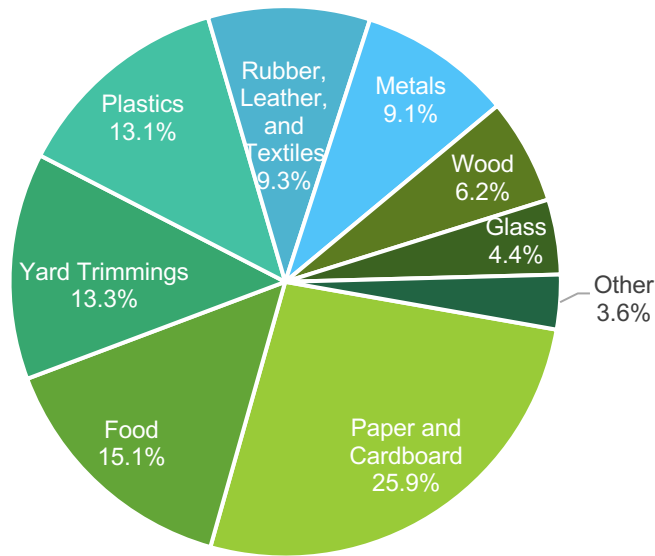
SECTION H-4. Residential/Commercial Waste Composition Analysis

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.

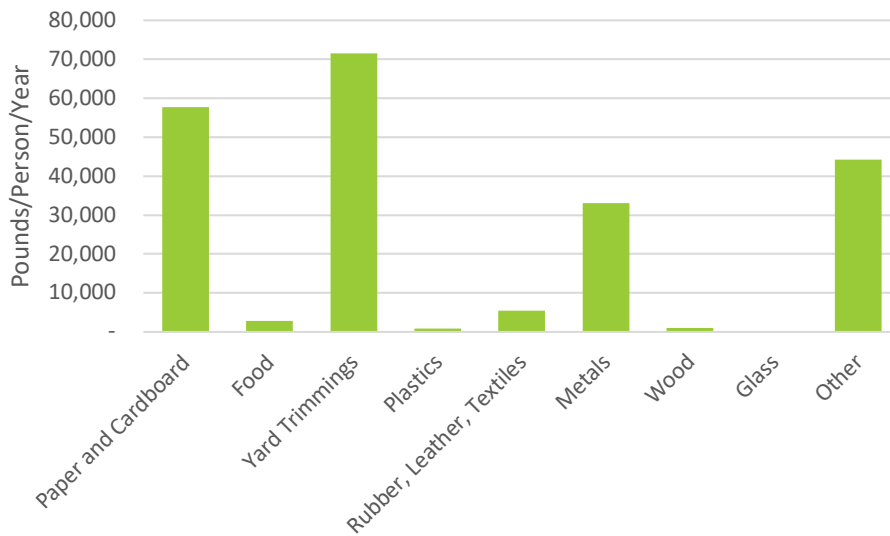
Figure H-4.1. U.S. Residential/Commercial Waste Composition by Weight: 2015



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

Applying the percentages in **Figure H-4.1** to the total residential/commercial generation for the District yields the tonnages by material type as shown below in **Figures H-4.2** and **H-4.3**. Based on the US EPA waste composition estimates, the District generates nearly half as much paper and paperboard in the residential/commercial sector.

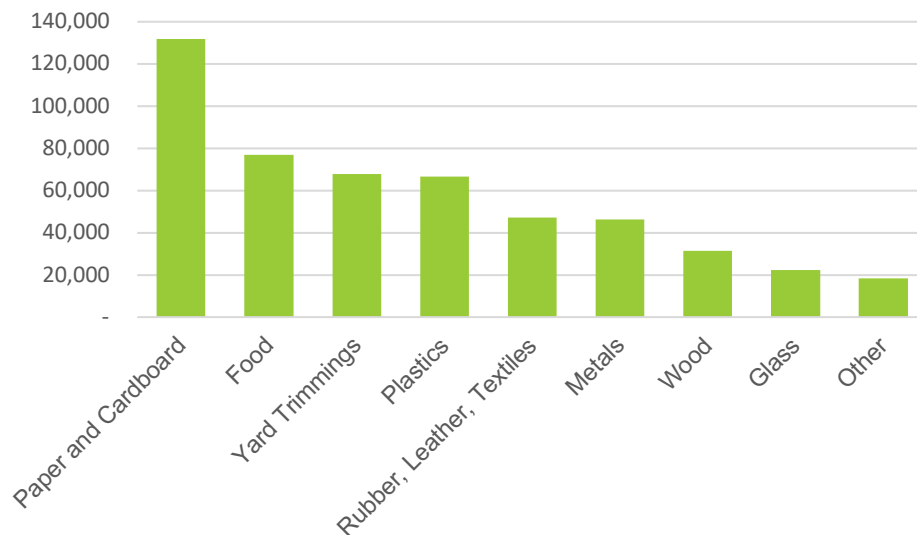
Figure H-4.2. Estimated Residential/Commercial Total Generation by Material Type: 2019



Note: "Other" includes commingled recyclables

Figure H-4.3 shows annual per capita waste generation by material based on US EPA estimates. *Per capita* waste generation ranges from almost 454 pounds per person/year for "Other" to almost 63 pounds per person per year for paper and paperboard. "Other" includes all other materials, such as diapers, feminine products, bio-hazard materials/sharps, dirt, rock, electronics, HHW, and unrecyclable paper coated with foil or plastic.

Figure H-4.3. District Per Capita Residential/Commercial Generation by Material Type: 2019 (Based on US EPA estimates)



B. Yard Waste Programs

1. Processing

Based on Ohio EPA reports, 25 Class II, III and Class IV composting facilities processed District yard waste in 2019. There were 20 located within the District. **Table H-4.1** identifies these facilities and the amount of material processed originating from within the District.

Table H-4.1. Class III and IV Compost Facilities and Processing Data

Facility	In-District Yard Waste Processed (TPY)	Out-of-District Yard Waste Processed (TPY)	Percent of Yard Waste Originating from the District
Earth 'N Wood Products Inc	45,966.03	0.00	100%
Mr Mulch	4486.68	0.00	100%
Stark C & D Disposal Inc	938.19	0.00	100%
Uniontown Topsoil & Mulch LLC	669.9	0.00	100%
Warstler Bros Landscaping	82.83	0.00	100%
Weisgarber Trucking Inc	356.4	0.00	100%
Yoder Landscape & Nursery Inc	270.60	0.00	100%
Black Snake Composting Facility	40.5	0.00	100%
Bull Country Composting	12,487.53	0.00	100%
Kimble Sanitary Landfill	526.02	3,224.20	14%
Tuscarawas, Village of	59.40	0.00	100%
Kellys Kompost	29.7	0.00	100%
OARDC Ohio Agriculture Research	14.85	0.00	100%
Orrville Composting Facility	82.75	0.00	100%
Paradise Composting Class II	1,792.83	0.00	100%
Paradise Lawn Care Inc	465.47	0.00	100%
Tope's	56.10	0.00	100%
Village of Shreve	135.3	0.00	100%
Wayne Lawn and Landscape	48.51	0.00	100%
Zollinger Sand & Gravel Co	757.02	1,679.37	31%
Andre Farms LLC*	0.00	5,370.54	0%
Number One Landscape	19.47	1,174.35	2%
Smith Bros Inc	1,123.32	8,984.58	11%
B-Sharp Property Maintenance	226.42	125.36	64%
Pro Tree & Landscape Co	66.00	561.00	11%

*Takes food waste and non-creditable materials.

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 does maintain contact with the largest facility in each county for the purpose of ensuring they have adequate capacity and their operations are running smoothly.

2. Residential Yard Waste Collection Programs

In 2019, 10 yard waste collection programs in the District operated or contracted for yard waste and/or leaf collection programs. The District provides grants to political subdivisions to offset the costs of operating a yard waste drop-off site. Community yard waste collection programs are responsible for diverting only a portion of District-generated yard waste from landfills. Each county has multiple yard waste drop-offs available for residents. The District communities that reported having yard waste or leaf collection included the following:

- Village of Brewster - Stark County
- Canton Township - Stark County
- Jackson Township - Stark County
- Lake Township - Stark County
- City of Massillon - Stark County
- Nimishillen Township - Stark County
- Perry Township - Stark County
- Plain Township, Fire Station - Stark County
- Village of Dennison - Tuscarawas County
- City of Dover - Tuscarawas County
- Lawrence Township - Tuscarawas County
- Village of Strasburg - Tuscarawas County
- Composting Program - Wayne County
- Village of Dalton - Wayne County
- Village of Creston - Wayne County
- City of Orrville - Wayne County

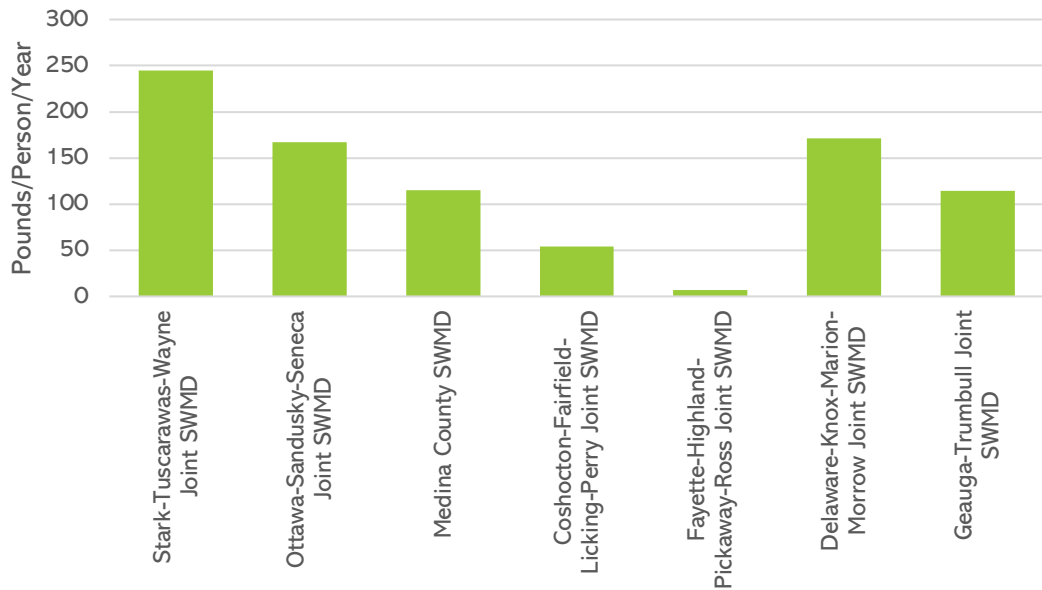
In Wayne County, the District promoted Paradise Composting as they allow residents to bring materials directly to their two sites for processing for a small fee.

3. Education

The District provides awareness to residents about the District drop-off sites, acceptable and unacceptable materials, and instructions for building a home compost pile on its website. It also includes information about yard waste diversion in printed and electronic newsletters and on its social media platforms.

Figure H-4.5 represents recovery rates for the District compared to other selected, urban/rural mix solid waste management districts in Ohio.

Figure H-4.5 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. The District promotes composting as well as its yard waste programs.

4. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Aids education of waste reduction.
- Represents a significant portion of material diverted from the landfills.
- Significant opportunity for yard waste recycling exists from both the District’s program as well from the private sector.
- Grants have been provided to start yard waste programs/improve facility capacity and efficiency in the tri-county area.
- Most remaining sites have infrastructure (via Program Startup grants) that will last several years.

Weaknesses/Challenges

- Lack of partnerships with private sector and lack of funding mechanism for potential private sector grants that doesn't incentivize volume.
- District does not use a yard waste material grinder to consolidate volume at drop-off sites and after evaluating using one has found it is not feasible, but hauling unground material is not efficient.
- The value of yard waste material is market driven and can greatly fluctuate from year to year, impacting the rates the District's sites are charged.
- The sites are not intended for use by commercial companies, but they sometimes still use the site which increases overall cost to the District.
- Sites that have privatized as a result of increased expenses and decreased funding are limited to their community's residents, decreasing opportunities for those in nearby communities or forcing them to drive farther to the nearest District site or private sector facility.
- Program is inconsistent across the three counties.

Opportunities

- Incentivize site privatization by offering funding infrastructure necessary for a site to privatize.
- At least one private sector facility in each county that accepts material directly from residents or community programs.
- Transition District funded drop-off sites to existing or new private sector sites as identified to reduce redundancy and cost.
- District creates a District owned and either District or private sector operates the facility.

Threats

- Private sector facilities have indicated they are struggling to keep enough workers to process the volume generated by the program.

C. Food Waste Composting Programs

In 2019, there were two Class II registered compost facilities operating in the District that accepted food waste. A total of 945 tons of food waste from Wal-Mart and other big box stores was collected and sent for processing.

1. Food Waste Haulers and Processors

There are not currently any food waste haulers operating in the District, but there is a recent trend of newer private hauling and processing companies for food waste in other urban areas of the state. Additionally, there are two

Class II compost facility in the District, with 239 food waste tons reported in 2019 and 586 tons reported from the District but from an out-of-District facility.

2. Food Waste Programs

Due to the limited infrastructure for managing food waste in the District, there are no District-funded programs directly related to reducing food waste.

The District directed food waste generators to an existing registered Class II composting facility located in Wayne County. This facility expanded their operation to accommodate additional food waste from District grocery stores, the Wayne County Fair, and non-profits that generate food waste from events like pancake breakfasts.

2. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Promotes food waste activities through the District’s website.
- Directing residents to home compost is cost efficient.

Weaknesses/Challenges

- Lack of long-term plan for food waste.
- The largest commercial generators of food waste likely would not pay to transport waste to a facility when they could include with their trash.
- No community curbside programs that accept food waste.

Opportunities

- Promote Paradise Composting, Earth N Wood/Kurtz Brothers. and other local entities that offer food waste diversion/composting services to schools and institutions.
- Promote Paradise Composting, Earth N Wood/Kurtz Brothers. and other local entities that offer food waste diversion/composting services to restaurants/grocery stores.

Threats

- Cost to develop and implement a Class 2 facility.
- No dedicated feed stock that is attainable without new collection infrastructure.

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.

A. Existing Volume-Based Programs (Pay-As-You-Throw Grants)

Starting in 2019, the District introduced a different rate structure for its Recycling Makes Sense Grant program wherein grantees received a higher amount if they have a PAYT program or program with a limitation on the amount of trash residents can put out. The hope is that this will serve as an incentive for communities when it comes time for their contracts to be re-bid or renewed. The District can also offer Program Startup Grants to communities to support existing PAYT programs, which could include assistance with purchasing equipment or carts for automated pickup or help them to implement a PAYT program. In 2019, the District did assist the City of New Philadelphia to purchase a new recycling truck with a cart tipper on the back through this grant program with the hopes that they might move to wheeled carts for increased safety and recovery rates in the future.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Some District communities utilize a volume-based program.
- Grants are available to assist communities with having a PAYT program

Weaknesses/Challenges

- The program’s success is reliant on community interest

Opportunities

- District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.
- Conduct targeted community workshops for those communities that have non-subscription curbside recycling to promote the benefits of PAYT programming.

Threats

- Many residents value the ability to put out unlimited trash regardless of the rate.

B. Recycling Makes Sense Grant Program

The District awarded a total of 21 Recycling Makes Sense Grants in 2019. The District paid \$415,282.45 for recyclable tonnage generated in 2019 to the following communities: Alliance, Baltic, Bolivar, Canal Fulton, Canton, Dennison, Dover, Doylestown, Gnadenuhnten, Hartville, Jackson Recycling Station, Marshallville, Massillon, New Philadelphia, North Canton, Orrville, Rittman, Strasburg, Sugarcreek, Uhrichsville, and Wooster.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Assists communities with establishing recycling programs.
- Establish a working relationship with local communities.
- Assists the District with meeting the recycling access goals.
- Incentives for programs with limited trash, weekly collection and larger wheeled carts.
- Data on tonnage collected is easily obtained through the Recycling Makes Sense grant program.

Weaknesses/Challenges

- Majority of communities contract out recycling pickup and do not require the funding for the program to operate.

Opportunities

- District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.
- Reduce program funding as it could be better utilized on other programs without reducing the program’s effectiveness.
- Restructure grant program to incentivize quality recyclables over quantity and continuance of curbside recycling.
- The program could require that communities share the revenue with the residents who actually conduct the source separation and recycling quantities captured in there program if the community does not need the funding to off set operational costs.

Threats

- The District’s primary source of revenue (tipping fees) has a great degree of volatility while expenses are always increasing. This grant program is a secondary priority and other District programs are higher priority.

C. Recycling Program Start-Up Grants (for political subdivisions)

The District awarded five new Recycling Program Start-Up Grants to communities in 2019 totaling \$149,531.94 (of which, \$133,934.36 was distributed during 2019).

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Assists with costly start-up costs associated with implementing a new program.
- Program helps expand recycling and yard waste drop-off site infrastructure throughout the District.
- Grants provide communities with means to significantly improve recycling volumes.
- Most high-volume sites have been awarded grants through the program for infrastructure that will last several years, and since the District typically funds capital purchases and not maintenance, future funding requests from these sites will be limited.
- Allows the District adaptability and flexibility to support infrastructure needs for District recycling collection programs.

Weaknesses/Challenges

- Current program priorities and eligibility can be limiting (some low volume curbside program requests are not as strong as some high-volume drop-off program requests, for example).
- The current language for the funding purpose may be misinterpreted (for example, funding front-end loaders used in part to load yard waste would be impractical, but they are a type of equipment, which is included in the language).
- Most grants awarded are for improvements to existing drop-off programs and not start-up costs for new programs.
- Because the District has typically targeted higher volume or higher dumping sites for program promotion, recent requests (and likely future requests) have been limited and from lower volume sites; this leads to less competition.

Opportunities

- The District could award grants to communities as an incentive for starting a new curbside program.

- District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.
- Rename grant program to include enhancement/improvement of existing programs instead of just start-up of new programs.

Threats

- The District’s primary source of revenue (tipping fees) has a great degree of volatility while expenses are always increasing. This grant program may not be as high priority as other District programs depending on industry trends and market conditions.

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

The District continued to promote the Community Development Grant within the tri-county area. Grant details were posted on the District’s website. In 2019, the District applied for and was awarded \$100,000 for a contamination reduction project including camera systems, new decals, and signage at select sites as well as the production of a coloring book for increased outreach.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- This program provides financial assistance to maintain or expand recycling and litter prevention activities.
- The District has been actively promoting this grant to political subdivisions.

Weaknesses/Challenges

- Participation in the grant opportunity is limited due to either lack of interest or lack of awareness about the program.

Opportunities

- Communities with drop-off sites who want to make site improvements beyond what can be funded through District grant programs could apply directly.
- District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.
- Conduct yearly grant workshops that coincide with the EPA grant roll-out cycle to engage communities on the opportunities for funding.

Threats

- This funding source may not be available in the future.

E. Recycling and Composting Infrastructure Enhancement Grant (for processors)

The District offered the Recycling and Composting Infrastructure Enhancement Grant program in 2019. The grant is available to entities that help the District meet State Plan goals #1 through #5. In 2019, the District did not award any grants.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Assists entities with increasing diversion capacity at their facilities.
- Builds positive relationship between District and grantee to increase survey response.
- The grant allows the District adaptability and flexibility to support infrastructure needs for District recycling collection programs.

Weaknesses/Challenges

- The degree or extent of the applicant’s ability to enhance existing recycling and composting infrastructure within the District is low.
- The District typically does not have enough revenue to budget for these grants.

Opportunities

- The District could lower the grant amounts to accommodate revenue levels.

Threats

- The District’s primary source of revenue (tipping fees) has a great degree of volatility while expenses are always increasing. This grant program is a secondary priority and other District programs are higher priority.

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

The District continued to promote the Market Development Grant within the tri-county area. Grant details were posted on the District's website. In 2019, the District did not serve as the governmental sponsor for any companies.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- The grant provides opportunity to increase recycled content in products.
- The grant supports recycling efforts by creating a market/end-use for recycled materials.
- The grant assists entities with increasing diversion capacity at their facilities.
- The grant builds positive relationship between District and grantee to increase survey response.

Weaknesses/Challenges

- Participation in the grant opportunity is limited due to either lack of interest or lack of awareness about the program.
- The grant application is competitive.

Opportunities

- The District could utilize its e-newsletter to provide information on this grant and could promote the e-newsletter when it sends out ADR surveys and other correspondence.
- The District could develop a list of commercial and business contacts through the website sign-up.
- Conduct yearly grant workshops that coincide with the EPA grant roll-out cycle to engage communities on the opportunities for funding.

Threats

- This funding source may not be available in the future.

G. Recycling Drop-Off Clean-Up/Host Community Cleanup Grants

At the beginning of 2018, the District transitioned to an Annual Host Community Clean-up Sign-off Form instead of having the host sites submit their hours worked quarterly. The sign-off form includes the following language: Program participants will receive up to \$2,500 annually for the purpose of cleaning up or maintaining targeted sites such as high-volume sites or sites with significant dumping. Expenses associated with hosting a site can include hours worked cleaning up the site, cost for disposing of nonrecyclable items dumped at the site, and cost for maintaining the site such as hours worked, materials purchased, or equipment used fixing potholes,

spreading gravel, etc. The amount will be paid annually upon completing this sign off form and can be used toward any of these expenses throughout the year.

The District awarded forty-seven (47) Host Community Cleanup grants totaling \$112,300.00 in 2019.

1. **Strengths, Challenges, Opportunities, and Threats (SWOT)**

Strengths

- Host Community grants provide assistance to the District in maintaining drop-off facilities.
- Establishes a working relationship with local municipalities.
- May serve as an incentive for a community to host a site.
- Is a relatively low amount of funding but has a great return.

Weaknesses/Challenges

- Expenses associated with hosting a site may exceed grant amount and host communities may have to make up the difference if no other District funding through other programs is available.
- District drivers also clean up sites as needed, essentially doubling the cost to maintain the site since the host communities get paid regardless.
- Not all drop-off sites participate in the program, meaning the approach to maintaining all sites is not consistent, and there is not currently enough budgeted for the program to fund a grant for each site unless the amount were reduced.
- Some sites receive the funding merely for agreeing to host a site whereas others spend more than the grant amount maintaining their site.

Opportunities

- If the revenue stayed consistent or grew and funding for another program (ex: Recycling Makes Sense) was decreased or restructured, all sites could participate for a relatively small amount, which could increase consistency in operation and communication with sites.

Threats

- Funding would likely not be enough to encourage host community to keep a site if residents/businesses deem it a nuisance due to issues associated with hosting a site (dumping, blowing debris, damage to lot, pickup schedule, etc.) may be greater); discontinued sites would reduce our access and securing new sites is difficult.

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.

H. Household Hazardous Wastes (HHW) & Pharmaceuticals Management

Permanent HHW Collection

The permanent HHW collection program conducted at the Canton City Recycling Center continued to operate year-round other than closing during the COVID19 lockdown and a brief closure over the holidays.

The District will continue assisting residents with the management of HHW materials through the District website and other marketing and educational outreach efforts as available.

HHW Management Outreach Program

The District conducted outreach regarding its HHW Management through the annual Newsletter, through the website (including listing locations that accept HHW on its new facility locator) and through print and radio ads surrounding the HHW collection events.

Expansion of HHW Collection

The permanent HHW collection program conducted at the Canton City Recycling Center continued to operate year-round and a brief closure over the holidays. The District also hosted two HHW collection events in Tuscarawas County and two in Wayne County and began exploring partnering with the Wayne County Health Department to host an appointment-based collection site or events.

Pharmaceutical Collection Sites

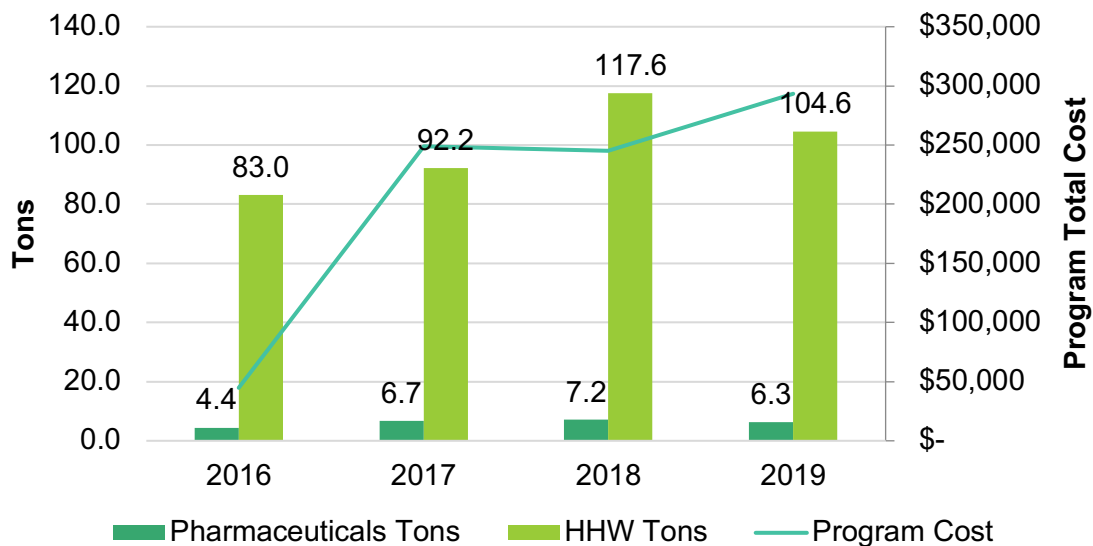
Multiple prescription drug collection boxes were located in each District county in 2019. There were 18 sites and one collection event in Stark County, 6 sites and 2 collection events in Tuscarawas County, and 8 sites and 2 collection events in Wayne County. The District supported local pharmaceutical collections by providing funding to offset the operational costs, as well as funding to advertise and promote the events. Stark County's sites collected 3.96 tons of materials. In 2019,

Tuscarawas County sites collected a total of 0.88 tons of drugs and Wayne County sites collected 1.50 tons. Drugs collected through this program were incinerated.

The District will also continue to assist and promote local pharmaceutical collection sites and events to reduce the amount of these materials disposed of in the landfills as resources are available.

The District’s goal is to reduce the amount of HHW materials that are placed in the landfills. In addition, the District wishes to reduce the amount of usable materials that are being disposed and also educate the public regarding which items are hazardous, which are not and how the creation of HHW can be reduced by using non-toxic alternatives.

Figure H-6-1. HHW & Pharmaceuticals Collections: 2016 – 2019



1. HHW Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Ability to manage cost of the program based on District’s budgetary needs.
- The collection opportunities are available year-round for District residents.
- All residents in the District have the opportunity to participate in the program.
- Provides an opportunity for the District to educate residents on HHW management issues and other District initiatives.

Weaknesses/Challenges

- Proximity of the current permanent collection site and/or availability of convenient collection temporary events may limit residential participation.
- Limited hazardous waste disposal companies/incinerators nearby.
- Cost of program is significant.

Opportunities

- Pop-up events in Tuscarawas and Wayne County could be added as needed if funding is available.
- Pop-up events allows us to establish partnerships in the local region that could lead to a permanent site and partnership.
- Develop satellite locations in Wayne and Tuscarawas counties to collect and then transfer acceptable HHW to the Canton facility for packaging and shipping.
- Work with communities to conduct their own HHW events, under controlled conditions, and then transfer collected materials to Canton facility for packaging and shipment.
- Develop permanent HHW facilities in Wayne and Tuscarawas counties.

Threats

- Acquiring and retaining part-time workers threatens operation of the permanent collection site at the Canton Recycle Center.
- Collection program is dependent upon availability of household hazardous waste disposal companies and disposal rates remaining cost efficient.

2. Pharmaceuticals Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- The collection opportunities are available year-round for District residents.
- All residents in the District have the opportunity to participate in the program.
- The dropboxes are located at the majority of police stations and all three Sheriff's Offices.
- Program not only has an environmental benefit but is also beneficial for the community as it destroys drugs that may otherwise cause intentional misuse or accidental overdose—this allows for partnerships with community organizations.

Weaknesses/Challenges

- Proximity of the current permanent collection site and/or availability of convenient collection temporary events may limit residential participation.
- Limited pharmaceutical disposal companies/incinerators nearby.
- The sites are not intended for use by commercial companies, but they sometimes still use the site which increases overall cost to the District.
- Majority of the weight collected is containers, but collecting loose pills is problematic.

Opportunities

- Explore if DEA may be willing to incinerate drugs collected at drop boxes as well as those collected at DEA collection event(s), reducing disposal cost.
- Encourage Stark County officials to participate in DEA takeback day for program consistency and cost reduction

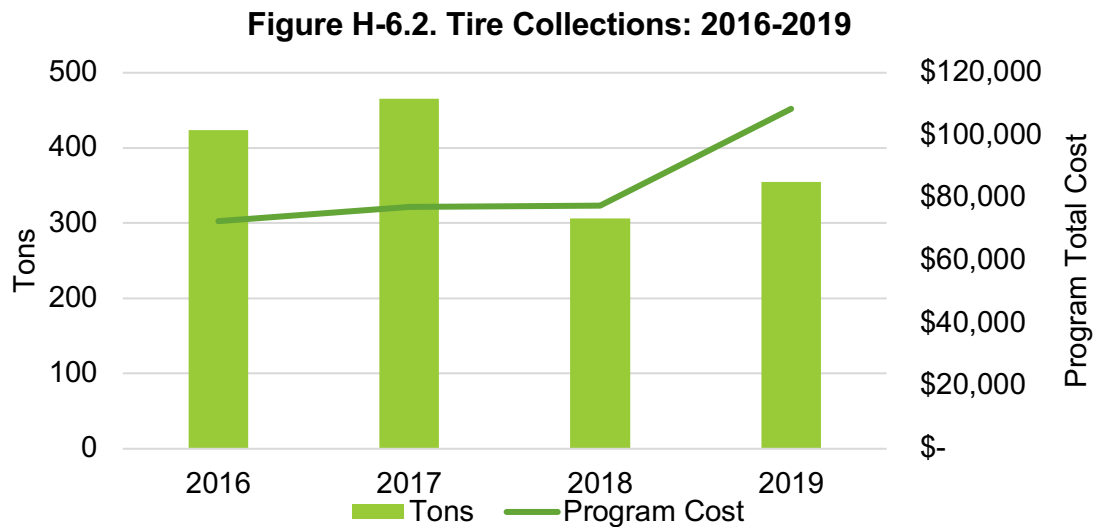
Threats

- Collection program is dependent upon availability of pharmaceutical disposal companies/incinerators and disposal rates remaining cost efficient.
- Regulatory requirements for disposal companies/incinerators are restrictive, limiting potential outlets while the volume of unused/expired drugs (and risk associated with storing them) continues to increase.

B. Scrap Tires

The District's permanent scrap tire collections site and the District's tire pass program for local municipalities to properly manage illegally dumped tires collected a total of 252 tons of tires from Stark County, 75.68 tons from Tuscarawas County, and 26.69 tons from Wayne County. Overall, a total of 354.37 tons of tires were collected from the program in 2019.

Programs such as the tire pass program help local municipalities to properly manage illegally-dumped tires. Figure H-6.2 shows the tires collected in the District from 2016 to 2019. In 2016 and 2017, there was an above average collection of tonnage but in 2018 there was a below average tires collected. The average is still just about 387 tons per year.



Based on the reference year, the cost per tire for 2019 was \$306.18/ton or estimated \$3.44/tire.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- A significant amount of scrap tires are collected and recycled in the District.
- Residents have multiple locations to recycle scrap tires at the regional tire drop-off sites.

Weaknesses/Challenges

- Some communities that host scrap tire drop-off sites are overwhelmed by the quantity of tires collected.
- Illegal dumping of scrap tires by commercial tire dealers.
- Only one tire disposal facility in the District and disposal cost rise annually.
- Limited registered tire haulers and cost to haul rises annually.

Opportunities

- Utilize the EPA scrap tire program would allow the cleanup of illegally dumped tires in District communities without straining the scrap tire budget.

- Conduct a Districtwide campaign to education residents on the local opportunities to turn in old tires when buying new tires.

Threats

- Current and past tire management practices by certain generators to retain tires instead of managing properly.

C. E-Waste

There are several private-sector companies that accept these materials throughout the District, and these locations are promoted on the District website and social media. These items are also accepted at collection events throughout the year which are supported by the District. In addition, the Canton City Recycling Center, operated by the Canton City Health Department, and the Jackson Township Recycling Center accept these items.

The District works with other organizations to collect these materials and also promotes private-sector companies that accept them. The District itself does not operate collection.

Computer/Electronics Recycling End Use Audit

The District conducted site visits or otherwise worked with companies/organizations that accept these items to ensure they were managed properly after collection.

