

PIKE COUNTY
SOLID WASTE MANAGEMENT DISTRICT



2022 – 2036
REVISED DRAFT
SOLID WASTE MANAGEMENT
PLAN UPDATE

October 2021

Prepared by:



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SECTION i. Solid Waste Management District Information

Table i-1. Solid Waste Management District Information

SWMD Name	Pike County Solid Waste Management District
Member Counties	Pike County
Coordinator’s Name (main contact)	Daphne Mosley
Job Title	Assistant Director
Street Address	116 S. Market Street, Suite 103
City, State, Zip Code	Waverly, OH 45690
Phone	740-947-4104
Fax	740-941-4308
E-mail address	daphne@pikecountydevelopment.com
Webpage	http://pikecountydevelopment.com

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

Member Name	Representing
Pike County	
Tony Montgomery	Pike County
Greg Kempton	City of Waverly
Matt Brewster	Pike County Health Department
Lewie Pritchett	Pike County Townships
Ken Reed	Citizen General Interest
Bill Malloy	General Public
Andrew D. Bauer	Industry, Commercial, and Institutional Generators

Table i-3. Chairperson of the Policy Committee

Name	Ken Reed
Street Address	2626 Shyville Rd
City, State, Zip Code	Piketon, OH 45661
Phone	740-289-4534
Fax	
E-mail address	PikeMHA@frontier.com

Table i-4. Board of County Commissioners

Commissioner Name	County	President
Jeff Chattin	Pike	
Tony Montgomery		✓
Jerry Miller		

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 These issues combined with Ohio's outdated and incomplete solid waste regulations caused Ohio's General Assembly to pass House Bill (H.B.) 592. H.B. 592 dramatically revised Ohio's outdated solid waste regulatory program and established a comprehensive solid waste planning process.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 March 24, 1989, the Pike County Board of Commissioners created the Pike County Solid Waste Management District. The District was created to provide for

the management of solid waste in a safe, environmentally sound, and effective manner.

The District's mission is to implement the Pike County Solid Waste Management Plan by educating and encouraging recycling efforts, waste reduction, and litter prevention in Pike County.

The District's administration consists of one centralized office, which is located at 116 S. Market Street, Waverly, OH 45690.

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 - Opportunity to Recycle

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

Goal #2 - Waste Reduction and Recycling Rate

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

Goal #3 - Minimum Outreach and Education

- 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 - 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 identified target audiences using best practices.

Goal #5 - Industrial Programs and Services

- The solid waste management plan shall include a strategic initiative for the industrial sector consisting of a minimum of three programs the solid waste management district will make available to industrial generators.

Goal #6 - Restricted Solid Wastes, Household Hazardous Waste, and Electronics

- 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 - Economic Incentives

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

Goal #8 - 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.

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 at least nine 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 Pike County Solid Waste Management District is a single-county district comprised of Pike County.

2. County Overview

Pike County is the twelfth least populous county in Ohio. The county has a total area of 444 square miles. According to the Ohio Development Services Agency’s Ohio County Profiles, there are 12,819 housing units in Pike County. Approximately 84.4% of housing units are occupied (67.3% by owners and 32.7% by renters) and 15.6% of housing units are vacant. Pike County consists of the following notable communities:

- Waverly is the largest city. In 2018, it had a population of 4,270 people which comprised approximately 15% of the county’s population.
- Pee Pee Township had a population of 3,388 in 2018.
- Pebble Township had a population of 2,496 in 2018.
- There are three villages ranging in population from 434 people to 4,270 people.
- There are fourteen townships ranging in population from 959 people to 3,388 people.

B. Population

1. Reference Year Population

The District had a total population of 28,067 people in 2018.

Table 2-1 presents the adjusted population, the largest village, and the population of the largest village in the SWMD during the 2018 reference year:

Table 2-1. Population of Pike County SWMD in 2018

County		Largest Political Jurisdiction		
Name	Population	Community Name	Population	Percent of County Population
Pike	28,067	Village of Waverly	4,270	15%

Source(s) of information: Ohio Development Services Agency, “2018 Population Estimates by County, City, Village, and Township.” May 2019.

2. Population Distribution

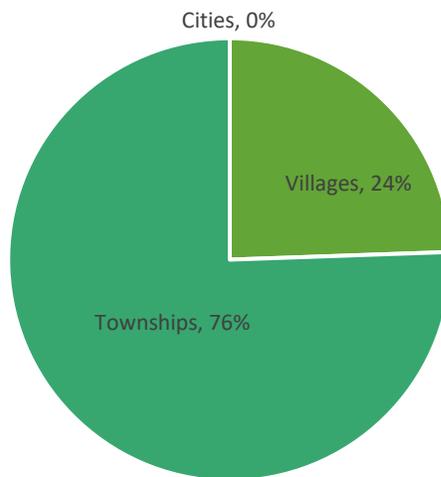
Table 2-2 below presents the distribution of Pike County’s population in cities, villages, and unincorporated areas.

Table 2-2. Population Distribution

County	Percent of Population in:		
	Cities	Villages	Unincorporated Townships
Pike	0%	24%	76%

Source(s) of information: Ohio Development Services Agency, “2018 Population Estimates by County, City, Village, and Township.” May 2019.

Figure 2-1. 2018 Pike County Population Distribution



According to the Ohio Development Services Agency’s profile for Pike County, it is comprised of mostly rural areas. The bullet points below show the largest uses of land in the county:

- 24% of land use was agricultural (cultivated crops and pasture/hay)
- 6% of land use was developed (mostly lower intensity)
- 70% of land cover was forest, wetlands, open water, shrub/grasslands, or barren (strip mines, gravel pits)

3. Population Change

The District’s population is expected to increase by 5.2% (or 1,463 residents) from 2018 to 2036.

4. Implications for Solid Waste Management

Based on the population projections, the District does not foresee any major implications related to managing solid waste and providing recycling programs during the planning period.

C. Profile of Commercial and Institutional Sector

There are approximately 1,050 commercial businesses and institutions in Pike County. There are 194 commercial businesses and institutions that have 10 or more employees. The top employers include the health care, retail, and other service industries. The following table lists the top five employers in the commercial and institutional sector.

Major Commercial/Institutional Sector Employers in District

Company Name	NAICS	Employees
Rural King	42	465
Head Start Early Head Start	62	291
Walmart Supercenter	45	286
Adena Pike Medical Ctr	62	260
Kroger	44	200
Atomic Credit Union	52	200

Source: U.S. Business Database. Rep. Reference USA. Web. 31 August 2020, Pike County Policy Committee.

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

Commercial/Institutional Establishment Statistics

NAICS Code	NAICS Description	Number of Commercial/ Institutional Establishments
42	Wholesale Trade	42
44-45	Retail Trade	157
48-49	Transportation and Warehousing	25
51	Information	18
52	Finance and Insurance	113
53	Real Estate and Rental and Leasing	31

NAICS Code	NAICS Description	Number of Commercial/ Institutional Establishments
54	Professional, Scientific, and Technical Services	60
55	Management of Companies and Enterprises	1
56	Administrative and Support and Waste Management and Remediation Services	29
61	Educational Services	31
62	Health Care and Social Assistance	401
71	Arts, Entertainment, and Recreation	12
72	Accommodation/Food Service	52
81	Other Services (Except Public Administration)	132
92	Public Administration	79

D. Profile of Industrial Sector

There are approximately 54 industries operating in Pike County. About 45% of District industries have an average employment of 10 or more individuals. Only one company has a staff of greater than 100 employees. The top 20 industrial sector employers are presented in the table below.

Largest Industrial Sector Employers

Company Name	City	NAICS	Employees
Centrus Energy	Piketon	32	1000
Centrus Energy	Waverly	32	70
Ohio Valley Veneer	Piketon	32	60
Clarksville Stave & Veneer	Waverly	32	40
Piketon Water Dept	Piketon	22	30
Ritchie's Food Distrs Inc	Piketon	31	30
Tim Hortons	Waverly	32	27
Barker Lumber	Piketon	32	25
Beaver Wood Products LLC	Beaver	32	25
Ohio Valley Veneer	Piketon	32	25
Indiana-Kentucky Electric Corp	Piketon	22	24
Ohio Valley Electric Corp	Piketon	22	24
A & E Machine & Fabrication	Beaver	33	18
Pike Water Inc	Piketon	22	18
No Name Lumber LLC	Piketon	32	15
American Metal Works LLC	Waverly	33	14
Waverly Water Dept Office	Waverly	22	14
Kroger Deli	Waverly	33	13
Canal Industries	Waverly	33	12
Duraflow Industries Inc	Wakefield	33	12

CHAPTER 3. Waste Generation

This chapter of the Solid Waste Management Plan provides a summary of the solid waste management district's historical and projected solid waste generation. The District's Policy Committee needs to understand the amounts and types of waste the solid waste management district (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 SWMD'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

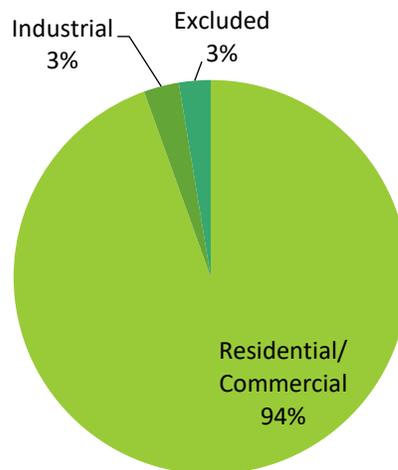
Table 3-1 shows the amounts of residential/commercial (R/C), industrial, and excluded waste generated within the District during 2018 (the reference year). The amount generated is defined by the tons disposed in landfills plus the tons recycled, composted, and otherwise diverted from landfill disposal.

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

Type of Waste	Tons Generated
Residential/Commercial	23,855
Industrial	730
Excluded	656
Total	25,241

As demonstrated in **Figure 3-1**, the R/C sector generates the majority (94%) of the total waste generated in the District, followed by the industrial sector (3%). Excluded waste represents 3% 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 2018, 23,855 tons of solid waste were generated from residential and commercial sources in Pike County. Waste generation is the sum of tons landfilled, tons recycled, and tons composted. This amounts to a residential/commercial waste generation rate of 4.66 pounds per person per day which is less than the statewide average of 6.85 PPD.

2. Industrial Waste Generated in Reference Year

In 2018, 730 tons of waste were generated from industrial sources in Pike County.

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 2018, 656 tons of excluded waste were generated in Pike County.

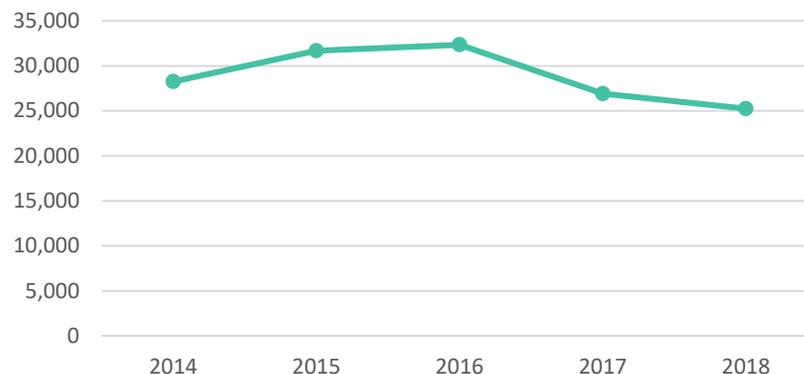
B. Historical Waste Generated

The overall waste generation for Pike County from all sectors from 2014 through 2018 is shown in the table below and **Figure 3-2**. These show that generation is slightly decreasing.

Reference Year and Historical Waste Generated

Year	Pop.	Residential/Commercial				Industrial			Excluded	Total	Annual % Change		
		Disposed	Recycled	Generated	PPD	Disposed	Recycled	Generated			R/C	Ind	Ex
2014	28,480	21,669	1,101	22,770	4.38	3,502	1,501	5,003	482	28,255			
2015	28,206	19,027	1,008	20,035	3.89	2,251	9,001	11,252	393	31,680	-12%	125%	-18%
2016	28,160	20,308	878	21,186	4.12	1,295	7,877	9,172	1,981	32,339	6%	-18%	404%
2017	28,270	20,848	1,163	22,011	4.27	1,759	1,303	3,062	1,836	26,909	4%	-67%	-7%
2018	28,067	22,629	1,227	23,855	4.66	499	230	730	656	25,241	8%	-76%	-64%

Figure 3-2. District Total Waste Generated



1. Historical Residential/Commercial Waste Generated

Overall, waste generation in the residential/commercial sector has remained fairly constant over the five-year period from 2014 through 2018. **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. While the figure shows some fluctuation, the average per capita waste generation in this period was 4.3 pounds per person per day.

Figure 3-3. Residential/Commercial Waste Generation: 2014-2018

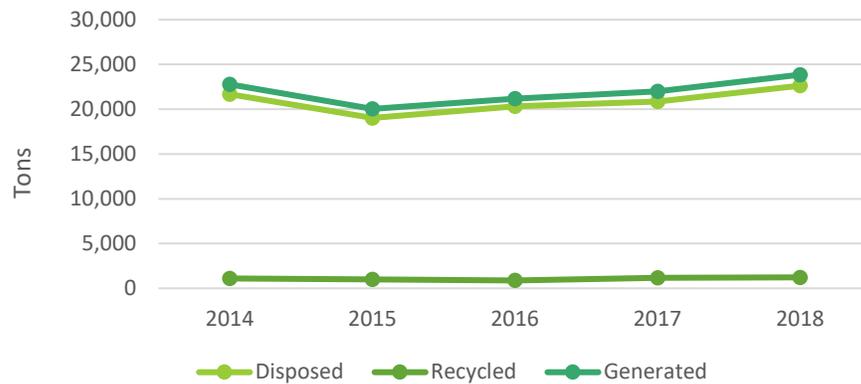
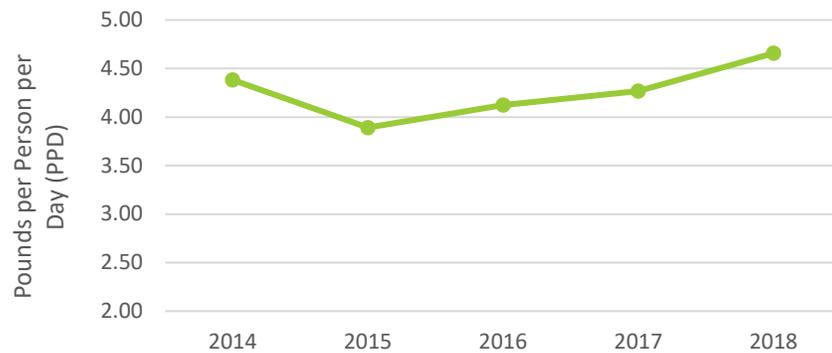


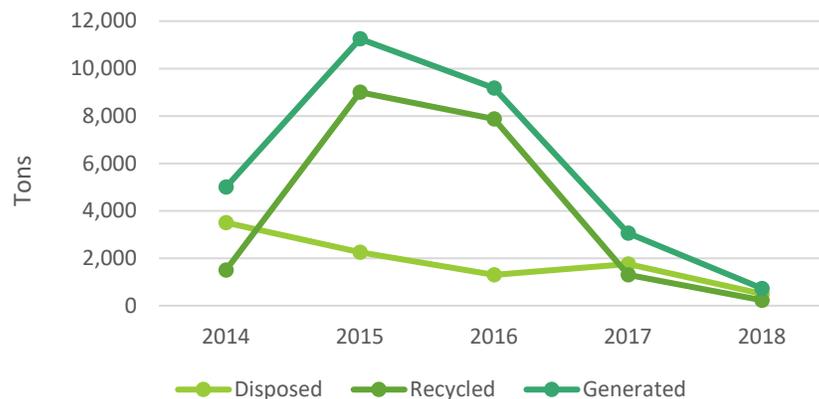
Figure 3-4. Residential/Commercial Waste Generation Per Capita



2. Historical Industrial Waste Generated

Industrial waste generation fluctuated over the five-year period from 2014 to 2018 due to fluctuating recycling totals and inconsistent reporting from private industries in the District. Disposal has slightly decreased annually.

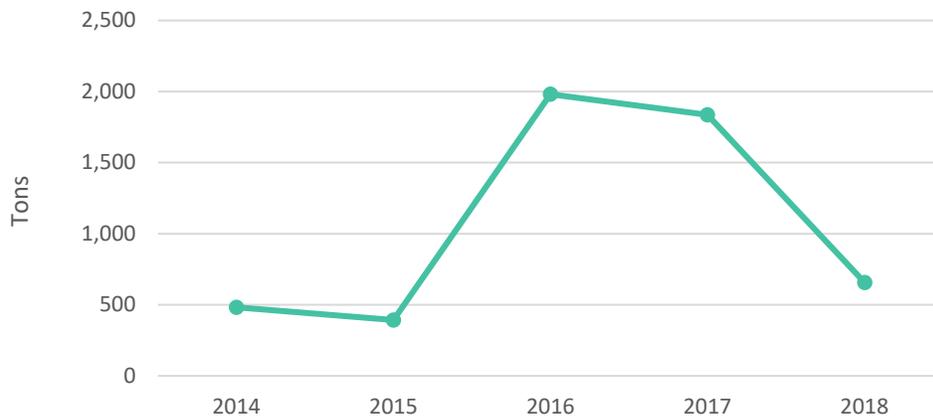
Figure 3-5. Industrial Waste Generation: 2014-2018



3. Historical Excluded Waste Generated

Annual quantities of excluded waste generated have fluctuated each year. From 2014 to 2018, volumes of excluded waste have ranged from a low of 393 tons in 2015 to a high of 1,981 tons in 2016.

Figure 3-6. Excluded Waste Generation: 2014-2018



C. Waste Generation Projections

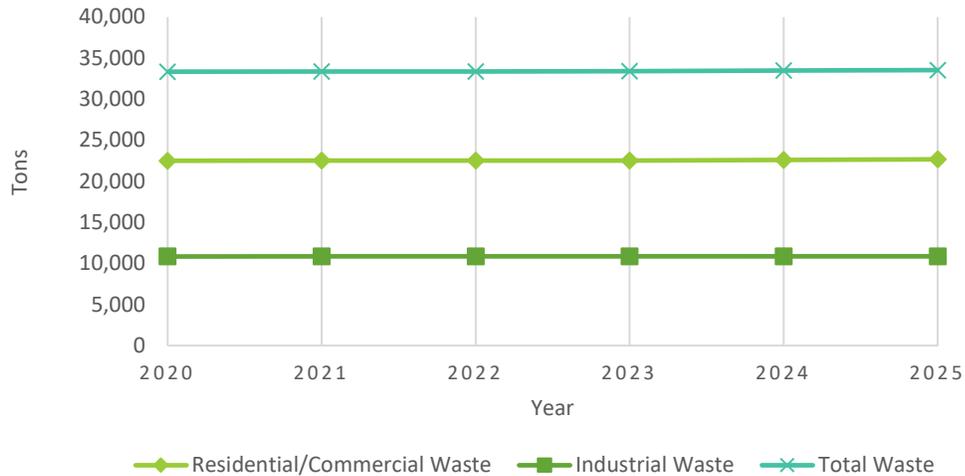
Table 3-2 demonstrates that waste generation within the District is expected to increase approximately 1% during the first six years of the planning period. Excluded waste has been excluded from projections because it accounts for less than 10% of the waste stream.

Table 3-2. Waste Generation Projections

Year	Residential/ Commercial Waste	Industrial Waste	Total
2020	22,483	10,841	33,325
2021	22,494	10,843	33,337
2022	22,505	10,845	33,351
2023	22,516	10,849	33,365
2024	22,527	10,854	33,381
2025	22,538	10,859	33,398

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

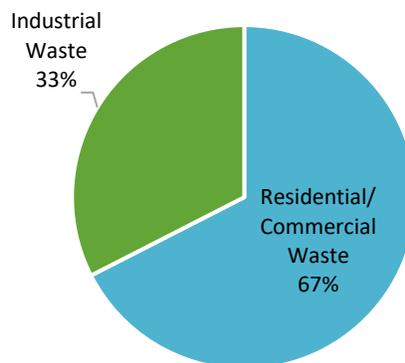
Figure 3-7. Waste Generation Projections



In general, generation for all sectors (residential/commercial, industrial, and excluded) is projected to increase modestly. 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 (2020).

Figure 3-8. Total Waste Generation: 2020



1. Residential/Commercial Waste Projections

Residential/commercial sector disposal tonnages are projected to increase slightly throughout the planning period. To project the total tons of residential/commercial sector disposal from 2018 to 2036, the average per capita disposal rate from 2013-2018 (4.01 pounds per person per day (PPD)) was assumed to remain steady for the entirety of the planning period. The projected PPD for each year was multiplied by 365 days/year

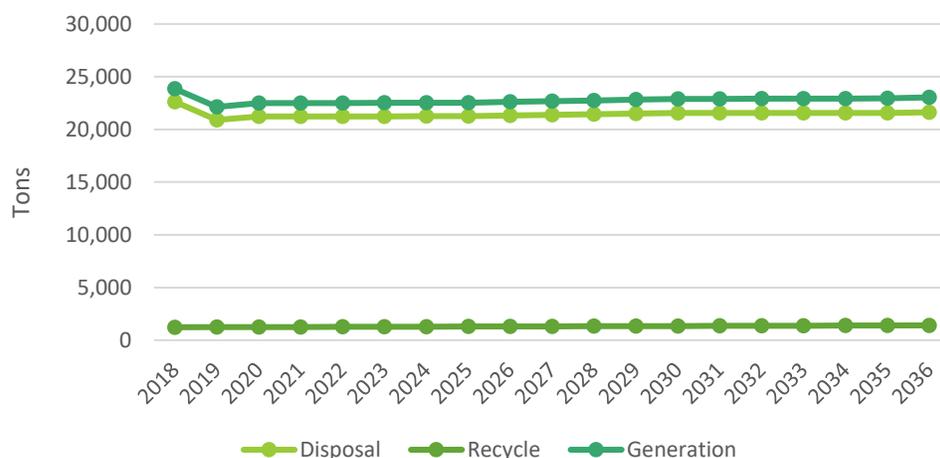
and the annual estimated population from **Table C-2**, then divided by 2,000 to convert from pounds to tons. **Table D-6** in Appendix D presents the residential/commercial waste disposal projections. The District considered four projection scenarios and selected this approach because it produced the most reasonable results based on historical trends

Residential/commercial sector recycling is projected to increase from 1,264 tons in 2022 to 1,405 tons in 2036, or 11.2 % 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: 2018-2036



2. Industrial Waste Projections

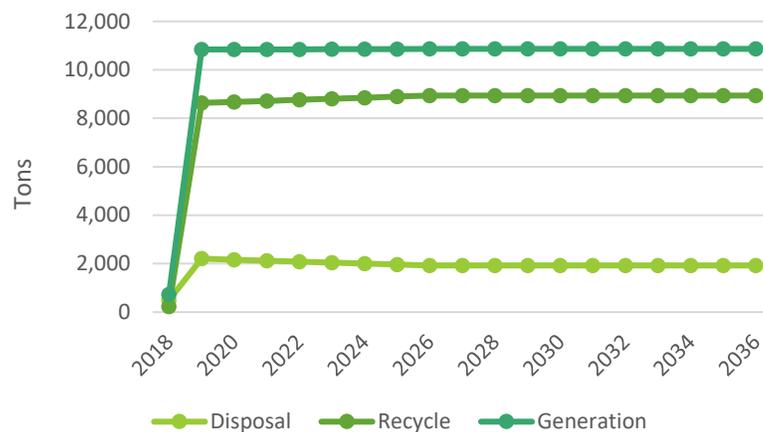
Waste generation in the industrial sector is normally influenced to a lesser degree by solid waste district programming than the generation totals from the residential/commercial sector.

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 reported recycling totals for 2013, 2015, and 2016 (when the large manufacturer had responded to recycling surveys). The total recycling for 2019 was projected by calculating the average annual reported industrial recycling tonnage in 2013, 2015, and 2016. It is assumed that the major industrial manufacturer that has not been reporting recycling tonnages recently is actually recycling a similar amount as in historical years when it responded to the District’s survey. From 2019 to 2026, recycling was projected to increase at 0.5% per year, then remain flat for the remainder of the planning period.
- **Disposal:** The average annual decrease in manufacturing employment projected for the State of Ohio by the Ohio Department of Jobs and Family Services was used to project industrial disposal. Employment is projected to decrease annually by 1.9% through 2026. However, the disposal tonnage in 2018 was much lower than previous years, so the disposal tonnage for 2019 is projected to be the average disposal tonnage from 2013-2017 (2,209 tons).

The result of these assumptions is that total waste generation for the industrial sector will increase from 2018 to 2020, then remain constant until the end of the planning period. 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: 2018-2036



CHAPTER 4. Waste Management

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

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

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

Although the Policy Committee needs to ensure that the SWMD will have access to all types of needed facilities, Ohio law emphasizes access to disposal capacity. In the solid waste management plan, the District must demonstrate that the SWMD will have access to enough landfill capacity for all the waste the SWMD 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 SWMDs in that region would likely rely on transfer facilities to transport waste to an existing landfill instead of building a new landfill.

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

A. Waste Management Overview

The solid waste generated within Pike County is managed through four major categories: recycling, composting, processing at transfer facilities, and landfilling. The waste delivered to transfer facilities is ultimately sent to landfills for disposal. These methods of waste management are anticipated to continue handling the

District’s solid wastes throughout the planning period. **Table 4-1** shows the projections for each management method for the 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
2022	33,351	10,026	0	1	23,324
2023	33,365	10,080	0	1	23,286
2024	33,381	10,133	0	1	23,248
2025	33,398	10,187	0	1	23,210
2026	33,474	10,242	0	1	23,233
2027	33,544	10,251	0	1	23,293

- 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 2022 is projected to be 30% while the amount of waste sent to transfer stations prior to final disposal in a landfill is less than 1%. The tonnage sent directly to landfills for disposal is expected to be 70% of total generation.

The percentage of waste managed by recycling in 2027 is projected to be 31%, and disposal at landfills is projected to be 69%.

Figure 4-1. 2022 Percent of Generation Managed by Each Method

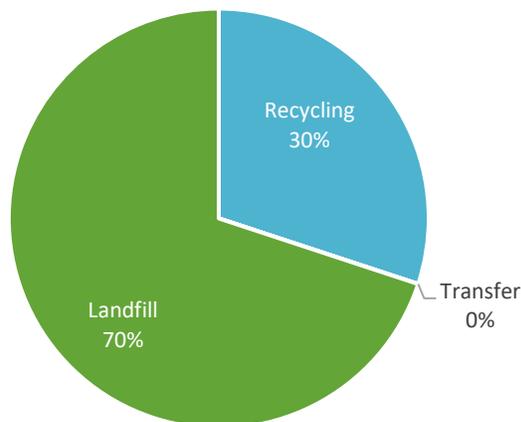
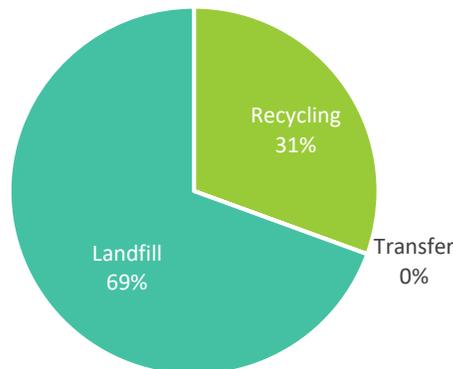


Figure 4-2. 2027 Percent of Generation Managed by Each Method



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

There is one landfill located in Pike County. There are no transfer stations located in the District. There are no composting facilities and multiple recycling facilities which are located in the county. The facilities used by the District during 2018 are discussed below.

1. Landfill Facilities

All the landfills which received waste directly (without first being processed at a transfer station) from the District during the reference year of 2018 are shown in **Table 4-2**. This table illustrates that 99% of the direct-hauled waste was disposed at the Pike Sanitation Landfill, which is a privately operated facility. At the end of 2018, the Pike Sanitation Landfill had 32.8 years of remaining capacity available for disposal. Other landfills which received waste from the District in 2018 had an average of over 62 years of remaining capacity.

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

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
<i>In-District</i>					
Pike Sanitation Landfill	Pike	OH	23,430	99%	32.8
<i>Out-of-District</i>					

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
Athens Hocking C&DD/Reclamation Center Landfill	Athens	OH	3	0%	46.2
American Landfill, Inc.	Stark	OH	164	1%	62.4
Beech Hollow Landfill	Jackson	OH	10	0%	80
Out-of-State					
Boyd Co Sanitary Landfill	Boyd	KY	176	1%	
Total			23,783	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 2018 are listed in **Table 4-3**. Less than 1% of the total waste ultimately sent for disposal was processed by transfer stations while approximately 99% 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	% of all District Waste Transferred	Final Waste Destination
	County	State			
In-District					
None					
Out-of-District					
RLS Transfer Inc	Ross	OH	1	100%	Pike Sanitation Landfill
Out-of-State					
None					
Total			1	100%	

3. Composting Facilities

Table 4-4 has been emitted as no registered compost facilities were used by the District in 2018.

4. Processing Facilities

Table 4-5 shows the major processing facilities which reported processing recyclables from the District during the reference year. This list was compiled by analyzing data resulting from the District’s survey efforts. The majority of the facilities processing recyclables generated in Pike County are located outside of Pike County. Approximately 9% of all recycling generated in the reference year was processed at the Pike County Recycling Center.

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

Name of Facility	Location		Facility Type
	County	State	
<i>In-District</i>			
Pike County Recycling Center	Pike	OH	MRF
Sundown Tire Recycling	Pike	OH	Single Material Processor
<i>Out-of-District</i>			
Rumpke - Chillicothe	Ross	OH	MRF
Enviro Tire Recycling		OH	Single Material Processor
Liberty Tire Service of Ohio	Stark	OH	Single Material Processor
<i>Out-of-State</i>			
None			

5. Other Waste Management

The District did not identify any other methods used for waste management during the reference year.

C. Use of Solid Waste Facilities During the Planning Period

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

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

D. Siting Strategy

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

1. have significant adverse impacts upon the Board's ability to finance and implement the *Plan Update*
2. interfere with the Board's obligation to provide for the maximum feasible utilization of existing in-District Solid Waste Facilities
3. materially and adversely affect the quality of life of residents within 300 feet of the proposed facility
4. have material adverse impacts upon the local community, including commercial businesses within 500 feet of the proposed facility and the adequacy of existing infrastructure to serve the proposed facility

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

E. Designation

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

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee (or the board in the case of an Authority) specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If the SWMD desires to have the ability to designate facilities, then the policy committee includes a clear statement in the solid waste management plan giving the designation authority to the board of directors. The policy committee can also prevent the board of directors from designating facilities by withholding that authority in the solid waste management plan.

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.)

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

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

The District has declined to designate any solid waste facilities under previous plan updates and has also declined to designate facilities with this *Plan Update*.

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 14 analyses that allowed the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the SWMD adequately serving all waste-generating sectors?
- Is the SWMD recovering high volume wastes such as yard 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 v4.0), 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 14 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	Population Analysis
#12	Data Collection Analysis
#13	Education and Outreach Analysis
#14	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 and the Policy Committee employed a ranking system to prioritize solid waste management efforts within Pike County. Each existing program and new initiative were ranked from 1 to 5 based upon its importance and feasibility/ease of implementing. All programs and initiatives with a ranking of “4” or “5” are recommended for implementation, as well as some with a ranking of “3.” 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”, “2”, or “3”, 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
<i>Residential Recycling Infrastructure</i>	
Curbside Recycling	Assist cities with new franchise agreement that includes curbside recycling
	Feasibility study for curbside recycling in Waverly and Piketon
	New Residential Curbside Programs
Drop-Off Recycling	Increase Types of Material Accepted
	Drop-Off Use Study
	Fiber Only Drop-Offs
	Multi-Material Recycling Drop-Offs
Multi-Family Housing	Promote Drop-offs to Multi-Family housing
<i>Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials</i>	
Commercial and Institutional Sector	Promote the Ohio Materials Marketplace
	Additional “Buy Recycled” Promotion
	Technical Assistance for Businesses
	Collection Services for Schools
Residential Sector	Yard Waste Processing Feasibility study
	Yard Waste as Part of Curbside Program
	District-Sponsored Paper Collection Boxes

Program Category	Program / Action Name
Restricted & Difficult-to-Manage Wastes	Electronics Collection Events
	Scrap Tire Collection Event
	Appliance Curbside Collection
	HHW Collection Programs
	Advertise other options for residents to dispose of tires
	Advertise importance of properly managing used tires
	Advertise other options for residents to dispose of HHW
	Collaborate with other Solid Waste Districts for HHW
Industrial Sector	Develop relationships with large manufacturers
	Waste Assessments & Audits
Education/Outreach	
Education/Outreach	Website
	Displays at Special Events
	Teacher Evaluation Form/Survey
	Recycling Education at Schools
	Recycling Education Assistance for Teachers
	Yard waste and composting educational materials and workshops
	Recycling presentations to civic groups
	Annual recycling poster contest
	Public service announcements
	Brochures, flyers, and other media
	Curbside recycling technical assistance
	List of lead-acid battery recyclers
	HHW educational materials
	Recycling Bins for Rent Available
	Partner with Health District to promote technical assistance
	Increase Recycling Campaign
Commercial/Industrial Technical Assistance	
Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs	
Grants/Incentives	Create Grant Program/Guidelines
	Community Incentive Grant
	Grant program for yard waste drop-offs or composting facilities
Enforcement and Clean Up	Funding support for community clean-ups
	Annual spring clean-up
	Cooperation with prosecutor's office to support scrap tire clean-ups
Facility Operations	Accept out of District Recyclables

Program Category	Program / Action Name
	New processing sorting equipment for new recycling center
	Provide funding to modify existing building for offices and meeting room.
Other Programs	HHW collection evaluation
	Cardboard dumpster evaluation
	Recycling incentive study for institutions
	Develop environmentally preferable purchasing policy
	Partner with health department to administer solid waste surveys
	Require Future Haulers to Report Data
	Online Surveying (Commercial)
	Online Surveying (Industrial)
	Review Survey Process (Commercial)
	Review Survey Process (Industrial)
	Use Previous Years' Reported Recycling (Commercial)
	Use Previous Years' Reported Recycling (Industrial)
	Road Maintenance
	Litter Enforcement

B. Program Descriptions

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

1. Residential Recycling Infrastructure

Potential: New Franchise Agreements

The District could provide assistance to the County and villages of Waverly and Piketon to renew franchise agreements that are currently on automatic renewal. The new franchise agreements could provide for curbside recycling.

Feasibility Study for Curbside Recycling in Waverly and Piketon

The District met with the Village of Waverly administration to discuss curbside recycling and inclusion of the curbside recycling feasibility study in the Solid Waste Plan. The village administration supports the curbside recycling feasibility program, and it was included in the plan update. In 2021, the District is planning to conduct a feasibility study to evaluate implementing curbside recycling in the villages of Waverly and Piketon.

Both communities currently have twice-a-week curbside trash pickup, and the feasibility study would evaluate switching to weekly trash and weekly curbside recycling collection. The feasibility study would also evaluate the potential impact on the new Pike Recycling Facility from the increased diversion from the curbside programs.

New Residential Curbside Programs

If the communities want to pursue curbside recycling at the conclusion of the feasibility study, the District could assist the two largest communities in the District (Waverly and Piketon) to start a curbside recycling program. The District could provide processing at the new Pike Recycling Center to support the programs

The feasibility study will evaluate several different recycling collection and processing options including:

- Current hauler collecting and hauling to the Pike Recycling Center
- Current hauler collecting and hauling to the Chillicothe MRF
- Third-party hauler collecting and hauling to the Pike Recycling Center.
- District providing collection and hauling to the Pike County Recycling Facility.

Increase Types of Materials Accepted

The new Pike Recycling Center will pursue grant funding to add a sort processing line. With a sort line the drop-offs can consider new materials to collect and process. In particular, the District will begin collecting steel cans once the processing line is in place.

Potential: Drop-Off Use Study

The District will periodically conduct a drop-off study to estimate the number of residents who use the drop-off and sort the material correctly. The District could use the OEPA study structure as a guide for the project. The drop off study will evaluate:

- Effectiveness of education on contamination
- Effectiveness of education for materials accepted
- Effectiveness of education to increase volume
- Drop-off location awareness
- Potential for new materials i.e. steel cans
- Potential for fiber-only drop-offs for businesses

Potential: Fiber Only Drop-offs

The District could place containers in clusters of small commercial companies located in Waverly, Piketon, and other areas of the county. These companies could utilize these containers to divert cardboard out of their waste stream. Cardboard could be taken to the new Pike Recycling Center

Potential: Promote Drop-offs to Multi-family Housing

The District could develop a drop-off promotional program flyer for multi-family properties. The district could work with landlord and renter stakeholder groups like the Pike County Metropolitan housing authority to distribute the information. The district could meet with the stakeholders to communicate the opportunities and benefits of recycling and to obtain their support in making the information available to their tenants.

2. Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials*Potential: Promote the Ohio Materials Marketplace*

The District can direct businesses and industries to the Ohio Materials Marketplace. The Ohio Materials Marketplace aims to create a closed-loop, collaborative network of businesses, organizations, and entrepreneurs where one organization's hard-to-recycle waste and by-products becomes another organization's raw material. In addition to diverting waste from landfills, these recovery activities could generate significant cost savings, energy savings, and create new jobs and business opportunities.

Potential: Create Additional "Buy Recycled" Promotions

In addition to the District's current "Buy Recycled" promotional activities, the District could create a model environmentally preferable policy for procurement that government agencies, institutions, and businesses could adopt in the District. This policy could be advertised on the website as well as general information about buying recycled.

Yard Waste Processing Feasibility Study

The District will conduct a yard waste feasibility study to evaluate the current system used to manage yard waste. In addition, the study could evaluate collection and central processing for the cities of and villages of Pike County including Waverly and Piketon. The study could also evaluate the synergies of working with a consolidated yard waste system.

Potential: Yard Waste as Part of Curbside Program

The District plans on assisting interested communities in implementing recycling curbside programs. The District could discuss with the community and hauler to see if yard waste curbside collection would be an option.

Potential: District-Sponsored Paper Collection Boxes

The District could investigate the feasibility of establishing fiber-only containers at public drop-offs located throughout the County or at private businesses willing to partner with the District. These could potentially increase the paper and cardboard collected for recycling. See H-1, Section B for more information on this opportunity.

Potential: Research and Advertise More Outlets

The District may research additional businesses in and around Pike County that accept hazardous materials (or other hard-to-manage materials described below). Identified businesses will be updated on the District website and outreach materials used for education.

Collaborate with Neighboring Solid Waste Districts

The District could partner with neighboring districts to create a multi-district HHW program that could aggregate volumes possibly getting reduced rates. The District will reach out to other Districts to investigate the possibilities of partnering possibly utilizing the new recycling center. In addition, the multi-district program would be available for all residents, in participating districts, creating more opportunities for residents to use the program. The program could rotate during the year between the participating districts and be available to all residents of the districts.

Potential: Advertise other Outlets for Recycling Tires

The District will research other outlets for recycling tires and create a resource list for residents. This would allow the residents opportunities to recycle tires during the year and could lower overall cost for the District to recycle tires.

Advertise the Importance of Recycling Tires

The District will create an outreach campaign to educate the public on the public health issues caused by storing tires outdoors and dumping tires. In addition, the campaign would promote the Districts tire recycling program and other resources available to the residents.

Create Relationships with Large Manufacturers

The District will target the largest manufacturers in the District and reach out and develop long term relationships. The District could engage the manufacturers for assistance on District programs and at a minimum obtain annual recycling data from the manufacturers. Assistance could include providing tours of the facilities, sponsoring events, and promoting events to increase participation.

3. Education/Outreach

Increase Recycling Campaign

Reach out to community groups to present information on waste reduction and recycling as well as the availability of the Collection Center for HHW, electronics, and scrap tires. Initially, the focus will be on the current drop - off program. When the new Pike County Recycling Center opens up the District could develop a media event with tours of the facility at its grand opening. If Waverly and/or Piketon begin a curbside recycling program the Increase Recycling campaign could expand to support the curbside programs.

Potential: Commercial/Industrial Technical Assistance

Contact large employers in the District to create a list of coordinators of sustainability/environmental/recycling. Offer to assist with starting recycling programs, contract assistance, conduct waste audits, or other requested assistance.

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

Create a Recycling Grant Program

The Community Incentive Grant Program has been developed and will begin in 2020. The program will fund curbside recycling programs, yard waste composting facilities, yard waste drop-offs, special event recycling, or other community recycling programs. Funding is set at \$45,000 with a 25% match required that can include "in-kind" services. Organizations that can apply include community groups, schools, not-for-profits, and businesses. Initial funding is open and available to all programs and communities with recycling and diversion programs. After the first couple years, the approval process will consider previous grant compliance, previous grants awarded to communities or organizations, and fair allocation of grants across the county .

Recycling Incentive Study

The District will meet with businesses, schools, and government entities to obtain stakeholder input with respect to interest in recycling competitions, container or collections support needed, and current outreach methods. The District could use this feedback to develop additional programs to support businesses, schools, and other governmental entities. The recycling incentive study and drop-off study would provide valuable data to support cardboard drop-offs in the business districts and recycling drop-offs at schools.

The new recycling center has a scale where all containers can be weighed by type of recyclable providing valuable and accurate data for each of the drop-off containers.

Potential: Require Future Haulers to Report Data

The District can approach the haulers in Pike County to identify whether solid waste data is available on a community level. If data is available, the District will begin collecting the information.

Potential: Online Surveying of Commercial & Industrial Businesses

The District could develop a streamlined easy-to-use online survey which would allow further time to dedicate staff to for generators. The District could target key generators that have not previously participated in the annual survey to identify whether they have a recycling program, introduce them to District programs and services, and request their participation in the survey.

Review Current Process for Surveying Commercial & Industrial

The District will objectively review its current process for surveying including the mailing list of businesses, businesses' mailing/contact information, user-friendliness of surveys, and method and schedule of follow-ups. In addition, the District will focus on larger businesses for outreach and engagement to develop relationships and support for District programs. Increased support from these businesses will increase the probability of receiving meaningful survey responses.

Use Previous Years' Reported Data

For the commercial and industrial sector survey reported data, Ohio ADR guidelines permit districts to use the previous two years' reported recycling tonnages from companies as long as they are still in business and running similar operations. In years that the District does not receive a large business's response, the previous year's recycling tonnage could be used.

Road Maintenance

With the increase in route truck and transfer trailer traffic to and from the Pike Sanitary Landfill the District will provide funding for road repair and maintenance.

The District has included a plan to fund road repair and maintenance in the current plan update. The following roads are the county roads that will use the funding to provide maintenance for the roads that are used by vehicles hauling trash to the Pike County Landfill.

- River Road from Piketon to State Route 220
- Zahns Corner Road leading from Piketon to State Route 220
- River Road from Jackson Township areas to State Route 220
- Portion of Schuster Road leading from southern Pike County to State Route 220
- McCorkle Road from southern Pike County to Schuster Road to State Route 220.

These county roads do not receive any funding from Seal Township for road maintenance. Seal Township receives fees from the Pike County Landfill that are used as funding to repair only township roads.

Litter Enforcement

The District will fund a litter enforcement position to supervise collection crews and perform environmental investigations & enforcement. This position will work closely with the Pike County General Health District providing support for existing programs. The District will utilize a deputy from the Pike County Sheriff Department to staff the position. There will be a memorandum of understanding that will outline the following:

- Supervise litter crew to clean specific roads and others as needed
- Investigate dumping locations to trace back to source
- Work with Pike County Prosecutor to enforce dumping laws
- Provide illegal dumping education and outreach
- Visit local tire shops to educate operators and review for record compliance.

The District updated the contract with the health department to provide \$50,000 per year for a solid waste nuisance abatement program. \$49,000 covers complaint investigations, open dump investigations, and public education. An additional \$1,000 has been provided to assist the District with solid waste surveys of businesses that are involved in routine inspections.

New Processing Equipment

The new recycling center will be used to process and sort higher volumes than what are currently being processed. The District will provide funding for sorting equipment that will substantially increase the processing capacity. The processing equipment will be elevated with bins under the stations to accumulate materials for baling. The conveyor is flush with the floor to allow for easy loading and moving the materials to the elevated sort stations. The sort stations will be designed to add magnets and other equipment to automate processing and increase processing capacity.

With increased capacity, the District will review opportunities to partner with other Districts or businesses to accept additional recyclables to fully utilize facility.

Modify Existing Building

Once the new recycling center is processing recyclables, the District will provide funding to upgrade the old recycling center with offices and a meeting room. The upgraded building will provide administrative support and educational support for the new recycling center. The buildings are next to each other on the site and will provide the District with a campus that will meet the recycling needs of residents and businesses.

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 increase slightly 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
2022	1,264	5.6%
2023	1,274	5.7%

Year	Projected Tons Collected	Residential/ Commercial WRR ¹
2024	1,283	5.7%
2025	1,293	5.7%
2026	1,303	5.8%
2027	1,313	5.8%

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 tons collected are expected to increase.

Table 5-2. Industrial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Industrial WRR ¹
2022	8,762	80.8%
2023	8,806	81.2%
2024	8,850	81.5%
2025	8,894	81.9%
2026	8,939	82.3%
2027	8,939	82.3%

¹ "WRR" means waste reduction and recycling rate.

3. Curbside and Drop-Off Recycling Inventory

The following table lists the existing drop-off recycling programs in Pike County. There are currently no curbside recycling programs in the District.

Table 5-3. Drop-Off Recycling Services

ID#	Name of Drop-off	Service Provider	Ongoing Service
FTR1	Pike County Fairgrounds (Piketon)	Pike County SWMD	Yes
FTR2	Old Beaver Firehouse	Pike County SWMD	Yes
FTR3	Beaver Township Garage	Pike County SWMD	Yes
FTR4	Perry Township Garage	Pike County SWMD	Yes
FTR5	Mifflin Township Garage	Pike County SWMD	Yes
FTR6	Camp Creek Township Building	Pike County SWMD	Yes
FTR7	Community Action Committee of Pike County	Pike County SWMD	Yes
FTR8	Marion Township Youth Center	Pike County SWMD	Yes

ID#	Name of Drop-off	Service Provider	Ongoing Service
FTR9	Scioto Township, Wakefield Firehouse	Pike County SWMD	Yes
FTR10	Seal Township, Recycling Center	Pike County SWMD	Yes
FTR11	Jackson Township, Omega	Pike County SWMD	Yes
FTR12	Pebble Township Firehouse	Pike County SWMD	Yes
FTR13	Seal Township, Garage	Pike County SWMD	Yes
FTR14	Bristol Village Drop-Off (Waverly)	Pike County SWMD	Yes
FTR15	Pee Pee Township, County Government Center (Waverly)	Pike County SWMD	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 2018 reference year, the District's overall revenue was \$813,247. In the first year of the planning period (2022), revenue is projected to be \$892,372. Revenue is projected to increase annually through the end of the planning period in 2036 with a projected revenue of \$945,654. Current revenue is generated through disposal fees, grants, reimbursements, projects, user fees, and other sources.

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 \$914,204 to \$1,004,965. Based on projections, the District will have ample revenue to finance the implementation of the programs and initiatives described throughout this Plan Update. The District is projected to begin the planning period in 2022 with a carryover balance of approximately \$791,712 and end the planning period with a carryover balance of approximately \$930,666.

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 disposal fees and generation fees.

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

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

Disposal fees are collected on each ton of solid waste that is disposed at landfills in the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste came from – in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed at landfills in the SWMD. Out-of-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 has a \$1.50 per ton disposal fee for waste generated in-District, \$3.00 for waste from out-of-District, and \$1.50 for waste from out-of-state waste.

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

The District does not utilize rates and charges.

5. Other Sources of Revenue

Other sources of revenue include:

- **Recycling Revenue** – A small amount of revenue was earned through sale of recyclables from the District’s drop-off recycling program.
- **Grants** – The District occasionally applies for Ohio EPA grants. Grants obtained by the District are competitive and therefore not a guaranteed source of revenue. Potential revenue from future grants has been excluded from revenue projections.
- **User Fees** – The District earns revenue on user fees for recycling special materials such as TVs.
- **Other Revenue** – The other revenue category includes mainly refunds from OBWC, insurance refunds, and returned supplies.

Revenue from these other sources totaled approximately \$2,469 in 2018. Projections from other sources of revenue were not projected since they generate a negligible amount of revenue.

6. Summary of Revenue

The following table presents the District’s total revenue by source for the 2018 reference year and the first six years of the Plan (2022 to 2027).

Table 6-1. Summary of Revenue

Year	Disposal Fees	Other Revenue		Total Revenue
		Reimbursements	Project	
Reference Year				
2018	\$810,778	\$1,787	\$682	\$813,247
Planning Period				
2022	\$892,372	\$0	\$0	\$892,372
2023	\$900,931	\$0	\$0	\$900,931
2024	\$909,577	\$0	\$0	\$909,577
2025	\$918,312	\$0	\$0	\$918,312
2026	\$927,213	\$0	\$0	\$927,213
2027	\$936,254	\$0	\$0	\$936,254

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 2018 reference year and for the first six years of the planning period (2022 to 2027) broken into specific expense categories.

Table 6-2. Summary of Expenses

Expense Category	Year						
	Reference	Planning Period					
	2018	2022	2023	2024	2025	2026	2027
Plan Preparation/ Monitoring	\$255,841	\$0	\$0	\$20,000	\$20,000	\$0	\$0
Direct Administration	\$265,882	\$213,802	\$218,078	\$222,440	\$226,888	\$231,426	\$236,055
Facility Operation	\$0	\$252,217	\$219,561	\$121,952	\$124,392	\$126,879	\$129,417
Special Collections	\$25,822	\$28,050	\$28,611	\$29,183	\$29,767	\$30,362	\$30,969
Education/Awareness	\$87,232	\$123,596	\$146,068	\$128,590	\$151,161	\$133,785	\$156,460
Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Plan Implementation	\$0	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
County Assistance	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Open Dump/Litter Enforcement	\$25,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
Total Expenses	\$659,778	\$842,665	\$837,319	\$747,165	\$777,208	\$747,452	\$777,901

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

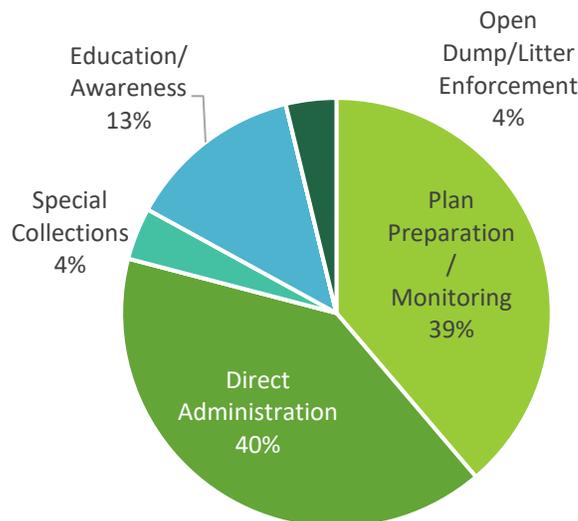
Expense categories in **Table 6-2** include the following:

- **Plan Preparation/Monitoring** – Represents expenditures for assistance from consultants with developing solid waste plan updates and annual district reports.
- **Direct Administration** – Budget includes expenditures for salaries, OPERS, unemployment compensation, workers’ compensation, health insurance, office overhead such as postage, office rent, utilities, telecommunications, other supplies, and vehicles and vehicle maintenance.
- **Facility Operation** – Includes budget for operating the Pike County Recycling Center.
- **Specials Collections** – Reflects expenditures for special collections such as for tires, HHW, electronics, appliances, and other materials.
- **Education and Awareness** – Reflects expenditures for education staff salaries and education campaigns and programs.

- Feasibility Studies** – Includes \$25,000 funding for a feasibility study for a curbside recycling program in the cities of Waverly and Piketon. Another feasibility study will be funded for \$25,000 to evaluate the yard waste recycling system in Pike County and provide recommendations for enhancements to divert more yard waste from the landfill.
- Other Plan Implementation** –Includes funding for a scholarship program and a grant program. The scholarship program will provide tuition assistance to a local student(s) pursuing an environmental degree from an accredited university. The grant program will provide funding for recycling programs and services for communities and schools in Pike County. The grant program will include funding for equipment, education & outreach, buy recycled content and other items to enhance recycling in Pike County. The scholarship and the grant program will be funded at a flat \$50,000 per year for the planning period. The scholarship program will not exceed 10% of the funding for this line item.
- County Assistance** – This line item reflects the budget allocated for assisting the County Engineer to maintain roads utilized for transporting MSW, especially to the in-county landfill.
- Open Dump/Litter Enforcement** – This line item reflects the budget allocated for assisting the Health Department as well as funding local law enforcement to supervise clean-up crews and for environmental enforcement.

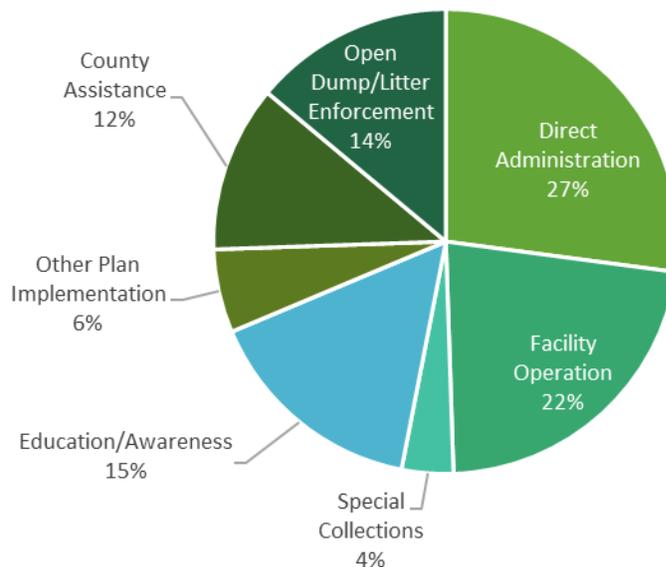
The following figure presents the distribution of expenses by category for the 2018 reference year. The top three expenditure categories include District Administration (40%), Plan Monitoring (39%), and Education/Awareness (13%).