Electronics Collection Program

The District created a facility locator tool on its website that directs residents to drop-off sites for several materials including many special materials like electronics. The District also offered support to communities/organizations wishing to host electronics collection events for their residents and had electronics recycling available at its household hazardous waste collection center in Canton and at the HHW collection events in Tuscarawas and Wayne Counties so that all residents had an outlet for these difficult-to-recycle items.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

The District believes that the opportunities for e-waste disposal generally are sufficient.

Strengths

- There are many opportunities for District residents to recycle these items.
- District does not fully fund collection but rather offers support to those that do. Limited collection allows District to stay within budgetary amounts.

- The District provides a no cost option of electronics recycling through the Canton Recycling Center.

Weaknesses/Challenges

- Availability of convenient collection events or proximity to centers that accept these materials may limit residential participation.
- Private sector companies that accept materials may not always collect these items or have restrictions.

Opportunities

- Additional promotion of the Canton Recycle Center and the free option it provides.
- Creation of satellite Ewaste collection sites that then can transfer collected materials to Canton for packaging and shipment.
- Work with communities to conduct their own Ewaste events, and could promote available mini-grant funding to communities through e-newsletter developed from ratification list
- Develop comprehensive list of private sector retail and scrap yard locations that accept e-waste and then promote the list of the District’s web site.

Threats

- Changes in costs/revenue of items for electronic recycling may require some materials to be reconsidered for collection.

D. Lead-Acid Batteries

The District created a facility locator tool on its website that directs residents to drop-off sites for several materials including many special materials like lead-acid batteries.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- There are many opportunities for District residents to recycle these items.
- District does not fully fund collection but rather offers support to those that do. Limited collection allows District to stay within budgetary amounts.

Weaknesses/Challenges

- Availability of convenient collection events or proximity to centers that accept these materials may limit residential participation.

Opportunities

- Additional promotion of the Canton Recycle Center and the free option it provides.
- Develop comprehensive list of private sector retail and scrap yard locations that accept lead acid batteries and then promote the list of the District’s web site.

Threats

- 2019 was the last year e-waste was collected at the pop-up HHW events

E. Appliances

The District created a facility locator tool on its website that directs residents to drop-off sites for several materials including many special materials like appliances.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

The District believes that the opportunities for these other materials are generally sufficient and go above and beyond what the State plan requires.

Strengths

- There are many opportunities for District residents to recycle these items.
- District does not fully fund collection but rather offers support to those that do. Limited collection allows District to stay within budgetary amounts.
- Free options exist for all district residents at the Canton Recycle Center.

Weaknesses/Challenges

- Availability of convenient collection events or proximity to centers that accept these materials may limit residential participation.

Opportunities

- Additional promotion of the Canton Recycle Center and the free option it provides.
- Develop comprehensive list of private sector retail and scrap yard locations that appliances and then promote the list of the District’s web site.

Threats

- Changes in costs/revenue of items for appliances recycling may require some materials to be reconsidered for collection.

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 fluctuated each year between 2015 to 2019 despite the population slightly decreasing 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	Population	Total Generation (Tons)	Total Recycling (Tons)	Per Capita Generation (PPD)	Per Capita Recycling (PPD)	Annual % Change in Tons Generated	Annual % Change in Tons Recycled
2015	580,642	2,083,147	1,167,831	19.46	10.91	-	-
2016	579,886	2,051,273	1,176,976	19.19	11.01	-1.53%	0.78%
2017	579,130	2,230,948	1,174,298	21.04	11.08	8.76%	-0.23%
2018	578,374	2,277,580	1,225,318	21.44	11.54	2.09%	4.34%
2019	577,618	2,000,241	1,031,293	18.88	9.73	-12.18%	-15.83%

A. Residential/Commercial Sector

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

1. Analysis and Evaluation

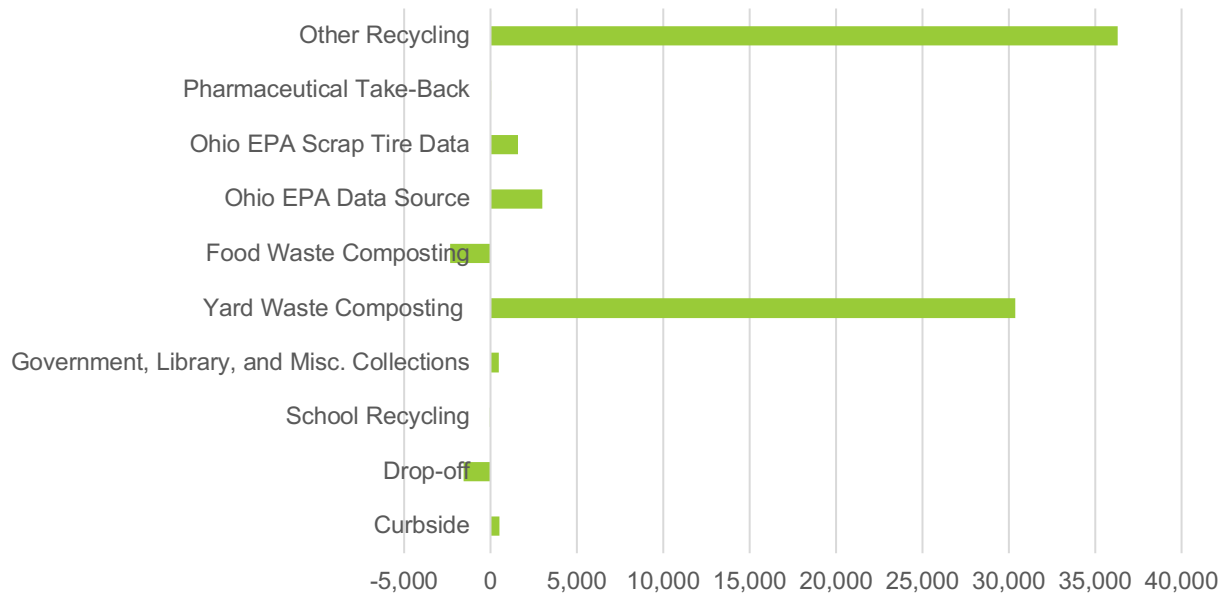
The District’s R/C recycling (or diversion) rate during the past five years has increased from 22.7 to 29.9 percent (see **Table H-7.2**). The per capita diversion rate as measured in terms of pounds per person per day (PPD) has also increased slightly from 1.34 PPD to 2.05 PPD between 2015 and 2019.

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

Year	Diversion Rate	
	Percent (%)	Per Capita
2015	22.7%	1.34
2016	25.1%	1.50
2017	23.5%	1.46
2018	22.6%	1.41
2019	29.9%	2.05

In order to achieve Goal #2, a district’s R/C recycling rate must reach 25% diversion. STW reached this goal in 2019 like the current plan projects (see figure below).

Figure H-7.1. Actual R/C Recycling Difference from Projected Recycling in Previous Plan Update



The main differences between projected recycling tons in 2019 from the previous plan and actual recycling tons in 2019 are differences in other recycling and yard waste composting. Other recycling includes commercial surveys, paper drop-offs, and other recycling facilities (MRFs, processors, and brokers) and was 36,290 tons higher than projected. The previous plan’s reference year was 2015, and the plan projected that other recycling would remain at 2016 levels (54,156 tons) throughout the planning period. However, programs included in other recycling continued to increase as recycling infrastructure and survey strategies improved. For example, the District began online surveying instead of using paper surveys in 2020 for 2019 data.

Additionally, yard waste composting was 30,358 tons higher than projected in the previous plan. This is mostly due to one compost facility in Stark County that was acquired by another large composting facility and the data was updated and verified by the OEPA to reflect the correct tonnage.

Other programs were all less than 3,000 tons different from the projections in the last plan.

Compared to other similar SWMDs in Ohio, the diversion rate for the District is the second highest percentage recycled and per capita recycled (see

Table H-7.3) only to Coshocton-Fairfield-Licking-Perry. The similar districts in the analysis were chosen based on number of counties in the district as well as Medina County which is adjacent. 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, STW’s percentage recycled and per capita recycling rates are higher than the statewide average as well.

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
North Central Ohio Solid Waste District	325,623	26.98%	1.48
Ottawa-Sandusky-Seneca SWMD	162,850	25.90%	1.57
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

2. Strengths, Challenges, Opportunities, and Threats (SWOT)

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.
- Residential/commercial recycling tonnages are more than 46% higher than projected in the previous plan.

Weaknesses/Challenges

- The District’s recycling rate has not been above 25% consistently in the last five years.

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.

Threats

- Success of “other recycling” is reliant on external entities such as private companies responding to surveys or private processors using recycled materials generated within the District.

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**.

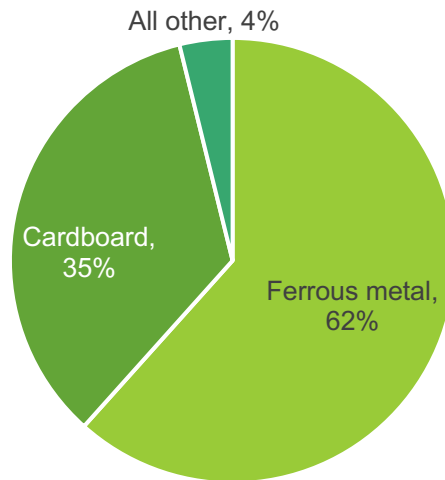
Table H-7.4. Industrial Recycling Rates for STW: 2015 – 2019

Year	Diversion Rate	
	Percent (%)	Per Capita
2015	74.8%	9.57
2016	75.4%	9.51
2017	67.5%	9.62
2018	69.9%	10.13
2019	67.6%	7.69

Compared to the current Plan, which projected 1,019,243.5 tons of industrial recycling for 2019, the actual amount diverted in the reference year is 20% lower (approximately 204,811 tons). The current Plan also projected an industrial recycling rate of 75.0% for 2019, which is higher compared to the actual estimated recycling rate of 67.6%. The reasoning for the significant over-projection was mostly due to one large steel manufacturer in the District that recycled approximately 230,000 fewer tons than previous years.

Ferrous metals represent the material type recycled in the greatest amount from industrial sources (see **Figure H-7.2**). Industries also recycle substantial amounts of cardboard.

Figure H-7.2. Industrial Material Types Recycled in STW: 2019



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 Medina, CFLP, CCH, Geauga-Trumbull, Southeastern Ohio, and GJMV but lower than OSS, FHPR, DKMM, and North Central Ohio. The statewide average industrial recycling rate in 2019 was 67.09%, and the District is only slightly lower 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	68.18%
Stark-Tuscarawas-Wayne SWMD	66.37%
Medina County SWMD	55.91%
Coshocton-Fairfield-Licking-Perry SWMD	54.05%
Carroll-Columbiana-Harrison SWMD	19.80%
Gauga-Trumbull SWMD	14.68%
Southeast Ohio SWMD	7.70%
Gallia-Jackson-Meigs-Vinton SWMD	1.46%

2. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- The District's industrial recycling rate is similar to the statewide average and higher than many similar districts' industrial recycling rate.
- Ferrous metal and cardboard are two highly valuable materials and are the most recycled material in the District's industrial sector.

Weaknesses/Challenges

- The District's actual recycling tonnage in 2019 is much lower than previous years and lower than projected in the previous plan.

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.

Threats

- Much of the District's industrial recycling data collected is dependent on private companies in the District and their success.

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
- Sheriff Departments 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 developed a policy for managing disaster debris events in 2010. A copy of the document can be found on the District website: www.timetorecycle.org.

The District provided \$7,160 in storm debris funding to remove/compost materials for Canton City and Lake Township in 2019.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- District is able to provide support to local communities with the removal of yard waste material accumulated through a storm based on storm debris needs and budgetary availability.
- District maintains partnerships with local emergency management agencies.

- Communities work together to share knowledge, labor, and resources to clear debris.
- District can serve as a liaison between governmental agencies and provide assistance to secure FEMA funding if eligible
- County EMAs meet regularly with local officials and District to establish communication and preparedness programs in the event of an emergency.

Weaknesses/Challenges

- It could be a challenge to notify the communities of the availability of the District funding and approved eligible expenses covered by it, and notifying all communities could result in more requests than the funding can cover.
- The amount typically appropriated may not be enough in the case where multiple communities are simultaneously affected.

Opportunities

- The District may review the disaster debris plan consistently and update the plan as necessary.

Threats

- The waste generated from a disaster may not be eligible for District assistance (solid waste).
- Funding and resources can be contingent upon a county or state declaring a state of emergency, and that isn't always the case.
- The affected community isn't always aware of available assistance from neighboring communities or entities.

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. All litter complaints/enforcement is usually directed to the District's Environmental Enforcement Officer via the Sheriff Department Grants.

The District awarded four (4) Health Department Grants totaling \$325,000 in 2019. The District awarded the Stark County Health Department \$170,000, Tuscarawas County Health Department \$85,000, Wayne County Health Department \$35,000 and the Canton City Health Department \$35,000.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- Grant program activities are not dependent on District funding (the departments would have to do them even without a grant); however, granting the funds ensures the program activities are prioritized, the District gets responsive results, and benefits are received that may otherwise have been needed to contract out (traffic control at events, for example). The funds also allow the health departments to exceed the Ohio EPA's inspection requirements since they have a designated sanitarian for these inspections secured through the District's support, and the flexibility to conduct more frequent inspections can help identify issues and promptly resolve them.
- Programs are tailored to each county's unique needs. For example, in Wayne County, their health department is not required to complete as many facility inspections as Stark County and there are no active landfills to inspect, so their sanitarian focuses on assisting with the collection of scrap tires and household hazardous waste in addition to completing the required inspections, recording any received solid waste complaints, and issuing orders to abate solid waste/tire dumps.
- The grant programs allow the District to partner with the health departments and sheriff offices in the areas that most need support and where they already serve a role, creating good synergy (example: illegal tire dumps are a public health concern because of mosquitos as well as a solid waste concern and require the involvement of law enforcement).
- Once illegal dumping is enforced at a drop-off site, typically a decrease in future dumping is seen.
- The Canton City and Wayne County Health Departments provide support for the household hazardous waste collection program and scrap tire collection program.

Weaknesses/Challenges

- Different sanitarians may handle solid waste complaints and dumps differently.
- Funding hasn't increased in six years but expenses (including wages, benefits, etc.) increase annually.

Opportunities

- Operationally streamline program and expand in service pending budgetary availability.
- Forward other funding avenues that could be utilized to enhance the programs (like Ohio EPA Community and Litter Grant funding)

as well as the scrap tire remediation program and mosquito control grant).

- To combat differences in procedures between agencies and individual sanitarians, as well as to combat staff turnover, a written procedure manual could be developed and an annual meeting could be held to assess program procedures.

Threats

- Staff turnover at the health departments and sheriff offices can result in the loss of historic knowledge and increase in training, inconsistency in grant reporting, and the shifting of program priorities.
- If funding for the District's residential scrap tire drop-off sites ever went away, the burden would likely shift onto the Health and Sheriff's Offices as there would likely be an increase in the illegal dumping of these tires and they would probably come to the District for support.

B. Sheriff Department

The District awarded three Sheriff Department Grants totaling \$285,000 in 2019. The District awarded \$95,000 each to the following: Stark County Sheriff Department, Tuscarawas County Sheriff Department, and Wayne County Sheriff Department. Duties performed by the sheriff departments varied by county but included patrolling near landfills, litter enforcement, monitoring the District's drop-off sites, collecting prescription medications deposited at drop boxes at local police stations, assisting with HHW collection events, and conducting litter collection on public roadways with a crew.

1. Strengths, Challenges, Opportunities, and Threats (SWOT)

Strengths

- The District has a dedicated environmental enforcement deputy in each county who follows up on illegal dumping issues at the drop offs.
- Grant program activities are not dependent on District funding (the departments would have to do them even without a grant); however, granting the funds ensures the program activities are prioritized, the District gets responsive results, and benefits are received that may otherwise have been needed to contract out (traffic control at events, for example).
- Programs are tailored to each county's unique needs. For example, since illegal dumping at drop-off sites is not as prevalent in Wayne County and the MEDWAY task force collects the prescription drugs, their deputy focuses on coordinating the litter cleanup crew, assisting at collection events, partnering with the Stark County Deputy on trainings, etc.

- The litter cleanup crew program is beneficial as it not only beautifies the public roadways but also allows those working for community service hours a chance to have a positive impact. It is also cost efficient for the District, as the workers are volunteers.
- The grant programs allow the District to partner with the health departments and sheriff offices in the areas that most need support and where they already serve a role, creating good synergy (example: illegal tire dumps are a public health concern because of mosquitos as well as a solid waste concern and require the involvement of law enforcement).
- Once illegal dumping is enforced at a drop-off site, typically a decrease in future dumping is seen.

Weaknesses/Challenges

- There can be jurisdiction issues with illegal dumping enforcement when the drop-off sites are located in cities and villages. Similarly, the District typically first approaches the local municipality's police station for traffic control when collection events are located in a city, and if they do wish to provide the traffic control, there can be an expense the District wouldn't have incurred had it utilized the grant-funded deputy.
- Deputies may enforce differently due to individual judgment exercised in some cases.
- Funding hasn't increased in six years but expenses (including wages, benefits, etc.) increase annually.

Opportunities

- Explore a more active partnership with ODOT for litter cleanups or share resources to benefit the litter cleanup crew programs.
- Promote shared resources and knowledge between counties increasing cohesion of the programs across county lines.
- One of the Environment Enforcement Officers is certified in the following training for District recycling drivers: load securement, pre-trip inspections, and defensive driving. He could extend this training to other local governments.
- Forward other funding avenues that could be utilized to enhance the programs (like Ohio EPA Community and Litter Grant funding as well as the scrap tire remediation program and mosquito control grant).
- To combat differences in procedures between agencies and individual deputies, as well as to combat staff turnover, a written procedure manual could be developed and an annual meeting could be held to assess program procedures.

Threats

-
- Staff turnover at the health departments and sheriff offices can result in the loss of historic knowledge and increase in training, inconsistency in grant reporting, and the shifting of program priorities.
 - If funding for the District's residential scrap tire drop-off sites ever went away, the burden would likely shift onto the Health and Sheriff's Offices as there would likely be an increase in the illegal dumping of these tires and they would probably come to the District for support.

SECTION H-9. Financial Analysis

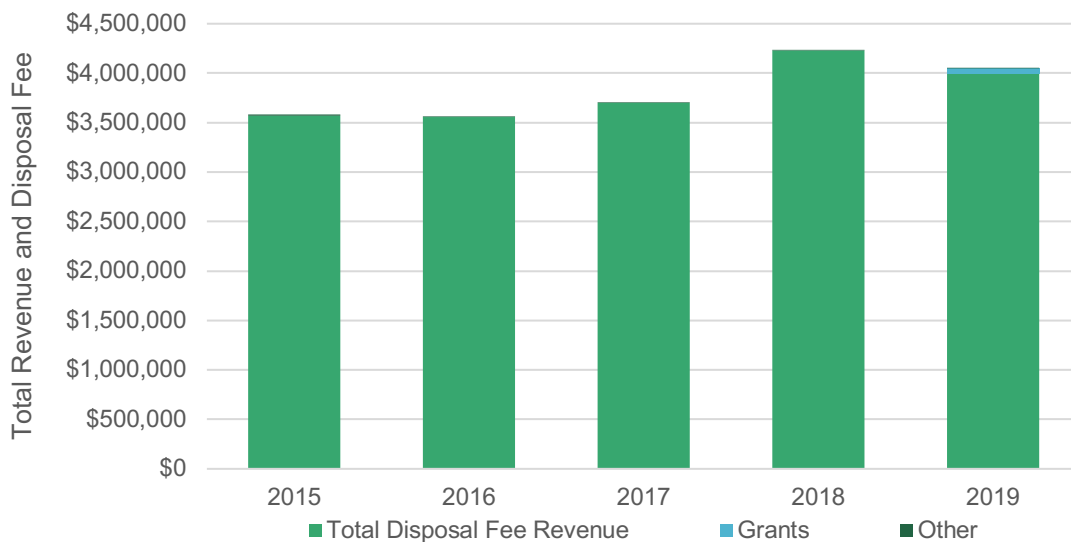
The financial analysis focuses on three areas: revenues, expenses, and District fund balances.

A. Revenues

From 2015 through 2019, the source of the majority of District revenue has come from the tiered disposal fee system of \$1.00/\$2.00/\$1.00 (in-district/out-of-district/out-of-state) per ton.

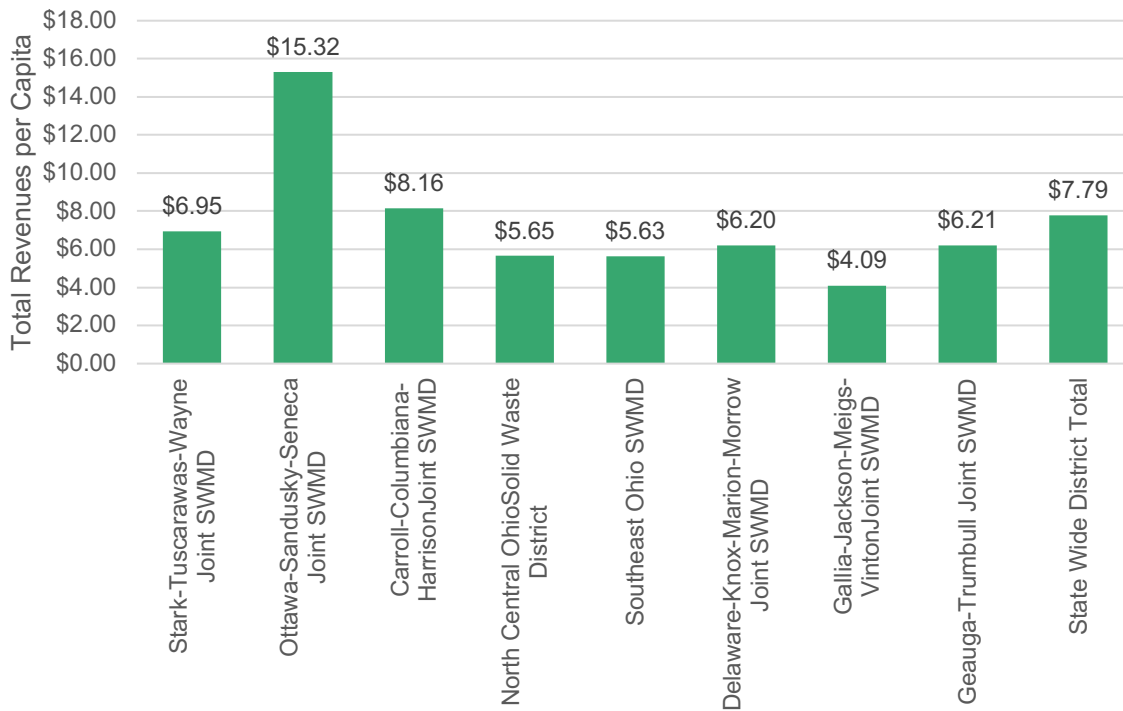
Figure H-9.1 shown below illustrates the increase of total District funding since 2015. In terms of dollars, the disposal fee revenue has fluctuated between \$3,550,000 and \$4,250,000 during the five-year period depicted in the figure.

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



On a per person basis, the District collected an average of \$6.56 per capita during 2015 through 2019, ranging from \$6.08 to \$7.28 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 \$7.79 per capita.

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



The District’s current Plan projected that approximately \$3,753,843 would be collected in revenues during 2019. The actual amount collected, \$4,055,093, is 6.5% more than projected. The higher actual revenues are the result of higher landfilled tonnage subject to the disposal fee compared to projected landfilled amount.

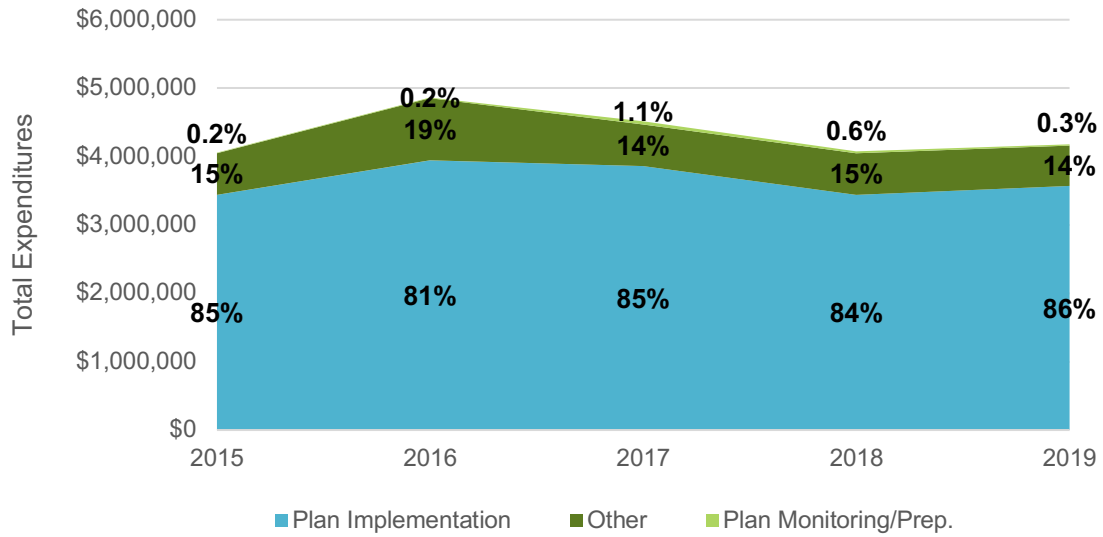
In summary, the District’s major revenue streams appear to be very stable and should continue to provide sufficient money for operations.

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, as shown in the following figure. The “other” category in **Figure H-9.3** represents Health Dept. Enforcement, County Assistance, and Open Dump, Litter Law Enforcement. The total expenditures for the District have ranged from a low of \$4.05 million in 2015 to \$4.86 million in 2016. The average overall expenditures during the five-year period was \$4.33 million annually. The total expenses for the District as projected in the current Plan were \$4.28 million for 2018, or approximately \$.21 million less than the actual expenditures.

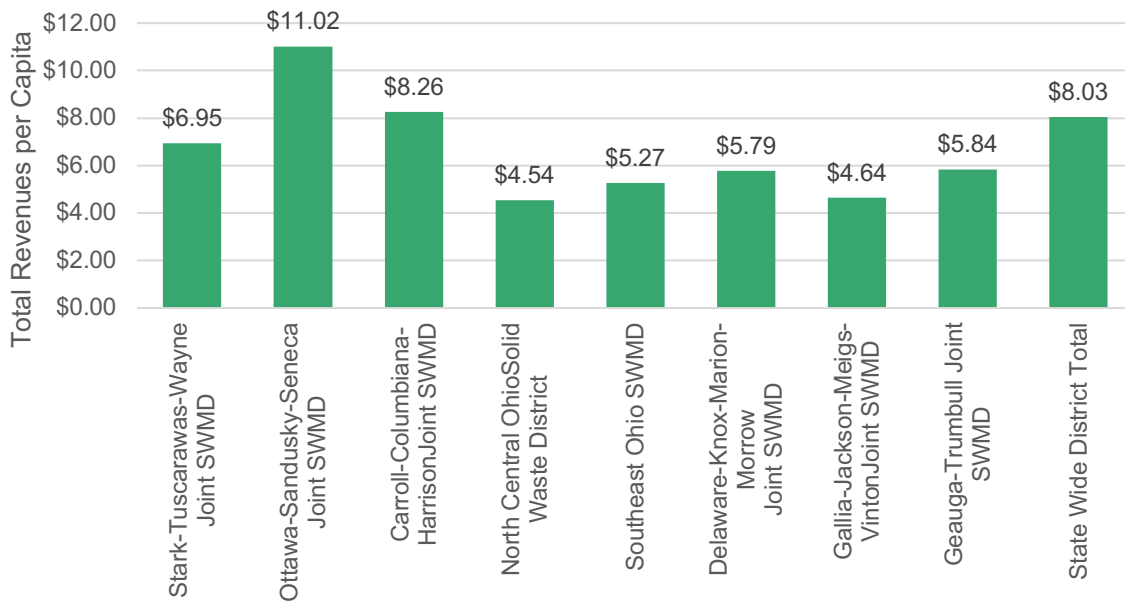
Figure H-9.3. District Expenditures: 2015 – 2019



Plan implementation makes up most of the District’s expenditures while most of the other expenditures stay relatively stable. The reason that “Other” expenditures are higher in 2016 due to county assistance with road maintenance.

A comparison of the total expenditures per capita is shown in **Figure H-9.4**. the District has the highest per capita expenditure rate of the following selected solid waste management districts depicted.

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

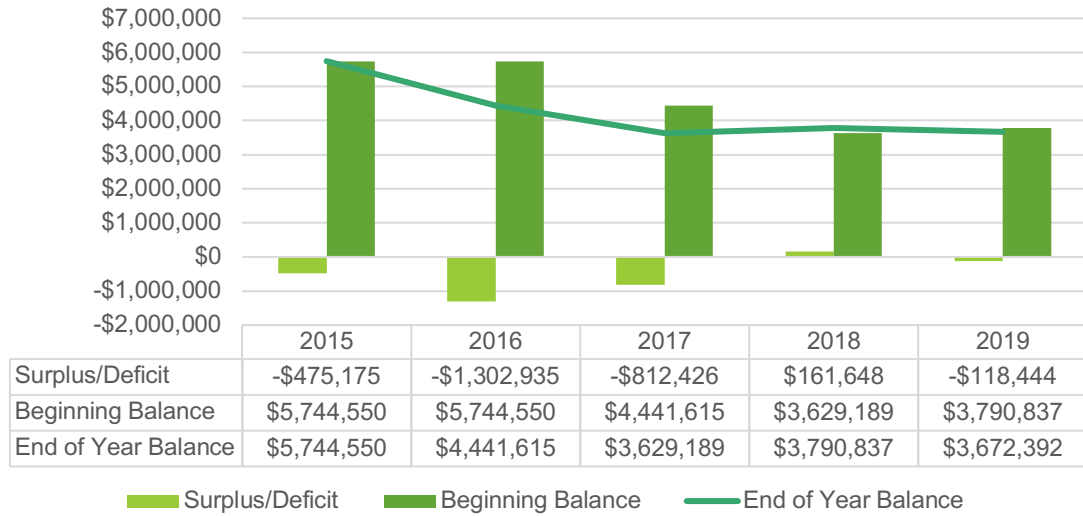


See Appendix O for further discussion on budget strategies for District programs.

C. Balances

For 2019, the District’s expenditures were higher than revenues, and the District’s account balance dropped accordingly. (See Figure H-9.5.) The deficits during 2016 were primarily due to county assistance with road maintenance. Between 2017 and 2019, expenditures lessened, District revenues exceeded expenses, and year-end balances began to level out.

Figure H-9.5. District Annual Surplus/Deficit and Year-End Balances: 2015-2019



The current Plan projected a carry-over or year-end balance for 2019 of approximately \$2,207,809, which is lower than the actual balance (\$3,672,392). The actual balance has decreased since 2015, primarily due to higher expenses than anticipated.

D. Strengths, Challenges, and Opportunities

Strengths

- District has stable financial position.

Weaknesses/Challenges

- None identified.

Opportunities

- Reallocation of funding to higher priority programs or initiatives as identified in other sections of this Appendices.

Threats

- Landfill closures that negatively affect District revenue. There are no projected closures identified at the time of this Plan Update.

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 3 landfills, two transfer facilities, two registered class II compost facilities, six class III compost facilities, and 12 class IV compost facilities. These facilities as well as the 22 out-of-District disposal facilities, 5 out-of-District compost facilities, and 19 total processors/MRFs are all considered regional stakeholders that the District maintains a good relationship with. Additionally, the District has provided technical assistance, litter monitoring, 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 and sheriff departments in the three counties to fund litter enforcement, landfill monitoring, dump site handling, assisting with District collection programs, and more. These departments receive funding, and the District also benefits from the services.

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

The District also partners with Summit Reworks in Summit County to assist with waste audits for businesses or institutions when requested. In 2019, the District partnered with Reworks to assist with a waste audit for the Akron-Canton Airport. This relationship is a great start to more connections in the future with the adjacent solid waste authority.

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 STW SWMD as well as the other districts.

Though the District is able to make designations for the flow of waste, the District supports an open market which helps to keep prices lower and/or competitive. Other regional districts have a similar responsibility and capability to have an impact on the prices for disposal.

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 consultants.

A. Residential Sector

Residential sector recycling tonnages reported by communities includes data from yard waste collection programs and special waste collection programs, such as Household Hazardous Waste (HHW) and scrap tires.

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

Data from District-sponsored programs, such as its drop-off program, scrap tire collection, pharmaceuticals collection, and HHW Collection are included in residential sector recycling totals. The District's collection programs provide data for these programs.