Figure 6-1. 2018 Distribution of Expenses by Category



Throughout the first six years of the planning period, the distribution of expenses among categories adjusts to account for new programs. In 2027, the sixth year of the planning period, the top three expense categories include District Administration (28%), Facility Operation (23%), and Education and Awareness (16%).

Figure 6-2. 2027 Distribution of Expenses by Category



D. Budget Summary

Table 6-3 presents a summary of the budget for the 2018 reference year and the first six years of the planning period (2022 to 2027). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue increases from \$771,834 to \$809,280; expenses fluctuate from \$808,448 to \$947,891 annually. The District’s ending balance during the first six years of the planning period ranges from a low of \$616,920 in 2027 to a high of \$855,540 in 2022. Ample funding should be available to operate the programs outlined throughout this Plan.

Table 6-3. Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2018	\$813,247	\$659,778	\$153,469	\$920,569
Planning Period				
2022	\$883,900	\$1,004,965	(\$121,066)	\$791,712
2023	\$892,372	\$1,001,965	(\$109,592)	\$690,679
2024	\$900,931	\$914,204	(\$13,273)	\$686,052
2025	\$909,577	\$946,688	(\$37,111)	\$657,676
2026	\$918,312	\$919,422	(\$1,110)	\$665,467
2027	\$927,213	\$952,410	(\$25,197)	\$649,311



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 **2018**.

B. Planning Period (first and last years)

The planning period for this solid waste management plan is: **2022 to 2036**

C. Goal Statement

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

D. Material Change in Circumstances/Contingencies

A material change in circumstances or deviation from the approved *Plan Update* has been defined by the District to include a reduction in available capacity, a reduction in funding, or a delay in program implementation that would significantly affect the chances of achieving the District goals.¹ The District staff will monitor circumstances affecting plan implementation as specified herein and report such circumstances to the Board² where warranted.

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

1. Assurance of Waste Disposal Capacity

a. Reduction in Available Capacity

A reduction in available capacity shall include closure and/or a 20% or greater reduction in the ability to process or dispose of District waste at any solid waste management facility designated or identified in the Plan that receives 20% or more of the District's waste stream. This does not

¹ The District has chosen to include a process for determining a material change in circumstances in this Plan Update, even though not required to do so by the Solid Waste Management Plan Format version 4.0.

² "Board" means Board of Directors, and for a single county solid waste management district, consists of the Board of County Commissioners.

include normal down time to fix or install equipment. This would include solid waste management facilities that do not receive approval for expansion due to site environmental problems, facilities that experience a reduction in capacity or facilities for which a permit or license was revoked.

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

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

b. Increase in Waste Generation

Future capacity needs of the District as outlined in the Plan are based on waste generation estimates. A twenty-five percent increase in solid waste generation within the District may affect capacity requirements and result in diminished capacity for handling or disposing of solid waste. The District will evaluate the impact of the increases prior to determining a material change in circumstances has occurred. Currently, the District has a franchise agreement with Rumpke to provide solid waste collection services for all residential, commercial, and industrial customers thru December 31, 2029. The franchise agreement includes a requirement that the Company must own and operate a landfill within Pike County. The Company Owns and operates the Pike Sanitation Landfill with a 32.8-year capacity as of December 31, 2018, given current volumes of MSW.

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

increased waste volume at any other properly licensed and permitted solid waste management facility.

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

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

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

2. Compliance with Applicable Waste Reduction or Access Goals

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

The following are the goals of the *2009 State Solid Waste Management Plan*.

Goal 1 – Recycling Infrastructure: The District shall provide its residents and commercial businesses with access to opportunities to recycle solid waste. At a minimum, the District must provide access to recycling opportunities to 90 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 District 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 – Outreach and Education (Minimum Required Programs): The District shall provide the following required programs:

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

Goal 4 – Outreach and Education: The District 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 – Restricted Solid Wastes, Household Hazardous Waste (HHW) and Electronics: The District shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, HHW, and electronics.

Goal 6 – Economic Incentives: The District shall explore how to incorporate economic incentives into source reduction and recycling programs.

Goal 7 – Measure Greenhouse Gas Reduction: The District will use U.S. EPA’s Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.

Goal 8 – Market Development: The District has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

Goal 9 – Reporting: The District shall report annually to Ohio EPA regarding implementation of the District’s solid waste management plan.

The District plans to demonstrate compliance with Goal #1 of the 2009 *State Plan*. To determine if Goal #1 is being achieved, the District staff will annually review the information presented in Appendices B and D by the second quarter of each year of the planning period to determine if the facilities and programs are still in operation, the type of operation (i.e. non-subscription or subscription curbside recycling programs and/or full-service or part-time drop-offs) and the type of materials accepted at each facility or program. The District will estimate the population in Pike County using information from the Ohio Department of Development or the County Planning Agency for the above referenced evaluation. The District staff will calculate the percentage of population that has access to each facility and program using the methodology prescribed in the Ohio EPA’s Solid Waste Management Plan Format version 4.0.

The District staff shall report to the District Director the results of the facility and recycling program evaluation. If the District Director believes a significant delay of more than one year in facility or program implementation or the discontinuance of essential facilities or programs result in the inability of the District to achieve Goal #1, a Board meeting to

discuss this issue will be held within 30 days. The Board will review the circumstances and determine whether alternative programs can be implemented to achieve either Goal #1 or in the alternative, Goal #2, or whether a material change in circumstances has occurred. If Goal #2 is selected, the District will submit a revised Plan Update for ratification and approval. A material change in circumstances has not occurred, however, if the District is able to implement new programs or modify existing programs to meet the current goal or utilize the alternate goal available to the District to meet State of Ohio requirements.

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

3. Financing of Plan Implementation

a. Decrease in Waste Generation and/or Waste Disposal

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

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

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

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

This report will be provided to the District Director for review and recommendations regarding modification or elimination of District

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

4. Procedures Where Material Change in Circumstances has Occurred

If, at any time, the Board determines that a material change in circumstances has occurred and a revision to the Plan is necessary, the Board will request the Policy Committee to prepare a Draft Amended Plan to the Board within 90 days of the Board request. The Board will review the Draft Amended Plan and approve or return the Draft Amended Plan for further revision within 60 days of receipt. The Policy Committee shall incorporate necessary revisions and submit the final Draft Amended Plan within 60 days to the Board.

The Board will notify the Ohio EPA in writing within 15 working days after the Board has determined that a material change in circumstances has occurred. Nothing contained in this section shall be construed as limiting the authority of the Policy Committee or the Board to otherwise amend this Plan.

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

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

The reported recycling tonnage for the residential/commercial sector in 2018 totaled 1,176.9 tons in the Annual District Report (ADR). However, the District's updated records show that 1,226.5 tons were recycled from this sector in 2018 due to updated tonnages from survey respondents. This is only a 4% increase and is not a large difference from what was originally reported. The updated numbers are used in this Plan.

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

In 2018, the District did not have any communities operating curbside recycling programs. Therefore, **Table B-1** has been omitted.

2. Drop-off Recycling Locations

Fifteen drop-off recycling locations are available to residents of the District. The District utilizes drop-offs to collect recyclables throughout the County. The drop-offs have 10 yard roll off containers that are serviced by the District with a pick-up truck and dump trailer. The roll-off containers are delivered to the Pike County Recycling Center (MRF) where the recyclables are sorted and baled. These sites accept a wide range of material types, with only one site classified as a full-time drop-off. **Table B-2** lists each of the drop-offs.

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

County	ID#	Name of Drop-off Site ²	Type				How Service is Provided	Open to Public	Materials Accepted ³	Access Credit	Tons Collected from SWMD	Service to Continue Through Planning Period
			Urban		Rural							
			FT	PT	FT	PT						
Pike	FTR 1	Piketon Village, Pike County Fairgrounds			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	2,157	-	Yes
Pike	FTR 2	Beaver Twp, Old Beaver Firehouse			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,221	0.5	Yes
Pike	FTR 3	Beaver Twp, Garage			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,221	-	Yes
Pike	FTR 4	Perry Twp, Garage			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,008	0.11	Yes
Pike	FTR 5	Mifflin Twp, Garage			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,276	0.42	Yes
Pike	FTR 6	Camp Creek Twp, Township Building			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	959	1.08	Yes
Pike	FTR 7	Piketon Village, Community Action Committee			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	2,157	-	Yes

County	ID#	Name of Drop-off Site ²	Type				How Service is Provided	Open to Public	Materials Accepted ³	Access Credit	Tons Collected from SWMD	Service to Continue Through Planning Period
			Urban		Rural							
			FT	PT	FT	PT						
		of Pike County										
Pike	FTR 8	Marion Twp, Youth Center			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,113	0.58	Yes
Pike	FTR 9	Scioto Twp, Wakefield Firehouse			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,251	0.62	Yes
Pike	FTR 10	Seal Twp, Recycling Center			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	3,324	114.16*	Yes
Pike	FTR 11	Jackson Twp, Omega			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,180	0.14	Yes
Pike	FTR 12	Pebble Twp, Firehouse			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	2,496	0.17	Yes
Pike	FTR 13	Seal Twp, Garage			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	1,192	0.7	Yes
Pike	FTR 14	Waverly Village, Bristol Village Drop-Off			✓		Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	4,270	1.05	Yes
Pike	FTR 15	Pee Pee Township/ Waverly, County Government Center	✓				Pike County Recycling	24 Hours, 7 Days/Week	AC, PL, MxP, OCC	7,658	7.12	Yes
Total										13.2		

¹ Tons collected at drop-off sites are not available since they are included in the totals for curbside collection.

² Service at these drop-off locations is expected to continue throughout the planning period.

³ AC = aluminum cans, SC = steel cans, GL = glass, PL = plastics, MxP = mixed paper, OCC = old corrugated cardboard, ONP = newspaper, HHW - Household Hazardous Waste, EW = Electronic Waste, ST = Scrap Tires

*Note: FTR10 recycled more material than what was originally reported in the 2018 ADR. This is the most up to date tonnage for this location.

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

B. Curbside Recycling and Trash Collection Service Providers

Table B-4a identifies the municipal and commercial hauler that provided trash collection services in 2018. This hauler has a franchise agreement with the District and the City of Waverly. Zero communities in Pike County offer curbside recycling, and therefore, **Table B-4b** has been omitted.

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

		Trash Collection Services				Curbside Recycling Services		
Name of Provider	Service Area	PAYT	RES	COM	IND	RES	COM	IND
Public Sector								
N/A								
Private Sector								
Rumpke	Pike County		✓	✓	✓	✓		

RES = Residential, COM = Commercial, IND = Industrial

C. Composting Facilities and Activities

Table B-5 identifies the yard waste management facilities and activities which received yard waste and other organic waste during the reference year. This table includes the facilities and programs that managed food waste, leaves, brush, trees, grass clippings, and logs, but no yard waste was reportedly composted at any registered facilities in 2018. “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**, such as the OEPA-reported hauler food waste data. 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						
	None					
Total					0	0
Community Yard Waste Collection Programs						
	None					
Total					0	0
Business Survey Yard Waste Composting						
	None					
Total					0	0
Other Food Waste Management Activities						
OFA1	Hauler and Walmart food waste data				82.83	
Total					82.83	0
Anaerobic Digestion						

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
	None					
Total					0	0
Grand Total					82.83	0

Sources: "2018 Analytics Ohio EPA Compost Facility Planning Analytical Report," Ohio EPA; Community yard waste tonnages as reported for 2018

Table B-6 has been 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 District owns and operates its own recycling center (Pike County Recycling Center). Additional material handling facilities are used to process other materials generated throughout the District.

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

Facility Name	County	State	Type of Facility	Tons Accepted from SWMD
Pike County Recycling Facility	Pike	Ohio	MRF - single-stream	132.87
Cintas	Clermont	Ohio	Broker	DNR
Livingston's	Scioto	Ohio	Broker	DNR
Bliss Brothers	Pike	Ohio	Broker	DNR
Jim Engle	Pike	Ohio	Broker	DNR
JVC Metals	Jackson	Ohio	Broker	DNR
Glatfelter	Ross	Ohio	Broker	DNR
DJJ	Hamilton	Ohio	Broker	DNR
AM Commodities	Jackson	Ohio	Broker	DNR
Cleanlites	Hamilton	Ohio	Broker	DNR
Hadsell Chemical Processing	Pike	Ohio	Broker	DNR
EQ - Detroit	Wayne	Michigan	Broker	DNR
Tri City-Industrial	Miami	Ohio	Broker	DNR
Daniels Metals	Pike	Ohio	Buyback	DNR
Barker Recycling	Pike	Ohio	Buyback	DNR
EnviroTire	Wood	Ohio	Tire Processor	20

Facility Name	County	State	Type of Facility	Tons Accepted from SWMD
Liberty Tire Service of Ohio	Franklin	Ohio	Tire Processor	79.18
Sundown Tire Recycling	Pike	Ohio	Tire Processor	59.11
Pike Sanitation	Pike	Ohio	Broker	DNR
Rumpke - Chillicothe	Ross	Ohio	MRF - single-stream recycling	82.04
				373.2

Sources: "Ohio Material Recovery Facilities and Commercial Recycling - 2018," Ohio EPA
 2018 Pike County Annual District Report - survey responses



APPENDIX C

POPULATION DATA



APPENDIX C. Population Data

As of July 1, 2018, the population of Pike County was estimated at 28,067. The community populations which need to be added or subtracted to 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 2018 is based on Ohio Department of Development (ODOD) Office of Strategic Research document, “2018 Population Estimates for Cities, Villages and Townships”, published in May 2019. As indicated in the table, the total adjusted population for the District is 28,067 for the reference year of 2018.

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

Community	Pike
Before Adjustment	28,067
Additions	
None	
Subtractions	
None	
After Adjustment	28,067

Sources of Information: Ohio Development Services Agency, “2018 Population Estimates by County, City, Village, and Township,” May 2019. <https://development.ohio.gov/files/research/P5027.pdf>

State law requires the entire population of cities and villages which are split between two counties to be included with the solid waste district having the majority of the city or village population. Since there are no communities that have more than half of their population in another county, there are no additions to or subtractions from the total District population (See **Table C-1**).

Population projections for the entire planning period are shown below in **Table C-2**. Reference year 2018 populations represent the actual estimates for that year. The District populations calculated for 2020, 2025, 2030, 2035, and 2040 have been determined using projection estimates for those years from the Ohio Development Services Agency¹. Straight-line projections have been used to develop the population estimates for years between the five-year intervals.

¹ “2010 to 2040 Projected Population for Ohio Counties: Summary 2010 to 2040 Projected,” Ohio Development Services Agency (ODSA) publication, March 30, 2013. <http://www.development.ohio.gov/files/research/P6090.pdf>

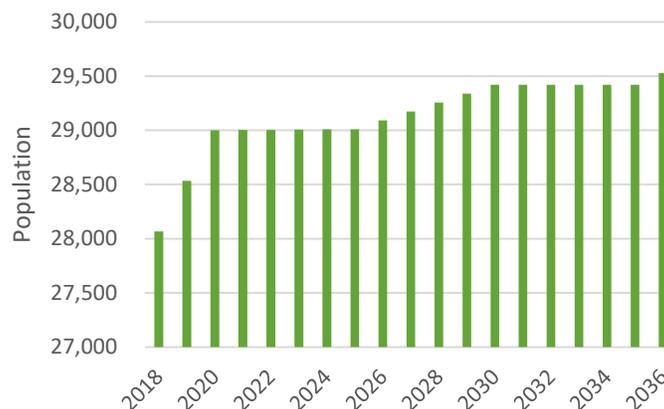
Table C-2. Population Projections 2018-2036

Year	Pike	Total District Population
2018	28,067	28,067
2019	28,534	28,534
2020	29,000	29,000
2021	29,002	29,002
2022	29,004	29,004
2023	29,006	29,006
2024	29,008	29,008
2025	29,010	29,010
2026	29,092	29,092
2027	29,174	29,174
2028	29,256	29,256
2029	29,338	29,338
2030	29,420	29,420
2031	29,420	29,420
2032	29,420	29,420
2033	29,420	29,420
2034	29,420	29,420
2035	29,420	29,420
2036	29,530	29,530

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 an increase in the population throughout the planning period. The population is expected to increase by 3.7 percent from 2018 through the fifth year of the planning period (year 2026) and increase by 5.2 percent by the end of the planning period.

Figure C-1. District Population: 2018 through 2036





APPENDIX D

DISPOSAL DATA



APPENDIX D. Disposal Data

A. Reference Year Waste Disposed

More than 98% of the District waste which was direct-hauled for disposal in the reference year was sent to the in-District Pike Sanitation Landfill. The out-of-state Boyd Co Sanitary Landfill received the next highest amount, at only 0.7% 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>						
Pike Sanitation Landfill	Pike	OH	22,440	335	655	23,430
<i>Out-of-District Facilities</i>						
Athens Hocking C&DD/Reclamation Center Landfill	Athens	OH	3	0	0	3
American Landfill, Inc.	Stark	OH	0	164	0	164
Beech Hollow Landfill	Jackson	OH	9	0	1	10
<i>Out-of-State Facilities</i>						
Boyd Co Sanitary Landfill	Boyd	KY	176	0	0	176
Total Direct Haul Waste Disposed in Landfills			22,628	499	656	23,783

Sources:

OEPA Facility Data Report - 2018

Kentucky Energy and Environment Cabinet 2018 Solid Waste Branch - Waste Quantity Report

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

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

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

Source(s) of Information: Ohio Environmental Protection Agency

Transfer facilities process a very small portion of District waste sent for disposal (see **Table D-2.**) During 2018, one out-of-District transfer facility (RLS Transfer in Ross County) received 1 ton of the transferred waste.

Table D-2. Waste Transferred in Reference Year

Facility Name	Location		Waste Received from the SWMD				Destination of Waste (Landfill)
	County	State	Residential/Commercial	Industrial	Excluded	Total	
In-District Facilities							
None						0	
Out-of-District Facilities							
RLS Transfer Inc	Ross	OH	1	0	0	1	
Out-of-State Facilities							
None						0	
Total			1	0	0	1	

Note: Res/Com = residential/commercial; TS/TF = transfer station/transfer facility; LF = landfill
Source(s) of Information: Ohio Environmental Protection Agency, "2018 Facility Data Report Tables," October 29, 2019.

No District waste reportedly was received at incinerators during the reference year (see **Table D-3.**)

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

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

Table D-4 shows the total waste disposed in the reference year for the District. Excluded waste has been included in this table but will be eliminated from the rest of the Plan because it accounts for less than 10% of the overall 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

Method of Management	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	22,628	499	656	23,783	100%
Transferred	1	0	0	1	0%
Incinerated	0	0	0	0	0%
Total	22,629	499	656	23,784	100%
Percent of Total	95.1%	2.1%	2.8%	100.0%	

Sources:

OEPA Facility Data Report - 2018

Kentucky Energy and Environment Cabinet 2018 Solid Waste Branch - Waste Quantity Report

B. Historical Waste Analysis

The amount of total solid waste disposed from the District since 2013 has slightly decreased from 27,583 tons in 2013 to 23,128 tons in 2018. See **Table D-5**.

Table D-5. Historical Disposal Data: 2013-2018

Year	Population	Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (PPD)	Tons	Tons	Tons	Tons
2013	28,703	3.80	19,914	2,237	5,432	27,583
2014	28,480	4.17	21,669	3,502	482	25,653
2015	28,206	3.70	19,027	2,251	393	21,671
2016	28,160	3.95	20,308	1,295	1,981	23,584
2017	28,270	4.04	20,848	1,759	1,836	24,443
2018	28,067	4.42	22,629	499	656	23,784

Source(s) of Information: Ohio Environmental Protection Agency, “2018 Facility Data Report Tables,” October 29, 2019.

The disposal tonnages for the residential/commercial (R/C) sector, the industrial sector, and total disposal are shown graphically below. While more waste has been disposed from the residential/commercial waste sector during the ten-year time period, industrial waste has considerably decreased in tonnage disposed from year-to-year.

Figure D-1. District Disposal: 2013 – 2018



C. Residential-Commercial Disposal

Residential/commercial (R/C) disposal has increased from approximately 19,914 tons in 2013 to 22,629 tons in 2018 (see **Figure D-2**).

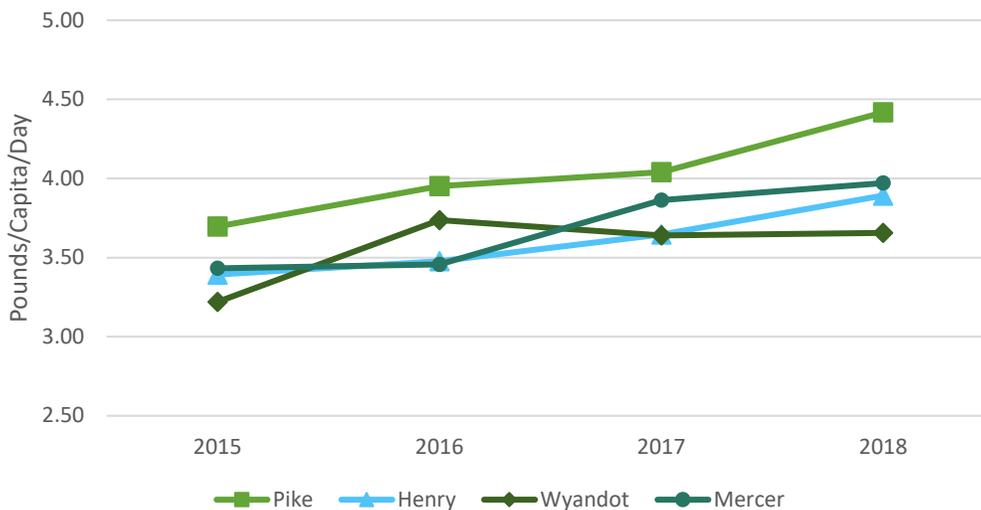
The changes in tons disposed have been closely tracked by changes in the per capita disposal rate. The highest disposal rate during the six-year period occurred in 2018 and the lowest disposal rate occurred in 2015 at 3.7 lbs. per person per day (ppd). The disposal rate steadily increased between 2013 and 2018.

Figure D-2. Residential/Commercial Tons Disposed vs. Disposal Rate: 2013 - 2018



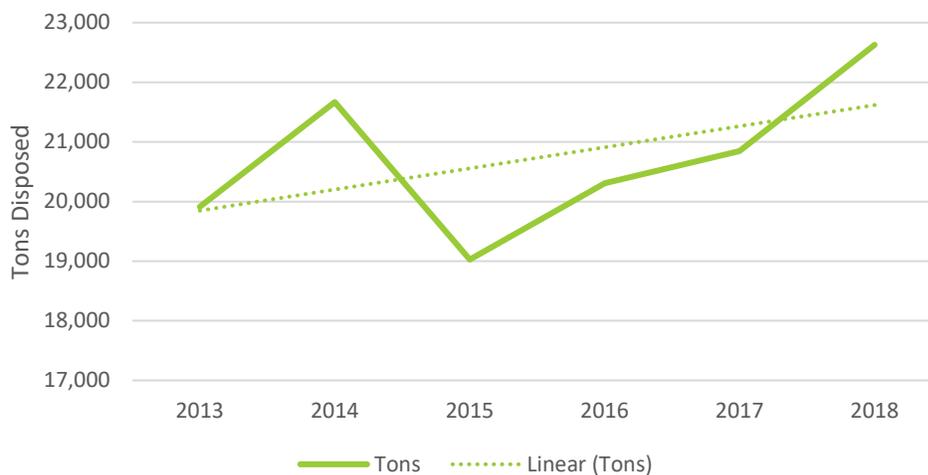
The R/C disposal rate for the District was compared with disposal rate for Henry, Wyandot, and Mercer Solid Waste Districts, which are similar to Pike in population. The figure below shows that each of these SWMDs experienced an increase in the R/C disposal rate from 2015 through 2018. However, Pike’s disposal rate has consistently been higher than the other districts.

Figure D-3. R/C Disposal Rate for Selected SWMDs: 2015-2018



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

Figure D-4. Residential/Commercial Sector Disposal Trends: 2013-2018



For 2018, the actual disposal of residential/commercial waste from the District was higher than the amount projected in the currently-approved plan. However, this is mostly because composting was projected to increase dramatically by 66% but instead decreased by 93% due to the closing of the Waverly composting site and expectations that two new composting sites were projected to have opened but did not. Landfill material was projected in the previous Plan based on generation minus diversion, and because the projected high diversion of organic material from new facilities did not come to fruition, the disposed material in recent years was higher than originally projected (see the table below).

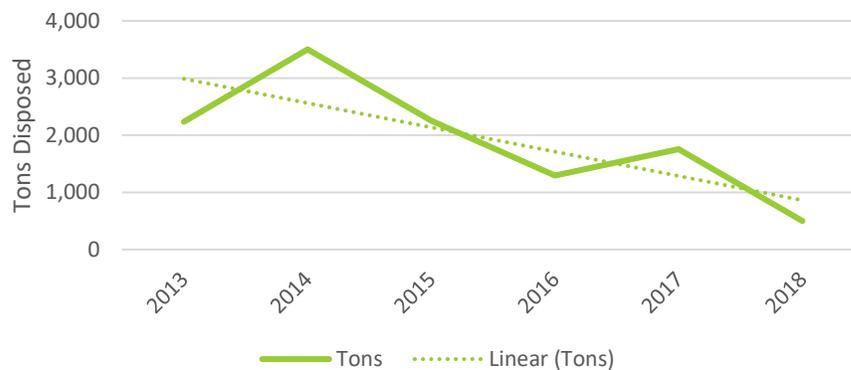
Actual vs. Current Plan Projections for Residential/Commercial Disposal: 2012-2018

Residential/Commercial Sector Tons Disposed				Residential/Commercial Sector Tons Composted		
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2012	17,449	17,449	0%	1,319	1,319	0%
2013	19,914	18,748	6%	97	0	100%
2014	21,669	18,746	13%	152	0	100%
2015	19,027	16,745	12%	138	1,996	-1343%
2016	20,308	16,747	18%	87	1,996	-2198%
2017	20,848	16,748	20%	106	1,996	-1775%
2018	22,629	16,550	27%	84	2,195	-2511%

D. Industrial Sector Disposal

As shown in **Figure D-5**, industrial disposal decreased substantially from 2013 through 2018. On average, industrial disposal has decreased 11.5% annually from the previous year.

Figure D-5. Industrial Sector Disposal: 2013 – 2018



Actual industrial disposal from 2013 through 2018 was consistently lower 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. The differences between actual and projected industrial disposal mainly stems from historical reporting issues. The previous plan update’s reference year was 2012, but in August 2013, Rumpke began operating the Pike Sanitation Landfill with a different methodology of tracking data than the previous operator. Though the reference year was 2012, the industrial disposal projections were based off of new, incomplete data from Rumpke’s new operations in late 2013 and 2014 and assumed projections incorrectly based on the incomplete data.