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 **Section H-11, Attachment 1**.

To collect reference year data for 2019, hard copy surveys were mailed to 2,403 commercial sector businesses in 2020. 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 31 new responses or a response rate of 1.3%.

Table H-11.1. Commercial Sector Mailed Survey Response Rate

Commercial Sector Mailed Survey	
Total Surveys Mailed	2,403
Total Responses Received	31
Response Rate	1.3%

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 70 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 101 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	2,403
Total Responses Received	31
Single Year (2019) Response Rate	1.3%
Supplemented Response Rate (2017-2019)	4.2%

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 433 industries in 2020. 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 28 new responses or a response rate of 6.5%.

Table H-11.3. Industrial Sector Mailed Survey Response Rate

Industrial Sector Mailed Survey	
Total Surveys Mailed	433
Total Responses Received	28
Response Rate	6.5%

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 28 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 56 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	433
Total Responses Received	28
Single Year (2019) Response Rate	6.5%
Supplemented Response Rate (2017-2019)	12.9%

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.
- Developed unique envelope to address survey response issues.
- 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.

Weaknesses/Challenges

- Receiving responses that do not provide the hauler/processor/broker used to manage a material; without performing a follow-up phone call, the information is unable to be used due to double counting.
- Some tonnage reported by industrial establishments requires follow-ups to determine whether it is creditable. For example, if large quantities are reported, there is a possibility that materials were brought into the District from another county or state as a raw material and recycled in the manufacturing process.
- Varying but sometimes significant amount of time required to solicit survey responses.
- Staffing changes at surveyed establishments; losing a contact person.
- Lack of knowledge from survey respondents when follow-up questions are made; for example, businesses that accept paper for shredding may not know or share where shredded materials are managed, so if the District has data from a paper mill, it cannot use data from the shredding company because of the risk of double counting. This may lead to understated recycling rates.
- Errors in reported values; responses from previous years are compared to current reported values (when possible) to identify significant increases or decreases in tonnage or the materials reported.
- Companies are not required to report.

Opportunities

- Focus each year in making sure all survey mail lists are up to date, accurate and include the correct contact person.

- Research better survey instruments to aid in user friendliness and data accuracy as needed.

Threats

- None identified.

SECTION H-11. Attachment 1



Survey Envelope

Commercial and Industrial Survey Cover Letter (via Mail)



STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

9918 Wilkshire Blvd NE • Bolivar, OH 44612
330-874-2258 • 800-678-9839 • 330-874-2449 FAX
www.timetorecycle.org • district@timetorecycle.org

David Held
Executive Director

Erica Wright
Finance Director

February 2020

Dear Facility Manager:

THE STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT 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.

We also encourage businesses and organizations which do not have a recycling program to participate in the survey to help us understand recycling in our area. The District can provide waste audits, referrals to available recycling grant opportunities, and other technical assistance for any business that is interested. Please visit www.timetorecycle.org for more information.

How to participate in our brief survey:

The survey asks for the total 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. Completing the survey should take only a few minutes.

Please complete your survey by **March 27, 2020** by following the steps below:

- Visit bit.ly/STWrecycles2019
- 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.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

David J. Held
Executive Director
Stark-Tuscarawas-Wayne Joint Solid Waste Management District

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveymonkey.com/s/3/5405510/STW-2019-Recycling-Survey>

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Commercial and Industrial Survey (via online)

The image shows a screenshot of a web-based survey form for the Stark-Tuscarawas-Wayne Recycling District. The header features the district's logo and name. The survey title is "STW 2019 Recycling Survey". Below the title, there is a section for "STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT" and "2019 Recycling Survey". Instructions and confidentiality information are provided. A contact number for Erin Oulton is listed. The form is divided into "Part 1 - General information" and includes a table with a "Response" column for various fields: Business/Organization, Mailing Address, City, Zip Code, Contact Person, Phone Number, and Email. Below this is a dropdown menu for "Type of Business (NAICS Code)" and a radio button question "Does your business/organization recycle?".

Stark-Tuscarawas-Wayne
Recycling District

STW 2019 Recycling Survey

STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

2019 Recycling Survey

Instructions: Please complete all of the following survey to the best of your ability. Only report materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. **Confidentiality:** The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify recycling rates in Stark, Tuscarawas, and Wayne Counties.

If you have any questions, please call Erin Oulton, the District's consultant, at 614-964-7284.

Part 1 - General information

	Response
Business/Organization *	<input type="text"/>
Mailing Address	<input type="text"/>
City	<input type="text"/>
Zip Code	<input type="text"/>
Contact Person	<input type="text"/>
Phone Number	<input type="text"/>
Email	<input type="text"/>

Type of Business (NAICS Code)
-- Please Select --

Does your business/organization recycle? *

Yes

No

Commercial and Industrial Survey Continued (via online)

Part 2 - Recycling Totals

Recycling in 2019

Please report the amount of materials recycled in 2019 that were generated within Stark, Tuscarawas, and Wayne Counties in Ohio in the following table. Indicate whether materials were generated by the residential/commercial sector or the industrial sector using the columns below. The data in the tonnage columns are 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
 1 gallon of used oil = 7.5 lbs.
 1 gallon of used antifreeze = 8 lbs.

This information may be found on your recycling bill or waste hauler contract/agreement .

Quick Calculations:

The District realizes that businesses may recycle cardboard and/or mixed/commingled but may not have actual weights of the cardboard and/or mixed/commingled based on the style of service provided (dumpster service). The following tables are provided to estimate the amount of cardboard and mixed/commingled recycled annually. Simply fill in the size of your dumpster (2, 3, 4, 6, 8 or 10 cubic yard), how full it is when picked up on average (as a percentage) and the number of times the dumpster is emptied each week. Then use the formula in the table below to calculate your annual tonnage of cardboard and/or mixed/commingled. An example is given to assist you in the calculation. If you have additional dumpsters, simply perform the same exercise for each separate dumpster. The total tons recycled can then be transferred to the cardboard and mixed/commingled rows below.

Recycled Cardboard Calculator:

Cardboard Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked up (b)	No of Pickups per week (c)	Estimated Cardboard Recycled (Tons) $(a) \times (b) \times (c) \times 52 / 20$
Example	6 cubic yards	80% full	1 time/week	$(6 \times 0.80 \times 1 \times 52 / 20)$ = 12.48 tons
1				
2				
3				
Total Cardboard Recycled in Tons (Enter in Cardboard row below)				

Recycled Mixed/Commingled Calculator:

Mixed/Commingled Recyclables Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked up (b)	No of Pickups per week (c)	Estimated Mixed/Commingled Recycled (Tons) $(a) \times (b) \times (c) \times 52 / 18$
Example	8 cubic yards	75% full	1 time/week	$(8 \times 0.75 \times 1 \times 52 / 18)$ = 17.33 tons
1				
2				
3				
Total Mixed/Commingled Recycled in Tons (Enter in Mixed/Commingled row below)				

For a PDF of additional conversion factors click on: [Volume-to-Weight Conversion Factors](#)

Commercial and Industrial Survey Continued (via online)

	Tons Recycled	Processor, Recycler, Broker, or Hauler (Ex. Kimble, Republic, Waste Management, STW Drop-off Site, etc.)
Mixed/Commingled Recycling	<input type="text"/>	<input type="text"/>
Paper (Newsprint, Office, Glossy, Books etc.)	<input type="text"/>	<input type="text"/>
Cardboard/Paperboard	<input type="text"/>	<input type="text"/>
Glass	<input type="text"/>	<input type="text"/>
Ferrous Metals (Steel, Iron): Do not report auto bodies or construction/demolition materials such as rebar.	<input type="text"/>	<input type="text"/>
Non-Ferrous Metals (Aluminum, Copper, Brass): Do not report auto bodies or construction/demolition materials such as aluminum siding	<input type="text"/>	<input type="text"/>
Plastics (#1 - #7)	<input type="text"/>	<input type="text"/>
Other Plastic Bags/Film Plastics	<input type="text"/>	<input type="text"/>
Wood (Except Pallets)	<input type="text"/>	<input type="text"/>
Wood - Pallets	<input type="text"/>	<input type="text"/>
Food (Do NOT include Cooking Oil)	<input type="text"/>	<input type="text"/>
Appliances (White Goods)	<input type="text"/>	<input type="text"/>
Rubber (Not including Tires)	<input type="text"/>	<input type="text"/>
Used Tires	<input type="text"/>	<input type="text"/>
Used Motor Oil (Residential Only)	<input type="text"/>	<input type="text"/>
Used Antifreeze (Residential Only)	<input type="text"/>	<input type="text"/>
Electronics (Residential: Computers, TVs, Cellphones, etc.)	<input type="text"/>	<input type="text"/>
Rechargeable/Household Batteries	<input type="text"/>	<input type="text"/>
Lead-acid Batteries (ex. Automotive Batteries)	<input type="text"/>	<input type="text"/>
Ink/Toner Cartridges	<input type="text"/>	<input type="text"/>
Textiles (Clothing, Fabrics)	<input type="text"/>	<input type="text"/>
Non-Exempt Foundry Sand	<input type="text"/>	<input type="text"/>
Yard Waste (Grass, Leaves, Branches)	<input type="text"/>	<input type="text"/>
Household Hazardous Waste (Residential Only)	<input type="text"/>	<input type="text"/>
Ash (Recycled Only)	<input type="text"/>	<input type="text"/>
Flue Gas Desulfurization Waste	<input type="text"/>	<input type="text"/>
<input type="text" value="Enter another option"/>	<input type="text"/>	<input type="text"/>
<input type="text" value="Enter another option"/>	<input type="text"/>	<input type="text"/>
<input type="text" value="Enter another option"/>	<input type="text"/>	<input type="text"/>
<input type="text" value="Enter another option"/>	<input type="text"/>	<input type="text"/>

Commercial and Industrial Survey Continued (via online)

Were you aware that the Stark-Tuscarawas-Wayne Recycling District can offer waste audits, referrals to available recycling grant opportunities, and other technical assistance for businesses and organizations? *

Yes

No

Would you like someone from the Stark-Tuscarawas-Wayne Recycling District to reach out to you for more information about audits or recycling assistance? *

Yes

No

Comments:

[Submit Survey](#)

Broker Survey Cover Letter (via Mail)



STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

9918 Wilkshire Blvd NE • Bolivar, OH 44612
330-874-2258 • 800-878-9839 • 330-874-2449 FAX
www.timeforecycle.org • district@timeforecycle.org

David Held
Executive Director

Erica Wright
Finance Director

February 2020

Dear Solid Waste/Recycling Manager:

THE STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT 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 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:

Please complete the survey using only calendar year 2019 information. Only materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio should be reported. Completing this survey should take only a few minutes.

Please complete your survey by **March 27, 2020** by following the steps below:

- Visit bit.ly/STW2019B
- 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.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

David J. Held
Executive Director
Stark-Tuscarawas-Wayne Joint Solid Waste Management District

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveymonkey.com/s/5410365/STW-2019-Brokers-Processors-Survey>


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Broker Survey (via online)



Stark-Tuscarawas-Wayne Recycling District

STW 2019 Brokers-Processors Survey

STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

2019 Broker Recycling Survey

Instructions: Please complete all of the following survey to the best of your ability. Only report materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. **Confidentiality:** The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify recycling rates in Stark, Tuscarawas, and Wayne Counties.

If you have any questions, please call Erin Oulton, the District's consultant, at 614-964-7284.

Part 1 - General information

	Response
Business/Organization *	<input type="text"/>
Mailing Address	<input type="text"/>
City	<input type="text"/>
Zip Code	<input type="text"/>
Contact Person	<input type="text"/>
Phone Number	<input type="text"/>
Email	<input type="text"/>

Does your business/organization recycle materials generated within Stark, Tuscarawas, and/or Wayne Counties? *

Yes

No

Broker Survey Continued (via online)

Part 2 - Recycling Totals

Recycling in 2019

Please report the amount of materials recycled in 2019 that were **generated within Stark, Tuscarawas, and Wayne Counties** in Ohio in the following table. Indicate whether materials were generated by the residential/commercial sector or the industrial sector using the columns below. The data in the tonnage columns are 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

1 gallon of used oil = 7.5 lbs.

1 gallon of used antifreeze = 8 lbs.

	Residential/Commercial Sector <i>Tons</i> Recycled	Industrial Sector <i>Tons</i> Recycled
Mixed/Commingled Recycling	<input type="text"/>	<input type="text"/>
Paper (Newsprint, Office, Glossy, Books etc.)	<input type="text"/>	<input type="text"/>
Cardboard/Paperboard	<input type="text"/>	<input type="text"/>
Glass	<input type="text"/>	<input type="text"/>
Ferrous Metals (Steel, Iron): Do not report auto bodies or construction/demolition materials such as rebar.	<input type="text"/>	<input type="text"/>
Non-Ferrous Metals (Aluminum, Copper, Brass): Do not report auto bodies or construction/demolition materials such as aluminum siding	<input type="text"/>	<input type="text"/>
Plastics (#1 - #7)	<input type="text"/>	<input type="text"/>
Other Plastic Bags/Film Plastics	<input type="text"/>	<input type="text"/>
Wood (Except Pallets)	<input type="text"/>	<input type="text"/>
Wood - Pallets	<input type="text"/>	<input type="text"/>
Food (Do NOT include Cooking Oil)	<input type="text"/>	<input type="text"/>
Appliances (White Goods)	<input type="text"/>	<input type="text"/>
Rubber (Not including Tires)	<input type="text"/>	<input type="text"/>
Used Tires	<input type="text"/>	<input type="text"/>
Used Motor Oil (Residential Only)	<input type="text"/>	<input type="text"/>
Used Antifreeze (Residential Only)	<input type="text"/>	<input type="text"/>
Electronics (Residential: Computers, TVs, Cellphones, etc.)	<input type="text"/>	<input type="text"/>
Rechargeable/Household Batteries	<input type="text"/>	<input type="text"/>
Lead-acid Batteries (ex: Automotive Batteries)	<input type="text"/>	<input type="text"/>
Ink/Toner Cartridges	<input type="text"/>	<input type="text"/>
Textiles (Clothing, Fabrics)	<input type="text"/>	<input type="text"/>
Non-Exempt Foundry Sand	<input type="text"/>	<input type="text"/>
Yard Waste (Grass, Leaves, Branches)	<input type="text"/>	<input type="text"/>
Household Hazardous Waste (Residential Only)	<input type="text"/>	<input type="text"/>
Ash (Recycled Only)	<input type="text"/>	<input type="text"/>
Enter another option	<input type="text"/>	<input type="text"/>
Enter another option	<input type="text"/>	<input type="text"/>
Enter another option	<input type="text"/>	<input type="text"/>
Enter another option	<input type="text"/>	<input type="text"/>

Broker Survey Continued (via online)

Part 3 - Destination of Materials

If materials collected by your establishment that were reported above are sent to another company to be processed or recycled, please identify the destinations of materials in the box below.

Comments:

Submit Survey

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 ten goals for Districts to achieve. One of the goals requires that solid waste management districts (SWMDs) shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to 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:

- Recycling Newsletter included county-specific recycling report cards
- Recycling & Disposal Locations
- What Do I Do With?
- Household Hazardous Waste Drop Off
- Solid waste information
- Upcoming events
- Educational resources for residents
- District reports and plans
- Contact information
- Master Recyclers Program

2. Schools

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

- School presentations on waste reduction and recycling
- Presentations with Puppet shows

- Drop-offs at schools
- Information on website on programs school are eligible for such as the bottle-caps-to-benches program, recycling receptacle loan program, litter cleanup kit loan program, and mini-grants

8. Commercial Businesses and Institutions

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

- Advice and program development for businesses
- Contract assistance
- Presentations
- Assistance with waste audits
- Information about EPA grant opportunities and potential sponsorship
- Office recycling guides
- Waste Audit Manual

9. Industries

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

- Advice and program development for industries
- Contract assistance
- Presentations
- Assistance with waste audits
- Information about EPA grant opportunities and potential sponsorship
- Office recycling guides
- Waste Audit Manual

10. Communities and Elected Officials

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

- Curbside assistance
- Contracting and marketing assistance
- Grant opportunities
- Presentations
- Assistance with waste audits

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 Outreach Coordinator's presentations reach a great number of students and residents of the District.
- Advertisements help reach residents in their homes, expanding potential outreach.
- The newsletter helps the District share information with its residents and businesses.
- Sharing the recycling tonnage helps residents realize their individual impact on the community's diversion totals.
- 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.
- District now has a group of volunteers (Master Recyclers) to assist at events or with District initiatives.
- The District e-newsletter now offers a paperless way to reach residents and can be sent more often than the hard copy newsletter, so it can include even more information to engage residents.

Weaknesses/Challenges

- Mailing to households is expensive but print and radio ads do not reach as many people.
- There are barriers to getting into certain events or schools.
- Social media impressions don't represent true engagement, but ads are based on the number of impressions.
- Most ads and campaigns are not targeted but rather are intended for a broad audience, yet targeting ads can be more impactful.

Opportunities

- Promote the bottle-cap-to-benches program allows schools, church youth groups and community youth organizations to obtain the recycled-content benches/tables that they want while engaging the children.
- Promote the litter collection kit loan program encourages groups to help the environment while being cost efficient.
- Promote the recycling container loan program encourages event coordinators to incorporate recycling for no cost (to them or the

District) while shifting the responsibility of collecting and transporting to them.

- Continue to grow the District residential e-newsletter audience e-newsletters could also be developed for governments, schools, and businesses.
- Continue to more actively engaging residents virtually via webinars, social media posts and paid ads, videos, etc., and continue utilizing these outreach tools to reach a wider audience.

Threats

- None

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 217,000 tons of residential/commercial recyclables and almost 814,500 tons of industrial recyclables. There are several facilities that processed quantities of District-generated recyclables (not counting composting facilities) in 2019 including:

- Stoller Lawn & Garden Inc
- Bennet's Appliance Centers
- Broadway Iron & Metal Inc.
- Wayco Automotive Inc
- Wayne County
- JEDCO Computers
- Little Shop of Bargains
- PSC Metals – Navarre
- PSC – Wooster
- Sanmandy Enterprises
- FPT Massilon
- Midwest Com-Tel Inc
- S. Slesnick Company

There are also processing facilities that manage District recyclables outside the District including:

- Rumpke – Dayton
- Republic – Akron
- Waste Management – Akron
- River Valley Paper Company
- FPT Cleveland
- Profile Products
- Medina Recycling

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

Material	Tons
Appliances/ "White Goods"	50.50
Household Hazardous Waste	117.32
Used Motor Oil	53.74
Electronics	115.66
Scrap Tires	12,831.26
Dry Cell Batteries	3.06
Lead-Acid Batteries	82.86
Food	3,857.91
Glass	1,154.80
Ferrous Metals	26,714.64
Non-Ferrous Metals	8,500.18
Corrugated Cardboard	25,802.59
All Other Paper	34,084.89
Plastics	1,911.61
Textiles	4,687.33
Wood	12,200.99
Commingled Recyclables (Mixed)	41,578.43
Yard Waste	71,495.83
Rubber (not including tires)	773.00
Other (Aggregated)	625.40
Total	246,641.98

1. Organics Processing Capacity

The highest quantity of materials recycled include yard waste at 71,495.83 tons from the residential/commercial sector solely. The District's network of composting facilities has managed the generated yard waste tonnage. There are six class III compost facilities and twelve class IV compost facilities located in-District that can take yard waste. There are also two Class II compost facilities in District to take food waste organics as well as yard waste (Earth N' Wood Products and Paradise Composting). However, only ten of these twenty facilities reported composting material from the District in 2019, and five facilities from outside of the District reported processing organics from the District in 2019.

2. 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

- At least 28 facilities in and around the District have capacity for processing the District’s recyclables.
- More processors of recyclables are located in the District rather than out of 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

- No single-stream MRFs are located in the District

Opportunities

- The District could provide grant funding, technical assistance, and/or partnership for any interested processing companies in opening a single-stream MRF in the District.
- Promote the two Class II compost facilities in the District to accept more food waste for diversion.

Threats

- Recycling processing facilities are expensive investments, especially with fluctuating recycling markets.
- Facilities deal with location and/or odor issues
- Scrap tire facility utilizes annual price increases, and if the facility closed, that program would be in jeopardy



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 analyses then identified strengths, challenges, and opportunities where applicable. Through this process, a total of 80 recommendations for improvements, initiatives, and/or strategies were proposed to be considered for 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 multiple countywide infrastructure and unique recycling facilities available to residents and businesses. 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 65 programs, actions, or initiatives that the District may or will implement during the planning period. The program descriptions are contained in Section B below and are organized under the following categories:

1. Curbside & Drop-Off Recycling
2. Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard-to-Recycle Materials
3. Education/Outreach
4. Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs

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 and at least 66 percent of the solid waste generated by the industrial sector.
Goal #3	The SWMD shall provide the following required programs: a Web site; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.
Goal #4	The SWMD shall provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identified target audiences using best practices.
Goal #5	The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.
Goal #6	The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.
Goal #7	The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.
Goal #8	The SWMD will use U.S. EPA’s Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.
Goal #9	The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.
Goal #10	The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD’s solid waste management plan

B. Program Descriptions

This section outlines the suggested opportunities from Appendix H and the existing programs available to residents, communities, businesses, and institutions during the planning period, as well as new programs or changes that will be implemented. Further details on opportunity descriptions are included in 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 Chapter V of this Plan Update.

For any program or initiative deemed by the Policy Committee as not to be implemented, the District still reserves the right to implement at any point in the planning period at its discretion with approval from the Board of Directors. The Policy Committee agreed to this right being expressed in the Plan Update.

1. Curbside and Drop-Off Recycling

The District listed opportunities for actions or programs identified through the evaluations conducted in Appendix H and these are presented in **Table I-1** below. After ranking, the opportunities were prioritized for new programs.

Table I-1. Ranked Suggested Opportunities from Appendix H for the Residential Recycling Infrastructure Analysis

Opportunities from Section H-1: Residential Recycling Infrastructure Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Curbside Recycling	Approach the Mayor of the only municipality without a curbside program in the District about exploring a curbside program	3	Implement
	Target 2-3 villages without curbside programs in the District with outreach and education flyers that summarize the value of curbside recycling programs.	2	May Implement
	Conduct workshops with 2-3 villages that do not have curbside programs in the District to promote curbside recycling and the technical assistance the District could provide in creating the program and funding opportunities.	2	May Implement
	The District can promote and utilize Program Startup Grants to incentivize communities to start a new curbside program via flyers, mailers, social media, or other direct engagement strategies.	3	Implement
	The District can promote and utilize mini-grants to incentivize communities to include recycling when they bid out curbside waste programs via flyers, mailers, social media, or other direct engagement strategies.	3	Implement
	The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent curbside recycling from expanding to rural and village communities in the District.	2	May Implement
	Drop-Off Recycling Infrastructure	Utilize existing full-time drivers to work weekend days/overtime hours to cover typical part-time driver hours.	3
incentivize full-time drivers to increase their certification from a Class B to a Class A CDL and continue to enhance their safe driving ability.		3	Implement
Continue exploring the benefits of leasing versus owning recycling trucks.		3	Implement
Employ additional camera systems and enforcement to reduce contamination and drop-off site abuse as the budget allows.		3	Implement

Opportunities from Section H-1: Residential Recycling Infrastructure Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
	Conduct surveying activities at targeted drop-off sites to communicate participation requirements as well as to ascertain why residents use the sites and what they know on correct recycling.	2	May Implement
	Add open dump ORC language on signs at recycling drop-off sites to drive home the message that dumping materials not accepted at the sites is against the law and there are penalties for breaking the law.	3	Implement
	Create an information sheet receptacle at each drop-off or targeted drop-off sites that includes detailed acceptable and non-acceptable materials for the program.	2	May Implement
	Explore cost of compressed natural gas, fuel cell, electric, biodiesel, etc. for District collection vehicles to determine if long term cost savings could be achieved.	2	May Implement
	The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent drop-off recycling from expanding in the District.	2	May Implement
	Create temporary site signage about site-specific issues that could draw more attention than permanent signage and could be used across multiple sites.	3	Implement

Table I-2. Summary of Actions and Programs for Residential Recycling Infrastructure for the Planning Period (2023-2032)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Curbside Recycling				
Existing	Curbside Recycling Programs	Existing	Ongoing	1, 2
Existing	Curbside Expansion Efforts	Existing	Ongoing	1, 2
Existing	Curbside Re-Start Program	Existing	Ongoing	1, 2
Existing	PAYT Promotion Efforts	Existing	Ongoing	1, 2
New	Approach municipality regarding new curbside programs	2023	2032	1, 2
Potential	Target 2-3 villages without curbside programs	2023	2032	1, 2
Potential	Conduct workshops with 2-3 villages that do not have curbside programs	2023	2032	1, 2
New	Promote and utilize Program Startup Grants	2023	2032	1, 2
New	Promote and utilize mini-grants to incentivize communities	2023	2032	1, 2
Potential	Curbside: Hauler engagement session	2023	2032	1, 2

Status	Program / Action Name	Start Date	End Date	Goal(s)
Drop-Off Recycling				
Existing	Drop-Off Recycling Program	Existing	Ongoing	1, 2
Existing	Drop-Off Map	Existing	Ongoing	1
Existing	Drop-Off Promotion Program	Existing	Ongoing	1, 2, 4
Existing	Implement Curbside Recycling for Targeted Areas	Existing	Ongoing	2, 4, 7
Existing	Community Assistance Program	Existing	Ongoing	2, 4, 7
New	Work with drivers to cover part-time hours	2023	2032	1, 2
New	Incentive for drivers to enhance their safe driving ability	2023	2032	N/A
New	Explore leasing truck benefits	2023	2032	N/A
New	Additional camera systems for contamination	2023	2032	1, 2
Potential	Surveying activities at targeted drop-off sites	2023	2032	1, 2
New	Add open dump ORC language on signs at recycling drop-off sites	2023	2032	1, 2
Potential	Drop-off information sheet receptacle	2023	2032	1, 2
Potential	Explore recycling truck energy options	2023	2032	1, 2
Potential	Drop-off: Hauler engagement session	2023	2032	1, 2
New	Create temporary site signage about site-specific issues	2023	2032	1, 2

a. Existing Programs: Curbside and Drop-Off Recycling

Further description of these existing programs can be found in Appendix H.

Curbside Recycling Programs

There were 19 non-subscription and 31 subscription curbside recycling programs in 2019. The programs are expected to continue throughout the planning period.

A full list of curbside programs can be found in Appendix J and other program details in Appendix H.

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.

Curbside Re-Start Program

In the event of a cancellation, the District works to re-establish the curbside collection program if possible. When that is not possible, the District evaluates the community for a recycling drop-off site.

PAYT Promotion Efforts

The District may continue to work with targeted political subdivisions that offer curbside recycling but do not have PAYT to promote establishment of PAYT programs.

Drop-Off Recycling Program

The District contracts in Tuscarawas County and conducts own collection in Stark and Wayne. 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

A full list of drop-off programs can be found in Appendix J. Details for this program can be found in Appendix H.

Drop-Off Map

The District's website has a facility locator tool which leads residents to drop-off sites for all different types of recyclables and special wastes and provides essential information about those sites like directions, phone number, etc.

Drop-Off Promotion Program

The District will continue to work with political subdivisions to educate their residents about drop-off programs. This may include suggestions on communications with residents via community websites or links to the District website, sharing of District publications on the drop-off program, special meetings and presentations and other activities as needed.

Drop-off promotion priority based on working with communities who do one of the following:

- Make a request for promotion assistance directly or via the District's mini-grant program.
- Regularly communicate to the District because they are grant recipients.
- Seem to be low performing for their population density.
- Would be prime candidates because of an apparent lack of promotion (for example, a tire drop-off site could be communicated to residents of a community that is observed to have an increased mosquito control concern).

The District reserves the right to revisit the operation of the program at any time during the planning period if deemed feasible by the Board. Also, the District reserves the right to add, remove, move, or modify drop-off sites as deemed necessary by the Board of Directors (Board).

Implement Curbside Recycling for Targeted Areas

In lieu of changes in the recycling markets, the District has prioritized offering support to communities with existing programs especially those with higher populations. Details for this program can be found in Appendix H.

The District continues to target political subdivisions for implementing curbside recycling programs based on factors such as: population greater than 20,000 and housing density.

The District could develop a list of communities that meet the above criteria and other criteria as determined and work with them to promote curbside recycling programs including contracting and consortiums whenever possible during the planning period. Conditions that would affect this effort include the following:

- Communities interest in developing curbside recycling programs.
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Community Assistance Program

District continues to target at least one community each year to work on improving recovery rates. Outreach can be focused on curbside, drop-offs, yard waste or a combination.

Assistance priority is based on working with communities who do one of the following:

- Make a request for promotion assistance directly or via the District's mini-grant program.
- Regularly communicate to the District because they are grant recipients.
- Seem to be low performing for their population density.
- Would be prime candidates because of an apparent lack of promotion (for example, a tire drop-off site could be communicated to residents of a community that is observed to have an increased mosquito control concern).

b. New Programs: Curbside and Drop-Off Recycling

Approach municipality regarding new curbside programs

A new initiative by the District is to approach the Mayor of the only municipality without a curbside program in the District about exploring a curbside program. This has been, to a certain extent, an ongoing activity and will continue.

Potential - Target 2-3 villages without curbside programs

The District could target 2-3 villages without curbside programs in the District with outreach and education flyers that summarize the value of curbside recycling programs. This activity would be based on the following criteria:

- Communities interest in developing curbside recycling programs.
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Potential - Conduct workshops with 2-3 villages that do not have curbside programs

The District could conduct workshops with 2-3 villages that do not have curbside programs in the District to promote curbside recycling and the technical assistance the District could provide in creating the program and funding opportunities. This activity would be based on the following criteria:

- Communities interest in conducting curbside recycling workshops.
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Promote and utilize Program Startup Grants

A new initiative by the District is to promote and utilize Program Startup Grants to incentivize communities to start a new curbside program via flyers, mailers, social media, or other direct engagement strategies. This initiative could include the following:

- Develop a list of communities to target including community contact or champion.
- Develop and or modify existing flyers, mailers, social media content.
- Submit the engagement media to each targeted community within the first 3 years of the new planning period.
- Measure the effectiveness of the engagement such as requested additional information by the community, requested meetings to discuss and other positive factors. Also measure negative factors such as no responses or requests for assistance or additional information.
- Determine based on the measurement metrics listed above if additional engagement activities would be warranted before the next plan update process.

Promote and utilize mini-grants to incentivize communities

A new initiative by the District is to promote and utilize mini-grants to incentivize communities to include recycling when they bid out

curbside waste programs via flyers, mailers, social media, or other direct engagement strategies. This initiative could include the following:

- Develop a list of communities to target including community contact or champion.
- Develop and or modify existing flyers, mailers, social media content.
- Submit the engagement media to each targeted community within the first 3 years of the new planning period.
- Measure the effectiveness of the engagement such as requested additional information by the community, requested meetings to discuss and other positive factors. Also measure negative factors such as no responses or requests for assistance or additional information.
- Determine based on the measurement metrics listed above if additional engagement activities would be warranted before the next plan update process.

Potential - Curbside: Hauler engagement session

The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent curbside recycling from expanding to rural and village communities in the District. This activity would be based on the following criteria:

- Haulers interest in attending the engagement session(s).
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Work with drivers to cover part-time hours

A new initiative by the District is to utilize existing full-time drivers to work weekend days/overtime hours to cover typical part-time driver hours. This is a management and staffing based activity and will occur as needed throughout the planning period.

Incentive for drivers to enhance their safe driving ability

A new initiative by the District is to incentivize full-time drivers to increase their certification from a Class B to a Class A CDL and continue to enhance their safe driving ability. This is a management and staffing based activity and will occur as needed throughout the planning period.

Explore leasing truck benefits

A new initiative by the District is to explore the benefits of leasing versus owning recycling trucks. This activity will be based on the following actions:

- Conduct an evaluation on the benefits and draw backs to leasing verses owning within the first three years of the new planning period.
- Based on the evaluation and presentations to the Board of Directors, additional evaluation may be required.
- Implementation or tabling of this initiative will be based on decisions from the Board of Directors.

Additional camera systems for contamination

A new initiative by the District is to employ additional camera systems and enforcement to reduce contamination and drop-off site abuse as the budget allows. This activity will be based on the following actions:

- Identification of highest contamination sites that do not have cameras.
- Evaluation of the costs for implementation of cameras per site identified.
- Presentation of the contamination metrics and costs for cameras to the Board of Directors (if needed due to the cost).
- Implementation of tabling of this initiative will be based on decisions from the Board of Directors.

Potential - Surveying activities at targeted drop-off sites

The District could conduct surveying activities at targeted drop-off sites to communicate participation requirements as well as to ascertain why residents use the sites and what they know on correct recycling. This potential initiative implementation could be based on the following criteria:

- Developing a list of potential drop-off sites that could be utilized for this initiative.
- District staff availability.
- Internship or volunteer opportunities for staffing.
- Local groups or organizations interested in conducting the survey work.
- District financial resources.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Add open dump ORC language on signs at recycling drop-off sites

A new initiative by the District is to add open dump ORC language on signs at recycling drop-off sites to drive home the message that dumping materials not accepted at the sites is against the law and there are penalties for breaking the law. The signs would contain the following language:

- No Dumping
Site under video surveillance!
Violators will be prosecuted
With a fine of up to \$500! RC. 3767.32
If you see illegal dumping,
- Each site will have the phone number of that county's sheriff's office
- This initiative will be implemented within the first 3 years of the new planning period.

Potential - Drop-off information sheet receptacle

The District could create an information sheet receptacle at each drop-off or targeted drop-off sites that includes detailed acceptable and non-acceptable materials for the program. This potential initiative implementation would be based on the following criteria:

- Developing a list of potential drop-off sites that could be utilized for this initiative.
- District staff availability.
- District financial resources.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Potential - Explore recycling truck energy options

The District could explore cost of compressed natural gas, fuel cell, electric, biodiesel, etc. for District collection vehicles to determine if long term cost savings could be achieved. This potential activity would be based on the following actions:

- Determine, within the first three years of the new planning period if this initiative can be completed or is warranted. If it is decided to move forward, then the following tasks would occur:
 - Conduct an evaluation on the benefits and draw backs to operating recycling drop-off trucks using natural gas, fuel cells, electric, biodiesel or other green energy fuels.
 - Based on the evaluation and presentations to the Board of Directors, additional evaluation may be required.
 - Implementation or tabling of this initiative would be based on decisions from the Board of Directors.

Potential - Drop-off: Hauler engagement session

The District could conduct an annual or more frequent hauler engagement session to understand barriers and other factors that prevent drop-off recycling from expanding in the District. This activity would be based on the following criteria if it is decided to implement:

- Haulers interest in attending the engagement session(s).
- District staff availability.
- District financial resources.
- Competition and other market forces.
- Local policies and politics.
- Direction from the Policy Committee and Board of Directors.
- Local, state, and federal grants.
- Other factors as discovered or determined.

Create temporary site signage about site-specific issues

A new initiative by the District is to create temporary site signage about site-specific issues that could draw more attention than permanent signage and could be used across multiple sites. The District will first conduct the following:

- Determine the best type of portable sign that could be used.
- Develop strategy on sign display and messaging.

- Ensure adaptability of sign for multiple and changing messages.
- Determine the cost of the sign and how many would be needed.
- Obtain approval for the purchases if they exceed the amounts already budgeted.
- This initiative will be implemented within the first 5 years of the new planning period.

2. Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard-to-Recycle Materials

The District listed opportunities for actions or programs identified through the evaluations conducted in Appendix H and these are presented in **Table I-3**, **Table I-4**, and **Table I-5** below. After ranking, the opportunities were prioritized for new programs.

Table I-3. Ranked Suggested Opportunities from Appendix H for the Business and Industrial Sector Analysis

SECTIONS H-2 and H-3. Business and Industrial Sector Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
District Business and Industry Recycling Assistance Programs	Further develop and promote resources to aid the commercial sector on the District website	3	Implement
	Hire a commercial/industrial specialist to provide technical assistance, outreach and education and other value-added services to increase recycling and data collection on recycling activities throughout the District.	1	Do Not Implement
	Work with area chamber of commerce initiatives to promote the District's programs and to provide technical assistance to this market segment.	2	May Implement

Table I-4. Ranked Suggested Opportunities from Appendix H for the Residential/Commercial Waste Composition Analysis

Opportunities from Section H-4. Residential/Commercial Waste Composition Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Yard Waste Programs	Incentivize site privatization by offering funding infrastructure necessary for a site to privatize.	3	Implement
	Promote at least one private sector facility in each county that accepts material directly from residents or community programs.	3	Implement

Opportunities from Section H-4. Residential/Commercial Waste Composition Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
	Transition District funded drop-off sites to existing or new private sector sites as identified to reduce redundancy and cost.	3	Implement
	District creates a District owned and either District or private sector operates the facility.	1	Do Not Implement
Food Waste Composting Programs	Promote Paradise Composting, Earth N Wood/Kurtz Brothers. and other local entities that offer food waste diversion/composting services to schools and institutions.	2	May Implement
	Promote Paradise Composting, Earth N Wood/Kurtz Brothers. and other local entities that offer food waste diversion/composting services to restaurants/grocery stores.	2	May Implement

Table I-5. Ranked Suggested Opportunities from Appendix H for the Restricted and Difficult to Manage Streams Analysis

Opportunities from Section H-6. Restricted and Difficult to Manage Waste Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
HHW	Pop-up events in Tuscarawas and Wayne County could be added as needed if funding is available.	3	Implement
	Pop-up events allows us to establish partnerships in the local region that could lead to a permanent site and partnership.	2	May Implement
	Develop satellite locations in Wayne and Tuscarawas counties to collect and then transfer acceptable HHW to the Canton facility for packaging and shipping.	1	Do Not Implement
	Work with communities to conduct their own HHW events, under controlled conditions, and then transfer collected materials to Canton facility for packaging and shipment.	1	Do Not Implement
	Develop permanent HHW facilities in Wayne and Tuscarawas counties.	1	Do Not Implement
Pharmaceuticals	Explore if DEA may be willing to incinerate drugs collected at drop boxes as well as those collected at DEA collection event(s), reducing disposal cost.	3	Implement
	Encourage Stark County officials to participate in DEA takeback day for program consistency and cost reduction	3	Implement
Scrap Tires	Utilize the EPA scrap tire program to allow the cleanup of illegally dumped tires in District communities without straining the scrap tire budget.	3	Implement
	Conduct a Districtwide campaign to educate residents on the local opportunities to turn in old tires when buying new tires.	3	Implement

Opportunities from Section H-6. Restricted and Difficult to Manage Waste Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
E-Waste	Additional promotion of the Canton Recycle Center and the free option it provides.	3	Implement
	Creation of satellite E-waste collection sites that then can transfer collected materials to Canton for packaging and shipment.	1	Do Not Implement
	Work with communities to conduct their own E-waste events, and could promote available mini-grant funding to communities through e-newsletter developed from ratification list	3	Implement
	Develop comprehensive list of private sector retail and scrap yard locations that accept e-waste and then promote the list of the District's website.	3	Implement
Lead-Acid Batteries	Additional promotion of the Canton Recycle Center and the free option it provides.	3	Implement
	Develop comprehensive list of private sector retail and scrap yard locations that accept lead acid batteries and then promote the list on the District's website.	3	Implement
Appliances	Additional promotion of the Canton Recycle Center and the free option it provides.	3	Implement
	Develop comprehensive list of private sector retail and scrap yard locations that appliances and then promote the list on the District's website.	3	Implement

Table I-6. Summary of Actions and Programs for Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials for the Planning Period (2023-2032)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Business and Industrial Sector				
Existing	Commercial/Institutional Recycling Assistance	Existing	Ongoing	3, 4
Existing	Waste Audits	Existing	Ongoing	4
Existing	School Recycling Program	Existing	Ongoing	1, 2, 3, 4
Existing	Government Building Recycling	Existing	Ongoing	1, 2, 3, 4
Existing	Campaign to reduce commercial use of residential yard waste drop-off sites	Existing	Ongoing	4
Existing	Commercial and Industrial Technical Assistance	Existing	Ongoing	4, 5
Existing	Waste Audit Manual	Existing	Ongoing	4, 5
New	Develop and promote resources to aid the commercial sector	2023	2032	4
Potential	District program promotion with area chambers of commerce	2023	2032	5
Restricted & Difficult to Manage Wastes, Special Collection Events				

Status	Program / Action Name	Start Date	End Date	Goal(s)
Existing	Pharmaceutical Collection Sites	Existing	Ongoing	1, 2, 6
Existing	Permanent HHW Collection	Existing	Ongoing	1, 2, 6
Existing	Scrap Tire Program - Permanent Sites and Outreach Efforts	Existing	Ongoing	1, 2, 6
Existing	Yard Waste Collection Sites	Existing	Ongoing	1, 2, 6
Existing	Computer/Electronics Recycling End Use Audit	Existing	Ongoing	1, 2, 6
Existing	Electronics Collection Program	Existing	Ongoing	1, 2, 6
Existing	HHW Management Outreach Program	Existing	Ongoing	1, 2, 6
Existing	Lead-Acid Battery Program	Existing	Ongoing	1, 2, 6
Existing	Appliance Collection Program	Existing	Ongoing	1, 2, 6
Existing	Food Waste Management Program	Existing	Ongoing	1, 2, 6
Existing	Yard Waste Partnership Program	Existing	Ongoing	1, 2, 6
Existing	Yard Waste Program Enhancement Initiative	Existing	Ongoing	1, 2, 6
Existing	Expansion of HHW Collection	Existing	Ongoing	1, 2, 6
New	Yard Waste: Incentivize site privatization	2023	2032	6
New	Yard waste private sector to take material directly from residents	2023	2032	6
New	Transition yard waste drop-off sites to existing or new private sector site	2023	2032	6
Potential	Promote local food waste entities to schools and institutions	2023	2032	4, 5
Potential	Promote local food waste entities to restaurants/grocery stores	2023	2032	4, 5
New	HHW: Pop-up events in Tuscarawas and Wayne County	2023	2032	1, 2, 6
Potential	Pop-up events in Tuscarawas and Wayne County	2023	2032	1, 2, 6
New	Pharmaceuticals: Explore if DEA may be willing to incinerate drugs	2023	2032	6
New	Pharmaceuticals: Encourage Stark County officials to participate in DEA takeback day	2023	2032	6
New	Scrap Tires: Utilize the EPA scrap tire program would allow the cleanup of illegally dumped tires	2023	2032	1, 2, 6
New	Scrap Tires: campaign to education residents on the local opportunities	2023	2032	4, 6
New	E-Waste/ Lead Acid Batteries/ Appliances: promotion of the Canton Recycle Center	2023	2032	4, 6
New	E-Waste: Work with communities to conduct their own E-waste events	2023	2032	N/A
New	E-Waste: list of private sector retail and scrap yard locations	2023	2032	1, 2, 6
New	Lead-Acid Batteries: list of private sector retail and scrap yard locations	2023	2032	2, 6
New	Appliances: list of private sector retail and scrap yard locations	2023	2032	1, 2, 6
New	Promote the two Class II compost facilities in the District to accept more food waste for diversion.	2023	2032	1, 2, 6

a. Existing Programs: Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials

Further description of these existing programs can be found in Appendix H.

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.

School Recycling Program

The District collects mixed paper and office paper from schools located throughout the three county area. Some of the school programs also accepted plastics, glass, aluminum, and steel. The District also collected data from local businesses that provided recycling services to schools, which include Royal Oaks Recycling and Sanmandy.

Government Building Recycling

The District continues to operate the Government Building Recycling program in each of the three counties. The District collected from Stark County government buildings, Stark County libraries, Tuscarawas County government buildings, and from Wayne County government buildings. The District also collected data from local businesses that provided recycling services to government buildings within the District. In Stark County, Royal Oaks Recycling collected from bins at government buildings and from bins at libraries; in Wayne County, Royal Oaks Recycling collected from bins at government buildings.

Campaign to reduce commercial use of residential yard waste drop-off sites

The District provides assistance to established yard waste sites in the form of grant funding for signs and cameras to reduce commercial dumping. With the Yard Waste Host Site Block Grant Program, the District can assist to de-incentivize sites from

encouraging commercial users at the sites as any hauling expenses that exceed the block grant amounts would have to be absorbed by the host sites.

Commercial and Industrial Technical Assistance

The District provided resources for the commercial and industrial sector on its website which included information about grant opportunities, managing special materials such as food or construction waste, low-cost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals. Printed copies of the Waste Audit Manual and Office Recycling Guide are available upon request.

Waste Audit Manual

The District will continue to advertise free waste auditing assistance on its website. Waste audits evaluate the waste streams of each business/industry, current disposal practices and costs, current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse, and composting. The waste audits may also include a marketing component to help the business/industries identify outlets for marketing recyclable materials or reusing the materials.

The District provides a waste audit manual for businesses to conduct their own audit and also provides information on companies that could be hired to do a more comprehensive audit if needed. Waste audits help businesses/industries realize the costs savings associated with the specific recommendations.

Pharmaceutical Collection Sites

Multiple prescription drug collection boxes are located in each District county. The District supported local pharmaceutical collections by providing funding to offset the operational costs, as well as funding to advertise and promote the events. Drugs collected through this program are incinerated.

Permanent HHW Collection

The permanent HHW collection program is conducted at the Canton City Recycling Center and is planned to continue to operate during the planning period. The District also provides HHW information on its website with locations that accept HHW materials year-round.

Scrap Tire Program - Permanent Sites and Outreach Efforts

The District operates permanent scrap tire collection sites and the tire pass program for local municipalities to properly manage illegally dumped tires collected.

Yard Waste Collection Sites

The District will continue to operate the yard waste collection program with a budgetary limit noted in Appendix O. The District reserves the right to spend less or more as determined by the Board of Directors. The District may provide grants to political subdivisions to offset the costs of operating a yard waste drop-off site. Funding level is primarily based upon prior years' hauling expenses. Sites must be open to all District residents to receive funding.

Computer/Electronics Recycling End Use Audit

The Responsible Recycling (R2) Leader program was designed to advance the safe, responsible, and sustainable repair and recycling of used electronics. The District met with Goodwill Industries to identify how electronics are managed after collection. Goodwill, which is R2 certified, meets the latest standards in terms of environmental health and safety regarding e-waste recycling. The District may monitor this and other locations it promotes as accepting these items to ensure they are managed properly after collection.

Electronics Collection Program

The District's facility locator tool on its website directs residents to drop-off sites for several materials including many special materials like electronics. The District also offers support to communities/organizations wishing to host electronics collection events for their residents and had electronics recycling available at its household hazardous waste collection center in Canton.

HHW Management Outreach Program

The District conducts outreach regarding its HHW Management through the annual Newsletter and through the website (including listing locations that accept HHW on its new facility locator).

Lead-Acid Battery Program

The District's facility locator tool on its website directs residents to drop-off sites for several materials including many special materials like lead-acid batteries.

Appliance Collection Program

The District's facility locator tool on its website directs residents to drop-off sites for several materials including many special materials like appliances.

Food Waste Management Program

The District directs food waste generators to an existing registered Class II composting facility located in Wayne County. This facility expanded their operation to accommodate additional food waste from District grocery stores, the Wayne County Fair, and non-profits that generate food waste from events like pancake breakfasts.

Yard Waste Partnership Program

The District directs residents with yard waste not only to District-sponsored sites but also to private sector facilities willing to accept the material (some at no cost) in all three counties. This is especially true during the first quarter as most District-sponsored sites are closed down for the season at that time. The District will continue exploring partnerships/promoting these facilities as the markets evolve.

Yard Waste Program Enhancement Initiative

The District may continue to provide assistance as needed to sites to improve existing yard waste sites such as implementing cameras, fencing and gates to reduce contamination and restrict overall volume.

Expansion of HHW Collection

The District will evaluate the option for additional year-round permanent HHW facilities central to the three-county area to supplement temporary collection events. The District will continue to explore changing to all appointment-based HHW collection events.

b. New Programs: Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials

Develop and promote resources to aid the commercial sector

A new initiative by the District is to further develop and promote resources to aid the commercial sector on the District website. This activity will be based on the following actions:

- Evaluation of other solid waste districts and or governmental entities to determine the best engagement and design concepts.
- Evaluate the best messaging and content approach for commercial sector businesses.
- Work with the current District website developer on the level of change needed based on the evaluation details obtained above.
- Develop a content management plan to ensure messaging and content remains current over time.
- Assign content management duties to existing District staff member.
- Evaluation of the costs for implementation of changes to the website.
- Implement within the first 5 years of the new planning period.

Potential - District program promotion with area chambers of commerce

The District could work with area chamber of commerce initiatives to promote the District's programs and to provide technical assistance to this market segment.

This initiative could be included in the website initiative discussed above or as a separate engagement initiative as determined by the District.

Yard Waste: Incentivize site privatization

A new initiative by the District is to incentivize site privatization by offering funding infrastructure necessary for a site to privatize.

This initiative will be implemented by adjusting the appropriate District grant program to allow for this funding. Promotion of this grant will be conducted through existing communication initiatives utilized by the District.

The District will implement this initiative within the first 3 years of the new planning period.

Yard waste private sector to take material directly from residents

A new initiative by the District is to focus on at least one private sector facility in each county that accepts material directly from residents or community programs. This activity will be based on the following actions:

- Identification of the best organics management facility(s) in each of three counties of the District that can accept materials directly from residential generators.
- Develop a working relationship with the owner and or operator of each site.
- Develop an agreement between each facility as to what services, products, waste streams and or materials they are willing to accept from residents and conditions of delivery.
- Work with each facility to ensure the details of their operations are promotable to residents via the engagement platforms used by the District.
- Make available to District engagement platform subscribers the opportunities each facility provides to the community.
- Expand to other facilities as appropriate.
- Implement within the first 5 years of the new planning period.

Transition yard waste drop-off sites to existing or new private sector site

A new initiative by the District is to transition District funded drop-off sites to existing or new private sector sites as identified to reduce redundancy and cost. This activity will be based on the following actions as well as the results from the previous initiative:

- Identification of the organics management facility(s) in each of three counties of the District that can accept the same materials in the District yard waste drop-off system from residents which are close to existing drop-off sites. Also determine their capacity for additional materials.
- Develop a working relationship with the owner and or operator of each site.
- Determine if the organics management facility can replace any District drop-off sites in the vicinity.
- Displace current drop-off sites, if possible, based on the actions above.

- Implement within the first 5 years of the new planning period.

Potential - Promote local food waste entities to schools and institutions

The District could promote Paradise Composting, Earth N Wood/Kurtz Brothers and other local entities that offer food waste diversion/composting services to schools and institutions. This initiative may be combined with other initiatives listed above depending on their implementation and end results.

Potential - Promote local food waste entities to restaurants/grocery stores

The District could promote Paradise Composting, Earth N Wood/Kurtz Brothers and other local entities that offer food waste diversion/composting services to restaurants/grocery stores. This initiative may be combined with other initiatives listed above depending on their implementation and end results.

HHW: Pop-up events in Tuscarawas and Wayne County

A new initiative by the District is to evaluate pop-up events in Tuscarawas and Wayne County that could be added as needed if funding is available. This initiative will be conducted as an evaluation and decision point on an annual basis though may be evaluated a second time closer to the end of the year to check in on how much funding remains and how it would be best utilized for the remainder of the year without going overbudget. These events could also assist the District to establish partnerships in the local region that could lead to a permanent site and partnership.

Criteria for determining whether to conduct pop-up collection events include:

- Budgetary availability
- Fairground schedule/location availability
- Partnership schedule/staff availability
- Attendance
- Time of year

Pharmaceuticals: Explore if DEA may be willing to incinerate drugs

A new initiative by the District is to explore if DEA may be willing to incinerate drugs collected at drop boxes as well as those collected at DEA collection event(s), reducing disposal cost. This initiative will

be conducted as an evaluation and decision point on an annual basis.

Pharmaceuticals: Encourage Stark County officials to participate in DEA takeback day

A new initiative by the District is to encourage Stark County officials to participate in DEA takeback day for program consistency and cost reduction. This initiative will be conducted as an evaluation and decision point on an annual basis.

Scrap Tires: Utilize the EPA scrap tire program would allow the cleanup of illegally dumped tires

A new initiative by the District is to utilize the EPA scrap tire program for the cleanup of illegally dumped tires in District communities without straining the scrap tire budget. This initiative will be conducted as an evaluation and decision point on an annual basis.

Scrap Tires: campaign to educate residents on the local opportunities

A new initiative by the District is to conduct a Districtwide campaign to educate residents on the local opportunities to turn in old tires when buying new tires. This activity will be based on the following actions:

- Communicate with residents, via the District's engagement platforms, on the locations of the District sites that accept scrap tires.
- Implement within the first 5 years of the new planning period.

E-Waste/ Lead Acid Batteries/ Appliances: promotion of the Canton Recycle Center

A new initiative by the District is to provide additional promotion of the Canton Recycle Center and the free option it provides including e-waste, lead acid batteries, and appliances.

This initiative will include adding information on the District's website as well as routine messaging on its engagement platforms. This will be completed in the first year of the new planning period.

E-Waste: Work with communities to conduct their own E-waste events

A new initiative by the District is to work with communities to conduct their own E-waste events. The District would promote available mini-grant funding to communities through the e-newsletter developed from the ratification list.

E-Waste: list of private sector retail and scrap yard locations

A new initiative by the District is to develop comprehensive list of private sector retail and scrap yard locations that accept e-waste and then promote the list on the District’s website. This activity will be completed in the first 2 years of the new planning period.

Lead-Acid Batteries: list of private sector retail and scrap yard locations

A new initiative by the District is to develop comprehensive list of private sector retail and scrap yard locations that accept lead acid batteries and then promote the list on the District’s website. This activity will be completed in the first 2 years of the new planning period.

Appliances: list of private sector retail and scrap yard locations

A new initiative by the District is to develop comprehensive list of private sector retail and scrap yard locations that accept appliances and then promote the list on the District’s website. This activity will be completed in the first 2 years of the new planning period.

3. Education/Outreach

The District listed opportunities for actions or programs identified through the evaluations conducted in Appendix H and these are presented in **Table I-7** and **Table I-8** below. After ranking, the opportunities were prioritized for new programs.

Table I-7. Ranked Suggested Opportunities from Appendix H for the Education and Outreach Analysis

Opportunities from Section H-12. Education and Outreach Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Education and Outreach	Promote the bottle-cap-to-benches program which allows schools, church youth groups and community youth organizations to obtain the recycled-content benches/tables that they want while engaging the children.	3	Implement

Opportunities from Section H-12. Education and Outreach Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
	Promote the litter collection kit loan program which encourages groups to help the environment while being cost efficient.	3	Implement
	Promote the recycling container loan program which encourages event coordinators to incorporate recycling for no cost (to them or the District) while shifting the responsibility of collecting and transporting to them.	3	Implement
	Continue to grow the District residential e-newsletter audience; e-newsletters could also be developed for governments, schools, and businesses.	3	Implement
	Continue to more actively engaging residents virtually via webinars, social media posts and paid ads, videos, etc., and continue utilizing these outreach tools to reach a wider audience.	3	Implement

Table I-8. Ranked Suggested Opportunities from Appendix L for the Education and Outreach Analysis

Opportunities from Section L. Minimum Required Education Programs: Outreach and Marketing Plan And General Education Requirements			
Program Category	Suggested Action or Program Name	District Ranking	Status
Audience: Residents	The District can track the recycling tonnages per location over time. These tonnages can be compared to the community’s population. If a community undertakes a major drop (15% or more) in recycling rates, the District will investigate the reason and can focus an education program on the available infrastructure.	2	May Implement
Audience: Schools	The District can use the data collected from the school programs to see participation trends amongst presentations.	1	Do Not Implement
	Schools which receive recycling assistance or host recycling drop-offs from the District could measure the resulting changes in recycling each month/year.	1	Do Not Implement
Audience: Institutions & Commercial & Industrial Businesses	The District can track waste audits assisted, contracts assisted with, recycling programs started, and age of recycling programs at businesses. Having data will allow the District to critique their program to further improve the available resources for these businesses	1	Do Not Implement
Audience: Communities & Elected Officials	The District can keep track of the officials invited, and ones which attend a meeting or presentation, number of communications or presentations given, and number of programs that started. This would allow the District to begin tracking success of the programs themselves.	1	Do Not Implement

Table I-9. Summary of Actions and Programs for Education/Outreach for the Planning Period (2023-2032)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Education/Outreach				
Existing	District website	Existing	Ongoing	3, 4
Existing	Recycling and Reuse Guide or Newsletter	Existing	Ongoing	3, 4
Existing	Education and Awareness Program	Existing	Ongoing	3, 4
Existing	Yard Waste Management Education and Outreach	Existing	Ongoing	3, 4, 6
Existing	HHW Management Education and Outreach	Existing	Ongoing	3, 4, 6
Existing	Special Events Initiative	Existing	Ongoing	3, 4
Existing	Waste Reduction Report Card	Existing	Ongoing	3, 4
New	Promote the bottle-cap-to-benches program	2023	2032	3, 4
New	Promote the litter collection kit loan program	2023	2032	3, 4
New	Promote the recycling container loan program	2023	2032	3, 4
New	Grow the District residential e-newsletter audience	2023	2032	3, 4
New	Continue to more actively engage residents virtually	2023	2032	3, 4
Potential	Audience: Residents - Track the recycling tonnages per location over time	2023	2032	3, 4

a. Existing Programs: Education/Outreach

Further description of these existing programs can be found in Appendix H.

District website

The District’s website address is easy to remember (www.timetorecycle.org) and is updated regularly. The website includes drop-down menus for residents, businesses, schools (or institutions), and local governments, as well as links to District publications and public records.

Further descriptions of these existing programs can be found in Appendix L.

Recycling and Reuse Newsletter

The annual comprehensive Recycling Newsletter was mailed to households in Stark, Tuscarawas, and Wayne Counties. Newsletters are also made available to residents and businesses on the District’s website. The newsletters contained detailed information on what is acceptable and unacceptable at the recycling drop-off sites and

where the sites are located as well as other available resources and information.

Education and Awareness Program

This program includes speakers, presentations, advertisements, and other educational activities. The District's full-time Outreach Coordinator performs presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation.

Yard Waste Management Education and Outreach

The District will continue to provide detailed information to residents about local yard waste composting opportunities in the annual Newsletter and by posting information on its website.

HHW Management Education and Outreach

The District conducted outreach regarding its HHW Management through the annual Newsletter and through the website (including listing locations that accept HHW on its new facility locator).

Special Events Initiative

The District continues to increase visibility in the tri-county area. The District will focus on increasing the District's presence at large events such as fairs and festivals.

The District's Outreach Coordinator may partner with other organizations with similar missions such as Soil and Water Conservation Districts to achieve greater outreach at these events.

Waste Reduction Report Card

The annual Newsletter contains the Waste Reduction Report Card and shows the tonnages by community for drop-offs and curbside recycling. These report cards are on the website within the uploaded copies of the recycling publications which are mailed to households in Stark, Tuscarawas, and Wayne Counties.

b. New Programs: Education/Outreach**Promote the bottle-caps-to-benches program**

A new initiative by the District is to promote the bottle-caps-to-benches program which allows schools, church youth groups and community youth organizations to obtain the recycled-content benches/tables that they want while engaging the children. This initiative will be primarily completed through direct engagement with the schools through the District's environmental education program. This initiative can occur only if a company that recycles the caps can be secured.

Promote the litter collection kit loan program

A new initiative by the District is to promote the litter collection kit loan program encourages groups to help the environment while being cost efficient. This initiative will be targeted by the social media platforms the District uses. Promotion will occur year-round on the website and through other District media (social media, e-newsletter, and newsletter) as time and space allow.

Promote the recycling container loan program

A new initiative by the District is to promote the recycling container loan program which encourages event coordinators to incorporate recycling for no cost (to them or the District) while shifting the responsibility of collecting and transporting to them. Promotion will occur year-round on the website and through other District media (social media, e-newsletter, and newsletter) as time and space allow.

Grow the District residential e-newsletter audience

A new initiative by the District is to grow the District residential e-newsletter audience; e-newsletters could also be developed for governments, schools, and businesses. This activity will be based on the following actions:

- Identification of the schools, governments, and businesses to target for the e-newsletter.
- Annually send a flyer/email/communication to the identified entities to invite them to subscribe to the e-newsletter.

Continue to more actively engaging residents virtually

A new initiative by the District is to more actively engaging residents virtually via webinars, social media posts and paid ads, videos, etc., and continue utilizing these outreach tools to reach a wider audience. This activity will occur during each year of the planning period as needed.

Potential - Audience: Residents - Track the recycling tonnages per location over time

The District could track the recycling tonnages per location over time. These tonnages could be compared to the community’s population. If a community undertakes a major drop (15% or more) in recycling rates, the District may investigate the reason and could focus an education program on the available infrastructure.

4. Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs

The District listed opportunities for actions or programs identified through the evaluations conducted in Appendix H and these are presented in **Table I-10, Table I-11, Table I-12, and Table I-13.** below. After ranking, the opportunities were prioritized for new programs.

Table I-10. Ranked Suggested Opportunities from Appendix H for the Economic Incentive Analysis

Opportunities from Section H-5. Economic Incentive Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Recycling Makes Sense Grant Program	District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.	2	May Implement
	Reduce program funding as it could be better utilized on other programs without reducing the program’s effectiveness.	3	Implement
	Restructure grant program to incentivize quality recyclables over quantity and continuance of curbside recycling.	3	Implement
	The program could require that communities share the revenue with the residents who actually conduct the source separation and recycling quantities captured in their program if the community does not need the funding to offset operational costs.	1	Do Not Implement
Recycling Program	The District could award grants to communities as an incentive for starting a new curbside program.	3	Implement

Opportunities from Section H-5. Economic Incentive Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Start-Up Grants (for political subdivisions)	District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.	2	May Implement
	Rename grant program to include enhancement/improvement of existing programs instead of just start-up of new programs.	3	Implement
Community Development Grant (Ohio EPA) Promotion and Assistance	Communities with drop-off sites who want to make site improvements beyond what can be funded through District grant programs could apply directly.	3	Implement
	District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter.	2	May Implement
	Conduct yearly grant workshops that coincide with the EPA grant roll-out cycle to engage communities on the opportunities for funding.	1	Do Not Implement
Recycling and Composting Infrastructure Enhancement Grant (for processors)	The District could lower the grant amounts to accommodate revenue levels.	1	Do Not Implement
Recycling Market Grant (Ohio EPA) Promotion and Assistance	The District could utilize its e-newsletter to provide information on this grant and could promote the e-newsletter when it sends out ADR surveys and other correspondence.	2	May Implement
	The District could develop a list of commercial and business contacts through the website sign-up.	2	May Implement
	Conduct yearly grant workshops that coincide with the EPA grant roll-out cycle to engage communities on the opportunities for funding.	1	Do Not Implement
Recycling Drop-Off Clean-Up/Host Community Center	If the revenue stayed consistent or grew and funding for another program (ex: Recycling Makes Sense) was decreased or restructured, all sites could participate for a relatively small amount, which could increase consistency in operation and communication with sites.	2	May Implement

Table I-11. Ranked Suggested Opportunities from Appendix H for the Special Program Needs Analysis

Opportunities from Section H-8. Special Program Needs Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Disaster Debris Management	The District may review the disaster debris plan consistently and update the plan as necessary.	3	Implement
Health Department Financial Assistance	Operationally streamline program and expand in service pending budgetary availability.	3	Implement
	Forward other funding avenues that could be utilized to enhance the programs (like Ohio EPA Community and Litter Grant funding as well as the scrap tire remediation program and mosquito control grant).	3	Implement
	To combat differences in procedures between agencies and individual sanitarians, as well as to combat staff turnover, a written procedure manual could be developed, and an annual meeting could be held to assess program procedures.	2	May Implement
Sheriff Department	Explore a more active partnership with ODOT for litter cleanups or share resources to benefit the litter cleanup crew programs.	2	May Implement
	Promote shared resources and knowledge between counties increasing cohesion of the programs across county lines.	3	Implement
	One of the Environment Enforcement Officers is certified in the following training for District recycling drivers: load securement, pre-trip inspections, and defensive driving. He could extend this training to other local governments.	2	May Implement
	Forward other funding avenues that could be utilized to enhance the programs (like Ohio EPA Community and Litter Grant funding as well as the scrap tire remediation program).	3	Implement
	To combat differences in procedures between agencies and individual deputies, as well as to combat staff turnover, a written procedure manual could be developed, and an annual meeting could be held to assess program procedures.	2	May Implement

Table I-12. Ranked Suggested Opportunities from Appendix H for the Data Collection Analysis

Opportunities from Section H-11. Data Collection Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Policy Committee Ranking
Commercial/ Industrial Sector	Focus each year in making sure all survey mail lists are up to date, accurate and include the correct contact person.	3	Implement
	Research better survey instruments to aid in user friendliness and data accuracy as needed.	2	May Implement

Table I-13. Ranked Suggested Opportunities from Appendix H for the Processing Capacity Analysis

Opportunities from Section H-13. Recyclable Material Processing Capacity Analysis			
Program Category	Suggested Action or Program Name	District Ranking	Status
Processing Capacity	The District could provide grant funding, technical assistance, and/or partnership for any interested processing companies in opening a single-stream MRF in the District.	1	Do Not Implement
	Promote the two Class II compost facilities in the District to accept more food waste for diversion.	3	Implement

Table I-14. Summary of Actions and Programs for Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs for the Planning Period (2023-2032)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Grants				
Existing	Community Development Grant (Ohio EPA) Promotion and Assistance	Existing	Ongoing	7
Existing	Recycling and Composting Infrastructure Enhancement Grant (for processors)	Existing	Ongoing	7
Existing	Recycling Makes Sense Grant Program	Existing	Ongoing	7
Existing	Recycling Market Grant (Ohio EPA) Promotion and Assistance	Existing	Ongoing	7
Existing	Recycling Program Start-Up Grants (for political subdivisions)	Existing	Ongoing	1, 2, 7
Existing	Recycling Drop-Off Clean-Up/Host Community Center	Existing	Ongoing	7
Existing	Pay-As-You-Throw Grants	Existing	Ongoing	2, 7
Potential	Recycling Makes Sense Grant: Inform Communities	2023	2032	7
New	Recycling Makes Sense Grant: Reprioritize program funding	2023	2032	7

Status	Program / Action Name	Start Date	End Date	Goal(s)
New	Recycling Makes Sense Grant: Restructure grant program	2023	2032	7
Potential	Recycling Program Start-Up Grant: Inform Communities	2023	2032	7
New	Recycling Program Start-Up Grant: Rename grant program	2023	2032	7
New	Community Development Grant (Ohio EPA): Drop-off site improvements	2023	2032	7
Potential	Community Development Grant (Ohio EPA): Inform Communities	2023	2032	7
Potential	Recycling Market Grant: E-newsletter	2023	2032	7
Potential	Recycling Market Grant: List of commercial and business contacts	2023	2032	7
Enforcement & Clean-up				
Existing	Health Dept. Funding: Health Department Financial Assistance	Existing	Ongoing	N/A
Existing	Sheriff Department	Existing	Ongoing	N/A
Existing	Health Department Grants	Existing	Ongoing	N/A
Existing	Disaster Debris Management	Existing	Ongoing	N/A
New	Health Department Financial Assistance: Operationally streamline program and expand in service	2023	2032	N/A
New	Health and Sheriff Department Financial Assistance: Forward other funding avenues that could be utilized to enhance the programs	2023	2032	N/A
Potential	Health Department and Sheriff Financial Assistance: written procedure manual	2023	2032	N/A
Potential	Explore a more active partnership with ODOT	2023	2032	N/A
New	Sheriff Department: Promote shared resources and knowledge between counties	2023	2032	N/A
Potential	Training for Environment Enforcement Officers	2023	2032	N/A
New	Review Disaster Debris Plan	2023	2032	N/A
Potential	Recycling Drop-Off Clean-Up/Host Community Grants	2023	2032	N/A
Other Programs				
Existing	Audit Committee	Existing	Ongoing	N/A
New	Promote the two Class II compost facilities in the District to accept more food waste for diversion.	2023	2032	1, 2, 6
Existing	Data Collection and Database of Recycling Processors	Existing	Ongoing	N/A
Existing	Political Subdivisions Contract Renewal Assistance	Existing	Ongoing	N/A
New	Commercial/Industrial Sector: Annually update survey mail lists	2023	2032	N/A
Potential	Research better survey instruments to aid in user friendliness and data accuracy as needed	2023	2032	N/A

a. Existing Programs: Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs

Further description of these existing programs can be found in Appendix H.