**Actual vs. Current Plan Projections, Industrial Sector Disposal:
2013-2018**

Industrial			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2013	2,237	879	61%
2014	3,502	11,514	-229%
2015	2,251	11,508	-411%
2016	1,295	11,503	-788%
2017	1,759	11,452	-551%
2018	499	11,446	-2193%

E. Excluded Waste Disposal

Because excluded waste accounts for less than 10% of the overall waste generated in Pike County in 2018, it has been omitted from the remainder of this Plan Update.

F. Disposal Projections

1. Residential/Commercial Sector

The District examined several approaches for projecting disposal for the planning period. Four scenarios which were thought to be the best approaches are included in the table below. The primary assumptions differentiating each scenario are explained, with the disposal projection resulting from applying the assumptions. For comparison, the last two columns in the table shows the highest disposal amount reported during the last ten years (2009 through 2018), and the disposal tonnage reported for 2018.

Tonnages Projected for R/C Sector: 4 Scenarios

Scenarios		Tonnage		
#	Description	2036 Projection	Highest during last 9 years	2018
1	Assume constant disposal rate of 4.01 PPD based upon 2013-2018 average	21,626	22,669	22,669
2	Assume annual increase in tonnage of 2.91 percent based upon average annual percent change, 2013-2018, then remaining constant after 2031	32,857		
3	Assume increase in disposal rate of 1.5% based on average annual rate of change 2013-2017, beginning with average disposal 2013-2017 to represent 2019, then constant after 2031	24,343		
4	Assume change in disposal rate annually based on annual rate of change in population	23,808		

Scenario 1 assumes a constant disposal rate of 4.01 ppd, based upon the historical average from 2013 through 2018 and is multiplied by the projected population of the District. This scenario results in a very modest decrease in tons disposed by the end of the planning period (approximately 1,000 tons). However, the annual tonnage increases annually from a projected increasing population.

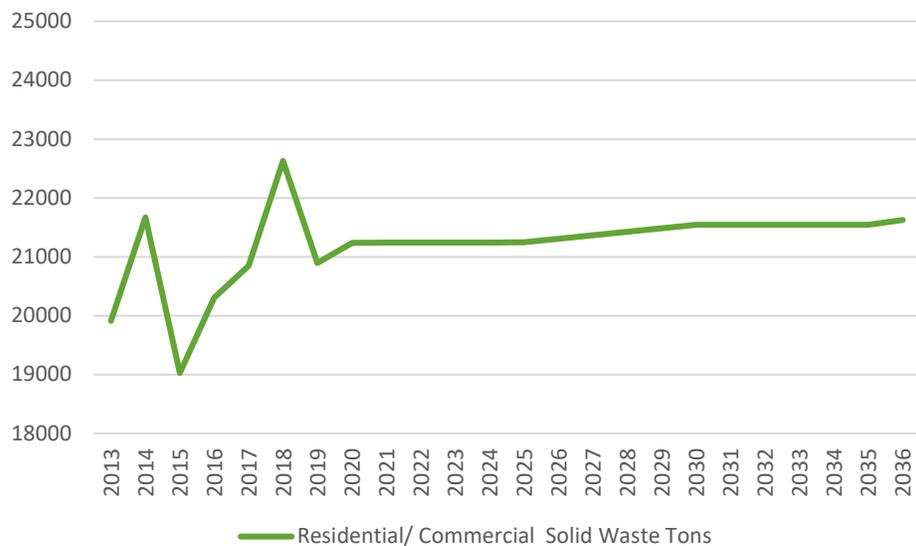
Scenario 2 applies the average annual percent change in tonnage which occurred during 2013 through 2018 (2.91 percent per year). This scenario results in a larger increase in projected tonnage by 2036, approximately 10,000 tons.

The District's R/C disposal rate has steadily increased since 2013 (3.8 ppd to 4.42 ppd), but the disposal rate in 2018 was much higher than previous years. Therefore, **Scenario 3** applies the average annual percent change in disposal rate from 2013-2017 to the first ten years of the planning period (1.5%). Additionally, it is assumed that 2019's R/C disposal will reflect the average disposal from 2013-2017 as well (20,353 tons). The disposal rate is projected to remain constant from 2031 to the end of the planning period.

Scenario 4 assumes that the disposal rate changes annually based on the projected annual rate of change of population. The highest increase in population projected is between 2018-2019 with a 1.7% increase.

Although several conclusions could be drawn from the last ten years of disposal data, the District believes that Scenario 1 represents the most reasonable approach for disposal projections. This scenario incorporates the increase in the disposal rate experienced during previous years, but also attempts to consider the highest tonnage reported in 2018 compared to the last nine years.

Figure D-6. Projected Residential/Commercial Disposal 2013-2036



2. Industrial Sector

Tonnages Projected for Industrial Sector: 3 Scenarios

Scenarios		Tonnage		
#	Description	2036 Projection	Highest during last nine years	2018
1	Assume average annual decrease in tonnage of 11.5% based upon 2013-2018 average change	56	4,285	499
2	Assume increase in disposal rate of 3.5% based on average annual rate of change 2013-2017, beginning with average disposal 2013-2017 to represent 2019, then constant after 2031	3,356		
3	Assume annual decrease in tonnage of 1.9% through 2031 based on projected change of industrial employment throughout the State of Ohio 2016-2026; constant after 2026	1,927		

The District evaluated three alternative methodologies for projecting industrial waste disposal (see the table below). **Scenario 1** applies the average annual percent change in reported disposal from 2013 through 2018 (-11.5%), which results in a projected tonnage of only 56 tons for 2036. This estimate is extremely low for any district and is too low for Pike County District.

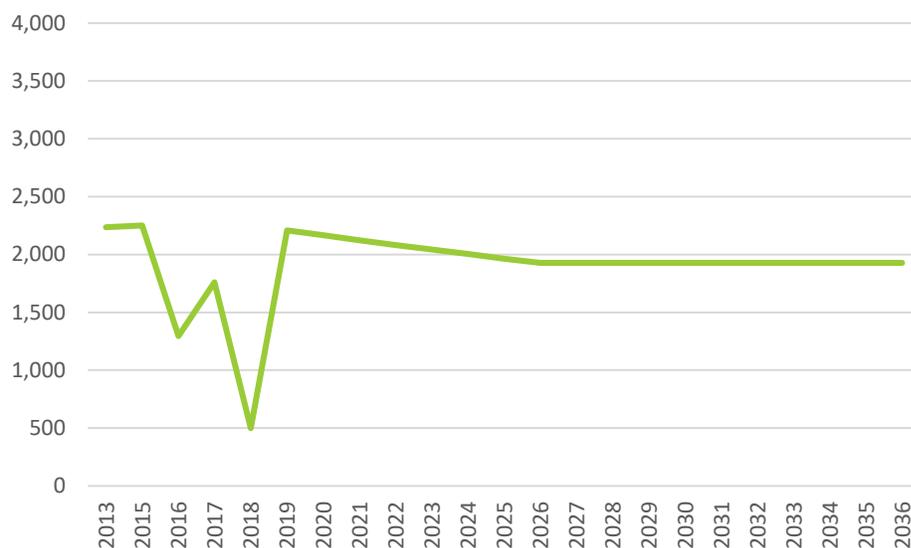
The District’s industrial disposal has steadily decreased since 2013, but the disposal rate in 2018 was much lower than previous years. Therefore, **Scenario 3** applies the average annual percent change in disposal rate from 2013-2017 to the first ten years of the planning period (3.5%). Additionally, it is assumed that 2019’s industrial disposal tonnage will reflect the average disposal from 2013-2017 as well (2,209 tons). The disposal tonnage is projected to remain constant from 2031 to the end of the planning period.

Scenario 3 uses the average annual decrease in manufacturing employment projected for the State of Ohio by the Ohio Department of Jobs and Family Services. Employment is projected to decrease annually by 1.9% through 2026. However, the disposal tonnage in 2018 was much lower

than previous years, so the disposal tonnage for 2019 is projected to be the average disposal tonnage from 2013-2017 (2,209 tons).

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 decrease in the disposal rate experienced during previous years, but also attempts to consider the lowest tonnage reported in 2018 compared to the last nine years.

Figure D-7. Projected Industrial Disposal 2013-2036



3. Summary

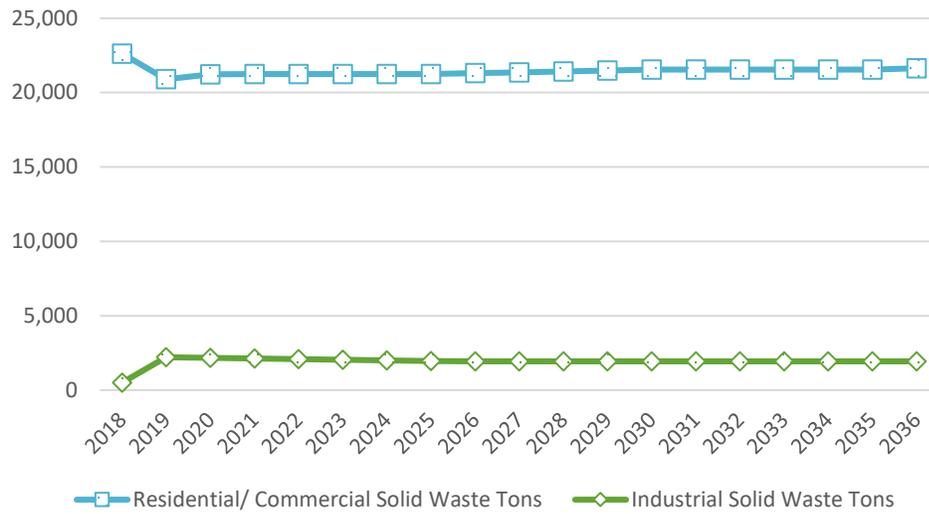
Table D-6 represents the results of using the approaches proposed above by the District for R/C and industrial disposal projections. The tons of R/C projected for disposal continue to increase throughout the planning period due to the anticipated increase in population. The industrial tonnage projected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

Table D-6. Waste Disposal Projections

	Year	Residential/ Commercial Solid Waste Tons	Industrial Solid Waste Tons	Total Waste Tons	Tons Transferred (as part of Total Disposal)	Waste Transferred (as % of Total Disposal)
1st Yr. of Planning Period →	2018	22,629	499	23,128	1	0.004%
	2019	20,896	2,209	23,105	1	
	2020	21,238	2,166	23,404	1	
	2021	21,239	2,124	23,364	1	
	2022	21,241	2,083	23,324	1	
	2023	21,242	2,043	23,286	1	
	2024	21,244	2,004	23,248	1	
	2025	21,245	1,965	23,210	1	
	2026	21,305	1,927	23,233	1	
	2027	21,365	1,927	23,293	1	
	2028	21,426	1,927	23,353	1	
	2029	21,486	1,927	23,413	1	
	2030	21,546	1,927	23,473	1	
	2031	21,546	1,927	23,473	1	
	2032	21,546	1,927	23,473	1	
	2033	21,546	1,927	23,473	1	
	2034	21,546	1,927	23,473	1	
	2035	21,546	1,927	23,473	1	
	2036	21,626	1,927	23,553	1	

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

Figure D-7. Projected Disposal: 2018-2036



Waste Transferred. Only 1 ton of waste was transferred before being sent to a landfill in 2018. This represents 0.004% of the total disposal in the District. This amount is projected to remain at 1 ton throughout the planning period.



APPENDIX E

RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA



APPENDIX E. Residential/Commercial Reduction and Recycling Data

This Appendix presents the reduction and recycling data for the residential and commercial sectors in the 2018 reference year. In order to avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities, such as programs, brokers, and scrap yards, will be demonstrated. A historic analysis of the residential/commercial sector’s recycling is included in this appendix. Information in this section as well as information from other sources was used to calculate the recycling projections from 2019 to the end of the planning period (2036) which are included at the end of this Appendix.

Table E-1A. Commercial Survey Results

NAICS	ST	DC	LAB	FW	GL	FM	NFM	OCC	MxP	PL	TX	W	CoM	YW	Totals
62									9						
81									5						
Total	0	0	0	0	0	0	0	0	14	0	0	0	0	0	14
Adj.															0
Adj.Total	0	0	0	0	0.0	0	0	0	14	0	0	0	0	0	14

No adjustments were made in Table E-1.

Data from 2 commercial businesses and institutions were used to complete **Table E-1**. Companies and institutions reported recycling 14 tons of paper in 2018.

Table E-2. 2018 Data from Other Recycling Facilities

Data Sources	WG	FM	NFM	OCC	MxP	PL	W	CoM	ST	HHW	Totals
Buybacks											
None.											
Scrap Yards											
None.											
Brokers											
None.											
Processors/MRF's											
Pike County Recycling Center	1.91		1.72	39.12	68.48	17.33			20.81	4.31	
Rumpke Chillicothe		16.80	3.49	58.55			1.25	1.95			
Unadjusted Totals	1.91	16.80	5.21	97.67	68.48	17.33	1.25	1.95	20.81	4.31	214.91
Adjustments									-20.81		0.00
Adjusted Totals	1.91	16.80	5.21	97.67	68.48	17.33	1.25	1.95	0.00	4.31	214.91

WG = white goods, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, W = wood, CoM = commingled, HHW = household hazardous waste, ST = scrap tires

Sources: Recycling Activities Survey (Calendar Year 2018)

Table E-2 contains tonnage collected by two processors or MRFs which receive materials generated in the District. The totals have been adjusted to account for the scrap tires collected at P1 that were sent to a registered tire processor reported later in this section.

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

Table E-3. 2018 Data Reported to Ohio EPA

Ohio EPA Data Source	PL	OCC	MxP	NF	Other	Totals
Walmart	15.66	388.36	1.41	0.01	9.01	
Dollar General		77.94	1.04			
Kroger	13.26	213.17	4.58		1.07	
USPS	0.60	1.73	28.72			
Unadjusted Total	29.52	681.20	35.75	0.01	10.08	756.56
Adjustments						0.00
Adjusted Total	29.52	681.20	35.75	0.01	10.08	756.56

PL = plastic, OCC = old corrugated cardboard, MxP = mixed paper, NF = non-ferrous metals

Sources: OEPA - Ohio Material Recovery Facilities and Commercial Recycling - 2018
 OEPA - County Scrap Tire Numbers - 2018

Table E-4 includes the amount of recycling reported by other recycling completed in the District. The totals have been adjusted to avoid double-counting. For example, the 126.65 tons of commingled materials reported by the drop-off program has been subtracted since it is assumed that this tonnage is reflected in the total tons reported by the Pike County Recycling Center. The drop-off recycling tonnage is different than what was reported in the 2018 ADR because the ADR did not include the complete tonnages from the Recycling Center drop-off at the time of submittal.

Table E-4. 2018 Other Recycling Programs/Other Sources of Data

Sources of Data	ST	FW	CoM	Total	Adj.	Adj. Total
Drop-Off Recycling			126.65	126.65	-126.65	0.00
Ohio EPA Tire Data	158.29			158.29		158.29
Ohio EPA Food Waste Hauler Data		82.83		82.83		82.83
Total	158.29	82.83	126.65	254.32	-13.2	241.12
Adjustments			-126.65	-13.2		
Adjusted Total	158.29	82.83	0.00	241.12		

ST = scrap tires, FW = food waste, CoM = commingled
 The following table explains the adjustments made in Table E-4A.

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 2018 Annual District Report.

Table E-5. Reference Year (2018) Residential/Commercial Material Recycled

Material	Tons*
Appliances/ "White Goods"	1.91
Household Hazardous Waste*	4.31
Used Motor Oil	0.00
Electronics	0.00
Scrap Tires	158.29
Dry Cell Batteries	0.00
Lead-Acid Batteries	0.00
Food	82.83
Glass	0.00
Ferrous Metals*	16.80
Non-Ferrous Metals*	5.22
Corrugated Cardboard	778.87
All Other Paper*	118.18
Plastics*	46.85
Textiles	0.00
Wood	1.25
Rubber	0.00
Commingled Recyclables (Mixed)	1.95
Yard Waste	0.00
Other (Aggregated)*	10.08
Total	1,226.54

Source(s) of Information: 2018 ADR Calculation Spreadsheets, 2018 Ohio EPA MRF Reports, 2018 Ohio EPA Scrap Tire Report, 2018 District program and survey data

***Note:** Some materials have a different total than what was reported on the 2018 Annual District Report. The total tons in Table E-5 are the most up-to-date recycling tonnages and will be used for the rest of this Plan Update.

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. 2018 Quantities Recovered by Program/Source

Source of R/C Data	Tons
Commercial Survey	14
Ohio EPA Commercial Data	756.56
Ohio EPA Food Waste Hauler Data	82.83
Ohio EPA Tire Data	158.29
Data from Recycling Facilities	214.91
Total	1,226.54

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

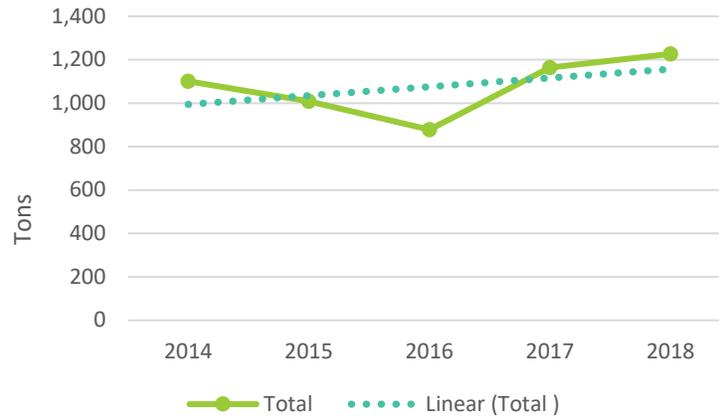
The District did not track historical annual recycling data in a format that was consistent with the original E-7 tables (**Tables E-7** and **E-7a1-3**), so a new table was developed. The following table presents the District’s historical recycling analysis using a customized version of **Table E-7**.

Table E-7. Historical Recycling Analysis

Year	Residential/Commercial				Annual Percentage Change	Annual Tonnage Change
	Yard Waste	Tires	Recycling	Total		
2014	-	192	909	1,101	--	--
2015	-	252	756	1,008	-8%	-93
2016	-	207	671	878	-13%	-130
2017	-	261	902	1,163	32%	285
2018	-	158	1,068	1,227	5%	64
2014-2018 Average						
Average Annual Percent Change					4%	
Average Tons over 5 Year Period					1,075	
Average Annual Tonnage Change					31	

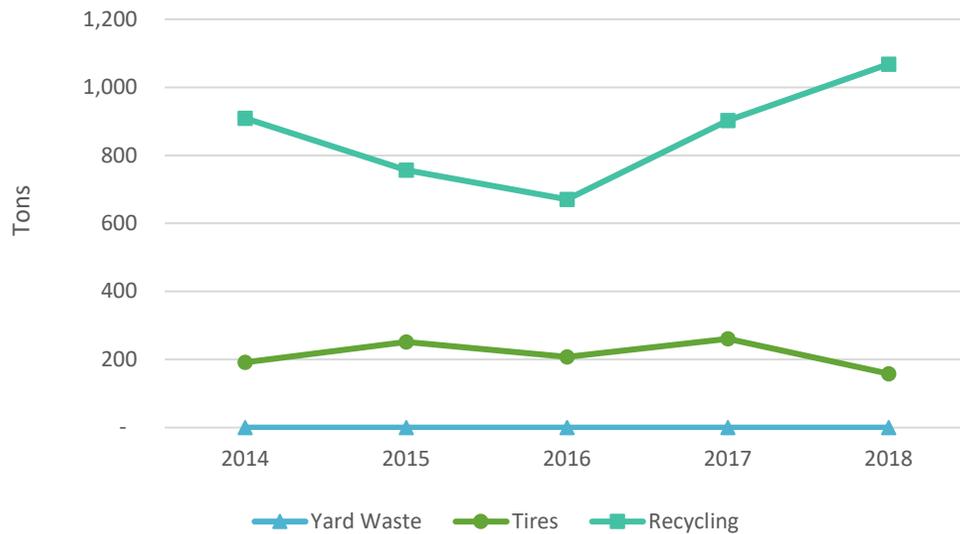
The District’s historical recovery for the residential/commercial sector over a five-year period spanning from 2014 through 2018 shows that total tons of recycling has slightly increased during this time period.

Figure E-1. Historical Recycling Analysis: 2014-2018



When each of the three categories in **Table E-7** are examined separately, yard waste has remained at 0 and scrap tire recovery has decreased slightly. Recycling has fluctuated between 2014 and 2018 (see **Figure E-2**).

Figure E-2. Historical Recycling by General Material Category: 2014-2018



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

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

First Year of Planning Period	Year	1	2	3	4	5	Totals
		2018	14	82	998	0	133
	2019	14	82	1,005	0	134	1,236
	2020	14	83	1,013	0	136	1,245
	2021	14	83	1,020	0	137	1,255
	2022	14	84	1,028	0	138	1,264
	2023	14	84	1,036	0	140	1,274
	2024	14	85	1,043	0	141	1,283
	2025	14	85	1,051	0	142	1,293
	2026	15	85	1,059	0	144	1,303
	2027	15	86	1,067	0	145	1,313
	2028	15	86	1,075	0	147	1,323
	2029	15	87	1,083	0	148	1,333
	2030	15	87	1,091	0	150	1,343
	2031	15	88	1,099	0	151	1,353
	2032	15	88	1,108	0	153	1,363
	2033	15	88	1,116	0	154	1,374
	2034	15	89	1,124	0	156	1,384
	2035	15	89	1,133	0	157	1,395
	2036	15	90	1,141	0	159	1,405

- 1 = Commercial Survey
- 2 = Data from Other Recycling Facilities
- 3 = Ohio EPA Data
- 4 = Recycling Drop-Offs
- 5 = Pike County Recycling Center

Notes: In the Ohio EPA format, the categories in Table E-7 should match categories in Table E-8. While some categories of historic data are easily extractable (such as tonnage reported by MRFs, many sources are not calculated as straight-forward and some categories double-count other categories. For example, MRF tonnage includes some tonnage from commercial survey responses, drop-off tonnage, etc. Breaking down historical data into categories, then adjusting each category for double-counting would be a labor-intensive process that ultimately will not provide useful figures because the figures would be adjusted for double-counting and not truly reflective of the quantity recycled from each source.

In **Table E-8**, actual tonnage was used for 2018. Projections for each program/source were calculated using the following assumptions and methodology:

- **Commercial survey:** 2018 was calculated as a 0.5% increase per year through the planning period.
- **Data from other recycling facilities:** Tonnage is projected to increase by 0.5% annually throughout the planning period based on the 2018 total. There are no planned changes to the program that the District is aware of at this time.

- **Ohio EPA Commercial, Tire, and Yard Waste Data:** Tonnage is projected to increase by 0.75% annually throughout the planning period based on the 2018 total. This factor is based on the average annual change in tonnage from 2014-2018 of the Ohio EPA commercial, compost, and tire data combined.
- **Non-subscription Curbside:** The drop-off program's tonnage is included in the Pike County Recycling Center tonnage, and therefore, it remains projected at 0 throughout the planning period.
- **Pike County Recycling Center:** The Pike County Recycling Center is projected to increase its recycling tonnage by 1% annually through the end of the planning period. The recycling center is the processor for all District-operated recycling programs and with initiatives planned and described in later sections of this Plan Update, will increase the recycling tonnage collected each year.

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 2018 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 (This table has been omitted for this plan as it was not applicable).
- **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 Pike County to obtain recycling data. Industrial manufacturers are surveyed. Survey recipients receive a cover letter via certified mail explaining the purpose of the survey and the survey itself. The District maintains a list of industrial manufacturers which is updated at least when the District is aware of new industries in the County. A business database is used to cross-reference the District’s list of industries with all industries in the County to ensure that all industries with 10 or more employees are contacted annually. **Table F-1** presents the industrial sector recycling totals which were reported on the 2018 Annual District Report (ADR).

Table F-1. Industrial Survey Results

NAICS	GL	FM	NFM	OCC	MxP	PL	W	Oth ¹	
321	0.1	1.0		2.5	2.0	1.0			Totals
322							2.2		
324		0.3							
325		50.0	59.3		63.0	5.0			
331								44.0	
Total	0.1	51.2	59.3	2.5	65.0	6.0	2.2	44.0	
Adj.									0.0
Adj. Total	0.1	51.2	59.3	2.5	65.0	6.0	2.2	44.0	230.3

GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, W = wood, Other1 = Oil filters

Sources: Industrial Solid Waste ADR Survey (June 2019)

The District does not survey other recycling facilities, processors, brokers that recycle industrial materials. Therefore, **Table F-2** has been omitted from this Plan Update.

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

Industrial 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. 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 already reported by generators. The following table presents the total 2018 industrial sector recycling totals from **Table F-1** and **Table F-2**.

Table F-4. Reference Year (2018) Industrial Waste Reduced

Material	Tons
Food	0.00
Glass	0.10
Ferrous Metals	51.20
Non-Ferrous Metals	59.32
Corrugated Cardboard	2.54
All Other Paper	65.00
Plastics	6.00
Textiles	0.00
Wood	2.15
Rubber	0.00
Commingled Recyclables (Mixed)	0.00
Ash	0.00
Non-Excluded Foundry Sand	0.00
Flue Gas Desulfurization	0.00
Other (Aggregated)	44.00
Total	230.31

Source(s) of Information: 2018 ADR Calculation Spreadsheets

Table F-5. Quantities Recovered by Program/Source

Program/Source of Industrial Recycling Data	Tons
Industrial survey	230.31
Other Recycling Programs/Other Sources of Data	0
Total	230.31

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 2014 to 2018 is presented in the following table.

Table F-6a. Historical Industrial Recovery by Program/Source: 2014-2018

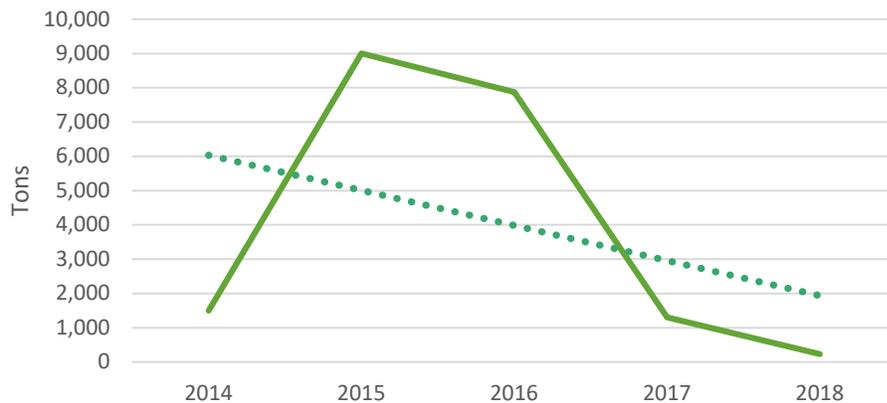
Year	Industrial Sector		
	Tons	Annual Percentage Change	Annual Tonnage Change
2014	1,501	----	----
2015	9,001	499.7%	7,500
2016	7,877	-12.5%	-1,124
2017	1,303	-83.5%	-6,574
2018	230	-82.3%	-1,073
2014-2018 Average			
Average Annual Percentage Change			80.3%
Average Tons Over 5 Year Period			3,982
Average Annual Tonnage Change			-318

An examination of the recovery patterns over the five-year period reveals that in 2018, a low of 230 tons were recovered and in 2015, a high of 9,001 tons were recovered.