Community Development Grant (Ohio EPA) Promotion and Assistance

The District continues to promote the use of the Ohio EPA's Community Development Grant through its education and awareness program. This will include a dedicated portion of the District's website for recycling grant promotional activities.

Recycling and Composting Infrastructure Enhancement Grant (for processors)

The grant is available to entities that help the District meet State Plan goals #1 through #6.

Recycling Makes Sense Grant Program

This program is only offered to municipal (cities, villages, and township) programs that are not operated by the District directly with District equipment and staff. Municipal programs are defined as a program that is under contract with a private contractor to provide the service or the program is operated by the municipality directly.

Due to the increasing appropriations for other District programs (Household Hazardous Waste Management, Yard Waste Management, etc.), the District would like to reduce the expenses of the Recycling Makes Sense Grant Program by restructuring the funding levels to encourage program expansions and enhancements that will achieve greater waste reduction rates while still incentivizing a community's implementation or continuation of a curbside recycling program. Funding tiers will be communicated to grantees in the Recycling Makes Sense Grant Agreement and may be evaluated and adjusted each grant cycle. For example, the District initially believed greater recycling and waste reduction rates would be observed through programs with larger wheeled carts and/or limited trash or PAYT, so it increased funding levels through the current rate structure but now believe that while these programs see greater volumes and participation levels, they have greater contamination rates. The District will continue monitoring and analyzing industry trends in these types of programs and may restructure the funding levels based upon what program enhancements are observed to have a greater impact on recycling and waste reduction rates. Communities that participate in the Recycling Makes Sense Grant

Program are eligible to participate in other District grant programs (Program Startup Grant, Mini-Grant, etc.) for projects that would improve their program.

Recycling Market Grant (Ohio EPA) Promotion and Assistance

The District continues to promote the Ohio EPA's Market Development Grant within the tri-county area. This will include a dedicated portion of the District's website for recycling grant promotional activities.

Recycling Program Start-Up Grants (for political subdivisions)

The District awards funding to be used to start or improve curbside programs, recycling drop-offs and/or yard waste drop-offs, as well as purchase equipment needed to operate the program and structural components needed to complete drop-off sites, such as concrete pads and fencing.

Recycling Drop-Off Clean-Up/Host Community Center

The District continues to utilize Host Communities to assist with the clean-up and operation of recycling drop-off sites. Host Communities also help the District determine if a change in service frequency or container placement is necessary.

Recipients can earn up to \$2,500 annually for the purpose of cleaning up or maintaining targeted sites such as high-volume sites or sites with significant dumping.

Pay-As-You-Throw Grants

This grant option is a part of the Program Start-Up Grant program and is not considered a standalone program. Grant requests under the Program Start-Up Grant may include funding for automated carts, PAYT program start-up, and ton limits based on a scale to give incentive for higher performance.

Sheriff Department

These grants are awarded to Sheriff Departments in the District. Duties performed by the Sheriff Departments varied by county but included patrolling near landfills, litter enforcement, monitoring the District's drop-off sites, collecting prescription medications deposited at drop boxes at local police stations, assisting with HHW collection

events, and conducting litter collection on public roadways with a crew.

Health Department Grants

These grants are awarded to Health Departments in the District. The grants include funding for solid waste inspection, enforcement, and well monitoring. Enforcement is defined as investigating open burning or open dumping cases. All litter complaints/enforcement is usually directed to the District's environmental enforcement officer via the Sheriff Department Grants.

Only approved health departments on the Ohio EPA Director's List of Approved Health Departments are eligible.

Disaster Debris Management

The District developed a policy for managing disaster debris events in 2010. A copy of the document can be found on our website: www.timetorecycle.org.

Audit Committee

The District Audit Committee meets to review the financial affairs of the District. The Audit Committee consists of three members of the Board of Directors, two Policy Committee members, the Executive Director, the Finance Director, and the District's legal counsel.

Data Collection and Database of Recycling Processors

The District continues to annually survey commercial and industrial waste generators using an online survey platform. Letters are mailed to brokers, industries, commercial and institutional entities, and businesses and organizations that accept special materials for recycling such as electronics, textiles, and appliances. The letters direct survey recipients to a web address where the survey could be completed online.

Political Subdivisions Contract Renewal Assistance

The District will continue to work with political subdivisions when contracts are nearing renewal time to encourage them to make contract adjustments that will maximize recycling collected, such as adding a Pay-As-You-Throw element, increasing recycling container size, and/or requiring the hauler to provide ongoing education.

The District continues to monitor the contract ending/renewals dates of those communities with curbside programs, so it can be more proactive about working with communities and providing information about best practices and available grant funding before the contracts are up.

b. New Programs: Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs

Potential - Recycling Makes Sense Grant: Inform Communities

The District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Recycling Makes Sense Grant: Reprioritize program funding

A new initiative by the District is to evaluate and reduce program funding as it was needed to balance the budget and maintain the budget levels of other well-utilized District programs (HHW, yard waste, etc.) but won't likely reduce the program's effectiveness since the majority of the grantees contract out their curbside program to private companies, don't require the funding to operate a successful program, and have historically indicated they use their funding on other proper public purposes aside from support for their recycling program. This activity will be based on the following actions:

- Evaluation of effectiveness of this program, considering the following factors: level of contamination, current markets for recyclable materials, community population size, program operation (private sector vs government):
 - Factors both programmatic and economic
- Based on the results of the evaluation above and with recommendations from the team, adjust program as needed.

Recycling Makes Sense Grant: Restructure grant program

A new initiative by the District is to restructure grant program to incentivize quality recyclables over quantity and continuance of curbside recycling by working with communities when their contracts are up for renewal. This initiative will be conducted by revising the grant agreement.

Potential - Recycling Program Start-Up Grant: Inform Communities

The District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Recycling Program Start-Up Grant: Rename grant program

Rename grant program to include enhancement/improvement of existing programs instead of just start-up of new programs. The District will review its current program and then adjust the name and criteria to reflect the goal of this initiative.

Community Development Grant (Ohio EPA): Drop-off site improvements

A new initiative by the District is to assist communities with drop-off sites who want to make site improvements beyond what can be funded through District grant programs by encouraging them to apply directly. Each year when the EPA grant comes out, the District may conduct a campaign on its social media platforms to promote the grant opportunity.

Potential - Community Development Grant (Ohio EPA): Inform Communities

The District could use its ratification contact list for the plan update to create a list to inform communities of this grant via an e-newsletter. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Potential - Recycling Market Grant: E-newsletter

The District could utilize its e-newsletter to provide information on this grant. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Potential - Recycling Market Grant: List of commercial and business contacts

The District could develop a list of commercial and business contacts through the website sign-up. The District may assess this potential opportunity annually to determine if a specific mailing needs to be conducted.

Health Department Financial Assistance: Operationally streamline program and expand in service

The reference year award amounts for each department were based primarily on the number of active landfills as the District wanted to provide enough funding for the Health Departments to inspect the facilities more frequently than statutorily required; however, upon auditing and analyzing the grant financial and activity reports, it was observed that some departments do not typically utilize all funding they were awarded each year while others exceed it. Similarly, some departments that receive less funding conduct more inspections, investigate more solid waste complaints, and issue more orders to abate solid waste dumps than those that receive more funding and vice versa. In large part, this is because the departments that cover areas with a higher population also have more solid waste related facilities to inspect, receive more solid waste complaints, etc.

In addition, the District has had great success partnering with two of the Health Departments (Canton City and Wayne County) on the household hazardous waste and scrap tire collection programs and would welcome partnering with the Tuscarawas County Health Department as well as these programs benefit public health. The District's goal is to streamline the current financial reporting requirements for the grant for better accuracy and compliance, revisit the funding levels to align with the historic activity level, and allow departments to earn additional funding by partnering with the District on other programs (HHW, tire). The additional funding would come out of the relevant program, so the budget does not fluctuate year-to-year other than a decrease in the final four years of the planning period, which was necessary to balance the budget but isn't so much that it would greatly impact the services provided or otherwise reduce program effectiveness.

A new initiative by the District is to operationally streamline program and expand in service pending budgetary availability. This initiative involves annual budgetary planning and will coincide with this process.

Health Department and Sheriff Financial Assistance: Forward other funding avenues that could be utilized to enhance the programs

A new initiative by the District is to forward other funding avenues that could be utilized to enhance the programs (like Ohio EPA Community and Litter Grant funding as well as the scrap tire remediation program and mosquito control grant). This may be

assessed each year as other grant and funding options become available or are identified.

Potential - Health Department and Sheriff Financial Assistance: written procedure manual

To combat differences in procedures between agencies, individual sanitarians, and deputies, as well as to combat staff turnover, a written procedure manual could be developed, and an annual meeting could be held to assess program procedures. The District may evaluate this need each year to determine if the manual can be developed or is needed.

Potential - Explore a more active partnership with ODOT

The District could explore a more active partnership with ODOT for litter cleanups or share resources to benefit the litter cleanup crew programs.

Sheriff Department: Promote shared resources and knowledge between counties

A new initiative by the District is to promote shared resources and knowledge between counties increasing cohesion of the programs across county lines. This initiative will be assessed each year as needed.

Training for Environment Enforcement Officers

A new initiative by the District is to have one of the Environment Enforcement Officers who is certified in the following training for District recycling drivers: load securement, pre-trip inspections, defensive driving, and extend this training to other local governments as needed. The certifications and or training would occur with the first 5 years of the planning period.

Review Disaster Debris Plan

A new initiative by the District is to review the disaster debris plan consistently and update the plan as necessary. This may be reviewed annually and updated as needed.

Potential - Recycling Drop-Off Clean-Up/Host Community Grants

If the revenue stayed consistent or grew and funding for another program (ex: Recycling Makes Sense) was decreased or

restructured, all sites could participate for a relatively small amount, which could increase consistency in operation and communication with sites.

Promote the two Class II compost facilities in the District to accept more food waste for diversion.

A new initiative by the District is to promote the two Class II compost facilities in the District to accept more food waste for diversion. This initiative may coincide with other initiatives already discussed in this Plan Update.

Commercial/Industrial Sector: Annually update survey mail lists

A new initiative by the District is to focus each year in making sure all survey mail lists are up to date, accurate and include the correct contact person.

Potential - Research better survey instruments to aid in user friendliness and data accuracy as needed

The District could research better survey instruments to aid in user friendliness and data accuracy as needed.

The following Appendix H analysis sections did not yield any actionable improvements or changes.

Suggested Opportunities Not Applicable to the Following Sections
Section H-7. Diversion Analysis
Section H-9. Financial Analysis
Section H-10. Regional Analysis



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

Stark-Tuscarawas-Wayne Joint SWMD (District) is committed to achieving Goal 1 of the 2020 State Plan. This section demonstrates the District's achievement of Goal 1 in the reference year and the programs that will help maintain the achievement of Goal 1 throughout the planning period.

Residential Sector Opportunity to Recycle

The following table presents the recycling opportunities in the reference year and years 1, 5 and 10 of the planning period, as well as the population credit received for each opportunity. The drop-off locations show a credit of zero because the community where the drop-off is located has curbside recycling. Municipalities are not permitted to have population credits exceeding 100%.

Table J-1a. Opportunity to Recycle (Stark County)

ID #	Stark	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside									
NSC1	City of Alliance	21,446	21,446	21,288	21,288	21,085	21,085	20,923	20,923
NSC2	City of Canal Fulton	5,408	5,408	5,368	5,368	5,317	5,317	5,276	5,276
NSC3	City of Canton	70,447	70,447	69,928	69,928	69,261	69,261	68,729	68,729
NSC4	City of North Canton	17,176	17,176	17,049	17,049	16,887	16,887	16,757	16,757
NSC5	Village of Hartville	3,079	3,079	3,056	3,056	3,027	3,027	3,004	3,004
NSC6	Village of Hills and Dales	221	221	219	219	217	217	216	216
Subscription curbside									
SC1	City of Massillon	32,584	8,146	32,344	8,086	32,036	8,009	31,789	7,947
SC2	Village of Navarre	1,812	0	1,799	0	1,782	0	1,768	0
SC3	Bethlehem Township	3,523	0	3,497	0	3,464	0	3,437	0
SC4	Village of Meyers Lake	565	141	561	140	555	139	551	138
SC5	Canton Township	12,497	3,124	12,405	3,101	12,287	3,072	12,192	3,048
SC6	Jackson Township	40,058	10,015	39,763	9,941	39,384	9,846	39,081	9,770
SC7	Lake Township	26,911	6,728	26,713	6,678	26,458	6,615	26,255	6,564
SC8	Lawrence Township	8,281	2,070	8,220	2,055	8,142	2,035	8,079	2,020
SC9	Village of Limaville	144	36	143	36	142	35	140	35
SC10	Lexington Township	5,233	1,308	5,194	1,299	5,145	1,286	5,105	1,276
SC11	City of Louisville	9,360	2,340	9,291	2,323	9,202	2,301	9,132	2,283
SC12	Marlboro Township	4,346	1,087	4,314	1,078	4,273	1,068	4,240	1,060
SC13	Nimishillen Township	9,475	0	9,405	0	9,316	0	9,244	0
SC14	Village of East Canton	1,576	394	1,564	391	1,549	387	1,538	384
SC15	Osnaburg Township	3,994	999	3,965	991	3,927	982	3,897	974
SC16	Village of Minerva	3,620	0	3,593	0	3,559	0	3,532	0
SC17	Paris Township	3,750	0	3,722	0	3,687	0	3,659	0
SC18	Perry Township	28,026	7,007	27,820	6,955	27,554	6,889	27,343	6,836
SC19	Village of East Sparta	799	200	793	198	786	196	780	195
SC20	Pike Township	3,137	784	3,114	778	3,084	771	3,060	765
SC21	Plain Township	34,349	8,587	34,096	8,524	33,771	8,443	33,511	8,378

ID #	Stark	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
SC22	Village of Magnolia	962	241	955	239	946	236	939	235
SC23	Village of Waynesburg	908	227	901	225	893	223	886	221
SC24	Sandy Township	2,033	508	2,018	505	1,999	500	1,983	496
SC25	Village of Beach City	981	0	974	0	964	0	957	0
SC26	Village of Brewster	2,153	0	2,137	0	2,117	0	2,100	0
SC27	Village of Wilmot	304	0	302	0	299	0	297	0
SC28	Sugar Creek Township	6,454	0	6,406	0	6,345	0	6,297	0
SC29	Tuscarawas Township	5,828	1,457	5,785	1,446	5,730	1,432	5,686	1,421
SC30	Washington Township	4,586	1,147	4,552	1,138	4,509	1,127	4,474	1,119
Full-time, urban drop-off									
FT-U1	Alliance Recycling Center	21,412	0	21,254	0	21,052	0	20,890	0
FT-U2	Canal Fulton City (Lawrence Township)	8,281	5,000	8,220	0	8,142	0	8,079	0
FT-U3	Canton City (Kimble Recycling)	70,447	0	69,928	0	69,261	0	68,729	0
FT-U4	Canton City (TimkenSteel)	70,447	0	69,928	0	69,261	0	68,729	0
FT-U5	Canton Township (Township Building)	12,908	5,000	12,813	5,000	12,691	5,000	12,593	5,000
FT-U6	Jackson Township (Recycling Station)	40,058	5,000	39,763	0	39,384	0	39,081	0
FT-U7	Lake Township (Hartville Flea Market)	26,911	5,000	26,713	0	26,458	0	26,255	0
FT-U8	Lake Township (Recycling Station)	26,911	5,000	26,713	5,000	26,458	5,000	26,255	5,000
FT-U9	Lawrence Township (County Outpost)	8,281	5,000	8,220	5,000	8,142	5,000	8,079	5,000
FT-U10	Lexington Township (Fire Station #2)	5,377	5,000	5,337	5,000	5,287	5,000	5,246	5,000
FT-U11	Louisville City (Louisville Service Center)	9,360	5,000	9,291	5,000	9,202	5,000	9,132	5,000
FT-U12	Massillon City (City Garage)	32,584	5,000	32,344	5,000	32,036	5,000	31,789	5,000
FT-U13	Massillon City (Recreation Center)	32,584	5,000	32,344	5,000	32,036	5,000	31,789	5,000
FT-U14	Minerva Village (Paris Township)	5,672	5,000	5,630	5,000	5,577	5,000	5,534	5,000
FT-U15	Navarre Village (Village Hall)	5,287	5,000	5,248	5,000	5,198	5,000	5,158	5,000
FT-U16	Navarre Village (St. Clement Church)	5,287	5,000	5,248	5,000	5,198	5,000	5,158	5,000
FT-U17	Nimishilen Township (Anthony Petitti Garden)	9,475	5,000	9,405	5,000	9,316	5,000	9,244	5,000
FT-U18	Nimishillen Township (Township Hall)	9,475	5,000	9,405	5,000	9,316	5,000	9,244	5,000
FT-U19	Osnaburg Township (Fire Station)	5,570	5,000	5,529	5,000	5,476	5,000	5,434	5,000
FT-U20	Paris Township (Robertsville)	5,672	0	5,630	0	5,577	0	5,534	0
FT-U21	Paris Township (Township Hall)	5,672	5,000	5,630	5,000	5,577	5,000	5,534	5,000
FT-U22	Perry Township (Administration Building)	28,026	5,000	27,820	5,000	27,554	5,000	27,343	5,000
FT-U23	Perry Township (Recycling Station)	28,026	5,000	27,820	5,000	27,554	5,000	27,343	5,000
FT-U24	Perry Township (Road Department)	28,026	5,000	27,820	5,000	27,554	5,000	27,343	5,000
FT-U25	Plain Township (Diamond Park)	34,349	5,000	34,096	5,000	33,771	5,000	33,511	5,000
FT-U26	Plain Township (First Friends)	34,349	5,000	34,096	5,000	33,771	5,000	33,511	5,000
FT-U27	Plain Township (Saint Michael Church)	34,349	5,000	34,096	5,000	33,771	5,000	33,511	5,000
FT-U28	Plain Township (Taft Elementary)	34,349	5,000	34,096	0	33,771	0	33,511	0
FT-U29	Sugar Creek Township - Beach City Village (Behind Police Department)	6,454	5,000	6,406	5,000	6,345	5,000	6,297	5,000
FT-U30	Sugar Creek Township - Brewster Village (Street Department)	6,454	5,000	6,406	5,000	6,345	5,000	6,297	5,000
FT-U31	Tuscarawas Township (Township Office)	5,828	5,000	5,785	5,000	5,730	5,000	5,686	5,000
FT-U32	Wilmot Village (Sugar Creek Township)	6,454	0	6,406	0	6,345	0	6,297	0
FT-U79-NEW	Plain Twp (Easton St.)	34,349	0	34,096	5,000	33,771	5,000	33,511	5,000
FT-U80-NEW	Plain Twp (First Friends Church)	34,349	0	34,096	5,000	33,771	5,000	33,511	5,000

ID #	Stark	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FT-U81-NEW	Jackson Twp (Jackson Middle School)	40,058	0	39,763	5,000	39,384	5,000	39,081	5,000
FT-U82-NEW	Jackson Twp (Strausser Elementary)	40,058	0	39,763	5,000	39,384	5,000	39,081	5,000
FT-U83-NEW	Jackson Twp (Real Hope Church)	40,058	0	39,763	5,000	39,384	5,000	39,081	5,000
FT-U84-NEW	Jackson Twp (Parks Maintenance Facility)	40,058	0	39,763	5,000	39,384	5,000	39,081	5,000
FT-U85-NEW	Lake Township (Village of Hartville)	26,911	0	26,713	5,000	26,458	5,000	26,255	5,000
Part-time, urban drop-off									
PT-U1	Canton City Recycling Center	70,447	0	70,447	0	70,447	0	70,447	0
Full-time, rural drop-off									
FT-R1	Marlboro Township (Township Garage)	4,346	2,500	4,314	2,500	4,273	2,500	4,240	2,500
FT-R2	Pike Township (Countywide RDF)	3,936	2,500	3,907	2,500	3,870	2,500	3,840	2,500
FT-R3	Pike Township (Fire Station)	3,936	2,500	3,907	2,500	3,870	2,500	3,840	2,500
FT-R4	Pike Township (Township Office)	3,936	0	3,907	0	3,870	0	3,840	0
FT-R5	Sandy Township (Administrative Building)	3,653	2,500	3,626	2,500	3,592	2,500	3,564	2,500
FT-R6	Village of Magnolia (Magnolia Park)	3,653	2,500	3,626	2,500	3,592	2,500	3,564	2,500
FT-R7	Washington Township (Township Office)	4,586	2,500	4,552	2,500	4,509	2,500	4,474	2,500
Part-time, rural drop-off									
None	None	0	0	0	0	0	0	0	0
Mixed municipal waste material recovery facility									
None	None	0	0	0	0	0	0	0	0
Total County Population		372,588		369,844		366,318		363,502	
Total Population Credit		324,321		338,037		336,388		335,070	
Percent of Population		87%		91%		92%		92%	

Table J-1b. Opportunity to Recycle (Tuscarawas County)

ID #	Tuscarawas	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside									
NSC7	Village of Baltic	776	776	775	775	773	773	773	773
NSC8	Village of Bolivar	970	970	968	968	966	966	966	966
NSC9	Village of Dennison	2,594	2,594	2,589	2,589	2,583	2,583	2,583	2,583
NSC10	City of Dover	12,723	12,723	12,700	12,700	12,667	12,667	12,667	12,667
NSC11	Village of Gnadenhutzen	1,258	1,258	1,256	1,256	1,252	1,252	1,252	1,252
NSC12	City of New Philadelphia	17,410	17,410	17,378	17,378	17,333	17,333	17,333	17,333
NSC13	Village of Strasburg	2,688	2,688	2,683	2,683	2,676	2,676	2,676	2,676
NSC14	Village of Sugarcreek	4,180	4,180	4,172	4,172	4,162	4,162	4,162	4,162
NSC15	City of Uhrichsville	5,314	5,314	5,304	5,304	5,290	5,290	5,290	5,290
Subscription curbside									
None	None	0	0	0	0	0	0	0	0
Full-time, urban drop-off									
FT-U33	Dover City (Parkside Buehlers)	12,723	0	12,700	0	12,667	0	12,667	0

ID #	Tuscarawas	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FT-U34	Lawrence Township (Bolivar Giant Eagle)	5,776	5,000	5,766	5,000	5,750	5,000	5,750	5,000
FT-U35	New Philadelphia City (Buehlers)	17,410	0	17,378	0	17,333	0	17,333	0
FT-U36	Dover City (Gale's Recycle It)	12,723	0	12,700	0	12,667	0	12,667	0
Part-time, urban drop-off									
None	None	0	0	0	0	0	0	0	0
Full-time, rural drop-off									
FT-R8	Dover Township (Kimble)	4,619	2,500	4,611	2,500	4,599	2,500	4,599	2,500
FT-R9	Fairfield Township (Township Building)	1,478	2,500	1,475	2,500	1,471	2,500	1,471	2,500
FT-R10	Jefferson Township (Township Garage)	954	2,500	952	2,500	950	2,500	950	2,500
FT-R11	Sandy Township (Township Building)	2,989	2,500	2,984	2,500	2,976	2,500	2,976	2,500
FT-R12	Franklin Township - Strasburg (Kraus Pizza)	4,739	2,500	4,730	2,500	4,718	2,500	4,718	2,500
FT-R13	Sugarcreek Village (Baker's IGA)	4,180	2,500	4,172	2,500	4,162	2,500	4,162	2,500
FT-R14	Warwick Township (Community Center)	2,761	2,500	2,756	2,500	2,749	2,500	2,749	2,500
FT-R15	Washington Township (Township Garage)	813	2,500	812	2,500	809	2,500	809	2,500
FT-R16	Wayne Township (Township Building)	2,137	2,500	2,133	2,500	2,128	2,500	2,128	2,500
FT-R18	Oxford Township (Street Department)	4,859	2,500	4,850	2,500	4,838	2,500	4,838	2,500
FT-R19	Perry Township (West Chester Community)	424	2,500	423	2,500	422	2,500	422	2,500
Part-time, rural drop-off									
None	None	0	0	0	0	0	0	0	0
Mixed municipal waste material recovery facility									
None	None	0	0	0	0	0	0	0	0
Total County Population		92,133		91,966		91,725		91,725	
Total Population Credit		80,413		80,326		80,201		80,201	
Percent of Population		87%		87%		87%		87%	

Table J-1c. Opportunity to Recycle (Wayne County)

ID #	Wayne	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside									
NSC16	Village of Doylestown	3,067	3,067	3,064	3,064	3,053	3,053	3,042	3,042
NSC17	City of Orrville	8,419	8,419	8,411	8,411	8,381	8,381	8,351	8,351
NSC18	City of Rittman	6,506	6,506	6,500	6,500	6,477	6,477	6,454	6,454
NSC19	Village of Marshallville	776	776	775	775	773	773	770	770
NSC20	City of Wooster	26,394	26,394	26,368	26,368	26,275	26,275	26,182	26,182
Subscription curbside									
None	None	0	0	0	0	0	0	0	0
Full-time, urban drop-off									

ID #	Wayne	2019		2023		2028		2032	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FT-U37	Chippewa Township (Street Garage)	7,084	5,000	7,077	5,000	7,052	5,000	7,027	5,000
FT-U38	Apple Creek Village (Street Garage)	6,944	5,000	6,937	5,000	6,913	5,000	6,888	5,000
FT-U39	Green Township (Buehler's Fresh Foods)	12,031	5,000	12,019	5,000	11,977	5,000	11,934	5,000
FT-U40	Dalton Village (Village Garage)	6,714	5,000	6,707	5,000	6,684	5,000	6,660	5,000
FT-U41	City of Wooster (Buehler's)	26,394	0	26,368	0	26,275	0	26,182	0
FT-U42	City of Wooster (Wooster College)	26,394	0	26,368	0	26,275	0	26,182	0
FT-U43	Sugar Creek Township (Kidron - Lehman Hardware and Appliances)	6,714	5,000	6,707	5,000	6,684	5,000	6,660	5,000
Part-time, urban drop-off									
None	None	0	0	0	0	0	0	0	0
Full-time, rural drop-off									
FT-R20	Baughman Township (Recycling Drop Off)	2,939	2,500	2,936	2,500	2,926	2,500	2,915	2,500
FT-R21	Chester Township (Northwestern Elementary School)	3,097	2,500	3,094	2,500	3,083	2,500	3,072	2,500
FT-R22	Congress Township - West Salem Village	4,517	2,500	4,513	2,500	4,497	2,500	4,481	2,500
FT-R23	Creston Village (Canaan Township)	4,984	2,500	4,979	2,500	4,962	2,500	4,944	2,500
FT-R24	Franklin Township (Township Hall)	3,926	2,500	3,922	2,500	3,908	2,500	3,894	2,500
FT-R25	Salt Creek Township - Fredericksburg Village (Elementary School)	4,353	2,500	4,349	2,500	4,333	2,500	4,318	2,500
FT-R26	Paint Township (Township Garage)	3,223	2,500	3,220	2,500	3,209	2,500	3,197	2,500
FT-R27	Plain Township (Township Garage)	3,126	2,500	3,123	2,500	3,112	2,500	3,101	2,500
FT-R28	Clinton Township - Shreve Village (East of Chicago)	3,090	2,500	3,087	0	3,076	0	3,065	0
FT-R29	Wayne Township (Township Garage)	4,163	2,500	4,159	2,500	4,144	2,500	4,130	2,500
FT-R17	Mill Township (Township Garage)	4,390	2,500	4,386	2,500	4,370	2,500	4,355	2,500
FT-R30	Congress Township (Service Department)	4,517	2,500	4,513	2,500	4,497	2,500	4,481	2,500
FT-R32	Milton Township (Township Garage)	3,058	2,500	3,055	2,500	3,044	2,500	3,033	2,500
FT-R33	Smithville Village (Sam's Pizza & Heroes)	4,677	2,500	4,672	2,500	4,656	2,500	4,639	2,500
FT-R34	Wooster Township (Valley College Grange)	4,766	2,500	4,761	2,500	4,745	2,500	4,728	2,500
Part-time, rural drop-off									
None	None	0	0	0	0	0	0	0	0
Mixed municipal waste material recovery facility									
None	None	0	0	0	0	0	0	0	0
Total County Population		115,921		115,808		115,400		114,990	
Total Population Credit		107,662		105,118		104,959		104,799	
Percent of Population		93%		91%		91%		91%	

Sources of Information: Ohio Development Services Agency, 2019 Population Estimates by County, City, Village, and Township, May 2020.

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. Drop-offs operating during the reference year that are discontinued and new ones implemented are captured in J-1a-c. The District reserves the right to adjust (remove, add, change, modify) drop-off sites throughout the planning period as location may need adjusted to meet drop-off and host-site needs. All of the District’s drop-off recycling sites 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

Twenty communities have non-subscription curbside recycling and 30 with subscription curbside recycling. The drop-off program also adds access for the residents. There are 77 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.

Table J-1d. Opportunity to Recycle Summary

Year	Population Data	County			Total
		Stark	Tuscarawas	Wayne	
2019	Total County	372,588	92,133	115,921	580,642
	Credit	324,321	80,413	107,662	512,396
	% Access	87%	87%	93%	88%
2023 (Year 1)	Total County	369,844	91,966	115,808	577,618
	Credit	338,037	80,326	105,118	523,481
	% Access	91%	87%	91%	91%
2028 (Year 5)	Total County	366,318	91,725	115,400	573,443
	Credit	336,388	80,201	104,959	521,547
	% Access	92%	87%	91%	91%
2032 (Year 10)	Total County	363,502	91,725	114,990	570,216
	Credit	335,070	80,201	104,799	520,070
	% Access	92%	87%	91%	91%

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
Stark						
Broadway Iron & Metal, Inc.	Hauler Collection, Drop-off, Buy-Back, Scrap Yard			✓		
FPT Canton	Hauler Collection, Drop-off, Buy-Back			✓		
PSC Metals, Inc.	Drop-off, Buy-Back, Scrap Yard			✓		
S Slesnick Company	Drop-off	✓	✓			
Slesnick Iron & Metal	Drop-off, Buy-Back, Scrap Yard			✓		
Jackson Twp. Recycling Station*	Drop-off	✓	✓	✓	✓	
Kimble Recycling Center	Hauler Collection, Drop-off	✓	✓	✓	✓	✓
Premier Pallet and Recycling, Inc.	Pallet Refurbisher, Drop-off					✓
Tuscarawas						
Kimble Recycling Center	Hauler Collection, Drop-off	✓	✓	✓	✓	✓
Recycled Fiberized Products	Drop-off	✓	✓			
Gale's Recycle It	Drop-off	✓		✓		
Speedie Salvage Scrap Recycling	Drop-off, Scrap Yard			✓		
Wallick's Scrap Metal	Drop-off			✓		
Wayne						
PSC Metals, Inc.	Drop-off			✓		
Wayco Recycling Center	Drop-off	✓	✓	✓	✓	
Millwood Inc.	Hauler Collection, Pallet Refurbisher					✓

CC = corrugated cardboard, MP = mixed paper, SC = steel cans, PL = plastics, W = wood pallets and packaging, FW = food waste

*Open during reference year but closed in 2020.

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: 7
- Mixed paper: 6

- Steel cans: 12
- Plastics: 4
- Wood pallets: 4

Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate

In the reference year, the District's residential/commercial sector achieved a 29.81% waste reduction and recycling rate, which is above the 25% requirement to achieve Goal 2. The waste reduction and recycling rate for the R/C sector is projected to meet or exceed the 25% requirement throughout the planning period based on anticipated volumes of recycling from scrap yards, processors, MRFs, retailers that report to Ohio EPA, scrap tire recyclers, HHW programs, recycling drop-off program, curbside recycling programs, and organics diversion facilities.

2. Industrial Waste Reduction and Recycling Rate

The Ohio EPA eliminated the industrial percentage goal. The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.

3. Encouraging Participation

The District will encourage residents and commercial generators to participate in available recycling infrastructure using a variety of outreach, education, and incentive programs, including the following:

- **Commercial and Industrial Technical Assistance:** The District provides resources for the commercial and industrial sector on its website which included information about grant opportunities, managing special materials such as food or construction waste, low-cost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals
- **Commercial and Industrial Waste Audits:** The District completes 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, and current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting.

- **Waste Reduction Report Card:** The Recycling and Reuse Guide or Newsletter contains the Waste Reduction Report Card and shows the tonnages by community for drop-offs and curbside recycling.
- **School Recycling Program:** The District collected mixed paper and office paper from schools located throughout the three-county area. Some of the school programs also accepted plastics #1-#7, glass, aluminum, and steel. The District also collected data from local businesses that provided recycling services to schools, which include the Royal Oaks program and Sanmandy.
- **Government Building Recycling:** The District collected from Stark County government buildings, Stark County libraries, Tuscarawas County government buildings, and from Wayne County government buildings. The District also collected data from local businesses that provided recycling services to government buildings within the District. In Stark County, Royal Oak Recycling and River Valley Paper Company collected from bins at government buildings and from bins at libraries; in Wayne County, Royal Oaks and Sanmandy collected from bins at government buildings.
- **District Web Site:** The web site will include a comprehensive resource guide and an Infrastructure Inventory. The website is used to promote all the recycling opportunities in the District and will include information and links useful to residents, business, and industry. The website will be updated regularly. (www.timetorecycle.org)
- **Education and Awareness Program:** This program includes speakers, presentations, advertisements, and other educational activities. The District's full-time Outreach Coordinator performs presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation.
- **Community Development Grant (Ohio EPA) Promotion and Assistance:** The District will promote the use of the Ohio EPA's Community Development Grant through its education and awareness program. This will include a dedicated portion of the District's website for recycling grant promotional activities.
- **Recycling and Composting Infrastructure Enhancement Grant (for processors):** The grant is available to entities that help the District meet State Plan goals #1 through #5.

- **Recycling Drop-Off Clean-Up/Host Community Grants:** The District continued to utilize Host Communities to assist with the clean-up and operation of recycling drop-off sites. Host Communities also help the District determine if a change in service frequency or container placement is necessary.
- **Recycling Makes Sense Grant Program:** This program is only offered to municipal (cities, villages and township) programs that are not operated by the District directly with District equipment and staff.
- **Program Start-Up Grants (for political subdivisions):** The District awards funding to be used to start or improve curbside programs, recycling drop-offs and/or yard waste drop-offs, as well as purchase equipment needed to operate the program and structural components needed to complete drop-off sites, such as concrete pads and fencing.
- **Political Subdivisions Contract Renewal Assistance:** The District will continue to work with political subdivisions when contracts are nearing renewal time to encourage them to make contract adjustments that will maximize recycling collected, such as adding a Pay-As-You-Throw element, increasing recycling container size, and/or requiring the hauler to provide ongoing education, such as a quarterly direct mailer to residents.
- **Pay-As-You-Throw Grants:** This grant option is a part of the Program Start-Up Grant program and is not considered a standalone program. Grant request under the Program Start-Up Grant may include funding for automated carts, PAYT program start-up, and ton limits based on a scale to give incentive for higher performance

Appendices I and L include detailed information about each program.



APPENDIX K

**WASTE REDUCTION AND RECYCLING
RATES AND DEMONSTRATION OF
ACHIEVING GOAL 2**



APPENDIX K. Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2

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 exceed the state's WRR goal for the residential/commercial sector for each year of the planning period.

Table K-1. Annual Rate of Waste Reduction: Residential/Commercial Solid Waste

	Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate	Per Capita
							Waste Reduction & Recycling Rate (ppd)
First Year of Planning Period → X	2019	580,642	216,339	508,986	725,325	29.83%	2.04
	2020	579,886	201,132	515,096	716,228	28.08%	1.90
	2021	579,130	208,163	521,279	729,442	28.54%	1.97
	2022	578,374	209,080	527,536	736,616	28.38%	1.98
	2023	577,618	210,006	533,869	743,875	28.23%	1.99
	2024	576,861	210,942	540,277	751,219	28.08%	2.00
	2025	576,007	211,887	546,763	758,649	27.93%	2.02
	2026	575,152	212,841	553,326	766,167	27.78%	2.03
	2027	574,297	213,805	559,968	773,773	27.63%	2.04
	2028	573,443	214,779	566,690	781,468	27.48%	2.05
	2029	572,588	215,762	573,492	789,254	27.34%	2.06
	2030	571,747	216,755	580,376	797,131	27.19%	2.08
	2031	570,906	217,758	587,343	805,101	27.05%	2.09
2032	570,065	218,771	594,393	813,165	26.90%	2.10	

Sources of Information: Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix E, Table E-5 (for reference year) and Table E-8 (for planning period)
- Waste Disposed: Appendix D, Table D-4 (for reference year) and Table D-6 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)
- Population: Appendix C, Table C-1 (for reference year) and Table C-2 (for planning period)

Sample Calculations:

2019 Waste Generated = 2019 Waste reduced and recycled + 2019 waste disposed
 725,325 tons = 216,339 tons + 508,986 tons

2019 Waste Reduction & Recycling Rate = (2019 Waste Reduced & Recycled ÷ 2019 Waste Generated) x 100
 29.83% = (216,339 tons ÷ 725,325 tons) x 100

2019 Per Capita Waste Reduction & Recycling Rate = (2019 tons recycled x 2,000) ÷ 365 ÷ population
 2.04 PPD = ((216,339 tons x 2,000) ÷ 365 days/year) ÷ 580,642 residents

Table K-1 demonstrates that the District does exceed the requirements of Goal 2 to reduce and recycle at least 25% of the solid waste generated by the residential/commercial during the reference year and is projected to meet the requirements of Goal 2 during the planning period. With new initiatives that the District plans to implement during the planning period (see Appendix I), the recycling rate may increase.

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 shows the District’s industrial sectors annual rate of waste reduction.

Table K-2. Annual Rate of Waste Reduction: Industrial Solid Waste

	Year	Waste Reduced and Recycled	Waste Disposed	Waste Generated	Waste Reduction and Recycling Rate
First Year of Planning Period → X	2019	816,194	390,597	1,206,791	67.63%
	2020	1,004,633	413,478	1,418,111	70.84%
	2021	1,013,078	520,792	1,533,870	66.05%
	2022	1,021,594	420,188	1,441,782	70.86%
	2023	1,030,181	427,007	1,457,189	70.70%
	2024	1,038,841	433,937	1,472,778	70.54%
	2025	1,038,841	440,979	1,479,820	70.20%
	2026	1,038,841	448,136	1,486,977	69.86%
	2027	1,038,841	455,408	1,494,249	69.52%
	2028	1,038,841	455,408	1,494,249	69.52%
	2029	1,038,841	455,408	1,494,249	69.52%
	2030	1,038,841	455,408	1,494,249	69.52%
	2031	1,038,841	455,408	1,494,249	69.52%
2032	1,038,841	455,408	1,494,249	69.52%	

Sources of Information: Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix F, Table F-4 (for reference year) and Table F-5 (for planning period)
- Waste Disposed: Appendix D, Table D-3 (for reference year) and Table D-5 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)

Sample Calculations:

2019 Waste Generated = 2019 Waste reduced and recycled + 2019 waste disposed
1,206,791 tons = 16,194 tons + 390,597 tons

2019 Waste Reduction & Recycling Rate = (2019 Waste Reduced & Recycled ÷ 2019 Waste Generated) x 100
67.63% = (816,194 tons ÷ 1,206,791 tons) x 100

To attempt to improve the WRR rate for the industrial sector for each year of the planning period, the District will implement the programs and/or initiatives detailed in Appendix I.

The combined WRR rate for residential/commercial and industrial sectors is shown in **Table K-3**. Overall, the WRR rate is projected to increase to 54.5% by the end of the planning period from 53.4% in 2019.

Table K-3. Annual Rate of Waste Reduction: Total Solid Waste

	Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
First Year of Planning Period → X	2019	1,032,533	899,583	1,932,116	53.44%
	2020	1,205,765	928,574	2,134,338	56.49%
	2021	1,221,241	1,042,071	2,263,312	53.96%
	2022	1,230,674	947,724	2,178,398	56.49%
	2023	1,240,188	960,876	2,201,064	56.34%
	2024	1,249,783	974,214	2,223,997	56.20%
	2025	1,250,728	987,742	2,238,470	55.87%
	2026	1,251,682	1,001,461	2,253,144	55.55%
	2027	1,252,646	1,015,376	2,268,022	55.23%
	2028	1,253,620	1,022,098	2,275,718	55.09%
	2029	1,254,603	1,028,900	2,283,503	54.94%
	2030	1,255,596	1,035,784	2,291,381	54.80%
	2031	1,256,599	1,042,751	2,299,350	54.65%
	2032	1,257,612	1,049,802	2,307,414	54.50%

Sources of Information: Tables K-1 and K-2

Sample Calculations:

2019 Waste Generated = 2019 Waste reduced and recycled + 2019 waste disposed

1,932,116 tons = 1,032,533 tons + 899,583 tons

*2019 Waste Reduction & Recycling Rate = (2019 Waste Reduced & Recycled ÷ 2019 Waste Generated)
x 100*

53.44% = (1,032,533 tons ÷ 1,932,116 tons) x 100



APPENDIX L

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



Appendix L. Minimum Required Education Programs: Outreach and Marketing Plan and General Education Requirements

This section discusses State Plan Goals 3 and 4 and the District's strategies to satisfy the requirements of meeting each goal. The following bullet points summarize each goal, as presented in Ohio EPA's Plan Format v4.1:

Goal 3: Waste Reduction and Recycling Rates

The SWMD shall provide the following required programs:

- *A website*
- *A comprehensive resource List*
- *An inventory of available infrastructure*
- *A speaker or presenter*

Goal 4: Outreach and Education - Outreach Plan and General Requirements

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

A. Minimum Required Education Programs

In accordance with Goal 3 of the *2020 State Plan*, the District is required to provide four minimum education programs including: (1) a website, (2) a comprehensive resource list, (3) an inventory of available infrastructure, and (4) a speaker or presenter. The District met these requirements in the reference year.

1. Website

The District's website address is easy to remember (www.timetorecycle.org) and is updated regularly. The website includes drop-down menus for residents, businesses, schools (or institutions), and local governments, as well as links to District publications and public records.

The website includes the District's contact information, upcoming District events, drop-off recycling locations for traditional and special materials, educational information on the benefits of recycling, educational information on the correct handling of special materials, District news, educational program highlights, and more.

Website updates are completed on an ongoing and as-needed basis. Examples of updates include adding upcoming events to the calendar, updating the Recycling Newsletter, and replacing the Solid Waste Plan each

time a new update is approved. Maintaining and updating the District website is the responsibility of the District.

In addition to the website, the District maintains a Facebook page (<https://www.facebook.com/STWrecyclingdistrict>) and LinkedIn page (<https://www.linkedin.com/company/27128361/>), Instagram, an e-newsletter, and a YouTube channel to increase connections with the residents and businesses in the three county communities.

The following outline is the District’s proposed website map for allowing targeted audiences to easily navigate and find information:

Residents	Businesses
<ul style="list-style-type: none"> • Battery Recycling • Computer Waste/Electronics • Food Waste • Household Hazardous Waste • Pills (Prescription Drugs) • Recycling Drop Off Locations • Recycling & Reuse Search Tool • Recycling Tips & Resources • Tires (Residential) • What's Recyclable? • Yard Waste 	<ul style="list-style-type: none"> • Battery Recycling • Computer Waste/Electronics • Food Waste • Grants for Businesses • Hazardous Waste (Business) • How To Start a Recycling Program • Let's Get Started <ul style="list-style-type: none"> ○ Develop a Recycling Plan ○ Understand Your Waste ○ Working with Your Waste Hauler ○ Recycling Container Placement & Signage ○ Educate Your Employees ○ Ensure a Sustainable Program ○ Tell Your Story • Pills (Prescription Drugs) • Recycling Drop Off Locations • Recycling Tips & Resources • Tires (Businesses) • What's Recyclable? • Yard Waste
Local Governments	Local Schools
<ul style="list-style-type: none"> • Battery Recycling • Computer Waste/Electronics • Grants • Hazardous Waste (Government) • Pills (Prescription Drugs) • Recycling Drop Off Locations • Recycling & Reuse Search Tool for Residents • Tires (Governments) • What's Recyclable? • Yard Waste 	<ul style="list-style-type: none"> • Battery Recycling • Computer Waste/Electronics • Grants • Hazardous Waste (Governments) • Kids Corner • Recycling Drop Off Locations • Recycling & Reuse Search Tool for Residents • School Food Waste Resources • School Recycling Resources • Teacher Resources on Recycling • Tires (Governments) • What's Recyclable?

Churches/Non-Profits	STW Environmental Taskforce
<ul style="list-style-type: none"> Battery Recycling Computer Waste/Electronics Grants Hazardous Waste (Church) Recycling Drop Off Locations Recycling & Reuse Search Tool for Residents Tires (Churches) What's Recyclable? Yard Waste 	<ul style="list-style-type: none"> What are they? Stark County Tuscarawas County Wayne County

Grants	Outreach and Events
<ul style="list-style-type: none"> Overview Bottle Caps to Benches Grant Mini Grant Program Startup Grant 	<ul style="list-style-type: none"> Caps to Benches Program Household Hazardous Waste Events Litter Collection Kit Loan Program Master Recycler Program Recycling Receptacle Loan Program Request a Speaker Request a Volunteer Recycling Receptacle Loan Program Webinars/Workshops

Name	Start Date	End Date	Goal
Website	Ongoing	Ongoing	3, 4

2. Comprehensive Resource List

The District hosts recycling outlet information on its website. Included on the website are drop-off locations and a “What Do I Do With?” section that contains information on where to recycle certain items in the tri-county area. This “What Do I Do With?” guide is easily accessible on the home page and through the drop-down menu.

Name	Start Date	End Date	Goal
Resource Guide (on website)	Ongoing	Ongoing	3

3. Inventory of Available Infrastructure

The District website includes in the “Recycling From Home” section a “Recycling & Disposal Locations” page which includes the location and address of the District’s drop-offs. The District also keeps an up-to-date Plan Update readily available on the front page of 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
Inventory of Available Infrastructure (on website)	Ongoing	Ongoing	1, 3

4. Speaker/Presenter

The District supports an active education program and employs a full-time Outreach Coordinator who is available for classroom and area civic group presentations and discussions on recycling, composting, conservation, waste reduction and natural resources. The services are free of charge and subject matter and presentation length can be altered to meet the educational needs for any age group.

The District's full-time Outreach Coordinator performed 233 presentations for more than 21,280 residents on topics including recycling, waste reduction, household hazardous waste, and conservation. Out of the education specialist's total engagements/presentations:

- Preschool classes represented 5%
- Kindergarten classes represented 3%
- Elementary classes represented 63%
- Young adult ages represented 1%
- Adult ages represented 16%
- Adult/family groups represented 11%
- Contamination team represented 1%

Presentations with Puppet shows:

- Preschool: 12
- Elementary: 47
- Adult: 1

Master Recyclers Participation Hours:

- Kindergarten classes: 2 hours
- Elementary classes: 10 hours
- Adult ages: 140 hours
- Adult/family groups: 99 hours
- Other/any age groups: 35 hours

Name	Start Date	End Date	Goal
Speaker/Presenter (Community Outreach Coordinator)	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	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website	✓	✓	✓	✓	✓
Presentations	✓	✓	✓	✓	✓
Comprehensive Resource Guides	✓	✓	✓	✓	✓
Technical Assistance		✓	✓	✓	✓
Waste Audit Program		✓	✓	✓	✓
Recycling Newsletter	✓				✓
Waste Reduction Report Card	✓				✓
Total Program per Group	5	5	5	5	7

1. Audience: Residents

a. Overview

As shown in Table L-1 above, the District endeavors to educate residents through several existing programs. While the District website is a primary source of information available for residents, other mechanisms are used as well to convey solid waste, recycling, and sustainability practices to the public.

All of the District’s programs are intended for use by the residential sector. This includes the drop-off recycling program, yard waste collection program, household hazardous waste collection program, and scrap tire drop-off program and promotion of this available infrastructure is done through advertising campaigns, the District website, District publications, and presentations done at civic groups, fairs, and festivals. The District also provides information on landfills, recycling haulers and trash haulers through some of these outreach methods.

Name	Start Date	End Date	Goal
Recycling and Reuse Newsletter	Existing	Ongoing	3, 4
Master Recycler Program	2019	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

Residents tend to benefit more from in-person interaction. This gives a face to the District for the residents. The Master Recycler Program allows interaction and education with residents participating in the program.

One of the best ways to reach residents as an audience is to have a presence online and advertisements for collection events that gear content toward household recyclable materials. The District uses its website, Facebook page, and advertisements to help promote recycling infrastructure and collection events to its residents.

Behavior Change Focus

The District currently provides many explanations of the benefits of reducing, reusing, recycling, composting, and responsibly disposing of materials on its website. Though this could incentivize some residents to change their individual behavior, many residents may not go searching for this information. The District will continue to advertise recycling, the benefits of recycling, and how easy recycling

could be in more places than just the District website. The Recycle Right and Often campaign focuses on the educational material currently on the website and emphasizes the usage of public drop-offs. This campaign will inspire residents to recycle acceptable materials more often and participate in the district's drop-off program.

Measuring Results

The District is able to obtain recycling tonnage for each drop-off location. Additionally, the District can keep track of pieces of media sent out, number of views on social media posts, costs, and other measurable data for residential education.

The Repeat Message

All newsletters and other promotional material and media have the same logo and branding to represent the Solid Waste District.

Measuring Effectiveness

The District can track the recycling tonnages per location over time. These tonnages can be compared to the community's population. If a community undertakes a major drop (15% or more) in recycling rates, the District will investigate the reason and can focus an education program on the available infrastructure.

2. Audience: Schools

a. Overview

The District provides several methods for schools to obtain information about solid waste management and sustainability. Teachers can reach out to the District for educational materials.

Presentations are an important aspect of the District's education program to reach the school audience. The District's Outreach Coordinator is available to schools to discuss topics including recycling, waste reduction, landfills, material recovery facilities, composting, enviro-shopping, and vermicomposting. During 2019, she provided 233 presentations which included presentations in school classrooms. Publications and technical assistance are available from the District for use in schools as well.

The District's school recycling program (detailed in Appendix H) describes the infrastructure available for schools. The District primarily educates the schools about infrastructure as well as other

recycling topics through presentations done at the schools by the Outreach Coordinator as well as occasional e-newsletters sent to some schools. The District also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

Name	Start Date	End Date	Goal
Education and Awareness Program	Existing	Ongoing	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.

Behavior Change Focus

The District has great school engagement activities such as the interactive presentations. These programs can be further focused/improved by having teachers and other school administrators discuss the needs of the students with the educational specialist before and/or after activities. If the teacher has planned activities in the future, the District could consult to include recycling topics in these lessons. This could continuously improve the educational program as time goes on.

Measuring Results

The District measures the school education programs by counting the number of presentations and students attended.

The Repeat Message

The District currently gives specialized messages to different grades, but this could be advanced by giving each grade a different topic about recycling. This way, the students will receive a new topic each year about recycling without receiving repeated presentations. The teachers, however, would receive the same message each year (assuming they remain teaching the same grade each year). This would assist the teacher in implementing the topic assigned to the grade in other lessons.

Measuring Effectiveness

The District can use the data collected from the school programs to see participation trends amongst presentations. Additionally, schools which receive recycling assistance or host recycling drop-offs could measure the resulting changes in recycling each month/year.

3. Audience: Institutions & Commercial Businesses

a. Overview

The District provides information on its website and in its “Office Recycling Guide” which can be useful to commercial businesses and institutions. The District conducts an annual survey of commercial businesses which not only collects information about businesses but also reminds companies that the District is available to provide assistance in solving waste management issues.

The District provides information on landfills, recycling haulers and trash haulers on its website and also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

Name	Start Date	End Date	Goal
Waste Audits	Existing	Ongoing	3, 4
School Recycling Program	Existing	Ongoing	3, 4
Government Building Recycling	Existing	Ongoing	3, 4
Campaign to reduce commercial use of residential yard waste drop-off sites	Existing	Ongoing	3, 4
Commercial and Industrial Technical Assistance	Existing	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

The audience for Institutions & Commercial Businesses may not have a full picture of the programs available to the District, but the annual recycling survey allows the District to reach out and have their presence known. Each survey includes a question that asks if the business would like the District to reach out for any recycling technical assistance.

Additionally, the District’s phone line, website information, social media, brochures and flyers, events, and other channels of

communication with residents often include material for commercial businesses and institutions.

The District could focus their educational efforts on targeting the largest businesses and institutions located in the District so as to create new relationships with these businesses. In addition to the current education available to this sector, the District offers assistance to the businesses for waste audits, information about starting recycling programs, contract assistance, and answers to any other questions they may have.

Behavior Change Focus

To enact a behavioral change in the institutions & commercial businesses, businesses will need to host recycling activities and report them on the annual surveys. To get to this point, the District will strive to increase survey participation at first by reaching out to businesses and offering assistance. Once relationships are created, the District may also begin to suggest improvements to current recycling programs.

Measuring Results

The District can keep track of the number of business which request information on recycling on the surveys, request information via the phone line, and requests for assistance. Afterwards, the District can ask the business to submit recycling data and can track the tonnages for the following years.

The Repeat Message

The District uses branded messaging when communicating with businesses to focus on what opportunities the District can assist with and infrastructure available.

Measuring Effectiveness

The District can track waste audits assisted, contracts assisted with, and recycling programs started. Having data will allow the District to critique their program to further improve the available resources for these businesses.

4. Audience: Industries

a. Overview

The District offers several programs which have the potential to provide information and education to industrial businesses. The District website includes a drop-down menu on the homepage specifically for business and industry interests.

The District has contacts with hundreds of industries throughout the tri-county area each year through its annual survey. Results from surveys are reviewed, and the District may follow-up with certain industries depending upon the information provided. For example, the company may request assistance or indicate that they would likely recycle if services were available.

The District provides information on landfills, recycling haulers and trash haulers on its website and also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

Name	Start Date	End Date	Goal
Waste Audits	Existing	Ongoing	3, 4
Commercial and Industrial Technical Assistance	Existing	Ongoing	3, 4
Waste Audit Manual	Existing	Ongoing	3, 4

b. Outreach Methodologies

The educational program for industrial businesses is identical to the technical assistance provided to the commercial and institutional sectors described above. The District provides technical assistance for market development of recyclables, waste audits upon request and assistance with grants. These programs and efforts are described and evaluated in Appendix H.

5. Audience – Communities & Elected Officials

a. Overview

The District provides information on its website, in its comprehensive resource guide, in the Recycling Newsletter, and through presentations and events such as fairs and festivals which are all available to communities and elected officials.

The District’s government recycling program (detailed in Appendix H) describes the infrastructure available for government offices. The

District primarily educates the government offices about infrastructure through routine communication with these offices due to partnership with the District hosting drop-off sites or participation in District grant programs. In addition, the District’s Executive Director meets with elected officials when they are considering a program change or implementation. The District provides information on landfills, recycling haulers and trash haulers on its website and also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

Name	Start Date	End Date	Goal
Curbside Expansion Efforts	Existing	Ongoing	3, 4
Curbside Re-Start Program	Existing	Ongoing	3, 4
PAYT Promotion Efforts	Existing	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

Communities and elected officials would benefit from updates on the District’s programs. Having face-to-face interactions and invitations to events and starting new programs would increase rapport with the District and result in greater communication. Officials are often busy and may benefit from setting up a scheduled meeting to discuss the development of new curbside recycling programs that the District could provide a grant or technical assistance.

Behavior Change Focus

There are currently 14 non-subscription and 36 subscription curbside recycling programs in the District for communities without curbside or non-subscription services, the District should focus its assistance and education about programs on first educating community leaders on the benefits, importance, and potential successes of programs like these. The District would first need to present curbside recycling successes from other programs and the positive impacts they have had on finances, politics, community connection, and environmental benefits. Once a community (or communities) are on board with curbside recycling, the District could enact its technical assistance program. Setting up RFPs, contracts, residential education, and other factors of the program would follow.

The Repeat Message

The District could follow up multiple times and reiterate the importance of curbside recycling in communities to elected officials and continuous outreach and education. Education for the curbside programs should be in line with education for recycling drop-offs as these are also targeting residents in District communities.

Measuring Results

The District can keep track of the officials invited and ones which attend a meeting or presentation, number of communications or presentations given, and number of programs that started. This would allow the District to begin tracking success of the programs themselves.

Measuring Effectiveness

Tracking the participation of officials and from which community 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 a “Recycle Right and Often” as an outreach priority. This priority would focus on both curbside and drop-off recycling collection programs. The District operates and manages drop-off recycling programs and assists curbside recycling programs as needed. The District will focus on programs (drop-offs/curbside) which are visually audited to have higher contamination levels with reports/conversations with collection drivers and MRFs. By focusing on the higher contamination or higher risk programs, the District will increase education and outreach and the District’s presence to help communities become involved. The District will create a branded campaign to increase recycling participation. All materials will include the District’s logo and contact information.

The District will incorporate all educational and outreach programs listed above and in Appendix H in the campaign to increase recycling. Programs will focus on the topic of recycling right, 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.

Goal of the Outreach Priority

- Increase participation in the recycling programs
- Increase public education of acceptable materials in recycling stream

Target Audience(s)

- Residents
- Community Leaders
- Commercial, Institutional, and Industrial Businesses

Plan to Achieve Success

- Create advertisement campaign to locate drop-offs and explain ease of use
 - Social media
 - Radio and print ads
 - District website
 - Other outlets such as flyers, events, word of mouth
- Advertise importance of recycling often *and* correctly
- Participate in community meetings when applicable to educate leaders on promoting recycling to residents as needed
- The District will have the Outreach Coordinator to assist in the education and outreach.

Milestones

- Continuous meetings with community leaders
- Increasing interest from residents
- Advertisements and consistent messaging about recycling right
- Increase in recycling tonnage reported by businesses on surveys
- Increase in new relationships with businesses, schools, communities

Who Implements the Strategy

- The District provides promotion and education related to the drop-off program and programs at businesses and schools
- The private haulers will have a role in reporting recycling rates. This will assist in ranking a community as a higher priority to focus on their recycling levels.
- Community officials will use the customizable messaging to communicate to their residents.

Measurement of Success

- Quantify the amount of recycling material in tons
- Quantify the level of contamination in the recycling drop-off program

Name	Start Date	End Date	Goal
Outreach Priority: Recycle Right and Often Campaign	2022	Ongoing	3, 4



APPENDIX M

**WASTE MANAGEMENT CAPACITY
ANALYSIS**



APPENDIX M. WASTE MANAGEMENT CAPACITY ANALYSIS

A. ACCESS TO PUBLICLY AVAILABLE LANDFILL FACILITIES

The Stark-Tuscarawas-Wayne Solid Waste Management District has three in-District landfills. During the reference year, District-generated waste was directly hauled to these three landfills as well as twelve out-of-District landfills. These facilities had an average remaining capacity of more than 43 years. Thirteen of the 15 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	County	Years of Remaining Capacity*
<i>In-District</i>		
American Landfill, Inc.	Stark	70
Republic Services Countywide Recycling & Disposal Facility	Stark	83
Kimble Sanitary Landfill	Tuscarawas	25
<i>Out-of-District</i>		
Geneva Landfill	Ashtabula	61
Athens-Hocking Reclamation Center	Athens	49
Crawford County Landfill	Crawford	22
Pine Grove Regional Facility	Fairfield	67
Hancock County Landfill	Hancock	28
Apex Environmental LLC	Jefferson	36
Carbon Limestone Landfill LLC	Mahoning	23
Mahoning Landfill Inc	Mahoning	48
Suburban Landfill Inc	Perry	66
Noble Road Landfill	Richland	20
Sunny Farms Landfill LLC	Seneca	8
<i>Out-of-State</i>		
Hoosier Landfill 2	Kosciusko, IN	N/A

Source(s) of Information: Ohio EPA Facility Data, 2019.

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 2028. Both residential/commercial and industrial waste has been included in the first analysis, and the second analysis includes only residential/commercial data. 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 9,131.02 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 472,685.01 MTCO₂E.

Table N-1. Greenhouse Gas Emissions from All Recyclables in 2019

If Landfilled Model

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						(9,131.02)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	25,802.59	-	NA	NA	4,686.52
Mixed Paper (general)	-	34,084.89	-	NA	NA	2,546.24
Food Waste	NA	3,857.91	-	-	-	1,919.30
Yard Trimmings	NA	71,495.83	-	-	-	(14,336.33)
Branches	NA	12,200.99	-	-	-	(6,540.49)
Mixed Plastics	-	1,911.61	-	NA	NA	38.72
Mixed Electronics	-	115.66	-	NA	NA	2.34
Aluminum Cans	-	8,500.18	-	NA	NA	172.17
Steel Cans	-	26,714.64	-	NA	NA	541.09
Mixed Metals	-	136.42	-	NA	NA	2.76
Glass	-	1,154.80	-	NA	NA	23.39
Carpet	-	4,687.33	-	NA	NA	94.94
Tires	-	13,604.26	-	NA	NA	275.55
Mixed Recyclables	-	42,203.83	-	NA	NA	1,442.77

If Recycled Model

GHG Emissions from Alternative Waste Management Scenario (MTCO₂E): (472,685.01)

Material	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	25,802.59	-	-	NA	NA	(80,899.81)
Mixed Paper (general)	-	34,084.89	-	-	NA	NA	(120,848.78)
Food Waste	-	NA	-	-	3,857.91	-	(445.92)
Yard Trimmings	NA	NA	-	-	71,495.83	-	(3,829.37)
Branches	NA	NA	-	-	12,200.99	-	(653.49)
Mixed Plastics	-	1,911.61	-	-	NA	NA	(1,769.24)
Mixed Electronics	NA	115.66	-	-	NA	NA	(90.83)
Aluminum Cans	-	8,500.18	-	-	NA	NA	(77,584.36)
Steel Cans	-	26,714.64	-	-	NA	NA	(48,943.24)
Mixed Metals	-	136.42	-	-	NA	NA	(599.04)
Glass	-	1,154.80	-	-	NA	NA	(318.83)
Carpet	-	4,687.33	-	-	NA	NA	(11,163.35)
Tires	-	13,604.26	-	-	NA	NA	(5,119.33)
Mixed Recyclables	NA	42,203.83	-	-	NA	NA	(120,419.43)

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 463,553.98 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	-85,586.33
Mixed Paper (general)	-123,395.02
Food Waste	-2365.22
Yard Trimmings	10506.96
Branches	5887.00
Mixed Plastics	-1807.96
Mixed Electronics	-93.17
Aluminum Cans	-77,756.52
Steel Cans	-49,484.33
Mixed Metals	-601.81
Glass	-342.22
Carpet	-11258.29
Tires	-5,394.88
Mixed Recyclables	-121,862.20
Net Totals	-463,553.98

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 (2028). 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 2028.