The drop in 2018 was due to a major industrial manufacturer not responding to the annual surveys every year. The most significant decrease over the 5-year period occurred from 2016 to 2017, when tonnage declined 83.5%. Over the five-year period, recovery changed by an average of 318 tons, or 80.3%, annually.

The following figure presents the District’s historical industrial recovery totals from 2014 to 2018.

Figure F-1. Historical Recycling Analysis: Industrial Sector (2014-2018)



C. Industrial Recovery Projections

According to Ohio EPA’s Plan Format v4.0, if a solid waste district met the industrial reduction/recycling goal of 66% during the reference year, it is acceptable to project a constant quantity of industrial material to be recovered at the reference year quantity throughout the planning period. However, the reported data shows that the District achieved only 31.6% recycling in the industrial sector during the 2018 reference year, so the District must provide industrial sector recycling totals for the planning period.

To project the total industrial sector recycling, the District used reported recycling totals for 2013, 2015, and 2016 (when the large manufacturer had responded to recycling surveys). The total recycling for 2019 was projected by calculating the average annual reported industrial recycling tonnage in 2013, 2015, and 2016. It is assumed that the major industrial manufacturer that has not been reporting recycling tonnages recently is actually recycling a similar amount as in historical years when it responded to the District’s survey. From 2019 to 2026, recycling was projected to increase at 0.5% per year, then remain flat for the remainder of the planning period. 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 or simply whether they respond to District surveys or not. 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	Total
2015	9,001
2016	7,877
2017	1,303
2018	230
2019	8,632
2020	8,675
2021	8,719
2022	8,762
2023	8,806
2024	8,850
2025	8,894
2026	8,939
2027	8,939
2028	8,939
2029	8,939
2030	8,939
2031	8,939
2032	8,939
2033	8,939
2034	8,939
2035	8,939
2036	8,939



APPENDIX G

WASTE GENERATION



APPENDIX G. Waste Generation

A. Historical Year Waste Generated

The historical waste generation for the District (years 2014 through 2018) 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. Between the residential/commercial (R/C) sector and the industrial sector, the R/C sector has been the most stable. R/C per capita generation rates have ranged from 3.89 to 4.66 pounds per person per day (PPD) from 2014-2018. The per capita generation rate for total generation has decreased from 5.44 PPD to 4.93 PPD.

Table G-1. Reference Year and Historical Waste Generated

Year	Pop.	Residential/Commercial				Industrial			Excluded	Total		Annual % Change		
		Disposed	Recycled	Generated	PPD	Disposed	Recycled	Generated		Tons	PPD	R/C	Ind	Ex
2014	28,480	21,669	1,101	22,770	4.38	3,502	1,501	5,003	482	28,255	5.44			
2015	28,206	19,027	1,008	20,035	3.89	2,251	9,001	11,252	393	31,680	6.15	-12%	125%	-18%
2016	28,160	20,308	878	21,186	4.12	1,295	7,877	9,172	1,981	32,339	6.29	6%	-18%	404%
2017	28,270	20,848	1,163	22,011	4.27	1,759	1,303	3,062	1,836	26,909	5.22	4%	-67%	-7%
2018	28,067	22,629	1,227	23,855	4.66	499	230	730	656	25,241	4.93	8%	-76%	-64%

Note: PPD = Per capita pounds per person per day

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

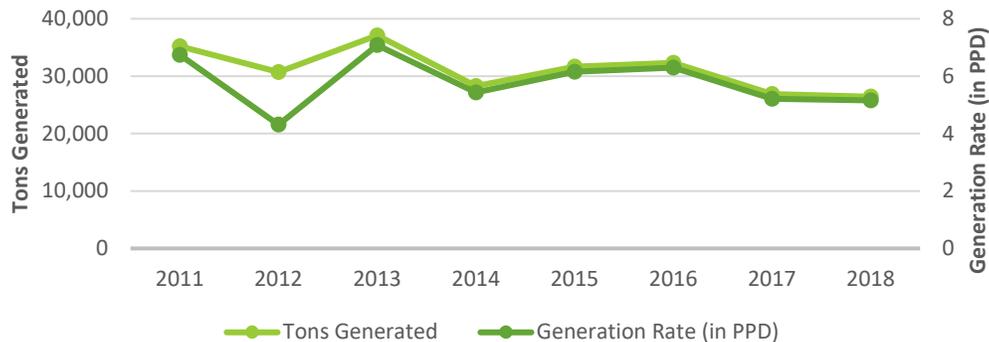
Sample Calculations (2018):

Per capita generation rate = ((tons generated x 2000) ÷ 365) ÷ population
 4.66 = (23,855 tons x 2,000) ÷ (365 x 28,067 residents)

Annual percentage change (R/C) = ((New year – old year) ÷ old year) x 100
 8% = ((25,241 tons – 26,909 tons) ÷ 26,909 tons) x 100

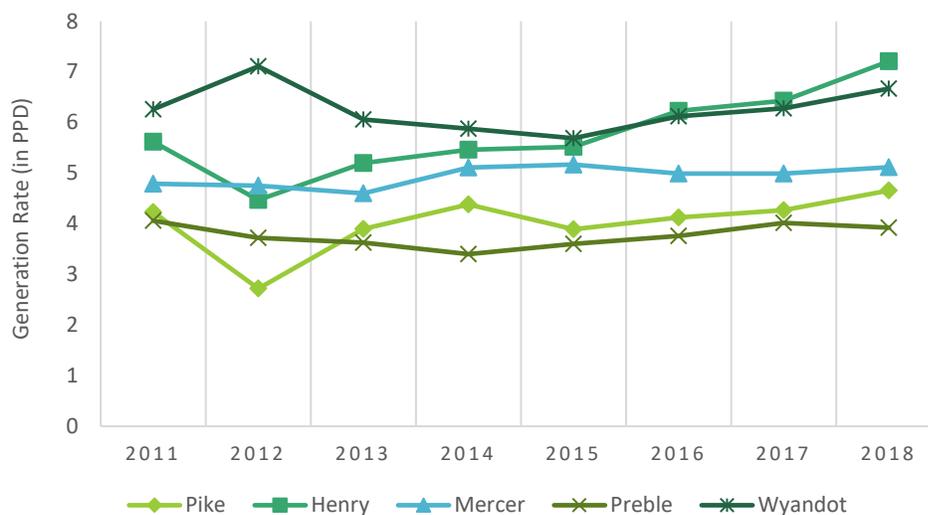
Figure G-1 shows the District’s waste generation over a longer historical period. Both the tons generated and the generation rate have declined slightly since 2011. One factor impacting generation is what is called the “shrinking ton.” Certain materials in our waste stream that were more formally prevalent such as glass containers and dense plastics have been significantly reduced by the internet and manufacturers producing lighter weight products to reduce transportation costs. For example, new water bottles that used to be rigid now can easily be squeezed due to the lighter weight plastics.

Figure G-1. Pike SWMD Total Generation: 2011-2018



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

Figure G-2. MSW Generation Rates for Selected Ohio SWMDs: 2011-2018



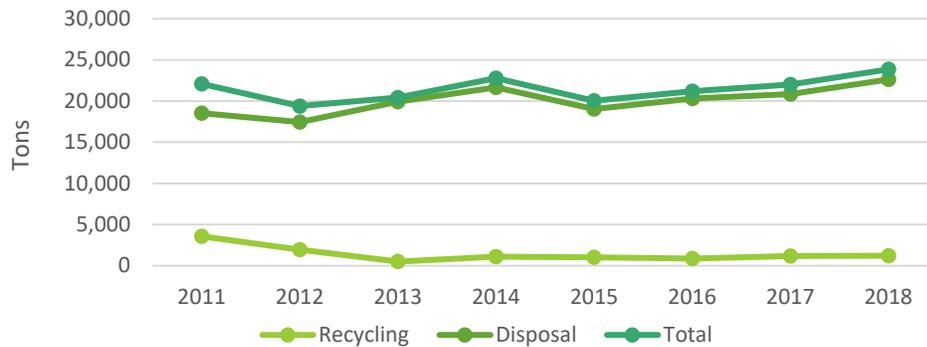
Most SMWDs that were analyzed in **Figure G-2** had slightly increasing pounds per person per day between 2011 and 2018 except Preble whose PPD slightly decreased during the time period. Throughout the analyzed eight-year period, Pike County continued to be second lowest in per capita generation of residential and commercial waste.

1. Residential/Commercial Waste

Total residential/commercial waste generation in the District has increased approximately 1,765 tons or 8% since 2011 as illustrated in **Figure G-3**.

Disposal increased approximately 4,106 tons or 22.1% from 2011 to 2018, while recycling decreased nearly 2,340 tons or 65.6%.

Figure G-3. District Residential/Commercial Waste Generation: 2011-2018



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: 2009-2018

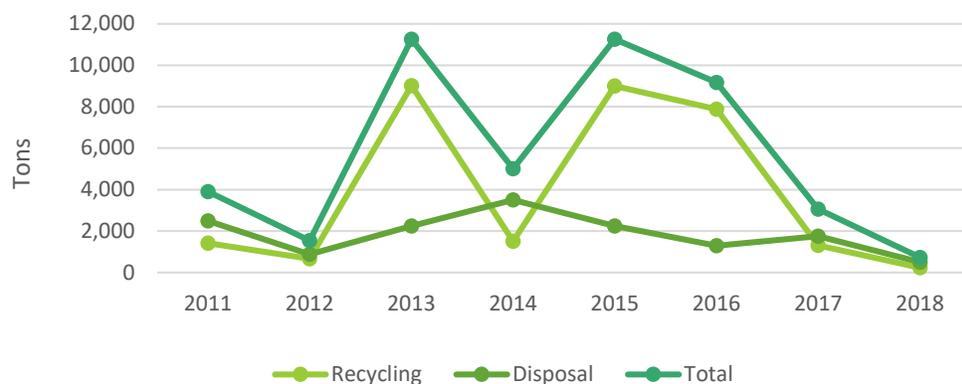
Year	Daily Per Capita Recycling (PPD)	Daily Per Capita Disposal (PPD)	Daily Per Capita Total (PPD)
2011	0.66	3.43	4.09
2012	0.38	3.36	3.73
2013	0.10	3.84	3.94
2014	0.21	4.19	4.41
2015	0.20	3.69	3.89
2016	0.17	3.94	4.11
2017	0.23	4.05	4.27
2018	0.24	4.42	4.66

Per capita recycling rates have generally decreased over the past decade mostly due to the closing of the Waverly compost site in 2013. Overall per capita generation increased about a half a pound per day, and disposal has increased approximately a full pound per person per day.

2. Industrial Waste

Total industrial waste generation varied significantly from 2011 to 2018 due to a major industrial manufacturer inconsistently responding to the District’s survey efforts. The average annual industrial recycling tonnage totaled 3,875 tons, the average annual industrial disposal tonnage totaled 1,864 tons, and the average annual industrial recycling rate between 2011 and 2018 is 53.7%.

Figure G-4. District Industrial Waste Generation: 2011-2018



3. Excluded Waste

Excluded waste was determined to be less than 10 percent of the total waste disposed in the reference year, and as a result, has been excluded in this analysis.

B. Generation Projections

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

Industrial disposal is projected to decrease annually throughout the planning period through 2026 then remain constant. Industrial recycling is expected to increase annually throughout the planning period through 2026 then remain constant.

Table G-2. Generation Projections

	Year	Population	Residential/Commercial				Industrial			Total
			Disposal	Recycle	Generation	Per Capita Generation (PPD)	Disposal	Recycle	Generation	
x First Year of Planning Period →	2018	28,067	22,629	1,227	23,855	4.66	499	230	730	24,585
	2019	28,534	20,896	1,236	22,132	4.25	2,209	8,632	10,841	32,973
	2020	29,000	21,238	1,245	22,483	4.25	2,166	8,675	10,841	33,325
	2021	29,002	21,239	1,255	22,494	4.25	2,124	8,719	10,843	33,337
	2022	29,004	21,241	1,264	22,505	4.25	2,083	8,762	10,845	33,351
	2023	29,006	21,242	1,274	22,516	4.25	2,043	8,806	10,849	33,365
	2024	29,008	21,244	1,283	22,527	4.26	2,004	8,850	10,854	33,381
	2025	29,010	21,245	1,293	22,538	4.26	1,965	8,894	10,859	33,398
	2026	29,092	21,305	1,303	22,608	4.26	1,927	8,939	10,866	33,474
	2027	29,174	21,365	1,313	22,678	4.26	1,927	8,939	10,866	33,544
	2028	29,256	21,426	1,323	22,748	4.26	1,927	8,939	10,866	33,614
	2029	29,338	21,486	1,333	22,818	4.26	1,927	8,939	10,866	33,684
	2030	29,420	21,546	1,343	22,889	4.26	1,927	8,939	10,866	33,754
	2031	29,420	21,546	1,353	22,899	4.26	1,927	8,939	10,866	33,765
	2032	29,420	21,546	1,363	22,909	4.27	1,927	8,939	10,866	33,775
	2033	29,420	21,546	1,374	22,919	4.27	1,927	8,939	10,866	33,785
	2034	29,420	21,546	1,384	22,930	4.27	1,927	8,939	10,866	33,796
	2035	29,420	21,546	1,395	22,940	4.27	1,927	8,939	10,866	33,806
	2036	29,530	21,626	1,405	23,031	4.27	1,927	8,939	10,866	33,897



APPENDIX H

STRATEGIC EVALUATION



APPENDIX H. Strategic Analysis

Appendix H includes fourteen (14) strategic analyses as required by Format v4.0. 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 v4.0 and any identified strengths and challenges and opportunities 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	•POPULATION ANALYSIS
SECTION H-12	•DATA COLLECTION ANALYSIS
SECTION H-13	•EDUCATION AND OUTREACH ANALYSIS
SECTION H-14	•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 herein in Appendix H evaluates the District's overall compliance with these goals.

Goal #1 - Opportunity to Recycle

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

Goal #2 - Waste Reduction and Recycling Rate

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

Goal #3 - Minimum Outreach and Education

- 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 - 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 identified target audiences using best practices.

Goal #5 - Industrial Programs and Services

- The solid waste management plan shall include a strategic initiative for the industrial sector consisting of a minimum of three programs the solid waste management district will make available to industrial generators.

Goal #6 - Restricted Solid Wastes, Household Hazardous Waste, and Electronics

- 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 - Economic Incentives

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

Goal #8 - 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.

SECTION H-1. Residential Recycling Infrastructure Analysis

This analysis evaluates the performance of the existing residential recycling infrastructure in Pike County to determine if it is meeting the needs of the residential sector. As demonstrated in this section, Pike County utilizes drop-off recycling located in 15 of the 17 communities during the reference year.

A. Curbside Recycling

The District does not operate or provide for curbside recycling services. Curbside recycling is not offered by private haulers in the District.

1. Challenges, and Opportunities

Challenges

- The District is rural with two small cities: Waverly and Piketon. Curbside collection of recyclables would be economically challenging in the rural areas.
- The District has one franchise agreement with a private hauler who provides curbside trash collection. The private hauler also owns and operates the Pike Sanitary Landfill. There are no other solid waste providers in the county.

Opportunities

- **Rewrite Franchise Agreement**
The District franchise agreement is on an annual auto renewal. The District could negotiate a new franchise contract that would include curbside recycling and delivery of the material to the new Pike Recycling Center. The negotiation of the franchise agreement is dependent on the outcome of the curbside feasibility study. Moreover, the franchise agreement is between the Pike County and Rumpke with the district being a stakeholder. The intent of the renegotiation would integrate the franchise agreement with the Districts goals of increasing recycling.
- **Curbside Recycling Feasibility Study**
The District met with Waverly administration to determine interest in recycling program development. Waverly administration provided supportive feedback for a curbside recycling program and support a curbside feasibility study as an element of the plan update. The district will meet with other communities including Piketon during the feasibility study project to obtain support. The feasibility study will be completed in 2021 or early 2022. The curbside feasibility study will evaluate a curbside program and will identify other enhancements if the curbside

program is not implemented. With Piketon and Waverly support, Pike County could pursue a study of the feasibility of beginning curbside recycling in either community. The feasibility study could have an optional analysis that evaluates the District providing curbside recycling services to select communities with District personnel and equipment with user fees charged though ORC 343.08.

- **New Residential Curbside Programs**

The District could begin discussions with the two largest communities in the District (Waverly and Piketon) to potentially start curbside recycling programs. This creates an opportunity for the District to assist the communities in creating an efficient program.

B. Drop-Off Recycling Infrastructure

The District has a drop-off program that consists of 15 full-time sites with containers. These sites assist residents, small businesses, and multi-family housing units with access to recycling. The sites accept the following materials:

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

1. Analysis and Evaluation

The District operates a drop-off collection service and processes the material at the District's material recovery facility (MRF). The drop-off locations have 10-yard enclosed roll off containers that are pulled on a scheduled basis or as needed. The District uses a pickup truck and a trailer with a hoist to pull the container. Once the container is loaded on to the trailer it is hauled to the District MRF where the materials are sorted and baled.

In 2020, the District built a new MRF building with significantly more square footage and height. The new facility will provide the District with capacity to process more recycling material and install equipment to move to an automated sorting operation. Early in the planning period, the District will install new processing equipment that will utilize the height of the new building for an elevated conveyor processing line that will use bins for storage. Once the bins have enough material, the material in the bins will be emptied and baled. The bales will be stored under an attached canopy until they are loaded on to semi-trailers to be transported to the end users.

This new facility will allow the District to expand the types materials currently collected for recycling and will make the operations personnel more efficient in processing the material. As the quantity of material increases, the increase

in labor to service the drop-offs will be partially offset by the increases in operational efficiencies with the new MRF and processing equipment.

Pike County Recycling Drop-off Container



The District has drop-offs located throughout Pike County. All Pike County residents have access to a drop-off at least in their township or one township adjacent. Ten out of the fourteen townships include a recycling drop-off. All drop-offs (except the heavily used recycling center) range from 0.13 to 2.25 pounds per person per year. Though this is not a perfect analysis since residents may use a drop-off not directly located in their community, this shows the activity at each drop-off. Drop-offs that are more centrally located (such as a township building or the county government center) have higher recycling rates due to residents traveling into town. The District also supports and services additional drop-offs at school districts. The following map shows the drop-off recycling infrastructure in the District during the reference year.

Figure H-1.1. 2019 District Drop-offs

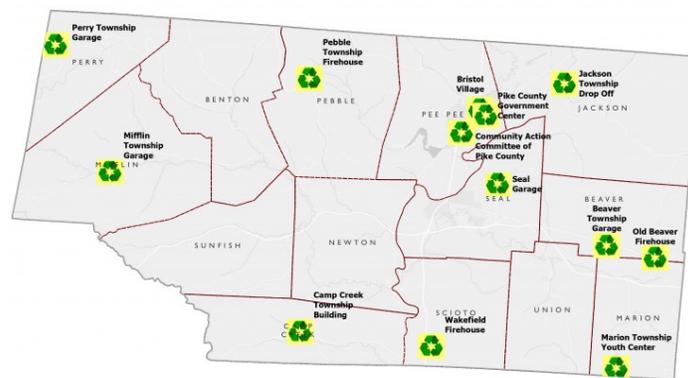


Table H-1.1: Drop-off Recycling Sites

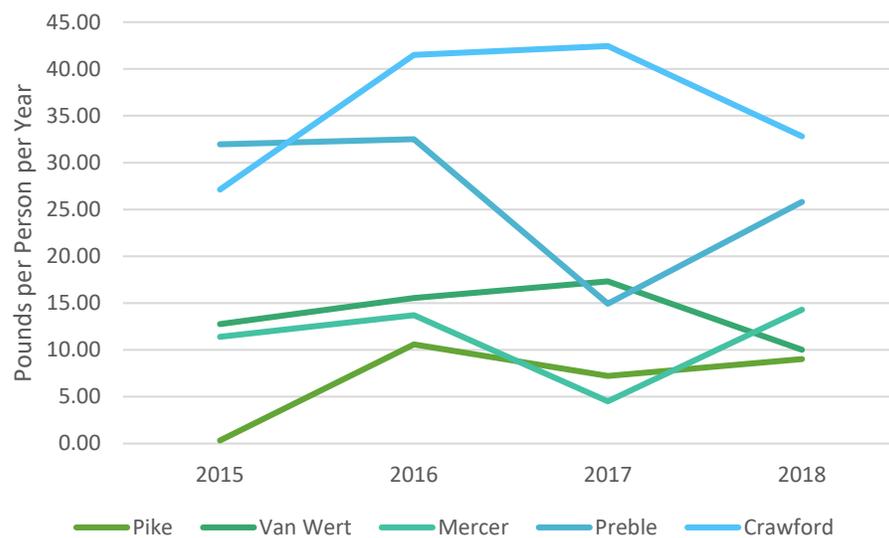
Community	Location	Drop off Tonnage	Number of Containers	Pickup Frequency*
Old Beaver Firehouse	Beaver	0.5	1	1x
Beaver Township Garage	Beaver	-	1	1x EOW
Bristol Village	Waverly	1.05	2	1x

Community	Location	Drop off Tonnage	Number of Containers	Pickup Frequency*
Camp Creek Township Building	Lucasville	1.08	1	1x EOW
Community Action Committee	Piketon	-	1	1x
Government Center Drop off	Waverly	7.12	3	1x
Jackson Township Firehouse	Waverly	0.14	1	1xEOW
Marion Township Youth Center	Stockdale	0.58	1	1x
Mifflin Township Garage	Latham	0.42	1	1xEOW
Pebble Township Firehouse	Waverly	0.17	1	1xEOW
Perry Township Garage	Cynthiana	0.11	1	1xEOW
Pike County Fairgrounds	Piketon	-	1	1xEOW
Recycling Center	Waverly	114.16	N/A	N/A
Seal Township Garage	Waverly	0.7	1	1xEOW
Wakefield Firehouse	Wakefield	0.62	1	1x
Schools	Location	Drop off Tonnage	Number of Containers	Pickup Frequency*
Eastern Local School	Beaver		1	1xEOW
Western Local School	Beaver		1	1xEOW
Piketon High School	Piketon		1	1xEOW

1x= one time per week, 1xEOW= one time every other week

All drop-offs accept paper, cardboard, aluminum cans, and plastics 1 & 2. The total tons of recyclables from the drop-off program was 126.7 in 2018 (see **Table H-1.2**). Additionally, the District compared its own drop-off program’s recycling rate per person to other similar single-county districts’ drop-off program recycling rate. Pike County remained mostly lower than the other similar districts’ recycling rates historically. However, pending the completion of the new Pike County Recycling Center, tons will increase as more materials are accepted and operations become more efficient.

Figure H-1.2. Historical Pike County and Similar Districts’ Drop-Off Recycling Rate Per Person



2. Strengths, Challenges, and Opportunities

Strengths

- The District provides a full-service drop-off recycling program with access for rural and city customers. Many communities have a site directly in their borders, or a drop off is less than 5 miles away.
- The District drop-off at the collection center is open to all District residents.

Challenges

- Contamination and open dumping can cause issues for the District when picking up materials.
- The drop-offs accept only plastic bottles, fiber, and aluminum. No glass or steel containers are accepted.

Opportunities

- **Track Contamination Levels with New Signage**
The District recently added new signs to all District drop-offs. The District may begin to audit locations to see if the signs have made an impact on contamination.
- **Increase Types of Materials Accepted**
The new District MRF will provide significant capacity to increase the types and quantities of materials collected at the drop-off. For example, the District is considering offering steel can recycling when the new facility is complete.
- **Drop-Off Use Study**
Conduct a study to estimate the number of residents who regularly use the drop-offs and who correctly use the drop-offs. The District could use the OEPA study structure for this project. The District could operate, place, and advertise each location strategically. The study will include an evaluation of the better performing drop-offs vs underperforming drop-offs to determine cause and develop a plan to increase volumes at low volume drop-offs.
- **Fiber Only Drop-Offs**
The District could investigate the possibility of placing dumpsters for paper and/or cardboard in the business districts within the villages of the County, primarily Waverly, Piketon, and Beaver. Businesses without

access to cardboard recycling will be targeted and will be identified in part through information collected during surveying.

C. Multi-Family

At this time, the multi-family residential recycling infrastructure is not clearly defined other than the publicly and privately operated drop-off recycling containers discussed previously in this section.

1. Analysis and Evaluation

Drop-off locations provide recycling opportunities for residents who live in multi-family housing units. Further analysis of the multi-family sector will help to identify sustainable solutions.

2. Strengths, Challenges, and Opportunities

Strengths

- The District's drop-off recycling program containers provide access to recycling for residents in many District communities.
- The District operates 14 sites in Pike County for recycling.

Challenges

- Many multi-family locations do not have enough space for an additional container for recycling.
- Difficult to justify economics for recycling for investment rental properties.
- Multi-family locations are not fully utilizing current drop-offs.

Opportunities

- **Contract Assistance**
Assist building owners with developing contracts either independently or in a consortium.
- **Conduct a Residential Survey**
The District could conduct an electronic survey of residents in multi-family housing units to identify whether their recycling needs are being met. Results could be analyzed by community to support the District's outreach and to improve recycling infrastructure for this demographic.

- **Promote Drop-Offs**
Compile a list of known drop-off locations and promote them on the District's website and to the metropolitan housing authority as a resource for property owners and renters.

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

This analysis considers both commercial and industrial businesses in Pike County 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 quantity and type of businesses in Pike County, the largest employers, and geographic considerations. The District used the *U.S. Business Database. Rep. Reference USA. Web. 21 July 2020* for this analysis.

1. Commercial/Institutional Establishments

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

Based on this definition, there were approximately 1,024 commercial/institutional establishments in Pike County 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	21
44-45	Retail Trade	127
48-49	Transportation and Warehousing	19
51	Information	15
52	Finance and Insurance	110
53	Real Estate and Rental and Leasing	27
54	Professional, Scientific, and Technical Services	42
55	Management of Companies and Enterprises	1

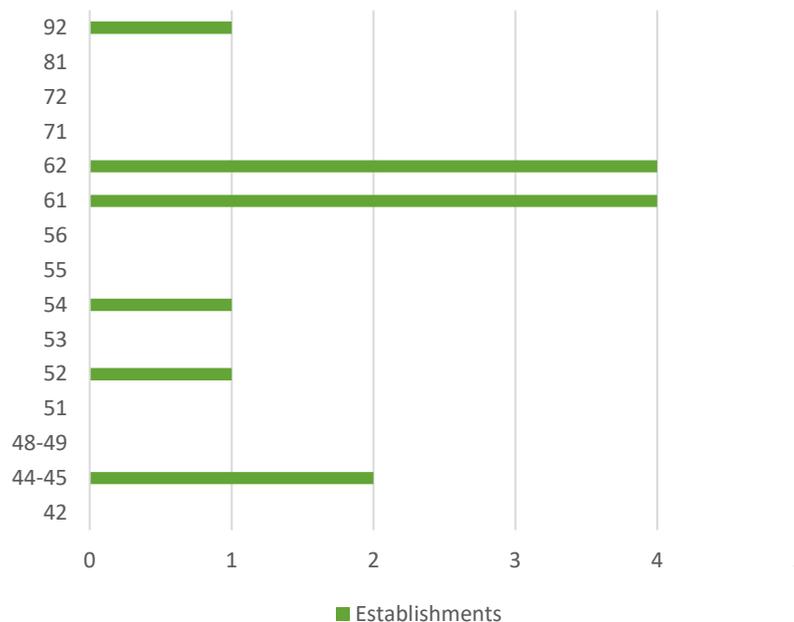
NAICS Code	NAICS Description	Number of Commercial/ Institutional Establishments
56	Administrative and Support and Waste Management and Remediation Services	14
61	Educational Services	29
62	Health Care and Social Assistance	385
71	Arts, Entertainment, and Recreation	10
72	Accommodation/Food Service	48
81	Other Services (Except Public Administration)	102
92	Public Administration	74

Source: U.S. Business Database. Rep. Reference USA. Web. 21 July 2020.

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

Based on the District’s analysis, 13 or approximately 1.3% 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. 21 July 2020

The types of businesses that have the most establishments that employ at least 100 people include NAICS code 61 (educational services) and NAICS code 62 (health care and social assistance).

Table H-2.2 identifies the top 10 employers in the District (for all sectors).

Table H-2.2. Top Employers in the District (150+ employees)

Company Name	NAICS	Employees
Head Start Early Head Start	62	291
Walmart Supercenter	45	286
Adena Pike Medical Ctr	62	260
Atomic Credit Union	52	200
Kroger	44	200
Community Action Cmte-Pike	92	145
Pleasant Hill Manor	62	130
Western Local Board of Edu	61	118
Jasper Elementary School	61	115
Piketon Junior High School	61	110

Source: U.S. Business Database. Rep. Reference USA. Web. 21 July 2020

2. Industrial Establishments

There are 45 industrial businesses that operated in Pike County during the reference year. Unlike commercial and institutional establishments, most industrial businesses have just one location in Pike County. **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	6
32	Manufacturing: Wood, Paper, Printing, Chemical, and Plastics	17
33	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.	15

Source: U.S. Business Database. Rep. Reference USA. Web. 21 July 2020; ADR Surveys 2019

About 47% of industrial businesses have an average employment of 10 or more individuals. Similar to commercial and institutional establishments, only a small percent of industrial businesses (2.2%) have a staff of greater than

100 employees. The top 20 industrial sector employers are presented in **Table H-2.4**.

Table H-2.4. Largest Industrial Sector Employers

Company Name	NAICS	Employees
Centrus Energy	32	1000
Centrus Energy	32	70
Ohio Valley Veneer	32	60
Clarksville Stave & Veneer	32	40
Piketon Water Dept	22	30
Ritchie's Food Distrs Inc	31	30
Mill Tree Lumber Holdings	32	27
Barker Lumber	32	25
Beaver Wood Products LLC	32	25
Ohio Valley Veneer	32	25

Source: U.S. Business Database. Rep. Reference USA. Web. 21 July 2020

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
Mixed Paper, Cardboard, Glass, Plastic, Aluminum Cans, Steel Cans	Rumpke	11775 OH-220	Waverly	OH
Mixed Paper, Cardboard, Plastic, Aluminum Cans, Steel Cans, Cell phones	Pike County Solid Waste District	274 Progress Drive	Waverly	OH
Rechargeable batteries	Klinker's Lumber	100 7th Street	Waverly	OH
Rechargeable batteries	Radio Shack	206 Waverly Plaza	Waverly	OH
Dry cell batteries	McConkey Auto Parts	112 S. Market Street	Waverly	OH
CFLs	Lowe's	867 N Bridge St	Chillicothe	OH
Metal	Barker's Recycling	4024 Bobo Road	Beaver	OH
Metal	Daniel's Metal Company	507 West Second Street	Waverly	OH
Used oil	AutoZone	723 W. Emmitt Avenue	Waverly	OH

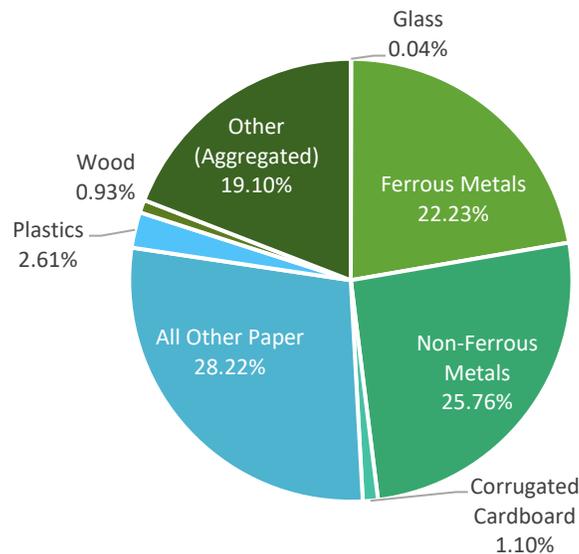
Some of these recycling facilities/haulers will collect or accept waste from a business based on their proximity, amount available, and market value of the material. Select facilities provide drop-offs for businesses. In addition, the District is serviced by multiple hauling companies that also process commingled recyclables. Information on processing capacity in the region is provided in Section H-14.

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 2018, industrial businesses recycled approximately 230.31 tons of waste and disposed 499 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. 2018 Industrial Sector Recyclables Recovered by Material (in percent of total)



As shown by **Figure H-2.2**, paper, and metals comprise the majority of industrial sector recyclables. **Table H-2.6** shows the quantity of material recycled by the industrial sector between 2014 and 2018.

Table H-2.6. 2014-2018 Industrial Recycling by Material

Material	2014	2015	2016	2017	2018
Batteries		-	-	-	-
Food	4.20	-	-	-	-
Glass	1.00	1.00	0.13	0.13	0.10
Ferrous Metals	15.00	7451.00	6,259.00	54.91	51.20
Non-Ferrous Metals	35.00	-	-	61.9	59.32
Corrugated Cardboard	20.00	13.00	15.00	2.00	2.54
All Other Paper	22.50	9.00	11.00	56.00	65.00
Plastics	6.40	1.00	1.00	7.00	6.00
Textiles	-	-	-	-	-
Wood	1,377.50	1528.80	-	-	2.15
Rubber	-	-	1,391.15	0.15	-
Commingled Recyclables (Mixed)	18.00	-	-	102.16	-
Ash	-	-	-	-	-
Flue Gas Desulfurization Waste	-	-	-	-	-
Non-Excluded Foundry Sand	-	-	-	-	-
Other (Aggregated)	-	0.17	-	1,019.03	44.00
Total	1,500.60	9,000.97	7,677.28	1,303.28	230.31

As demonstrated in **Table H-2.6**, there have been fluctuations in these quantities during the last five years. One of the overriding variables causing changes in quantity of materials recycled in the industrial sector is due to whether or not a particular business responded to the District's recycling survey in a given year. Other factors that contribute to variations in tonnage include economic factors, energy/fuel pricing, and other economic issues.

1. District Business and Industry Recycling Assistance Programs

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

Surveys

The annual recycling surveys sent out annually offer an opportunity for the District to connect with businesses located in the District. They also provide the District with information to monitor how the commercial and industrial recycling programs are operating.

Technical Assistance

The Pike County Solid Waste District offers advice and program development for businesses wishing to begin waste diversion activities or improve their current program. Businesses are often present at presentations that the District gives.

Education & Awareness

The District hosts presentations, educational displays, advertising, website, and flyers and brochures that are available for businesses at presentations to local groups. In reference year 2018, the District set up displays at 9 events throughout the county for open houses, senior expo, Pike county fair, a Christmas event, and other events. In 2018, performed 8 presentations at schools and other events for children. Also, did one composting class for adults.

“Buy Recycled” Promotion

The District incorporates the “buy recycled” philosophy into commercial and industrial reduction and recycling programs as often as possible. Many materials used in presentations and displays are also made with recycled materials. Additionally, a list of local businesses that buy scrap metals is maintained and distributed at fairs, festivals, and presentations.

D. Strengths, Challenges, and Opportunities

Strengths

- The District provides opportunities to educate the commercial and industrial businesses in the County.
- The drop-off program sponsored by the District gives small commercial businesses and institutions an outlet to recycle.

Challenges

- Many of the District’s programs focus on the residential sector leaving limited availability to focus on commercial and industrial sector outreach.
- The District does not receive recycling survey data from many of the largest employers in the County.
- Annual industrial recycling tonnages vary from year to year.

Opportunities

- **Strategic Approach to Target Businesses for Assistance and Surveys**

The District could use a database to target businesses where there are greatest opportunities to recycle based on factors such as number of employees, NAICS code, geographic cluster, or proximity to recycling processors. The District could collaborate and survey these targeted businesses to determine if they are interested in District support to start or increase recycling. Based on survey results, the District could design workshops targeting businesses either by NAICS or geographic region. Additionally, the District can create a relationship with these businesses so that they respond to annual surveys.

- **Zero Waste Planning Services for Industry**

The District could help industrial facilities consider the development of a zero-waste plan. This would include establishing an industrial green team and the development of recommendations for the industry's waste streams.

- **Promote Ohio Materials Marketplace**

The District can direct businesses and industries to the Ohio Materials Marketplace. The Ohio Materials Marketplace aims to create a closed-loop, collaborative network of businesses, organizations, and entrepreneurs where one organization's hard-to-recycle waste and by-products becomes another organization's raw material. In addition to diverting waste from landfills, these recovery activities could generate significant cost savings, energy savings, and create new jobs and business opportunities.

- **Place District Multi-Material or Fiber Drop-offs in Business Districts**

See H-1, Section B above (multi-material) and H-4, Section E below (fiber) for this opportunity.

- **Additional "Buy Recycled" Promotion**

In addition to the District's current "Buy Recycled" promotional activities, the District could create a model environmentally preferable policy for procurement that government agencies, institutions, and businesses could adopt in the District. This policy could be advertised on the website as well as general information about buying recycled.

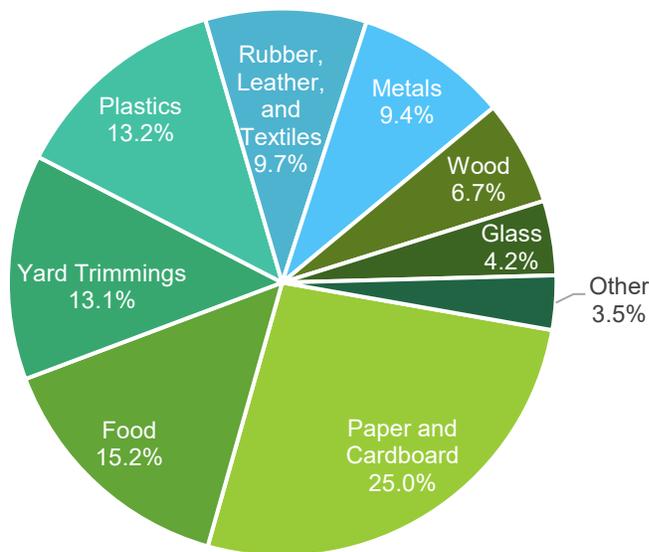
SECTION H-4. Residential/Commercial Waste Composition Analysis

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: 2017 Fact Sheet. November 2019.

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 twice as much paper and paperboard as the next highest category of material (food waste).

Figure H-4.2. Estimated Residential/Commercial Total Generation by Material Type: 2018

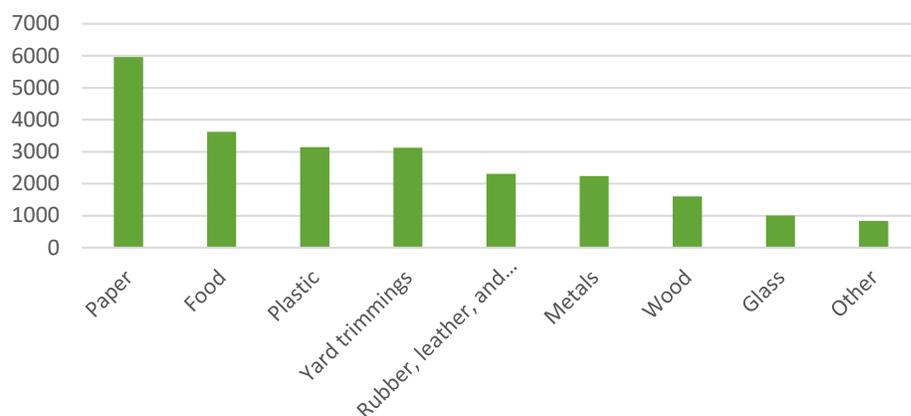


Figure H-4.3 shows annual per capita waste generation by material based on US EPA estimates. *Per capita* waste generation ranges from 59.5 pounds per person/year for “Other” to 425 pounds per person per year for paper and paperboard. “Other” includes all other materials, such as diapers, feminine products, 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: 2018 (Based on US EPA estimates)

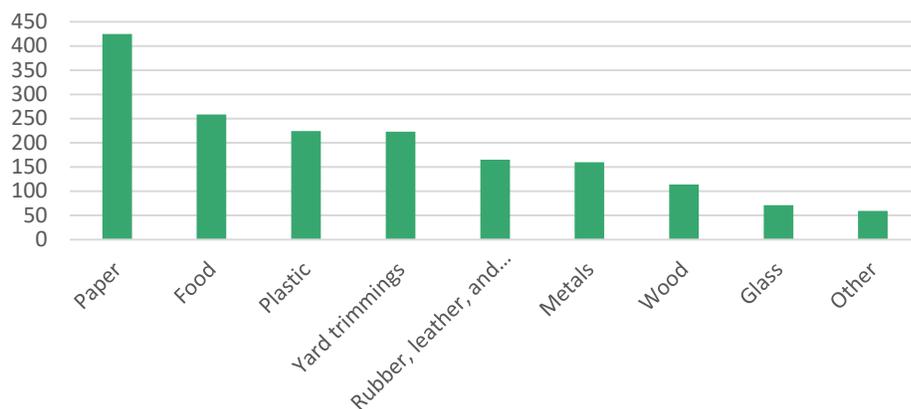
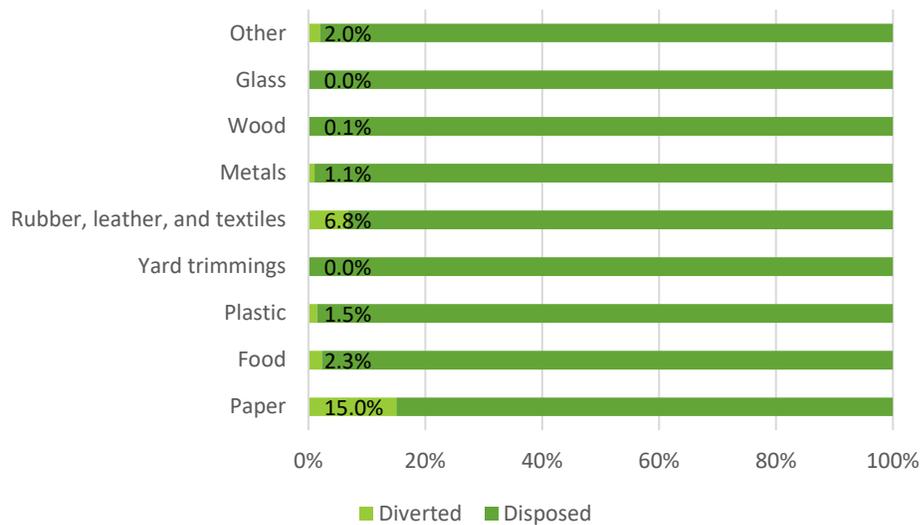


Figure H-4.4 shows the percentage of the residential/commercial materials recovered for recycling in the District (as reported in its 2018 Annual District Report) compared with the total material generated. As shown, the District has the highest recovery rate (or recycling rate) for paper, which is calculated to be 15%. Rubber and food waste are the next two highest recovered materials at 6.8% and 2.3% respectively, while yard trimmings and glass have the lowest recovery rates at 0%. According to the *US EPA 2017 Fact Sheet*, the national average recycling rates are 65.9% for paper and paperboard, 69.4% for yard waste, 33.3% for metals, 28.4%

for other, 26.6% for glass, 18.3% for rubber and leather, 16.7% for wood, 15.2% for textiles, 8.4% for plastic containers, and 6.3% for food waste.

Figure H-4.4. District Material Recycling Rates Compared to Total Generation: 2018



B. Yard Waste Programs

1. Processing

The District is predominately a rural county and there are no Class II, III, or IV compost facilities in the District. The surrounding counties are also rural with only Highland County to the West having Class III and IV compost facilities. The City of Waverly has a yard waste drop-off for limbs and branches. The limbs and branches are periodically processed into wood chips and utilized by residents and the City.

2. Residential Yard Waste Collection Programs

The District is predominately a rural county and there are no residential yard waste collection programs.

3. Education

The District has composting information posted on its website and has partnered with Pike County Soil and Water Conservation and OSU Extension. For example, backyard composting workshops are given by the OSU Extension office that are sponsored by the District.

C. Food Waste Composting Programs

In 2018, there were no Class II registered compost facilities operating in the District that accepted food waste. In-District food waste processing and options for food waste collection are issues in Pike County.

1. Food Waste Haulers and Processors

There are not currently any food waste haulers operating in Pike County, and because of limited volumes and hauling distance, food waste recycling is difficult. Moreover, the proximity of an in-District landfill makes food waste composting significantly challenging.

2. Food Waste Programs

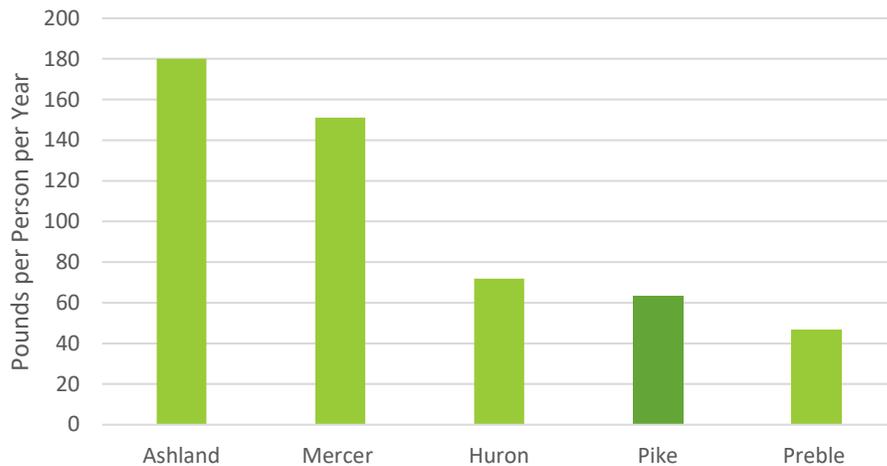
Due to the limited infrastructure for managing food waste in Pike County, there are no District-funded programs directly related to reducing food waste.

D. Fiber (Paper) Recycling Programs

Fiber includes cardboard, mixed paper, office paper, and newspaper and comprises about one-fourth off all residential/commercial waste generated. Pike County collects fiber in programs from all sectors. Paper and cardboard are accepted at all drop-off locations listed in **Appendix B, Table B-2**. In addition, the District's facility accepted 39.12 tons of cardboard and 68.48 tons of paper in 2018 as well as additional paper mixed in with commingled materials. The District provides comprehensive information for residents and businesses about cardboard and paper recycling opportunities in its flyers, on its website, and on its social media page.

The figure below represents Pike County and other similar solid waste districts' fiber recycling rate per person. These similar districts were selected based on similar population sizes and availability of data. Though these districts all have higher populations and are slightly more urban, Pike County has a similar fiber recycling rate to Huron and Preble.

Figure H-4.7. Recovery Rates of Fiber Waste for Selected Ohio SWMDs: 2018



Note: Fiber includes mixed paper and cardboard reported on 2018 Annual District Reports.

The District’s residential and commercial sectors recycled approximately 897.05 tons of fiber in 2018. Approximately 11%, or 132.87 tons, was recovered from the residential drop-off recycling program and the Pike County Recycling Center. The remaining 89%, or 1,012 tons, was recycled by the commercial sector. Only two organizations responded to the commercial recycling surveys, and both reported recycling mixed paper.

- NAICS Code 62, Health Care and Social Assistance: 9 tons
 NAICS Code 81, Other Services (except Public Administration): 5 tons

The amount of fiber material recycled in the District is much lower compared to other rural solid waste districts in Ohio (see **Figure H-4.7**). Since fiber is the largest component of the District’s residential/commercial waste stream, opportunities to increase fiber diversion are significant given the plentiful opportunities and infrastructure. Strategies to increase fiber recycling should focus on education and awareness to promote participation in existing programs and the use of existing infrastructure.

The District-wide recycling education programs, website, and new recycling center will play a key role in improving fiber recovery rates. The website offers educational materials. There are plentiful opportunities for residents and businesses to recycle paper and cardboard for no cost; the focus during this planning period will be to increase the quantity of materials recycled by current recycling program participants and to improve participation rates.

E. Strengths, Challenges, and Opportunities

The following section summarizes the strengths and challenges for residential/commercial waste composition.

Strengths

- There are abundant education materials, services, and opportunities provided by the District with information online for public access. District partners annually with Pike county Soil and Water for vermiculture and back yard composting class.
- Opportunities to recycle paper for no charge are plentiful throughout the District.
- New recycling center will create opportunities to accept additional materials, for example, steel cans.

Challenges

- There are opportunities to improve overall residential/commercial waste diversion, which was 5.1% during 2018.
- There are limited options for managing food waste in the District and no known food waste haulers provided service in Pike County. The District will continue to evaluate opportunities at the municipal and county level for food waste diversion.
- There are 0 municipalities in the District that have a yard waste curbside collection program.
- There are no registered compost facilities in the District, and no other known private composting operations in the District.
- Current market conditions for some plastics make expanding recycling program challenging.
- Glass is not currently recycled in the drop-off collection program.
- Despite the widespread opportunities to recycle paper and cardboard throughout the District, estimates indicate that only 15% of the fiber generated is recycled, while 85% is still being disposed.
- Export restrictions and higher recycling standards on fiber and mixed plastics by China may affect local recyclers and MRF operators. Impacts from trade restrictions will be more pronounced on the East and West coasts, but the

longer these restrictions stay in place, the more likely it will be that Ohio will be impacted in the long-term and affect markets and pricing.

Opportunities

- **Yard Waste Processing Feasibility**

The District used to have a composting site in Waverly that discontinued in 2013. The District could meet with the villages of Waverly and Piketon (or any other communities that are interested) in restarting the Waverly site or starting a new composting site in District. Alternatively, the District and the community could compromise on a yard waste drop-off that eventually gets hauled to an out-of-District composting site. The District will fund a yard waste feasibility study that will provide recommendations for a yard waste facility for the District.

- **Yard Waste as Part of Curbside Program**

The District plans on assisting interested communities in implementing recycling curbside programs. The District could discuss with the community and hauler to see if yard waste curbside collection would be an option.

- **District-Sponsored Paper Collection Boxes**

The District could investigate the feasibility of establishing fiber-only containers at public drop-offs located throughout the County or at private businesses willing to partner with the District. These could potentially increase the paper and cardboard collected for recycling. See H-1, Section B for more information on this opportunity.

SECTION H-5. Economic Incentive Analysis

In accordance with Goal 6 of the 2009 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 provide economic incentives directly or indirectly for greater recycling or waste reduction.

A. Existing Volume-Based Programs

1. Analysis and Evaluation

There are currently no curbside recycling or trash collection programs in the District; and as a result, there are no volume-based collection programs operating in the District.

1. Strengths, Challenges, and Opportunities

Challenges

- No communities in the District currently operate a curbside recycling collection program to improve upon.

Opportunities

- **Begin Curbside Programs as PAYT**
The District can work with one or two of the larger communities in the District to start curbside collection programs. Starting from scratch gives the community and District the opportunity to make the curbside program volume-based from the start.

B. Grants/Financial

The District plans to begin a Community Incentive Grant program to assist communities with curbside recycling programs, yard waste drop-offs, or yard waste composting facilities as well as an institutional recycling incentive program. The District has been in discussions to begin these programs and plans to continue these programs going forward.

1. Analysis and Evaluation

Community Incentive Grant Program

The Community Incentive Grant Program has been developed and will begin in 2020. The program will fund curbside recycling programs, yard waste composting facilities, yard waste drop offs, special event recycling, or other

community recycling programs. Funding is set at \$45,000 with a 25% match required that can include “in-kind” services. Organizations that can apply include community groups, schools, not-for-profits, and businesses.

Recycling Incentive Study

Additionally, the District is in the planning stages of a recycling incentive program to develop strategies to recycle more at businesses, schools, and government entities. The District plans to give a grant based on how much was recycled at the winning organization. Additionally, the District will create a post on the website or social media about which organization recycled the most along with their contact information as a form of free advertising.

2. Strengths, Challenges, and Opportunities

Strengths

- The District has planned previously and still plans to begin funding these recycling incentive programs.

Challenges

- It is difficult for the District to determine how much to fund each program.
- Ensuring less populated communities receive adequate funding.

Opportunities

- **Create Grant Program Guidelines**
In order to speed up the process and determine how much funding should go towards each grant, how often a grant should be given out, how many grants should be given out, and all other operational features of this program can be written out and summarized in a grant guidebook. Many other districts have grant guidelines that help them to continue to operate their grant programs year after year.
- **Recycling Incentive Study**
Carry out the Recycling Incentive Study to develop strategies to recycle more at businesses, schools, and government entities. These organizations would be able to compete monthly or less or more often as determined.

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, lead-acid batteries, e-waste (or electronics), appliances, fluorescent bulbs, used oil, propane tanks, pharmaceuticals, sharps, and yard waste. The District or local communities have programs designed to address each of these materials. For an explanation of the yard waste program, see **Section H-4**.

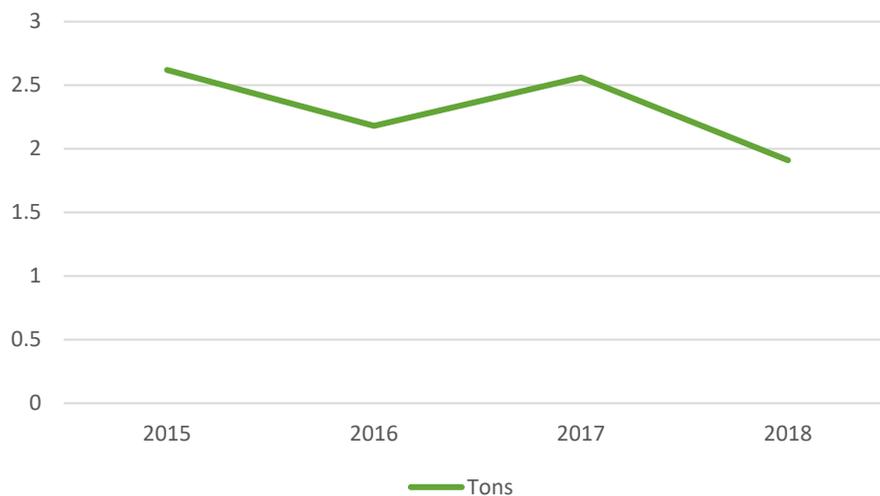
A. Household Hazardous Wastes (HHW)

The District hosts HHW collection events when funding is available. The District was able to host an HHW collection event in both 2019 and in 2018. In 2018, the collection event occurred on April 30 and collected 5,019 lbs. of HHW at the Pike County Government Center. Most hazardous waste and chemicals were accepted, but some items were not accepted such as appliances, electronics, tires, trash, or medical waste.