Table N-3. Tons of Solid Waste Applied to WARM

2019 WARM Model

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						(420,044.71)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	24,737.51	-	-	NA	NA	(77,560.43)
Mixed Paper (general)	33,019.81	-	-	NA	NA	(117,072.52)
Food Waste	NA	-	-	2,792.83	-	(322.81)
Yard Trimmings	NA	-	-	71,495.83	-	(3,829.37)
Branches	NA	-	-	1,038.01	-	(55.60)
Mixed Plastics	846.53	-	-	NA	NA	(783.48)
Mixed Electronics	115.66	-	-	NA	NA	(90.83)
Aluminum Cans	7,435.10	-	-	NA	NA	(67,862.97)
Steel Cans	25,649.56	-	-	NA	NA	(46,991.93)
Mixed Metals	136.42	-	-	NA	NA	(599.04)
Glass	89.72	-	-	NA	NA	(24.77)
Carpet	4,687.33	-	-	NA	NA	(11,163.35)
Tires	13,604.26	-	-	NA	NA	(5,119.33)
Mixed Recyclables	31,040.85	-	-	NA	NA	(88,568.30)

2028 WARM Model

GHG Emissions from Alternative Waste Management Scenario (MTCO ₂ E):							(416,348.78)
Material	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	24,519.85	-	-	NA	NA	(76,877.99)
Mixed Paper (general)	-	32,729.27	-	-	NA	NA	(116,042.40)
Food Waste	-	NA	-	-	2,768.26	-	(319.97)
Yard Trimmings	NA	NA	-	-	70,866.74	-	(3,795.67)
Branches	NA	NA	-	-	1,028.88	-	(55.11)
Mixed Plastics	-	839.08	-	-	NA	NA	(776.59)
Mixed Electronics	NA	114.64	-	-	NA	NA	(90.03)
Aluminum Cans	-	7,369.68	-	-	NA	NA	(67,265.86)
Steel Cans	-	25,423.87	-	-	NA	NA	(46,578.45)
Mixed Metals	-	135.22	-	-	NA	NA	(593.77)
Glass	-	88.93	-	-	NA	NA	(24.55)
Carpet	-	4,646.09	-	-	NA	NA	(11,065.13)
Tires	-	13,484.56	-	-	NA	NA	(5,074.29)
Mixed Recyclables	NA	30,767.72	-	-	NA	NA	(87,788.98)

The two scenarios in **Table N-3** above are combined into **Table N-4** below to show that the added GHG emissions between 2019 and 2028 by slightly decreasing recycling is 3,695.93 MTCO₂E.

Table N-4. Net GHG Reductions for 2028: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (2028)
Corrugated Containers	682.44
Mixed Paper (general)	1,030.12
Food Waste	2.84
Yard Trimmings	33.69
Branches	0.49
Mixed Plastics	6.90
Mixed Electronics	0.80
Aluminum Cans	597.11
Steel Cans	413.48
Mixed Metals	5.27
Glass	0.22
Carpet	98.22
Tires	45.04
Mixed Recyclables	779.32
Net Totals	3,695.93



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 2023-2032. The District has prepared the budget section of this Plan Update to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.

The budget tables prepared for this *Plan Update* demonstrate that the District has the financial funding throughout the planning period to implement the planned programs and initiatives. Nothing contained in these budget projections should be construed as a binding commitment by the District to spend a specific amount of money on a particular strategy, facility, program and/or activity. 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, facilities, 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, facility, 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 reserves the right to revise the budget and reallocate funds as programs change or when otherwise determined to be in the best interest of the District. If the budget in this *Plan Update* is affected to the point that it must be revised, the District will first determine if a material change in circumstance has occurred. If a material change in circumstance has not occurred but budget revisions are needed that go beyond normal adjustments, the District may revise the budget per ORC Section 3734.56(E) and follow the appropriate ratification requirements to finalize the budget revisions.

The District is committed to implementing planned strategies, facilities, programs and/or activities in a cost-effective manner. The District is committed to improving the effectiveness and reduce the cost (adding revenues not otherwise committed to fund balance) 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 (unused revenues). Additionally, the Board is authorized to use reduced costs (unused revenues) to provide grant funds or direct funding to evaluate, test and/or implement new strategies, facilities, programs, and activities. These cost changes would be in compliance with this *Plan Update* are not a "material change in circumstance" regarding the implementation of this *Plan Update*.

A. FUNDING MECHANISMS AND REVENUE GENERATED

1. Disposal Fees

The District earned the majority of its revenue from tiered solid waste disposal fees in 2019. The disposal fee has always been the primary funding mechanism for the District. In 2019, the disposal fee schedule was \$1.00 per ton for in-district waste, \$2.00 per ton for out-of-district waste and \$1.00 per ton for out-of-state waste. The disposal fee yielded \$3,999,287 in revenue for the District in 2019.

The District is not projecting the disposal fees to increase during the planning period but reserves the right to adjust the disposal fees, if warranted, at any point in the planning period. If an adjustment is warranted, the District will follow the appropriate Ohio Revised Code (ORC) process to conduct the adjustments.

In-District revenue from 2020 and 2021 are actual revenue. In-District revenue from 2022 to 2032 is based on the tonnages projected in Appendix D.

The Out-of-District and Out-of-State revenues for 2022 is an average from 2017 to 2021. The Out-of-District revenues is projected to increase by 1.27% (average percent rate of change 2017 to 2021) each year from 2023 to 2032. The Out-of-State revenues is projected to increase by 1% each year from 2023 to 2032.

**Table O-1: Disposal Fee Schedule and Revenue
(in accordance with ORC Section 3734.57(B))**

Year	Disposal Fee Schedule (\$/ton)			Waste Disposed at in-District Landfills			Revenue			Total Disposal Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2015	\$1.00	\$2.00	\$1.00	757,814	1,395,183	22,795	\$757,814	\$2,790,367	\$22,795	\$3,570,976
2016	\$1.00	\$2.00	\$1.00	796,447	1,365,751	30,827	\$796,447	\$2,731,501	\$30,827	\$3,558,775
2017	\$1.00	\$2.00	\$1.00	898,339	1,383,095	32,065	\$898,339	\$2,766,189	\$32,065	\$3,696,593
2018	\$1.00	\$2.00	\$1.00	959,117	1,620,403	27,573	\$959,117	\$3,240,805	\$27,573	\$4,227,495
2019	\$1.00	\$2.00	\$1.00	864,764	1,539,413	55,696	\$864,764	\$3,078,827	\$55,696	\$3,999,287
2020	\$1.00	\$2.00	\$1.00	909,680	1,419,838	40,606	\$909,680	\$2,839,676	\$40,606	\$3,789,962
2021	\$1.00	\$2.00	\$1.00	994,022	1,406,682	40,255	\$966,469	\$2,813,363	\$40,255	\$3,820,088
2022	\$1.00	\$2.00	\$1.00	959,508	1,473,886	39,239	\$959,508	\$2,947,772	\$39,239	\$3,946,520
2023	\$1.00	\$2.00	\$1.00	972,801	1,492,671	39,631	\$972,801	\$2,985,341	\$39,631	\$3,997,774
2024	\$1.00	\$2.00	\$1.00	986,283	1,511,695	40,028	\$986,283	\$3,023,389	\$40,028	\$4,049,700
2025	\$1.00	\$2.00	\$1.00	999,955	1,530,961	40,428	\$999,955	\$3,061,922	\$40,428	\$4,102,306
2026	\$1.00	\$2.00	\$1.00	1,013,822	1,550,473	40,832	\$1,013,822	\$3,100,946	\$40,832	\$4,155,600
2027	\$1.00	\$2.00	\$1.00	1,027,885	1,570,234	41,241	\$1,027,885	\$3,140,468	\$41,241	\$4,209,593
2028	\$1.00	\$2.00	\$1.00	1,034,756	1,590,246	41,653	\$1,034,756	\$3,180,493	\$41,653	\$4,256,902
2029	\$1.00	\$2.00	\$1.00	1,041,711	1,610,514	42,070	\$1,041,711	\$3,221,028	\$42,070	\$4,304,809
2030	\$1.00	\$2.00	\$1.00	1,048,749	1,631,040	42,490	\$1,048,749	\$3,262,080	\$42,490	\$4,353,319
2031	\$1.00	\$2.00	\$1.00	1,055,871	1,651,827	42,915	\$1,055,871	\$3,303,655	\$42,915	\$4,402,441
2032	\$1.00	\$2.00	\$1.00	1,063,079	1,672,880	43,344	\$1,063,079	\$3,345,760	\$43,344	\$4,452,183

2. Generation Fees

The District does not receive revenue from generation fees; therefore, **Table O-2** has been omitted.

3. Designation Fees

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

4. Loans

The District does not have current loans and does not anticipate securing loans during the planning period therefore **Table O-4** has been omitted.

5. Other Sources of Revenue

a. Grants

The District received grants from Ohio EPA in 2019 and 2021. Ohio EPA's grants are competitive and not guaranteed; therefore, the District is not projecting grant revenue during the planning period.

b. Reimbursement

The District did not have reimbursement revenue in 2019 and is not projecting reimbursement revenue during the planning period.

c. Recycling Revenue

Since 2015, recycling revenue is credited to the District's General Fund for interest and non-tier disposal fee revenue purposes; therefore, the District projected \$0 throughout the planning period.

Contingent Funding

The District reserves the right, on an as needed basis, to transfer recycling revenue from the general fund to the recycling revenue line item of the solid waste plan implementation fund. The purpose of any transfer would be to balance the budget during any month or year throughout the planning period. The District conservatively projected \$100,000 of recycling revenue transferred from the general fund to the plan implementation fund under this line item starting in 2023 through the end of the planning period. In addition, in order to balance the budget a one-time transfer of \$1,000,000 is projected in year 2030. The District would conduct the transfer only if needed or required to ensure the District maintains a positive cash balance in any given year of the planning period.

d. Other Revenue

Miscellaneous revenue represents donations and other forms of miscellaneous revenue. From 2015 to 2020, miscellaneous revenue ranged from a low of \$111 in 2016 to a high of \$29,441 in 2020. Based on the previous years, the District projects a conservative \$0 per year throughout the planning period.

Any fee changes would be implemented under the process in the ORC. All projected fees by fee type or service type that require ratification by the District communities and Commissioners past 2032 are not approved with the approval of this Plan Update. The District reserves the right to set minimum fees and adjust fees as needed and determined by the Board of Directors.

Table O-5. Other Revenue and Other Revenue Sources

	Year	Grants	Reimbursement	Recycling Revenue	Other	"Other Revenue" Total
	2015	\$0	\$0	\$0	\$11,539	\$11,539
	2016	\$0	\$0	\$0	\$111	\$111
	2017	\$0	\$0	\$0	\$7,600	\$7,600
	2018	\$0	\$0	\$0	\$7,006	\$7,006
	2019	\$50,000	\$0	\$0	\$5,806	\$55,806
	2020	\$0	\$25,000	\$0	\$29,441	\$54,441
	2021	\$51,000	\$19,721	\$0	\$4,741	\$75,462
	2022	\$0	\$0	\$0	\$0	\$0
First Year of Planning Period → X	2023	\$0	\$0	\$100,000	\$0	\$100,000
	2024	\$0	\$0	\$100,000	\$0	\$100,000
	2025	\$0	\$0	\$100,000	\$0	\$100,000
	2026	\$0	\$0	\$100,000	\$0	\$100,000
	2027	\$0	\$0	\$100,000	\$0	\$100,000
	2028	\$0	\$0	\$100,000	\$0	\$100,000
	2029	\$0	\$0	\$100,000	\$0	\$100,000
	2030	\$0	\$0	\$1,000,000	\$0	\$1,000,000
	2031	\$0	\$0	\$100,000	\$0	\$100,000
	2032	\$0	\$0	\$100,000	\$0	\$100,000

6. Summary of District Revenues

Total revenue amounted to \$4,055,093 during the 2019 reference year. During the first year of the planning period (2023), total revenue is expected to be \$4,097,774. At the end of the planning period in 2032, total revenue is projected to be \$4,552,183.

Table O-6. Total Revenue

	Year	Disposal Fees	Other Revenue	Total Revenue
	2015	\$3,570,976	\$11,539	\$3,582,515
	2016	\$3,558,775	\$111	\$3,558,887
	2017	\$3,696,593	\$7,600	\$3,704,193
	2018	\$4,227,495	\$7,006	\$4,234,500
	2019	\$3,999,287	\$55,806	\$4,055,093
	2020	\$3,789,962	\$54,441	\$3,844,404
	2021	\$3,820,088	\$75,462	\$3,895,549
	2022	\$3,946,520	\$0	\$3,946,520
First Year of Planning Period → X	2023	\$3,997,774	\$100,000	\$4,097,774
	2024	\$4,049,700	\$100,000	\$4,149,700
	2025	\$4,102,306	\$100,000	\$4,202,306
	2026	\$4,155,600	\$100,000	\$4,255,600
	2027	\$4,209,593	\$100,000	\$4,309,593
	2028	\$4,256,902	\$100,000	\$4,356,902
	2029	\$4,304,809	\$100,000	\$4,404,809
	2030	\$4,353,319	\$1,000,000	\$5,353,319
	2031	\$4,402,441	\$100,000	\$4,502,441
	2032	\$4,452,183	\$100,000	\$4,552,183

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.

Table O-7. Expenses

Line #	Category/Program	2015	2016	2017	2018	2019	2020
1	1. Plan Monitoring/Prep.	\$8,314	\$8,732	\$49,429	\$22,598	\$10,468	\$9,500
1.a	a. Plan Preparation	\$0	\$1,095	\$41,328	\$13,890	\$0	\$0
1.b	b. Plan Monitoring	\$8,314	\$7,637	\$8,101	\$8,708	\$10,468	\$9,500
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$3,439,376	\$3,943,090	\$3,857,190	\$3,439,851	\$3,579,319	\$3,907,145
2.a	a. District Administration	\$525,160	\$549,331	\$590,514	\$625,641	\$590,286	\$658,331
2.a.1	Personnel	\$345,806	\$372,009	\$402,360	\$421,635	\$448,906	\$458,564
2.a.2	Office Overhead	\$176,505	\$176,272	\$186,691	\$197,744	\$136,625	\$197,817
2.a.3	Other	\$2,850	\$1,050	\$1,463	\$6,263	\$4,755	\$1,950
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$2,070,860	\$2,016,695	\$2,162,894	\$1,898,233	\$1,978,559	\$2,424,510
2.d.1	Curbside	\$348,223	\$472,454	\$409,263	\$453,283	\$453,065	\$429,671
2.d.2	Drop-off	\$1,719,890	\$1,544,241	\$1,753,631	\$1,441,782	\$1,521,922	\$1,994,839
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$2,746	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$3,168	\$3,573	\$0
2.e	e. Special Collections	\$76,077	\$186,284	\$340,341	\$325,238	\$407,146	\$329,632
2.e.1	Tire Collection	\$56,531	\$72,639	\$77,175	\$77,551	\$108,485	\$92,435
2.e.2	HHW Collection	\$70	\$44,800	\$248,955	\$245,135	\$291,727	\$234,713
2.e.3	Electronics Collection	\$9,643	\$58,525	\$9,310	\$2,070	\$1,620	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$9,832	\$10,321	\$4,901	\$482	\$5,315	\$2,483
2.f	f. Yard Waste/Other Organics	\$440,621	\$856,571	\$469,046	\$357,522	\$367,668	\$235,018
2.g	g. Education/Awareness	\$232,205	\$293,760	\$265,642	\$206,934	\$220,197	\$259,655
2.g.1	Education Staff	\$50,126	\$48,326	\$53,075	\$55,605	\$58,541	\$59,897
2.g.2	Advertisement/Promotion	\$173,820	\$210,511	\$157,693	\$133,931	\$145,683	\$185,954
2.g.3	Other	\$8,259	\$34,923	\$54,874	\$17,398	\$15,972	\$13,803
2.h	h. Recycling Market Development	\$94,454	\$39,500	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activities	\$94,454	\$39,500	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$28,169	\$6,284	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$950	\$585	\$20,000	\$7,160	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$8,303	\$0
3	3. Health Dept. Enforcement	\$325,000	\$325,000	\$325,000	\$325,000	\$298,750	\$351,250
	<i>Health Department Name:</i>	Stark County Health Department, Tuscarawas County Health Department, Wayne County Health Department, and Canton City Health Department					
3.a	a. Personnel	\$325,000	\$325,000	\$325,000	\$325,000	\$298,750	\$351,250
3.b	b. Supplies	\$0	\$0	\$0	\$0	\$0	\$0
3.c	c. Equipment	\$0	\$0	\$0	\$0	\$0	\$0
3.d	d. Vehicles	\$0	\$0	\$0	\$0	\$0	\$0
3.e	e. Other	\$0	\$0	\$0	\$0	\$0	\$0
4	4. County Assistance	\$0	\$300,000	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$300,000	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,403	\$285,000	\$284,000
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,403	\$285,000	\$284,000
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$4,057,690	\$4,861,822	\$4,516,619	\$4,072,852	\$4,173,537	\$4,551,895

Table O-7. Expenses (continued)

Line #	Category/Program	2021	2022	2023	2024	2025	2026
1	1. Plan Monitoring/Prep.	\$39,300	\$12,000	\$12,120	\$12,241	\$43,864	\$12,487
1.a	a. Plan Preparation	\$30,000	\$0	\$0	\$0	\$31,500	\$0
1.b	b. Plan Monitoring	\$9,300	\$12,000	\$12,120	\$12,241	\$12,364	\$12,487
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$3,645,108	\$4,004,980	\$3,616,387	\$3,700,624	\$3,737,382	\$3,826,738
2.a	a. District Administration	\$620,806	\$768,230	\$791,027	\$814,503	\$838,678	\$863,573
2.a.1	Personnel	\$488,712	\$560,000	\$576,800	\$594,104	\$611,927	\$630,285
2.a.2	Office Overhead	\$129,341	\$183,230	\$188,727	\$194,389	\$200,220	\$206,227
2.a.3	Other	\$2,753	\$25,000	\$25,500	\$26,010	\$26,530	\$27,061
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$2,132,256	\$2,225,000	\$1,929,750	\$1,981,643	\$2,035,092	\$2,090,145
2.d.1	Curbside	\$387,366	\$400,000	\$200,000	\$200,000	\$200,000	\$200,000
2.d.2	Drop-off	\$1,744,889	\$1,825,000	\$1,729,750	\$1,781,643	\$1,835,092	\$1,890,145
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$370,625	\$407,250	\$400,000	\$400,000	\$400,000	\$400,000
2.e.1	Tire Collection	\$95,627	\$107,250	\$100,000	\$100,000	\$100,000	\$100,000
2.e.2	HHW Collection	\$274,998	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
2.e.3	Electronics Collection	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$300,000	\$317,500	\$200,000	\$200,000	\$150,000	\$150,000
2.g	g. Education/Awareness	\$220,701	\$287,000	\$295,610	\$304,478	\$313,613	\$323,021
2.g.1	Education Staff	\$61,086	\$67,000	\$69,010	\$71,080	\$73,213	\$75,409
2.g.2	Advertisement/Promotion	\$138,928	\$220,000	\$226,600	\$233,398	\$240,400	\$247,612
2.g.3	Other	\$20,687	\$0	\$0	\$0	\$0	\$0
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activities	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$720	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000
	<i>Health Department Name:</i>	Stark County Health Department, Tuscarawas County Health Department, Wayne County Health Department, and Canton City Health Department					
3.a	a. Personnel	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000
3.b	b. Supplies	\$0	\$0	\$0	\$0	\$0	\$0
3.c	c. Equipment	\$0	\$0	\$0	\$0	\$0	\$0
3.d	d. Vehicles	\$0	\$0	\$0	\$0	\$0	\$0
3.e	e. Other	\$0	\$0	\$0	\$0	\$0	\$0
4	4. County Assistance	\$0	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$4,294,408	\$4,626,980	\$4,238,507	\$4,322,865	\$4,391,246	\$4,449,226

Table O-7. Expenses (continued)

Line #	Category/Program	2027	2028	2029	2030	2031	2032
1	1. Plan Monitoring/Prep.	\$12,612	\$12,738	\$45,941	\$12,994	\$13,124	\$13,255
1.a	a. Plan Preparation	\$0	\$0	\$33,075	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$12,612	\$12,738	\$12,866	\$12,994	\$13,124	\$13,255
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$3,868,770	\$3,963,557	\$4,061,182	\$4,161,730	\$4,265,289	\$4,371,949
2.a	a. District Administration	\$889,209	\$915,610	\$942,796	\$970,793	\$999,624	\$1,029,314
2.a.1	Personnel	\$649,193	\$668,669	\$688,729	\$709,391	\$730,673	\$752,593
2.a.2	Office Overhead	\$212,414	\$218,786	\$225,350	\$232,110	\$239,074	\$246,246
2.a.3	Other	\$27,602	\$28,154	\$28,717	\$29,291	\$29,877	\$30,475
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$2,096,849	\$2,155,254	\$2,215,412	\$2,277,374	\$2,341,196	\$2,406,931
2.d.1	Curbside	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2.d.2	Drop-off	\$1,946,849	\$2,005,254	\$2,065,412	\$2,127,374	\$2,191,196	\$2,256,931
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
2.e.1	Tire Collection	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
2.e.2	HHW Collection	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
2.e.3	Electronics Collection	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2.g	g. Education/Awareness	\$332,712	\$342,693	\$352,974	\$363,563	\$374,470	\$385,704
2.g.1	Education Staff	\$77,671	\$80,002	\$82,402	\$84,874	\$87,420	\$90,042
2.g.2	Advertisement/Promotion	\$255,040	\$262,692	\$270,572	\$278,689	\$287,050	\$295,662
2.g.3	Other	\$0	\$0	\$0	\$0	\$0	\$0
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activities	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$325,000	\$325,000	\$300,000	\$300,000	\$300,000	\$300,000
	Health Department Name:	Stark County Health Department, Tuscarawas County Health Department, Wayne County Health Department, and Canton City Health Department					
3.a	a. Personnel	\$325,000	\$325,000	\$300,000	\$300,000	\$300,000	\$300,000
3.b	b. Supplies	\$0	\$0	\$0	\$0	\$0	\$0
3.c	c. Equipment	\$0	\$0	\$0	\$0	\$0	\$0
3.d	d. Vehicles	\$0	\$0	\$0	\$0	\$0	\$0
3.e	e. Other	\$0	\$0	\$0	\$0	\$0	\$0
4	4. County Assistance	\$0	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$4,491,382	\$4,586,295	\$4,692,123	\$4,759,725	\$4,863,414	\$4,970,205

2. Explanation of Expenses

Table O-7 includes actual expenses from 2015 to 2020, estimated 2021, and anticipated expenses from the District's approved budgets for 2022, and projected expenditures from 2023 to 2032. Line items explained below are numbered according to the corresponding line item number in the District's Quarterly Fee Reports. Line items that did not have any expenditures projected throughout the planning period were omitted from the discussion below.

In general, many initiatives identified in Appendix I for implementation include promotional and or educational tasks. The District considers these initiatives as soft investments that will be funded under the existing administrative or education budgets. Any initiative identified in Appendix I that is considered a hard investment will include adjustments in the budgets presented in this section.

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 3-year update that will occur during the planning period.
- **1.b Plan Monitoring** – Budget includes estimated expenses related to retaining a consultant for assistance with plan monitoring for Annual District Reports during the planning period. Expenses are adjusted to increase 1% annually.

2. Plan Implementation

2.a District Administration

- **2.a.1 Personnel** – Budget includes expenditures for salaries, OPERS, workers' compensation, Medicare, and health insurance. Expenditures are projected to increase 3.0% annually based on historic trends and District practices.

The Personnel line item includes District Administrative staff minus the Outreach Coordinator, which is included in Education Staff. District Recycling Truck Drivers are included in Drop-off Recycling Collection.

- **2.a.2 Office Overhead** – Budget includes expenditures for a variety of administrative costs, including but not limited to liability insurance, software subscriptions, supplies, equipment, annual financial audit, postage, utilities, telecommunications, staff training, and trade organization memberships. It is assumed costs will increase annually. Aligning with the approved 2022 budget expenses are projected to increase 3.0% annually throughout the planning period.
- **2.a.3 Other** – The approved budget for 2022 was used to project an increase of 2.0% annually throughout the planning period. This is based on the amount not to exceed for annual legal counsel as determined by the District over the past few years.

2.d Recycling Collection

- **2.d.1 Curbside** – Curbside recycling expenses are projected to be \$400,000 in 2022 and \$200,000 for the remainder of the planning period.

Grants included under this line item:

- Recycling Makes Sense Grant Program

- **2.d.2 Drop-off** – In 2020, program costs were higher than historical costs primarily due to the comprehensive bin upgrade project completed in the summer of 2020. The Board moved \$250,000 from reserve for the project as well as an additional \$25,000 at the end of the year for additional bins needed at the Jackson Township location. Currently, the District is leasing a third of its fleet of trucks. Over the past five years, the District has situated itself with fleet upgrades to be able to extend truck fleet life with preventative maintenance and repairs. Purchases and/or leases will be evaluated annually based on the carry-over balance. District Recycling Truck Drivers salaries are included in this line item. Per the Collective Bargaining Agreement payroll increases are expected annually. A 3% annual increase is projected through the planning period. Drop-off recycling expenses are projected to be \$1,600,000 for the payroll and collection expenses in 2022. This also includes the Program Startup Grant budget (\$150,000 in 2023) and the Host Cleanup grants (\$75,000).

Grants included under this line item:

- Recycling Program Start-Up Grants (for political subdivisions)
- Recycling Drop-Off Clean-Up/Host Community Center
- **2.d.6 Other** – In 2019, the District spent \$3,573. There is no budget allocated for this category for the planning period.

2.e Special Collections

- **2.e.1 Tire Collection** – A flat annual budget of \$100,000 is allocated to this program. The District's residential tire drop-off sites are appointment-based, so appointments could be discontinued until the following year if the budgeted amount is met.
- **2.e.2 HHW Collection** – A flat annual budget of \$300,000 is projected for the rest of the planning period. The District's residential HHW collections are appointment-based, so appointments could be discontinued until the following year if the budgeted amount is met.

The District intends on providing the HHW program at the budgeted amount; however, it understands that the program as it is currently operating is vulnerable because it is dependent upon the ability of the City of Canton Recycle Center to serve as the permanent drop-off site and the District's HHW contractor to maintain fundable rates for disposal, labor, transportation, materials and other supplies. There are a limited number of companies that can offer this service. If either of those circumstances change, the program in its current form would not be possible, and due to the fact that the HHW collection does not aid the District in meeting the required Goal #1, the budget for the program may need to be altered to maintain recycling access and a balanced budget. In the circumstance that the program can continue but the costs for disposal, labor, transportation, materials and other supplies all rise or the District needs to explore another HHW company, the District would make every effort to maintain the current program but would monitor program costs and would explore restricting the amount of waste a resident can drop off at collection events (to reduce costs and also because the collection site is better equipped to identify if a large quantity of waste may be commercially generated).

The District will at a minimum at least promote the disposal of HHW through private sector companies through our annual e-newsletter if the District financially could not continue to

contract with the City of Canton and Clean Harbors or another HHW company.

The intention of the HHW collection program is to provide an outlet for materials that do not have another outlet through the private sector, but if another outlet for a specific material is identified that may provide a cost savings to the District, it may be explored.

- **2.e.3 Electronics Collection** – The contractor costs were \$1,620 in 2019. There is no budget allocated for this category for the planning period, but associated costs are budgeted in HHW Collection.
- **2.e.5 Other Collection Drives** – The contractor costs were \$5,315 in 2019. There is no budget allocated for this category for the planning period, but associated costs are budgeted in HHW Collection.

2.f Yard Waste/Other Organics

A flat annual budget of \$200,000 is allocated from the yard waste program for 2023 and 2024. In 2025, \$150,000 is allocated for this program for the remainder of the planning period. This funding could go toward any of the grants yard waste sites are eligible for depending on site needs.

Any yard waste host sites that wish to make enhancements will be directed to the District's Program Startup Grant Program.

Grants included under this line item:

- Composting Infrastructure Enhancement Grant (for processors)
- Host Community Cleanup Grant (\$100,000) were split between the three types of host sites of 2.d.2 Drop-off (\$75,000), 2.e.1 Tire collection (\$10,000), and 2.f Yard Waste/Other Organics (\$15,000).
- Program Startup Grant

2.g Education/Awareness

- **2.g.1 Education Staff** – A 3% annual increase is projected from 2022's approved budget through the planning period. The Outreach Coordinator salary is included in the line item and from historic trends benefit and pay raises are expected.

- **2.g.2 Advertisement/Promotion** – A 3% annual increase is projected from 2022's approved budget through the planning period allowing for rate and mailing increases.
- **2.g.3 Other** – In 2019, the District spent \$15,972. There is no budget allocated for this category for the planning period.

2.h Recycling Market Development

The District is not projecting any expenditures from grant related revenue since grants are competitive and not guaranteed.

2.n Emergency Debris Management

In 2019, the District spent \$7,160. There is no budget allocated for this category for the planning period.

2.p Other

In 2019, the District spent \$8,303. There is no budget allocated for this category for the planning period.

3. Health Department Enforcement

3.a Personnel – A flat annual budget of \$325,000 is allocated to this program, until 2029 when the annual budget is reduced to \$300,000.

7. Open Dump, Litter Law Enforcement

2.b Local Law Enforcement – A flat annual budget of \$285,000 is allocated to this program.

Budget Summary

The District started the 2019 reference year with a carry-over balance of approximately \$3,790,837. Based on revenue and expenditure projections discussed throughout this appendix, the District is expected to begin the planning period in 2023 with a carry-over balance of \$2,093,525 and end the planning period with a carry-over balance of \$51,662. 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
First Year of Planning Period → X	2014	Ending Balance			\$6,219,725
	2015	\$3,582,515	\$4,057,690	-\$475,175	\$5,744,550
	2016	\$3,558,887	\$4,861,822	-\$1,302,935	\$4,441,615
	2017	\$3,704,193	\$4,516,619	-\$812,426	\$3,629,189
	2018	\$4,234,500	\$4,072,852	\$161,648	\$3,790,837
	2019	\$4,055,093	\$4,173,537	-\$118,444	\$3,672,392
	2020	\$3,844,404	\$4,551,895	-\$707,491	\$2,964,901
	2021	\$3,895,549	\$4,317,705	-\$422,156	\$2,542,745
	2022	\$3,946,520	\$4,626,980	-\$680,460	\$1,862,285
	2023	\$4,097,774	\$4,238,507	-\$140,733	\$1,721,552
	2024	\$4,149,700	\$4,322,865	-\$173,165	\$1,548,387
	2025	\$4,202,306	\$4,388,211	-\$185,906	\$1,362,482
	2026	\$4,255,600	\$4,449,226	-\$193,625	\$1,168,856
	2027	\$4,309,593	\$4,491,382	-\$181,789	\$987,067
	2028	\$4,356,902	\$4,586,295	-\$229,393	\$757,675
	2029	\$4,404,809	\$4,688,936	-\$284,128	\$473,547
	2030	\$5,353,319	\$4,759,725	\$593,594	\$1,067,141
	2031	\$4,502,441	\$4,863,414	-\$360,972	\$706,169
	2032	\$4,552,183	\$4,970,205	-\$418,022	\$288,147



APPENDIX P

DESIGNATION



Appendix P. Designation

A. Statement Authorizing/Precluding Designation

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

Even though a SWMD has the legal right to designate, it cannot do so until the Policy Committee (or the Board in the case of an Authority) specifically conveys that authority to the Board of Directors. The Policy Committee does this through a Solid Waste Management Plan. If the SWMD desires to have the ability to designate facilities, then the Policy Committee includes a clear statement in the Solid Waste Management Plan giving the designation authority to the Board of Directors. The Policy Committee can also prevent the Board of Directors from designating facilities by withholding that authority in the Solid Waste Management Plan.