Information about the proper disposal of household hazardous waste (HHW) is available on the District’s website. The website also includes information on the benefits of proper HHW management, HHW facts and figures, HHW reduction, and disposal options. HHW brochures are available at presentations and events. Additional discussion of District educational efforts for proper HHW management can be found in **Appendix L**.

Figure H-6.1 shows the pounds of HHW materials collected throughout the District.

Figure H-6.1. HHW Tonnages: 2015 – 2018



The District provides education addressing management of HHW through its educational materials, events, and flyers. HHW information is also available in the Recycling Guide on its website. Further discussion of HHW education can be found in **Appendix L**.

1. HHW Strengths, Challenges, and Opportunities

Strengths

- The District provides annual HHW collection events to District residents when funding is available that allows for more opportunity to recycling and properly manage special wastes.
- The program provides residents with information to maintain safety for the environment and human health by properly disposing of HHW.

Challenges

- The program does not provide HHW collection for residents on a daily/weekly basis.
- Residents have limited disposal options available for most HHW materials.
- Currently, the District does not have available space for a permanent collection/drop-off site for HHW.

Opportunities

- **Research More Outlets**
The District may research additional businesses in and around Pike County that accept hazardous materials (or other hard-to-manage materials described below).
- **Collaborate with Neighboring Solid Waste Districts**
Pike County Solid Waste District is surrounded by four other solid waste districts. Pike and these other rural districts may be able to plan HHW collection events or location together in order to cut costs for both parties.

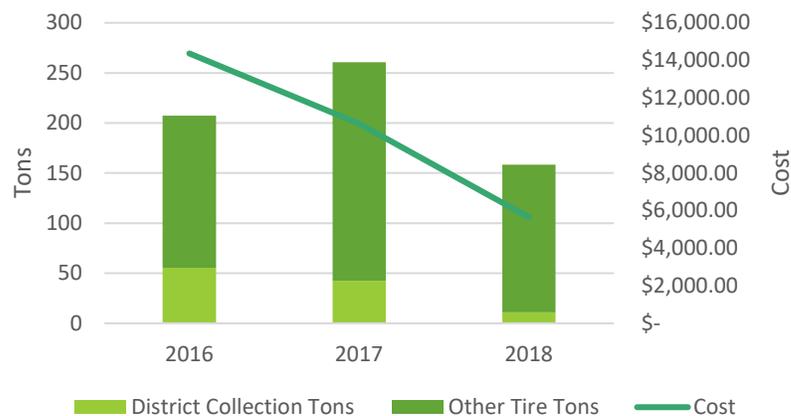
B. Scrap Tires

Pike County has a sufficient infrastructure for managing scrap tires. The Pike County Sanitation Landfill (not District-owned) located in Waverly has a licensed scrap tire

monocell and Class II Storage Facility. Sundown Tire Recycling located in Piketon is also a Class II Storage Facility. Pike Sanitation and Sundown Tire Recycling are both licensed scrap tire transporters in Pike County.

Additionally, the District works alongside the Pike County Health District to hold tire amnesty events when funding is available from Ohio EPA grants. The District maintains this program to help manage scrap tires generated within the County. In 2018, the District did not receive a grant, but still held a tire collection event. Between the tire event and the Spring Clean-Up, the District collected 212 passenger tires, 144 truck tires, and 13 farm tires (approximately 11.13 tons) and cost approximately \$5,644. Additionally, 147.16 tons of tires were collected by other commercial and residential generators around the District in 2018. The following chart summarizes the tons and annual cost to the tire collection program.

Figure H-23. Tire Collections: 2016-2018



The District also maintains information regarding management of scrap tires on its website and flyers for residents, businesses, and other generators. Additional discussion of District educational efforts for proper scrap tire management can be found in **Appendix L**.

1. Scrap Tire Strengths, Challenges, and Opportunities

Strengths

- Costs have decreased from the annual events.
- The Solid Waste District is able to get assistance from the Pike County Health District.

- Multiple outlets including tire retailers are available for disposing of tires in the county.

Challenges

- Scrap tires collection and processing are expensive.
- Residents do not always turn in their old tires at dealers when purchasing new tires.
- Grant funding is not always available from the Ohio EPA for tire amnesty events.

Opportunities

- **Advertise Other Outlets for Recycling Tires**
The District has multiple solutions for the management of scrap tires including tire retailers who accept tires for recycling. The District could target its outreach efforts on these other locations to take scrap tires. This could also decrease funds needed for tire collection events.
- **Advertise the Importance of Recycling Tires**
Tire dumps can become a pest, health, and community issue if not managed properly. The District could focus more educational topics on the importance of the correct management of tires.

C. E-Waste and Appliances

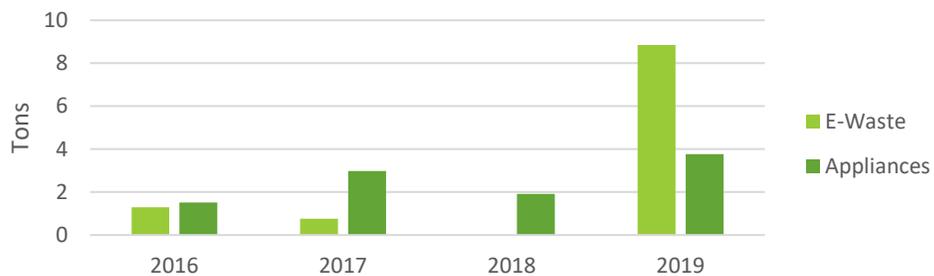
The District continues to collect electronics at the Recycling Center year-round. Additionally, the District holds a two-week-long appliance and electronics collection drive twice per year. County residents can sign up to have their electronics and appliances picked up from their home by District employees. Most materials are free, but televisions have a fee per unit depending on the size.

In 2018, 49 residents participated in the two drives. The District was going to use a local recycler for e-waste, but the materials were never picked up. Instead, the District held the electronics, and 8.85 tons of 2018 and 2019 electronics were picked up by Greenwave in 2019. In 2018, 1.91 tons of appliances from the events were recycled as well and sent to local metal scrap recyclers. Approximately \$562 was spent on advertising this event in 2018, and approximately \$4,809 was spent in 2019 for advertising those events and the processing of both years' electronics and appliances.

Electronics recycled at the collection drives include computers, printers, monitors, TV's, radios, speakers, phones, DVD players, CD players, clocks, vacuum cleaners, battery operated tools, humidifiers, dehumidifiers, or almost everything with a cord.

The District also provides other outlets for general electronics, cell phones, and appliances on their website. The District provides information on its website, in the flyers, and at educational events for the safe and correct handling of e-waste.

Figure H-23. E-Waste and Appliances Collections: 2016 – 2019



1. E-Waste Strengths, Challenges, and Opportunities

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

Strengths

- Electronics are collected year-round at the Recycling Center as well as during special collection events.

Challenges

- The cost of television recycling continues to increase.
- Local recyclers are not as reliable as large processors out of District.

Opportunities

- **Develop Long-Term Relationship with E-Waste Processors**
 In 2018, the District operated an e-waste collection event, and had a local processor lined up to collect the material for processing. However, this arrangement did not happen. The District may want to connect with other processors in and out of the District to prepare for future issues.

D. Lead-Acid Batteries

Lead-acid batteries are collected as part of the HHW events. The District also provides other outlets for recycling lead-acid batteries and other batteries on its website. Additional background information on the safe and correct handling of scrap batteries are available on the District's website, educational presentations, and flyers. The District did not track its recycling of lead-acid batteries in 2018 and in the past because they are combined in the HHW tonnages.

1. Lead-Acid Battery Strengths, Challenges, and Opportunities

The District believes that the opportunities for lead acid battery management are generally sufficient.

E. Other Difficult-to-Manage Materials

Fluorescent Bulbs

Fluorescent bulbs are collected as part of the HHW events. The District also provides other outlets for recycling fluorescent bulbs on its website. Additional background information on the safe and correct handling of bulbs are available on the District's website, educational presentations, and flyers. The District did not track its recycling of fluorescent bulbs in 2018 and in the past because they are combined in the HHW tonnages.

Used Oil

Used oil is collected as part of the HHW events. The District also provides other outlets for recycling used oil on its website. Additional background information on the safe and correct handling of used oil are available on the District's website, educational presentations, and flyers. The District did not track its recycling of used oil in 2018 and in the past because they are combined in the HHW tonnages.

1. Other Materials Findings and Challenges

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

SECTION H-7. Diversion Analysis

The table below shows the amounts of solid waste which were generated and diverted via recycling from 2014 to 2018. Overall, total recycling has fluctuated each year between 2014 to 2018 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: 2014-2018

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
2014	28,480	27,773	2,602	5.34	0.50	-	-
2015	28,206	31,287	10,009	6.08	1.94	12.7%	285%
2016	28,160	30,358	8,755	5.91	1.70	-3.0%	-13%
2017	28,270	25,073	2,466	4.86	0.48	-17.4%	-72%
2018	28,067	24,535	1,407	4.79	0.27	-2.1%	-43%

A. Residential/Commercial Sector

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

1. Analysis and Evaluation

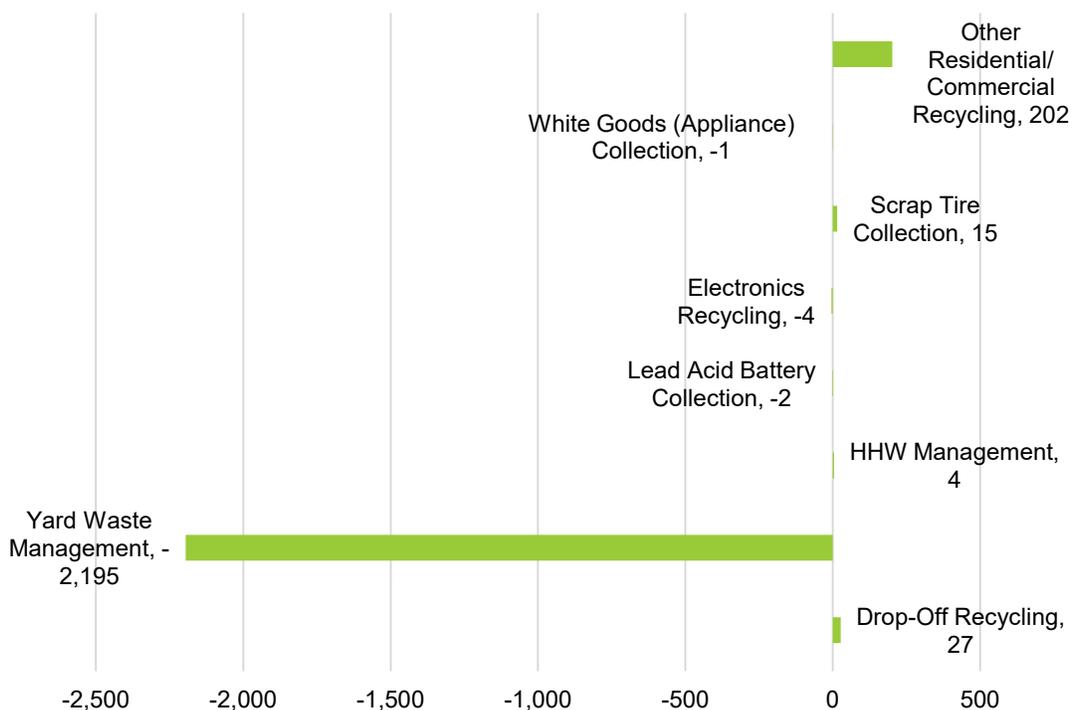
The District’s R/C recycling (or diversion) rate during the past five years has stayed relatively steady ranging from 4.14% to 5.28% (see **Table H-7.2**). The per capita diversion rate as measured in terms of pounds per person per day (PPD) has also remained steady ranging from 0.17 PPD to 0.23 PPD between 2014 and 2018.

Table H-7.2. R/C Diversion Rates: 2014 – 2018

Year	Diversion Rate	
	Percent (%)	Per Capita
2014	4.84%	0.21
2015	5.03%	0.20
2016	4.14%	0.17
2017	5.28%	0.23
2018	4.94%	0.23

In order to achieve Goal #2, a district's R/C recycling rate must reach 25% diversion. Pike County did not reach this goal in 2018, but the current plan only projected a 16.1% recycling rate (see figure below).

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



The main reason for the major difference is because two-yard waste facilities were projected to open during the planning period, but they did not. The Village of Waverly discontinued its composting operation in 2013, but based upon discussions with Village officials, it was expected that this activity would resume in 2015. Additionally, the Village of Piketon had planned to open a composting facility, but this also did not come to fruition.

Other programs recycled quantities that were very close to what was projected, and drop-off recycling and commercial recycling increased.

Compared to other similar SWMDs in Ohio, the diversion rate for the District is lower by total R/C recycling rate and recycled pounds per person per day (see **Table H-7.3**). Pike County has the lowest R/C diversion rate compared to the five other single-county Districts with the most similar population size. From 2016 through 2018, the statewide R/C percentage recycling rate hovered around 28-30 percent, while the per capita recycling rate decreased slightly from 6.1 to 5.8 PPD, so Pike County is below the statewide averages.

Table H-7.3. R/C Diversion Rates for Other Ohio SWMDs: 2018

SWMD Name	Population	Res/Com Diversion Rate	
		Percent (%)	Per Capita
Pike	28,067	5.1%	0.24
Henry	27,185	46.2%	3.33
Van Wert	28,086	24.1%	0.69
Wyandot	22,029	45.4%	3.03
Putnam	34,499	55.0%	1.87
Preble	42,045	15.1%	0.59

2. Conclusions, Strengths, and Challenges

There is room to improve recycling quantities in the residential and commercial sectors in the District, but the District has been increasing their residential/commercial recycling rate annually.

Strengths:

- District has added new residential/commercial recycling drop-off locations since the previous Plan Update.
- Recycling drop-offs and commercial recycling tonnages acquired from surveys have both increased and are higher than what was projected from the last Plan update.
- The diversion rate has increased over the past five years.
- New recycling center allows for additional types of recyclables to be collected in recycling programs.
- New incentive grant program will provide funding for recycling opportunities and education outreach.

Challenges:

- R/C per capita diversion rate is lower than similar solid waste districts in Ohio.
- The diversion rate is lower than many similarly sized districts.
- Increasing diversion will require more participation from both the commercial and residential sector.

- Special collections and recycling special materials are slightly lower than what was projected in the previous Plan Update due to issues with processors and acquiring grant funding.
- Focusing on enhanced surveying would provide more data of recycling in the District.

Opportunities

- **New Compost Facility**
See H-4.
- **New Residential Curbside Programs**
See H-1.
- **New Fiber Recycling Drop-Offs**
See H-1.
- **New Increase in Types of Materials Accepted**
See H-1.

B. Industrial Sector

1. Analysis and Evaluation

The industrial recycling rates in the District for 2014 through 2018 are shown in Table H-7.4.

Table H-7.4. Industrial Recycling Rates: 2014 – 2018

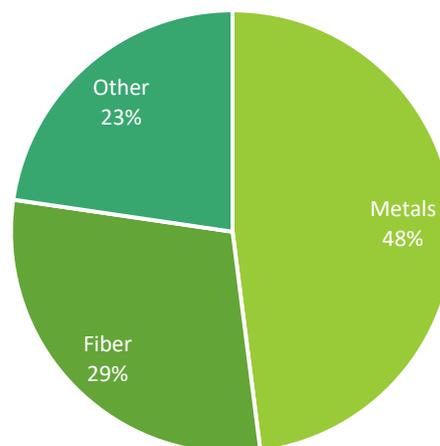
Year	Diversion Rate
	Percent (%)
2014	30.00%
2015	79.99%
2016	85.88%
2017	42.55%
2018	31.57%

Compared to the current Plan, which projected 9,054 tons of industrial recycling for 2018, the actual amount diverted in the reference year is 97.5% lower (approximately 8,823 tons). The current Plan also projected an industrial recycling rate of 44.2% for 2018, which is higher compared to the actual estimated recycling rate of 31.6%. The reasoning for the significant

over-projection was due to one large manufacturer not consistently responding to recycling surveys. However, if it were assumed that this industrial manufacturer had responded for the 2018 ADR, using their most recently reported recycling tonnages, the District industrial recycling tonnage would have been 9,196 (only a 2% difference than projected).

Metals represent the material type recycled in the greatest amount from industrial sources (see Figure H-7.2.) Industries also recycle substantial amounts of fiber (paper and cardboard).

Figure H-7.2. Industrial Material Types Recycled in Pike: 2018



The District’s industrial recycling rate for 2018 was lower than the other SWMDs as shown in Table H-7.5. However, if the large industrial manufacturer had responded for the 2018 ADR, Pike’s recycling rate would have been 85.1% and higher than three of these other districts.

Table H-7.5. Industrial Diversion Rate Comparison

SWMD Name	Industrial Diversion Rate
	Percent (%)
Pike	31.6%
Henry	65.7%
Van Wert	81.0%
Wyandot	67.9%
Putnam	98.8%
Preble	68.8%

2. Conclusions, Strengths, and Challenges

Strengths:

- Industries in the District recycle high quantities of metal and fiber.

Challenges:

- In the industrial sector, the District has a somewhat lower reported diversion rate compared to similarly sized districts.
- The District does not meet Goal #2 criteria for an industrial sector diversion rate of at least 66%.
- The District heavily relies on large, private manufacturers to respond to recycling survey efforts in order to reach a sustainable recycling rate.

Opportunities

- **Create Relationships with Large Manufacturers**

Private companies are more likely to respond to surveys, requests for information, and requests for assistance when there is an existing relationship. The District should target the largest manufacturers in the District to create a closer relationship.

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:

- Pike County Solid Waste Enforcement and Open Dump Abatement
- Pike County Engineer Road Maintenance and Repair Program

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. Special Programs

1. Pike County Solid Waste Enforcement and Open Dump Abatement

The District currently works hand-in-hand with the Pike County General Health District to establish objectives and guidelines for the solid waste enforcement and open dump abatement conducted by the GHD on behalf of the District. The District provide funds for these activities. In 2018, \$25,000 was spent on the GHD, and between 2015-2017 \$22,000 were spent annually.

In 2019, the professional services agreement with the Pike County Health Department was updated with a budget increase of up to \$50,000 annually. The agreement specifies \$50,000 for solid waste enforcement and open dump monitoring and abatement. This is accomplished through

documentation of nuisance complaint investigations, formal letters to the responsible party of their violation, Board of Health Resolutions and orders, longitudinal case management, and, if necessary, referral of cases to the Pike County Prosecutors Office for litigation. Education and awareness outreach associated with littering, open dumping, and scrap tire collection programs is included. Also included is assistance to the District on the solid waste Surveys of Industrial and commercial businesses.

2. Pike County Engineer Road Maintenance and Repair Program

With the increase in route truck and transfer trailer traffic to and from the Pike Sanitary Landfill, the District has included a plan to fund road repair and maintenance in the current plan update. The primary roads for funding are heavily used by trash collection vehicles and include the following roads.

- River road from Piketon to State Route 220
- Zahns Corner Road leading from Piketon to State Route 220
- River road from Jackson Township areas to State Route 220
- Portion of Schuster Road leading from southern Pike county to State Route 220
- McCorkle Road from southern Pike county to Schuster Road to State Route 220.

B. Strengths, Challenges, and Opportunities

Strengths

- The District continues to track current and future solid waste trends to make proactive changes to programming and activities.
- The Health District has a focused scope of work and provides services to the entire County.
- The Solid Waste District only has one Health District to coordinate work and resources.
- The Health District is in compliance with Ohio EPA program requirements.
- The District conducts an audit regularly to ensure expenditures are in-line with allowable uses.

Challenges

- Keeping each of these departments focused on the allowable uses of the funds.
- The District does not currently provide funding for road maintenance. Out-of-District solid waste has significantly increased since the Pike County Sanitation Landfill was purchased by Rumpke Waste and is projected to continue. With the increase in out-of-District waste, there has been an increase of heavy transfer trailer traffic on Pike County roads.
- Regular communications between departments.

Opportunities

- The District could fund a litter enforcement position to supervise collection crews and perform environmental investigations & enforcement. This position would also work closely with the Pike County General Health District providing support for existing programs.

With the increase in route truck and transfer trailer traffic to and from the Pike Sanitary Landfill, the District has included a plan to fund road repair and maintenance in the current plan update.

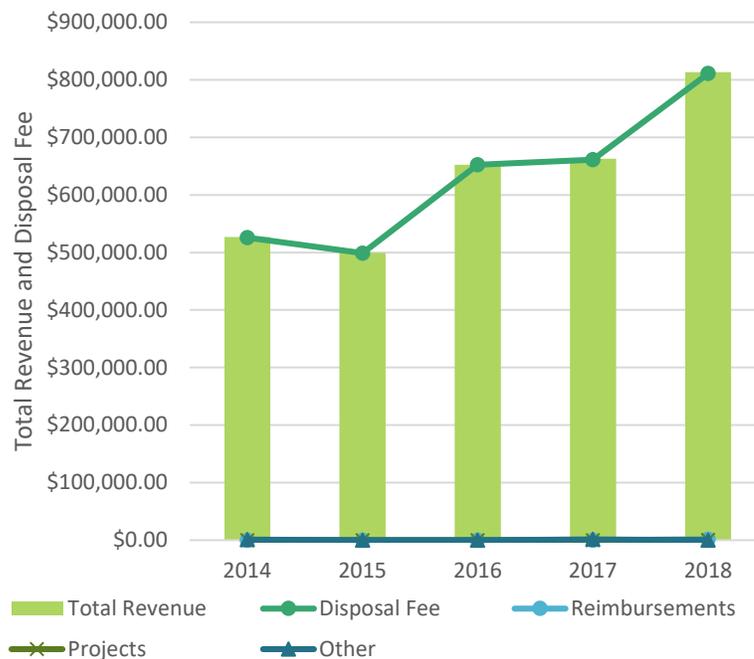
SECTION H-9. Financial Analysis

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

A. Revenues

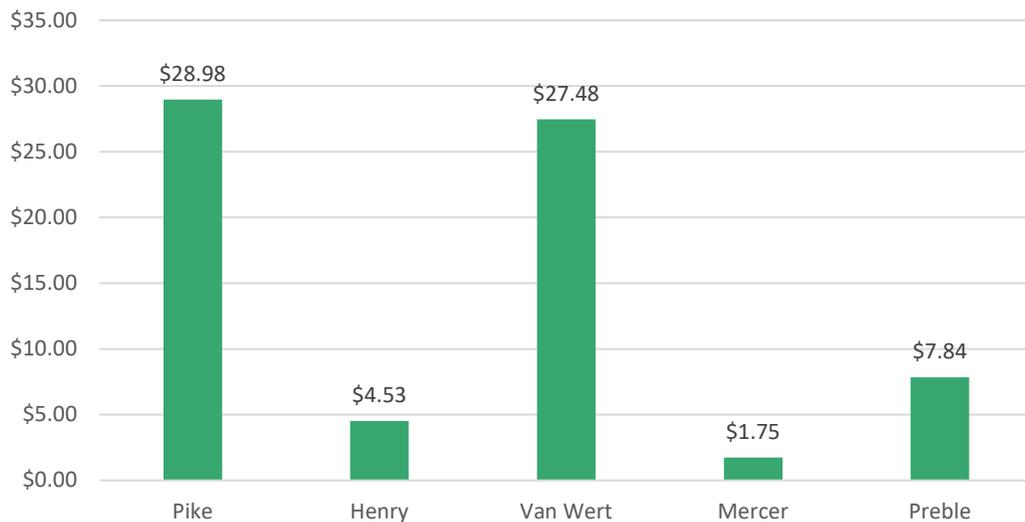
The disposal fees from the Pike County Sanitation Landfill has consistently provided the majority of the District’s revenue since 2014. Over the past five years ranging from 2014 to 2018, total revenue has ranged from a low of \$499,005.35 in 2015 to a high of \$813,247.21 in 2018.

Figure H-9.1. Sources of Revenue for the District: 2014 – 2018



On a per person basis, the District collected an average of \$22.35 per capita during 2014 through 2018. Compared to five similar and nearby solid waste districts, the District has the most revenue collected per person (see **Figure H-9.3**). However, Pike County has one of the lowest populations compared to other districts and hosts a landfill, resulting in a much higher per capita revenue.

Figure H-9.3. Comparison of Revenues Collected Per Capita in 2018



The District’s current Plan projected that approximately \$484,050.60 would be collected in revenues during 2018. The actual amount collected was \$813,247.21, or approximately \$329,196.61 more than projected.

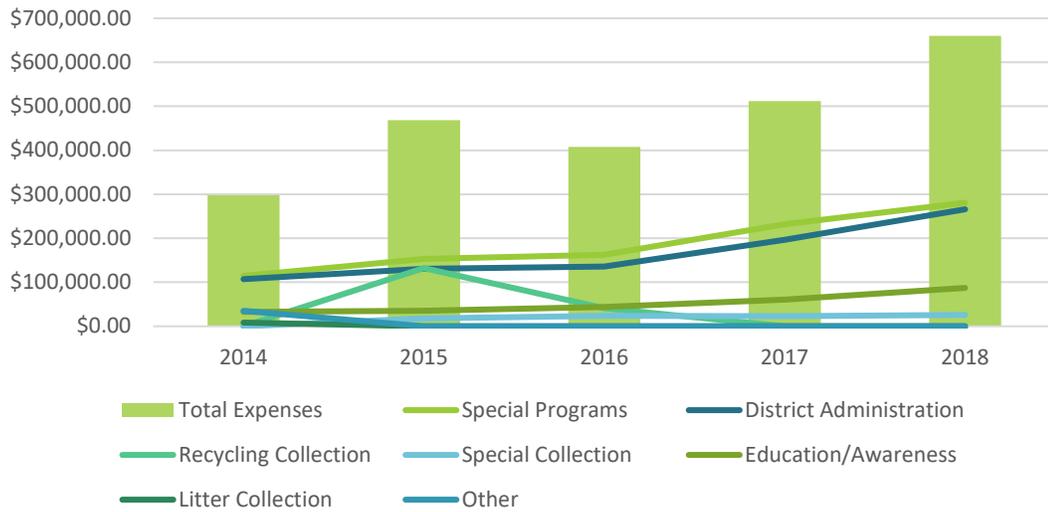
In summary, the District’s major revenue streams appear to be relatively stable and should continue to provide sufficient money for current and past operations. No changes are projected for the general sources of revenue.