Even if the Policy Committee grants the Board of Directors the authority to designate in a Solid Waste Management Plan, the Board of Directors decides whether or not to act on that authority. If it chooses to use its authority to designate facilities, then the Board of Directors must follow the process that is prescribed in ORC Section 343.014. If it chooses not to designate facilities, then the Board of Directors simply takes no action.

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

1. Authorization Statement to Designate

The District is hereby authorized to establish facility designations in accordance with ORC Section 343.013, 343.014 and 343.015.

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.)

2. Description of the SWMD’s Designation Process

Decisions regarding designation, if implemented, or the granting of a designation waiver, if applicable, shall be made by the District, following a review of the request by the Policy Committee.

If 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 Policy Committee will evaluate each request for designation or waiver based upon, at least, the following general criteria:

- The facility’s compatibility with the District’s Solid Waste Management Plan.
- Other criteria as defined in Section C of this appendix.

B. Designated Facilities

The District continues to support an open market for the collection, transport and disposal of solid waste. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, 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.

The District is not designating any facilities in this *Plan Update* as shown in Table P-1.

Table P-1. Facilities Designated

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

C. Waiver Process for the Use of Undesignated Facilities

The District is authorized to designate solid waste facilities. If the Board elects to designate solid waste facilities after this *Plan Update* is approved by the Director

of the Ohio EPA, the following waiver process may be followed by any person, municipal corporation, township or other entity that wishes to deliver waste to a solid waste facility not designated by the District.

In the event that any person, municipal corporation, township or other entity requests permission to use a facility, other than a designated facility, for the disposal of solid waste generated within the District, the entity must submit a written request for a waiver of designation to the Board. The request must contain the following information:

1. Identification of the persons, municipal corporation, township or other entity requesting the waiver;
2. Identification of the generators(s) of the solid waste for which the waiver is requested;
3. Identification of the type and quantity (in tons per year) of solid waste for which the waiver is requested;
4. Identification of the time period(s) for which the waiver is requested;
5. Identification of the disposal facility(s) to be used if the waiver is granted;
6. If the solid waste is to be disposed in an Ohio landfill, a letter from the Solid Waste Management District where the solid waste will be disposed, acknowledging that the activity is consistent with that District's current plan;
7. An estimate of the financial impact to the District that would occur with issuance of the requested waiver; and
8. An explanation of the reason(s) for requesting the waiver.

Upon receipt of the written request containing all of the information listed above, District staff will review it and may request additional information necessary to conduct its review. The Board shall act on a waiver request within ninety days following receipt of the request. The Board may grant the request for a waiver only if the Board determines that:

1. Issuance of the waiver is not inconsistent with projections contained in the District's approved *Plan Update* under Section 3734.53 (A)(6) and (A)(7) of the Ohio Revised Code;
2. Issuance of the waiver will not adversely affect implementation and financing of the District's approved *Plan Update*; and
3. The entity is willing to enter into an agreement requiring the payment of a waiver fee to the District if the generation fee is not collected.



APPENDIX Q

DISTRICT RULES



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 District does not have any existing rules. There are no current plans to adopt new rules at the time of the development of this *Plan Update*.

B. Rule Making Authority – ORC 343.01

The solid waste management plan provides the authority to the Board of Directors (Board) to adopt, publish, and enforce all the rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

ORC 343.01(G)(1)

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

- (1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities covered by the plan, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code, except that the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director’s order;
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite

good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;

(c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

(d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;

(e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;

(f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

ORC 343.01(G)(2)

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any

such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

“Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility under general plans and specifications for the proposed improvement have been submitted to and approved by the Board of County Commissioners . . . as complying with solid waste management plan or amended plan of the District. The construction of such a facility . . .”

ORC 343.01(G)(3)

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district’s solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district’s solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

ORC 343.01(G)(4)

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

C. Rule Making Authority – ORC 3734.53

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

- (1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
 - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
 - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
 - (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;
 - (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

- (2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;
- (3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;
- (4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

D. Proposed Rules

The District is not proposing any new rules in this *Plan Update*.

E. Rule Approval Process

Proposed rules shall be adopted and enforced by the Board as provided in section 343.01(G).



APPENDIX R

**BLANK SURVEY FORMS AND RELATED
INFORMATION**





STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

9918 Wilkshire Blvd NE • Bolivar, OH 44612
330-874-2258 • 800-678-9839 • 330-874-2449 FAX
www.timetorecycle.org • district@timetorecycle.org

David Held
Executive Director

Erica Wright
Finance Director

February 2020

Dear Facility Manager:

THE STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT 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.

We also encourage businesses and organizations which do not have a recycling program to participate in the survey to help us understand recycling in our area. The District can provide waste audits, referrals to available recycling grant opportunities, and other technical assistance for any business that is interested. Please visit www.timetorecycle.org for more information.

How to participate in our brief survey:

The survey asks for the total 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. Completing the survey should take only a few minutes.

Please complete your survey by **March 27, 2020** by following the steps below:

- Visit bit.ly/STWrecycles2019
- 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@qtenvironmental.com or 614-964-7284.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

David J. Held
Executive Director
Stark-Tuscarawas-Wayne Joint Solid Waste Management District

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveymoz.com/s/5405510/STW-2019-Recycling-Survey>

BOARD of DIRECTORS

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Wayne
Ron Amstutz
Becky Foster
Sue Smail

STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT 2019 RECYCLING SURVEY

Confidentiality: The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled.

Instructions: Please complete all of the following survey to the best of your ability. Only include solid waste/recyclable data that is generated from Stark, Tuscarawas, and Wayne Counties. If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

PLEASE RETURN COMPLETED SURVEY USING ONE OF THESE METHODS:

Email: eoulton@qtenvironmental.com or Fax: (614) 899-9255
Or complete the survey online at: bit.ly/STWrecycles2019

1. Contact Information (this information will be kept private):

Company Name: _____
 Mailing Address: _____
 Contact Name: _____ No. 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

Data recorded in this table should include all of the materials recycled by your company in 2019 along with the processor/recycler/broker/landfill/transfer station/incinerator used for each material. Please estimate the quantities of each type of material recycled in tons. 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: 2000 Pounds = 1 ton and 3 cubic yards = 1 ton.

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)				

Mixed/Commingled Recyclables Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked up (b)	No of Pickups per week (c)	Estimated Mixed/Commingled Recycled (Tons) (a) x (b) x (c) x 52 / 18
<i>Example</i>	<i>8 cubic yards</i>	<i>75% full</i>	<i>1 time/week</i>	<i>(8 x 0.75 x 1 x 52 / 18) = 17.33 tons</i>
1				
2				
3				
Total Mixed/Commingled Recycled in Tons (Enter in Mixed/Commingled 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 checked="" type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards Recycling Brothers of Ohio
Mixed/Commingled Recycling		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Paper (Newsprint, Office, Glossy, Books etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Cardboard/Paperboard		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Glass		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Ferrous Metals (Steel, Iron): Do not report auto bodies or construction/ demolition materials such as rebar.		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Non-Ferrous Metals (Aluminum, Copper, Brass): Do not report auto bodies or construction/ demolition materials such as aluminum siding		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Plastics (#1-#7)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Other Plastic Bags/Film Plastics		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Wood (Except Pallets)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Wood - Pallets		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units
Food (Do NOT include Cooking Oil)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons
Appliances (White Goods)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Rubber (Not including Tires)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units
Used Tires		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons
Used Motor Oil (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Used Antifreeze (Residential Only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units
Electronics (Residential: Computers, TVs, Cellphones, etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons
Rechargeable/Household Batteries		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Lead-acid Batteries (ex. Automotive Batteries)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons
Ink/Toner Cartridges		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Textiles (Clothing, Fabrics)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units
Non-Exempt Foundry Sand		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons
Yard Waste (Grass, Leaves, Branches)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards

Please return completed survey to eoulton@gtenvironmental.com. Thank you!



STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

9918 Wilkshire Blvd NE • Bolivar, OH 44612
330-874-2258 • 800-678-9839 • 330-874-2449 FAX
www.timetorecycle.org • district@timetorecycle.org

David Held
Executive Director

Erica Wright
Finance Director

February 2020

Dear Solid Waste/Recycling Manager:

Thank you for providing information to the Stark-Tuscarawas-Wayne Joint Solid Waste Management District about the recycling opportunities your business offers.

Each year, our District is required to survey establishments that may accept or process materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. This information is critical for state-mandated data reporting and waste management planning.

We would greatly appreciate your participation in a brief survey regarding the total tons recycled by your business in 2019. The data you provide will be combined with data reported from other establishments. Survey responses are aggregated, so your individual information will not be identified.

Please complete the survey using only **calendar year 2019 information**. Only materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio should be reported. Completing this survey should take only a few minutes.

Please complete your survey by **March 27, 2020** by following the steps below:

- Visit bit.ly/STW2019RG
- 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.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

David J. Held
Executive Director
Stark-Tuscarawas-Wayne Joint Solid Waste Management District

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5411613/STW-2019-Recycling-Guide-Survey>

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Sue Smail

STARK-TUSCARAWAS-WAYNE JOINT WASTE MANAGEMENT DISTRICT 2019 RECYCLING SURVEY

Instructions: Please complete the survey to the best of your ability. Only report materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. **Confidentiality:** The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify local recycling rates. If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@qtenvironmental.com or Fax: (614) 899-9255

1. Contact Information (this information will be kept private):

Company Name: _____
 Mailing Address: _____
 Contact Name: _____ No. of Employees: _____
 Phone Number: _____ Email address: _____

2. Facility Information

- Stark, Tuscarawas, and/or Wayne Counties
 Only Ohio Counties other than Stark, Tuscarawas, and/or Wayne Counties Areas Outside Ohio

3. Materials Recycled in 2019

Please report the amount of materials recycled in **2019** that were generated *within Stark, Tuscarawas, and Wayne Counties in Ohio* in the following table. Indicate whether materials were generated by the residential/commercial sector or the industrial sector using the columns below. Residential/commercial sector refers to recycling generated from households, commercial businesses, and institutions such as schools; Industrial sector refers to recycling generated by manufacturing facilities. **The data in the tonnage columns 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, 7.5 lbs = 1 gallon of used oil, and 8 lbs = 1 gallon of used antifreeze.

Material	Residential/ Institutional/ Commercial Quantity	Measurement	Industrial Quantity	Measurement
Mixed/Commingled Recycling		<input checked="" 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
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

Material	Residential/ Institutional/ Commercial Quantity	Measurement	Industrial Quantity	Measurement
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 checked="" type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input checked="" 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

4. 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 the District.

Facility	Type of Recyclable	Amount

THANK YOU FOR YOUR HELP!



STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

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www.timetorecycle.org • district@timetorecycle.org

David Held
Executive Director

Erica Wright
Finance Director

February 2020

Dear Solid Waste/Recycling Manager:

THE STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT 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 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:

Please complete the survey using only **calendar year 2019 information**. Only materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio should be reported. Completing this survey should take only a few minutes.

Please complete your survey by **March 27, 2020** by following the steps below:

- Visit bit.ly/STW2019B
- 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.

We greatly appreciate your willingness to participate and value your feedback.

Sincerely,

David J. Held
Executive Director
Stark-Tuscarawas-Wayne Joint Solid Waste Management District

*In the event you cannot reach the survey by the shortened link above, please use:
<https://www.surveygizmo.com/s3/5410365/STW-2019-Brokers-Processors-Survey>

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Becky Foster
Sue Smal

STARK-TUSCARAWAS-WAYNE JOINT WASTE MANAGEMENT DISTRICT 2019 RECYCLING FACILITY/BROKER/PROCESSOR SURVEY

Instructions: Please complete the survey to the best of your ability. Only report materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. **Confidentiality:** The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify local recycling rates. If you have any questions or need assistance completing the survey, contact the District's consultant, Erin Oulton, at (614) 964-7284.

PLEASE RETURN COMPLETED SURVEY BY **MARCH 20, 2020** USING ONE OF THESE METHODS:

Email: eoulton@qtenvironmental.com or Fax: (614) 899-9255

1. Contact Information (this information will be kept private):

Company Name: _____
 Mailing Address: _____
 Contact Name: _____ No. of Employees: _____
 Phone Number: _____ Email address: _____

2. Facility Information

- Stark, Tuscarawas, and/or Wayne Counties
 Only Ohio Counties other than Stark, Tuscarawas, and/or Wayne Counties Areas Outside Ohio

3. Materials Recycled in 2019

Please report the amount of materials recycled in **2019** that were generated within Stark, Tuscarawas, and Wayne Counties in Ohio in the following table. Indicate whether materials were generated by the residential/commercial sector or the industrial sector using the columns below. Residential/commercial sector refers to recycling generated from households, commercial businesses, and institutions such as schools; Industrial sector refers to recycling generated by manufacturing facilities. **The data in the tonnage columns 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, 7.5 lbs = 1 gallon of used oil, and 8 lbs = 1 gallon of used antifreeze.

Material	Residential/ Institutional/ Commercial Quantity	Measurement	Industrial Quantity	Measurement
Mixed/Commingled Recycling		<input checked="" 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
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

Material	Residential/ Institutional/ Commercial Quantity	Measurement	Industrial Quantity	Measurement
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 checked="" type="checkbox"/> Gallons		<input type="checkbox"/> Pounds <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Tons <input checked="" 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

4. 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 the District.

Facility	Type of Recyclable	Amount

THANK YOU FOR YOUR HELP!



APPENDIX S

SITING STRATEGY



APPENDIX S.Siting Strategy

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

The District Policy Committee has determined that sufficient disposal capacity exists for the entire planning period. The District does not anticipate constructing any solid waste facility or contracting with a private entity to do so on behalf of the District. As such, and in accordance with the Format 4.1, no siting criteria is necessary for this *Plan Update*.



APPENDIX T
MISCELLANEOUS PLAN DOCUMENTS



CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft 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 ten year period covered by the Plan Update are accurate and are in compliance with the requirements in the *District Solid Waste Management Plan Format*, revision 4.1.

Mark Cozy motion made by.

Bob Holland seconded the motion.

Vote was taken and resulted as follows:

Policy Committee Members:

YES

NO

Certified by:

13

0

Rachel Rothacker

PUBLIC NOTICE
STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT
30-DAY WRITTEN COMMENT PERIOD AND PUBLIC HEARING

Public Comment Period for Draft Solid Waste Management Plan Update

The Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) is establishing a 30-day written comment period (August 1 until August 30, 2022) on the draft 2023 Solid Waste Management Plan Update (Plan Update) (Ohio Revised Code Section 3734.54). The District has prepared the draft Plan Update as required by Section 3734.54 of the Ohio Revised Code.

The Plan Update has been prepared to fulfill the requirements of Ohio solid waste laws and regulations. The Plan Update establishes a ten-year planning period (2023-2032). The draft Plan Update includes a budget and fees to finance the Plan, a solid waste facility inventory, projections and strategies, facilities and programs to be used, and an analysis of the progress made toward achieving state solid waste reduction goals. This draft is an update to a previously approved solid waste plan. This Plan Update includes a solid waste inventory, projections and strategies, facilities and programs to be used, an analysis of progress made toward achieving state waste reduction goals, and cost to finance the plan.

The draft Plan Update includes a demonstration of access to landfill capacity and determines there is more than ten years of capacity available to the District. Specifically, the American Landfill, Inc. and Countywide Recycling & Disposal Facility has enough capacity to manage all of the waste generated in the District through 2028.

This draft Plan Update continues to authorize the Board of Commissioners to establish facility designations in accordance with Section 343.013 and 343.014 of the Ohio Revised Code. The District does not currently have facility designations and is not proposing to designate facilities during this planning period.

The draft Plan Update demonstrates achieving the State of Ohio 85% recycling access goal through a combination of curbside and drop-off recycling programs throughout the District.

The draft Plan Update includes a detailed budget outlining revenues and operation costs for programs. The District currently funds programs and operations through a disposal fee collected at District landfills and transfer stations of \$1.00 per ton for in-district solid waste, \$2.00 per ton for out-of-district solid waste, and \$1.00 per ton for out-of-state solid waste. These fees are not being proposed to change during the planning period.

The District will hold a public hearing to obtain oral comments regarding the draft Plan Update on Friday, September 2, 2022 at 10:00 a.m. at the District's office, 9918 Wilkshire Boulevard, NE, Bolivar, Ohio 44612. The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update from August 1,

2022 until August 30, 2022. Written comments should be sent to Mr. David Held, Executive Director, 9918 Wilkshire Boulevard, NE, Bolivar, Ohio 44612.

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District website at <https://www.timetorecycle.org/> Please call (330) 874-2258 with any questions about the Plan Update.

LOCALiQ

The Alliance Review | Ashland Times Gazette
The Daily Jeffersonian | Record-Courier
The Daily Record | The Repository
The Times-Reporter | The Independent
Akron Beacon Journal | Columbus Dispatch

PO Box 630599 Cincinnati, OH 45263-0599

PROOF OF PUBLICATION

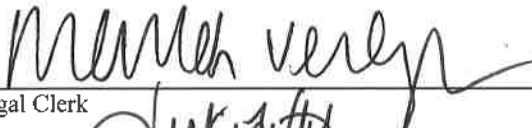
Rachel Rothacher
ATTN: DAVID HELD
L-STARK-TUSC-WAYNE JOINT SOLID
9918 Wilkshire BLVD NE
Bolivar OH 44612-8978


STATE OF OHIO, COUNTY OF TUSCARAWAS

The Times Reporter, a daily newspaper of general circulation, printed and published in New Philadelphia, Tuscarawas County, OHIO; that the publication, a copy of which is attached hereto, was published in said newspaper in the issue dated:

07/31/2022

Sworn to and subscribed before on 07/31/2022



Legal Clerk


Notary, State of WI, County of Brown
9.19.25

My commission expires

Publication Cost: \$271.80
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PO #: 30 Day Comment

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State of Wisconsin

PUBLIC NOTICE

STARK-TUSCARAWAS-
WAYNE JOINT SOLID
WASTE MANAGEMENT
DISTRICT 30-DAY
WRITTEN COMMENT
PERIOD AND PUBLIC
HEARING

*Public Comment Period for
Draft Solid Waste
Management Plan Update*

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Published In The Times Reporter on July 31, 2022.

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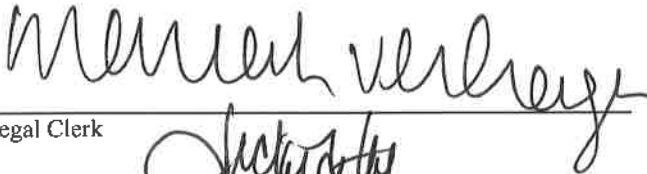
Rachel Rothacher
ATTN: DAVID HELD
L-STARK-TUSC-WAYNE JOINT SOLID
9918 Wilkshire BLVD NE
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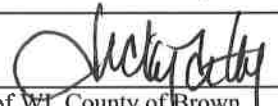
STATE OF OHIO, COUNTY OF STARK

The Canton Repository, a daily newspaper of general circulation, printed and published in the county of Stark, in the State of Ohio; that the publication, a copy of which is attached hereto, was published in said newspaper in the issue dated:

07/31/2022

Sworn to and subscribed before on 07/31/2022



Legal Clerk


Notary, State of WI, County of Brown
9-19-25

My commission expires

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PUBLIC NOTICE

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WAYNE JOINT SOLID
WASTE MANAGEMENT
DISTRICT 30-DAY
WRITTEN COMMENT
PERIOD AND PUBLIC
HEARING

*Public Comment Period for
Draft Solid Waste
Management Plan Update*

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- District website at <https://www.timeforrecycle.org/about/resources/our-plan/> Please call 330-674-2258 with any questions about the Plan Update.

Published in The Repository on July 31, 2022.

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Stark-Tuscarawas-Wayne Joint Sol
ATTN: DAVID HELD
Stark-Tuscarawas-Wayne Joint Solid Waste Mgmt Dist.
9918 WILKSHIRE NE BLVD
BOLIVAR OH 44612


STATE OF OHIO, COUNTY OF WAYNE

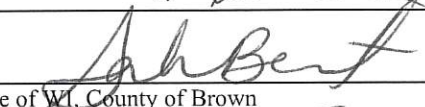
The Daily Record, a newspaper printed and published in the city of Wooster, and of general circulation in the County of Wayne, State of Ohio, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue dated:

07/31/2022

and that the fees charged are legal.

Sworn to and subscribed before on 07/31/2022



Legal Clerk


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PUBLIC NOTICE
STARK-TUSCARAWAS-WAYNE
JOINT SOLID WASTE MANAGEMENT DISTRICT
30-DAY WRITTEN COMMENT PERIOD
AND PUBLIC HEARING
Public Comment Period for Draft
Solid Waste Management Plan Update
The Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) is establishing a 30-day written comment period (August 1 until August 31, 2022) on the draft 2023 Solid Waste Management Plan Update (Plan Update) (Ohio Revised Code Section 3734.54). The District has prepared the draft Plan Update as required by Section 3734.54 of the Ohio Revised Code.
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• District website at <https://www.timetorecycle.org/about/resources/our-plan/>
Please call 330-874-2258 with any questions about the Plan Update.
PUB: July 31, 2022 7533299

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AUG 08 2022
Stark-Tusc-Wayne Joint Solid Waste



Resolution Adopting the Solid Waste Management Plan

Resolution # PCM-2022-10

A RESOLUTION DECLARING THAT THE AMENDED SOLID WASTE MANAGEMENT PLAN FOR THE STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT HAS BEEN ADOPTED.

Whereas, the Stark-Tuscarawas-Wayne 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 January 28, 2022 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on March 15, 2022.

Whereas, the District's Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken their comments into consideration and incorporated changes into the amended Plan as appropriate;

Whereas the District has conducted a 30-day comment period from August 1, 2022 until August 30, 2022 and a public hearing held on September 2, 2022 to provide the public an opportunity to have comment on the Plan. No public comments were received through the above processes.

NOW, THEREFORE, BE IT RESOLVED that the District Policy Committee:

1. Adopts the amended Plan as the District Plan, as amended by the Policy Committee for clerical and language clarifications.
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 ten-year period covered by the Plan, are accurate and are in compliance with the requirements of the District Solid Waste Management Plan Format Revision 4.0.
3. Directs that copies of the adopted Plan be delivered to the Boards of County Commissioners of Stark, Tuscarawas and Wayne Counties and to the legislative authority of each municipal corporation and township under the jurisdiction of the District for ratification.





This resolution shall be in effect immediately upon its adoption

Stark County		
Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner	<i>[Handwritten Signature]</i>	
Largest City	<i>[Handwritten Signature]</i>	
Health District	<i>[Handwritten Signature]</i>	
Townships		
Industry		
General Interest of Citizens		
Public	<i>[Handwritten Signature]</i>	
Total Votes		

Date: 9-16-22

Tuscarawas County		
Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner	<i>Al Francis</i>	
Largest City	<i>Joe B...</i>	
Health District	<i>W...</i>	
Townships		
Industry	<i>Joe Kelly</i>	
General Interest of Citizens		
Public	<i>Joe Kelly</i>	
Total Votes		

Date: 9-16-22

Wayne County		
Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner		
Largest City		
Health District		
Townships		
Industry		
General Interest of Citizens		
Public		
Total Votes		

Date: 9-16-22



APPENDIX U

RATIFICATION RESULTS





APPENDIX V

**INVENTORY OF OPEN DUMPS
AND OTHER DISPOSAL FACILITIES**



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

Table V-1 Existing Solid Waste Open Dumps

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)
Stark County	
1336 Whipple	MSW
3212 Linden	MSW
3035 Taft	MSW
5695 Breezehill	MSW
9912 Moulin	MSW
13245 Edison	MSW
2917 Farmington	MSW
14370 Lincolnway	MSW
2083 Broadway	MSW
3343 Lincoln Way East	MSW
409 Madina	MSW
229 Hartford	MSW
3051 Howenstine	MSW
Tuscarawas County	
4866 Maple Grove RD Mill	Tires
3590 Shumacher Hollow Rd Warwick	MSW
5981 SR 212 Fairfield	MSW
CR 104 and Dover-Zoar Sandy	MSW
Parcel 24-00912-004 Goshen	MSW
5981 SR 212 Sommerdale Fairfield	MSW
5981 state route 212 Fairfield	MSW
Metzger Hill Rd 30-00120-008 Jefferson	Tires
4692 Rutledge St. Midvale Goshen	MSW

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)
7999 Waterworks Hill RD Mill	MSW
8350 W. Broadway ST Mineral City Sandy	MSW
5462 Angela Dr. Beach City/Franklin	MSW
830 Eastport Ave Uhrichsville	MSW
Wayne County	
87 ERIE STREET RITTMAN, OH 44270	MSW
4817 OVERTON RD. WOOSTER, OH 44691	MSW
101 EASTERN DRIVE SHREVE, OH 44676	MSW, Tires

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)
Stark County	
DNR	
Tuscarawas County	
DNR	
Wayne County	
DNR	

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, 693,619 tons of solid waste and excluded waste was direct landfilled at in-District landfills. During this same year, 18,897 tons of solid waste and excluded waste was direct landfilled in facilities outside of the District and 47 tons were disposed directly at out of state facilities. Waste generated outside the District is anticipated to be disposed in the District during the planning period.

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 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 MAP



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

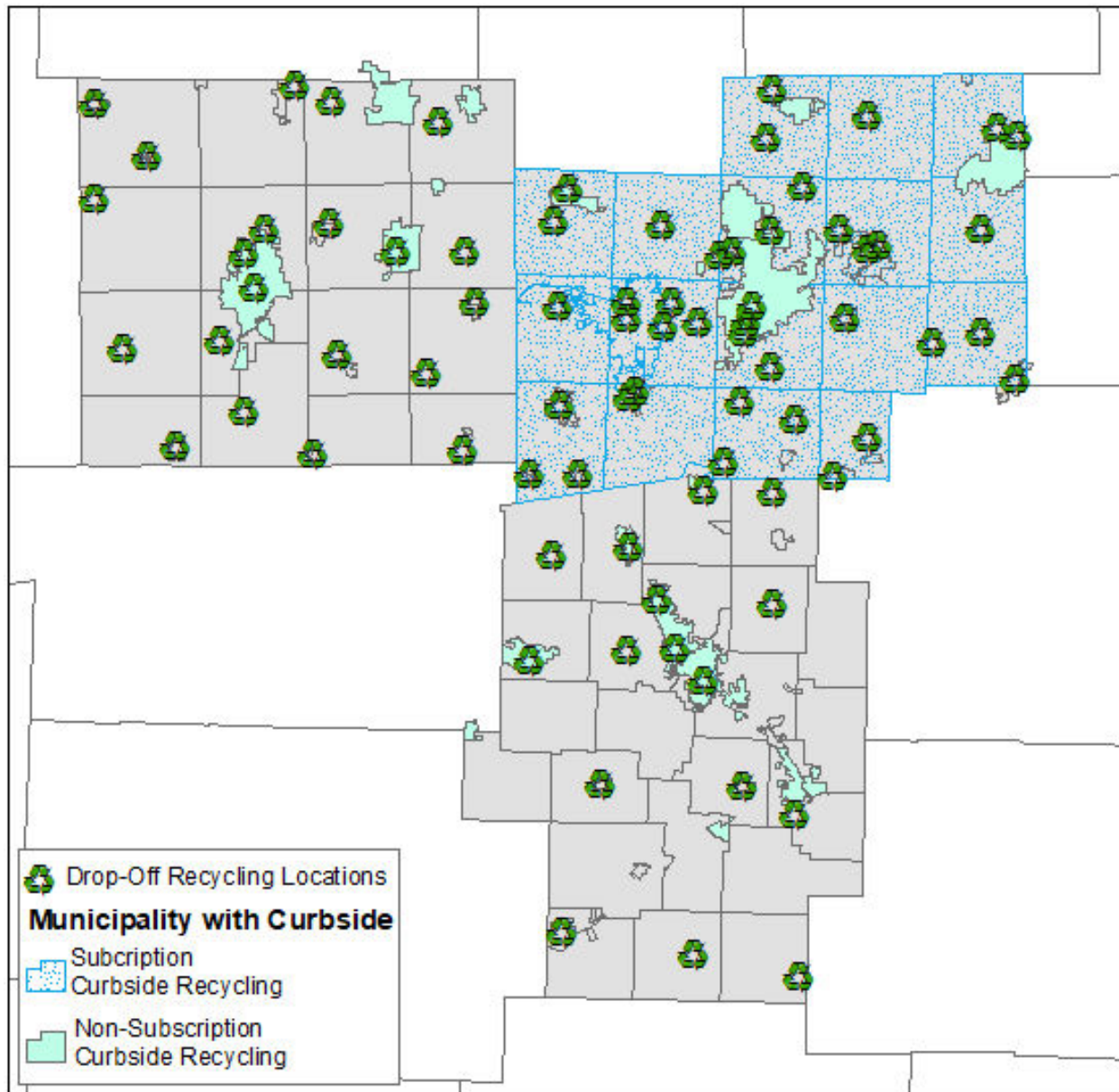


Figure W-2. 2019 District Used Registered Composting Facilities

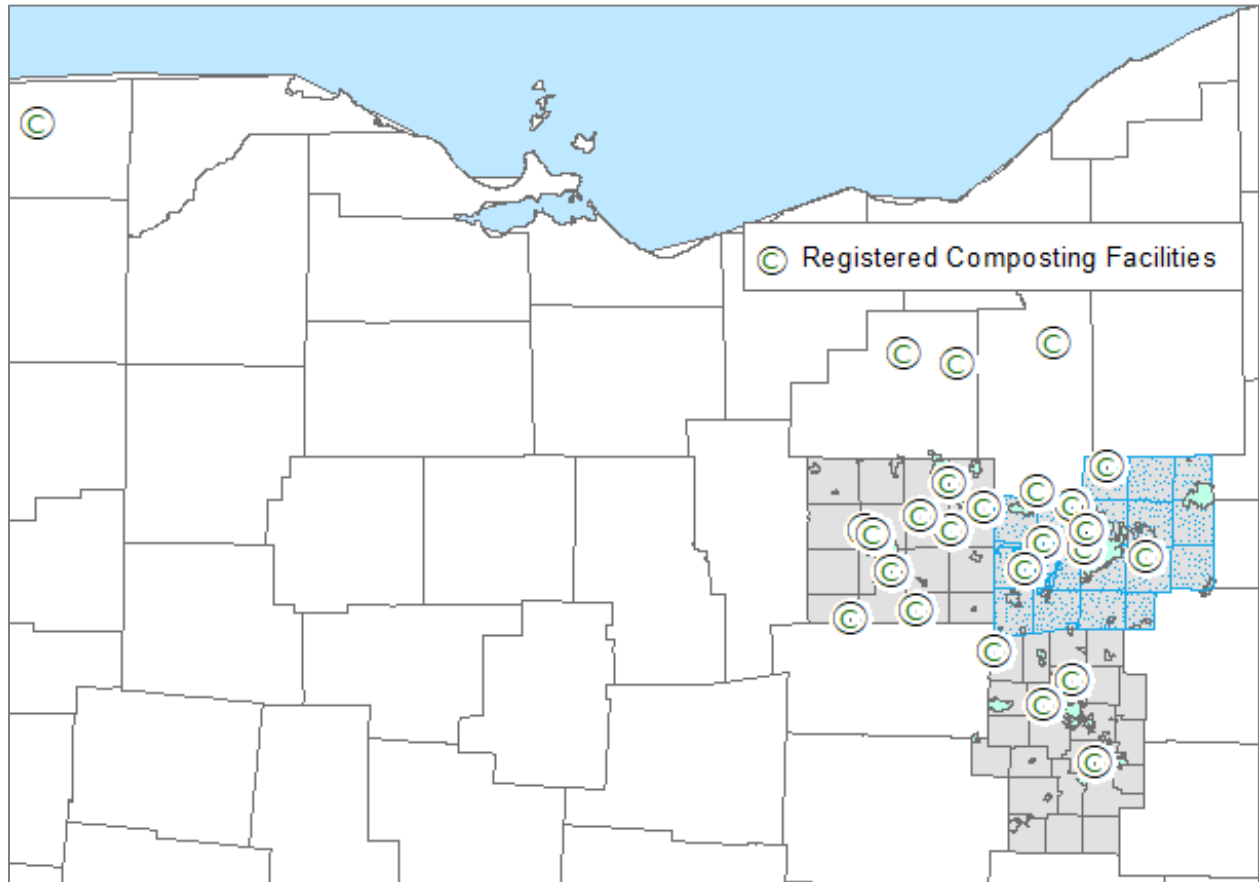


Figure W-3. 2019 Landfills, Transfer Stations, and MRFs Used to Manage District Waste and Recycling