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

B. Expenditures

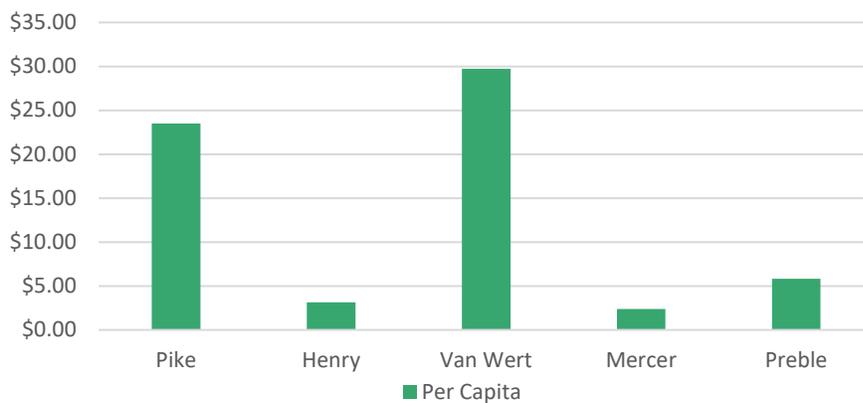
The main expenditures for the District reported to Ohio EPA since 2014 has been district administration and special programs, as shown in the following figure. Special Programs in **Figure H-9.4** represents plan preparation/monitoring, health department enforcement, and open dump and litter law enforcement. The total expenditures for the District have ranged from a low of \$297,931.72 in 2014 to \$659,777.99 in 2018. The average overall expenditures during the five-year period was \$469,191.87 annually. The total expenses for the District as projected in the current Plan were \$457,138 for 2018, or approximately \$202,640 more than the actual expenditures.

Figure H-9.4. District Expenditures: 2014 – 2018



District Administration and Special Programs makes up most of the District's expenditures while most of the other expenditures stay relatively stable. A comparison of the total expenditures per capita from other districts is shown in **Figure H-9.5**. The District has one of the highest per capita expenditure rates of the five solid waste management districts depicted. The reasoning for this again is because of its low population.

Figure H-9.5. Comparison of District Expenditures Per Capita: 2018



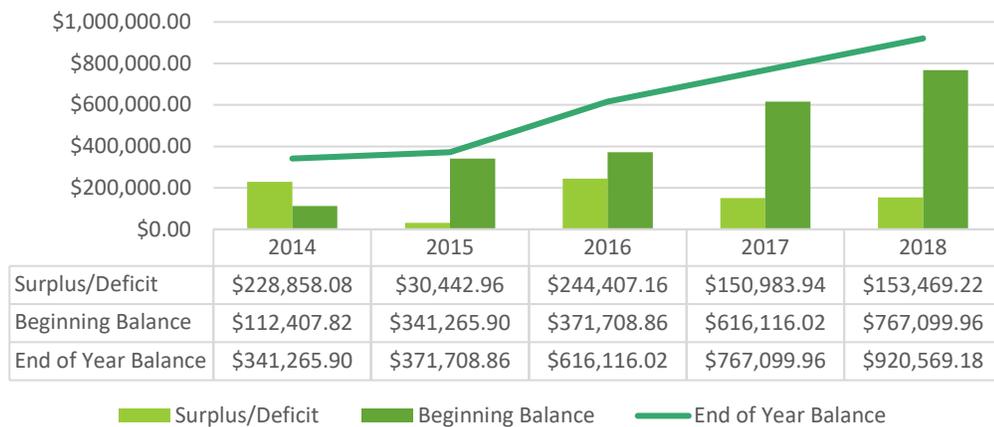
See Appendix O for further discussion on budget strategies for District programs.

C. Balances

Both revenues and expenses have risen over the last five year. Additionally, the District has maintained a positive year-end balance every year because of the

addition of carry-over balances from previous years. This total year-end balance provides a comfortable level for the District to be able to pay for current operation costs but may be inadequate for expansions or any unexpected expenditures in the future. Additionally, Pike County is updating the current Recycling Center to provide more capacity to the District, and this balance has helped to fund these initiatives along with an additional revenue stream.

Figure H-9.6. District Annual Surplus/Deficit and Year-End Balances: 2014-2018



D. Strengths, Challenges, and Opportunities

Strengths

- The District continues to track all District spending to ensure transparency and accurate funding needed for the District’s program and activities.
- The District continues to have a positive year-end balance and increasing the end of year balance to assist with the new operations of the Pike County Recycling Center.

Challenges

- The current funding level has a potential risk that the out of district tons could be diverted by the owner operator of the Pike County Landfill to another landfill outside the district. This could significantly reduce the current revenue funding the District programs.

Opportunities

- The District believes that its financial management and programs are generally adequately funded.

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 solid waste districts and the District's residents, schools and institutions, commercial and industrial businesses, and community officials. Other stakeholders include Rumpke (who has a franchise agreement with the District), governmental agencies, hauling companies, non-profit organizations, 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's facility and the programs housed in it are central to its success with the above listed stakeholders. Between the recycling drop-offs, special materials collections, recycling and processing operation, and offices for education and outreach programs located in the facility, the facility becomes imperative. The District could additionally use the facility as a central meeting spot for collaborating with community leaders, business roundtables, composting or other educational seminars, educational tours of the facility, news media, public meetings, or other uses.

The District will meet with neighboring solid waste districts to explore the possibility of utilizing the new recycling center to support programs outside the County. One possibility is to partner with other districts to market materials and obtain aggregate pricing. Utilizing aggregate multi district contracts the facility could benefit from better pricing and rebates. Also, the District can use the new recycling facility to support HHW, tire collection, and other hard to manage programs. These programs could include other districts who also provide the same services on different dates. By having multiple sites providing collection opportunities on different dates service will increase for residents of all participating districts.

The District also collaborates with other entities such as the Pike County Health District on open dump abatement and education. The District also partners with the RPHF SWMD to the north on certain educational programs. For example, backyard composting workshops are given by the OSU Extension office, but is also sponsored by the Pike County SWMD, RPHF SWMD, Pike Soil & Water Conservation District, and the Pickaway County Park District. This is a great program that benefits residents in multiple communities, counties, and districts.

B. Regional Impact Considerations

Pike County is home to a registered private landfill operating in-County (Pike Sanitation Landfill, operated by Rumpke). This landfill receives more waste generated out of District than it does in District. While doing so, the District charges a disposal fee on materials disposed in-District. In 2018, 305,617 tons of out-of-District waste and 8,924 tons of out-of-State waste were disposed in the Pike Sanitation Landfill, bringing in \$777,123.40 compared to the 23,430 tons of in-District waste creating \$33,654.81 in revenue. Though this creates beneficial revenue for the District, this landfill has 32.8 years of capacity left. This will eventually cause the District to look at other options for revenue and Pike and other SWMDs to find other opportunities for disposal.

Another regional impact that the District's operations could have on other SWMDs include the new Recycling Center currently being built. Though this is a great opportunity for the District, it could potentially create more competition from other regional MRFs for selling commodities to processors. However, a beneficial impact that the Recycling Center could have is that the District could potentially process recycling materials generated out-of-District.

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 provides disposal for its region in the southern-Ohio region. The District has also served as a leader in collaborating on unique educational programs with neighboring solid waste districts

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. Population Analysis

Pike County's population continues to decrease slowly. From 2012 – 2018, the County's population decreased 0.2% on average annually. This is a decrease of approximately 413 residents over the seven-year period. The most recent two-year estimate shows the County's population decreased by approximately 155 residents or 0.5% between 2016 and 2018. During the same 2016-2018 period, the State of Ohio's population increased 0.65% or approximately 75,069 residents.¹ As demonstrated in Appendix C, the District's population is expected to steadily increase throughout the planning period. The District population is expected to increase by 3.7% from 2018 through the fifth year of the planning period (year 2026) and increase by more than 5.2% by the end of the planning period (year 2036).

Population for the last two years showed very little redistribution. Based on population changes from 2016 to 2018, population change was most significant in the following areas:

- Greatest increase for municipalities:
 - Beaver Village -7 residents, -0.7%
 - Waverly Village -95 residents, -0.7%
 - Pee Township -41 residents, -0.6%

¹ Ohio County Profiles - Ohio Development Services Agency, Office of Research. (4/2019)

<https://development.ohio.gov/files/research/P5007.pdf>

SECTION H-12. Data Collection Analysis

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

The District was not able to demonstrate achieving Goal #2 of the State Plan, which requires a waste reduction and recycling rate of at least 25% for residential/commercial waste. In the reference year, the District's residential/commercial sector achieved a 5.1% waste reduction and recycling rate, and the industrial sector achieved a 31.6% recycling rate.

A. Residential Sector

Communities in Pike County do not usually report recycling because most of the residential recycling is done through District-operated programs. There are no community-operated yard waste programs, curbside recycling, or special collections.

Data from District-sponsored programs, such as its Drop-Off Program, Scrap Tire Collection, HHW Collection, Appliance Collection, Electronics Collection, and Spring Clean-Up 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 and other third parties. No issues with using Ohio EPA data for the residential sector have been identified.

2. District Programs

No communities in the District currently operate their own curbside, drop-off, or special collection for recycling. Therefore, most residential recycling data comes from District-sponsored programs such as the District-wide drop-off program, special materials collections, and Spring Clean-Ups.

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.

4. Strengths, Challenges, and Opportunities

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.

Strengths

- Tonnages collected by District-sponsored collection programs account for a large portion of the residential sector recycling.
- Drop-off program collects data by site.

Challenges

- No residential curbside recycling programs operate in the District.

Opportunities

- **Require Future Haulers to Report Data**
Depending on future potential curbside programs, the District could work with future curbside haulers and communities to require recycling and disposal data be provided by community.

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.

2. Generator Data

The District sends a hard copy mailed 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 (generally) at least 20 employees using a business database such as *Reference USA*.
- Cross-reference list to ensure key generators listed in the Pike 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 hard copy survey is updated annually. To collect reference year data, the District used a template created by Ohio EPA as a model for the survey. Participation rates were underwhelming in 2018. The District continually makes evidence-based improvements to try to boost participation rates. For example, using phrases such as "it would help us out" or "can you please help the county" can result in an increase in response rates of up to 18%. Examples of the most up-to-date survey materials are available in **Section H-12, Attachment 1**.

To collect reference year data for 2018, hard copy surveys were mailed to 117 commercial sector businesses in 2019. 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 2 responses or a response rate of 1.7%.

Table H-12.1. Commercial Sector Mailed Survey Response Rate

Commercial Sector Mailed Survey	
Total Surveys Mailed	111
Total Responses Received	2
Response Rate	1.8%

Reminder e-mails were sent to survey recipients with email addresses obtained through historical records 2 weeks before the deadline. No surveys from previous years were moved forward.

Table H-12.2. Commercial Sector Total Survey Response Rate

Commercial Sector Mailed Survey	
Total Surveys Mailed	111
Total Responses Received	2
Single Year (2018) Response Rate	1.8%
Supplemented Response Rate (2016-2018)	1.8%

The District primarily relies upon generator data to compile commercial sector recycling totals. A large amount of broker/processor and hauler data is used. 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 are 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.

3. Commercial Sector Data Gaps

The District does not believe that it receives survey responses from the majority of key generators in Pike County, which is demonstrated in **Table H-2.2**. The District’s survey efforts are continually improving by updating surveys every year, trying new formats for surveys, and contracting help on survey management.

4. Strengths, Challenges, and Opportunities

Strengths

- The District’s annual survey process is thoughtful and uses a lot of effort every year.

Challenges

- Increasing participation rates has been a challenge for the District. It primarily relies solely on paper surveying to collect annual data. Strategies to further improve response rates may be available, but the District will need to evaluate the benefits compared to the financial costs and human capital/time investments.
- It is unknown if the commercial businesses who have never responded to surveys are recycling and not responding to surveys or simply not recycling at all.

Opportunities

- **Online Surveying**
The District could develop a streamlined easy-to-use online survey which would allow further time to dedicate staff to for generators. The District could target key generators that have not previously participated in the annual survey to identify whether they have a recycling program, introduce them to District programs and services, and request their participation in the survey.
- **Review Survey Process**
The District could objectively review its current process for surveying including the mailing list of businesses, businesses' mailing/contact information, user-friendliness of surveys, and method and schedule of follow-ups. In addition, the District could focus on larger businesses for outreach and engagement to develop relationships and support for District programs. Increased support from these businesses will increase the probability of receiving meaningful survey responses.
- **Use Previous Years' Reported Recycling**
ADR guidelines permit districts to use the previous two years' recycling tonnages from companies if they are still in business and running similar operations. In years that the District does not receive a large business's response, the previous year's recycling tonnage could be used.

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 and generator data.

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.

2. 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 2018, surveys were mailed to 11 industries in 2019. 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 5 responses or a response rate of 45.5%.

Table H-12.3. Industrial Sector Mailed Survey Response Rate

Industrial Sector Mailed Survey	
Total Surveys Mailed	11
Total Responses Received	5
Response Rate	45.5%

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

Table H-12.4. Industrial Sector Total Survey Response Rate

Commercial Sector Mailed Survey	
Total Surveys Mailed	11
Total Responses Received	5
Single Year (2018) Response Rate	45.5%
Supplemented Response Rate (2016-2018)	45.5%

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

3. Industrial Sector Data Gaps

The District receives survey data from most of the key industrial sector facilities in Pike County, which is demonstrated in Table H-2.4. However, the District estimates that this does not cover the majority of industrial recyclables due to historical surveys received.

4. Strengths, Challenges, and Opportunities

Strengths

- The District receives a large portion of surveys back from industrial businesses.

Challenges

- The largest known manufacturer in the District does not consistently respond to recycling surveys.
- It is unknown if the industrial businesses who have never responded to surveys are recycling and not responding to surveys or simply not recycling at all.

Opportunities

- **Online Surveying**

The District could develop a streamlined easy-to-use online survey which would allow further time to dedicate staff to for generators. The District could target key generators that have not previously participated in the annual survey to identify whether they have a recycling program, introduce them to District programs and services, and request their participation in the survey.

- **Review Process**

The District could objectively review its current process for surveying including the mailing list of businesses, businesses' mailing/contact information, user-friendliness of surveys, and method and schedule of follow-ups.

- **Use Previous Years' Reported Recycling**

Ohio ADR guidelines permit districts to use the previous two years' reported recycling tonnages from companies as long as they are still in business and running similar operations. In years that the District does not receive a large business's response, the previous year's recycling tonnage could be used.

SECTION H-13. 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 2009 State Solid Waste Management Plan established nine goals for Districts to achieve. One of the goals requires that solid waste management districts (SWMDs) shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identified target audiences using best practices. The District has five target audiences, including:

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

The General Health District also assists the Solid Waste District with advertising collection events, recycling opportunities, and delivering messages about solid waste management to the public.

1. Residents

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

- Copy of the Plan
- Alternate recycling locations in and out of District
- Recycling guide
- Drop-off recycling locations
- Contact information
- Information on the correct handling and disposing/recycling of difficult-to-manage materials
- Educational information on composting and HHW
- Educational information on the benefits of recycling
- Highlights from special events and educational programs
- Events calendar
- "Buy Recycled" promotions
- Backyard composting workshops

The District also has surveys, flyers, brochures, student educational supplies, and a display booth at the Pike County Fair about District programs and activities for Pike County residents. Additionally, the District has a mascot “Spotless” who often appears at fairs, parades, and other special events around the County.

2. Schools

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

- School presentations on waste reduction and recycling
- Drop-offs at schools
- Annual poster contest
- School supplies and materials about recycling for teachers

3. Commercial Businesses and Institutions

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

- Phone line
- Source reduction brochure
- Website with information on programs
- Presentations
- Surveys
- Available recycling containers for rent
- “Buy Recycled” promotions

4. Industries

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

- Phone line
- Source reduction brochure
- Website with information on programs
- Presentations
- Surveys
- Available recycling containers for rent
- “Buy Recycled” promotions

5. Communities and Elected Officials

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

- Technical assistance when requested
- Presentations
- Available recycling containers for rent
- Use of Spotless the mascot and other District materials at special events

B. Strengths, Challenges, Opportunities

Evaluating the educational opportunities and the audiences reached outlines areas of strength and several challenges. There are also areas for improvement which create opportunities which are presented below.

Strengths

- Though no yard waste processing programs exist in the District, the District educates residents on backyard composting.
- Each audience receives attention from the District.
- Many programs are geared to educating and encouraging participation within the residential sector.
- A District focus for many years has also been the students and schools.
- Technical assistance on any requested program is available for any audience.
- The District has adequate outreach materials and website.

Challenges

- Focus on student education may not help to boost recycling rates significantly.
- There is a need to assist and educate the commercial, industrial, and institutional sectors with recycling education opportunities offered by the District.
- Regular communications with recycling coordinators at businesses and in communities is needed to boost recycling opportunities throughout the residential and business community.

- No communities have curbside recycling. This gives less incentive for the communities to interact with the District.
- The District needs to increase the frequency and quantity of in-person education at schools, businesses, and public events.

Opportunities

- **Curbside Technical Assistance**
Advertise the significance and offer technical assistance to communities to implement non-subscription curbside recycling, volume-based programs, yard waste collection programs, or others. Target the larger communities.
- **Increase Recycling Campaign**
Educate residents on the importance of recycling and recycling right. Hire a part-time education specialist to assist in person education that will increase overall quantity.
- **Commercial/Industrial Technical Assistance**
Contact large employers in the District to create a list of coordinators of sustainability/environmental/recycling. Offer to assist with starting recycling programs, contract assistance, conduct waste audits, or other requested assistance.

SECTION H-14. 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 1,227 tons of residential/commercial recyclables and over 230 tons of industrial recyclables. Pike County Recycling Center is the only known facility that processed quantities of District generated recyclables in 2018. However, there are other known recyclers in-District that did not reply to survey efforts such as:

- Barker's Recycling
- Barker's Automobile
- Daniels Metal Company
- Klinkers Lumber
- McConkey Auto Parts
- Echo Environmental
- Auto Zone
- Glockner Environmental Services
- Sundown Tire Recycling

There are also processing facilities that manage Pike County recyclables outside the District and that are advertised in the District's brochure that can recycle material from the District including:

Known

- Rumpke Chillicothe
- Enviro Tire Recycling
- Liberty Tire Service of Ohio

Advertised

- | | |
|----------------------------------|--------------------------------|
| • Adams Brown Recycling Station | • Phoenix Recycling Inc. |
| • Livingston & Co. Inc. | • Plastic Compound |
| • PSC | • Ponz Industries |
| • Nu-Tech Polymers Co. | • Price Marketing Management |
| • Smurfit Recycling Corporation | • Sims Brothers, Inc. |
| • OnSpec Composites | • Composite Technologies corp. |
| • Plastic Visions, Inc. | • Universal Pallet Company |
| • Primus Environmental, Inc. | • Allen County Pallet Co. |
| • American Plastics Inc. | • Columbus Pallet Recycling |
| • Artemis Industries | • Habitat for Humanity |
| • Cincinnati Foam Products, Inc. | • Alum Creek Rt. 104 Topsoil |

- SWACO Norwest Compost Site
- Jiffy Lube
- First Recovery
- USA Lamp and Ballast Recycling
- Allied Environmental Services, Inc.
- Central Ohio Oil
- Environmental Enterprises, Inc.
- Environmental Specialists, Inc.
- Clean Water Ltd.
- Special Waste Systems, Inc.
 - USA Lamp & Ballasts Recycling, Inc.
 - Cyclement Inc.
- First Capital Enterprises
- Ohio Mobile Shredding
- Creative Learning Workshop
- USTRG, LTD
- Tech Used
- A S Recycling LLC
- Heritage Crystal Clean, LLC
- Falcon Technology Services, Inc.
- Clean Harbors Recycling Services of Hebron
- Klor Kleen, Inc.
- Safety-Kleen Corp

Table H-14.1. Reference Year (2018) Residential/Commercial Material Recycled

Material	Tons
Appliances/ "White Goods"	1.91
Household Hazardous Waste	4.31
Used Motor Oil	0.00
Electronics	0.00
Scrap Tires	158.29
Dry Cell Batteries	0.00
Lead-Acid Batteries	0.00
Food	82.83
Glass	0.00
Ferrous Metals	16.80
Non-Ferrous Metals	5.22
Corrugated Cardboard	778.87
All Other Paper	118.18
Plastics	46.85
Textiles	0.00
Wood	1.25
Rubber	0.00
Commingled Recyclables (Mixed)	1.95
Yard Waste	0.00
Other (Aggregated)	10.08
Total	1,226.54

1. Organics Processing Capacity

No reported yard waste was composted in 2018. However, grocers and haulers reported 82.83 tons of food waste were diverted either through donation or composting. Additionally, the District partners with RPHF SWMD and other public entities to educate about backyard composting. The information about how much material was processed using backyard composting is unavailable.

2. Traditional Recyclables Processing Capacity

Traditional recyclables collected from the District drop-off program, commercial facilities, and institutions (including corrugated cardboard, paper, ferrous metal, non-ferrous metal, plastics, glass, and commingled recyclables) totaled 1,226.54 tons in 2018. In 2018, at least 2 different facilities reported processing traditional recyclables from the residential/commercial sector. Having the Pike County facility located in the District should continue to be a benefit to the District providing ample processing capacity for recyclables.

3. Pike County Recycling Center

The Pike County Recycling Center processes a large portion of recyclables generated in-District (153.68 tons). The facility is owned and operated by the District. The facility accepts recycling and materials from special clean-ups and events. Though there are a few recyclable processors in the region that currently do or could take Pike County's recyclables, the facility serves as an addition to strengthen and diversify the District's opportunity to recycle.

The District built a new 3,000 square-foot recycling facility and began processing recyclables in 2021. The horizontal baler was moved into the new facility in 2021. The new facility has a 35' ceiling which will allow route trucks to unload in the facility. Also, there is a 4' push wall around the building allowing equipment to load and unload during processing. Recyclables are currently manually sorted and loaded into the baler. Finished bales are stacked and stored outside the facility in a covered storage area. Future plans include adding an elevated processing line that will significantly increase capacity. With the larger facility and potential increase in processing capacity, the recycling facility can support potential curbside programs in the District.

B. Strengths, Challenges, Opportunities

Sufficient in-District processing capacity was accessible in the reference year for recyclable materials.

Strengths

- The District has ample in-District processing capacity for current and projected volumes of recyclables throughout the planning period and plans to increase its capacity in the near future.
- Specialty materials such as tires, electronics, and HHW are managed at facilities inside and outside of the District.
- The District provides many alternative options for recycling specific materials on its website and in its educational brochures.
- New larger recycling center that has the potential to support significant increases in recycling including curbside programs.

Challenges

- The District is currently focusing much of its energy and funding on building the updated Recycling Center.
- There are few alternative options for recycling HHW, tires, and other special materials in the District.
- Full utilization of the recycling center will require significant increases in recycling volumes. Increases in volume will require greater volume from the drop-offs and/or curbside programs in the District.

Opportunities

- **Accept Out-of-District Recyclables**
The District could evaluate whether to work with surrounding Districts on using the Pike County facility as it grows in capacity.



APPENDIX I

CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS



APPENDIX I. Actions, Priorities, and Program Descriptions

A. Conclusions and Priorities from Appendix H

The District completed fourteen analyses which reviewed the District's existing recycling infrastructure and all of its programs and services in Appendix H. The analysis then identified strengths, challenges, and opportunities where applicable. Through this process, a total of 36 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 countywide infrastructure and unique recycling facilities available to residents. The recommendations in Appendix H were created to improve programs and address gaps to increase awareness and collaboration with the District's audiences.

Appendix I describes 36 programs and actions 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. 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 nine goals contained within the 2009 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 provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.
- Goal #6** • The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.
- Goal #7** • The SWMD will use U.S. EPA's Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.
- Goal #8** • The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.
- Goal #9** • The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

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 5 to each initiative with 5 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 – No implementation
 - ✓ Ranking of 3 – District reserves the right to implement but does not guarantee implementation
 - ✓ Ranking of 4 – Implement
 - ✓ Ranking of 5 – 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 results of this prioritization process and the programs/initiatives developed or continued are detailed in Chapter V of this 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 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	Total Average
Curbside Recycling	New Franchise Agreement The County and cities of Waverly and Piketon franchise collection agreement is on auto renewal. The District could provide assistance to negotiate a new franchise contract that would include curbside recycling and delivery of the material to the new Pike Recycling Center.	3
	Curbside Recycling Feasibility Study The district met with Waverly administration to determine interest in a curbside recycling program and a feasibility study. Waverly administration supports both the curbside recycling program and the feasibility study. The District will participate in a curbside feasibility study in 2021. The feasibility study could have an optional analysis that evaluates the District providing curbside recycling services to select communities with District personnel and equipment with user fees charged through ORC 343.08	4
	New Residential Curbside Programs After completion of feasibility study, The District could begin discussions with the two largest communities in the District (Waverly and Piketon) to potentially start curbside recycling	4

Opportunities from Section H-1: Residential Recycling Infrastructure Analysis		
Program Category	Suggested Action or Program Name	Total Average
	programs. This creates an opportunity for the District to assist the communities in creating an efficient program.	
Drop-Off Recycling Infrastructure	Increase Types of Materials Accepted The new District MRF will provide significant capacity to increase the types and quantities of materials collected at the drop-off. For example, the District is considering offering steel can recycling when the new facility is complete.	4
	Drop-Off Use Study Conduct a study to estimate the number of residents who regularly use the drop-offs and who correctly use the drop-offs. The District could use the OEPA study structure for this project. The District could operate, place, and advertise each location strategically.	3
	Fiber Only Drop-Offs The District could investigate the possibility of placing dumpsters for paper and/or cardboard in the business districts within the villages of the County, primarily Waverly, Piketon, and Beaver. Areas without access to cardboard recycling will be targeted and will be identified in part through information collected during surveying.	3
Multi-Family Housing	Contract Assistance Assist building owners with developing contracts either independently or in a consortium.	2
	Conduct a Residential Survey The District could conduct an electronic survey of residents in multi-family housing units to identify whether their recycling needs are being met. Results could be analyzed by community to support the District's outreach and to improve recycling infrastructure for this demographic.	2
	Promote Drop-Offs Compile a list of known drop-off locations and promote them on the District's website and to the metropolitan housing authority as a resource for property owners and renters.	3

Table I-2. Summary of Actions and Programs for Residential Recycling Infrastructure for the Planning Period (2020-2034)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Curbside Recycling				
Potential	Assist cities with new franchise agreement that includes curbside recycling	2024	2025	1, 2, 4
New	Feasibility study for curbside recycling in Waverly and Piketon	2022	2023	1, 2
New	New Residential Curbside Programs	2024	2025	1, 2
Drop-Off Recycling				
New	Increase Types of Material Accepted	2023	2024	1, 2
Potential	Drop-Off Use Study	2022	Ongoing	1, 2

Status	Program / Action Name	Start Date	End Date	Goal(s)
Potential	Fiber Only Drop-Offs	2023	Ongoing	1, 2
Existing	Multi-Material Recycling Drop-Offs	Existing	Ongoing	1, 2
Multi-Family Housing				
New	Promote Drop-offs to Multi-Family Housing	2022	Ongoing	1, 2, 3, 4

a. Potential: New Franchise Agreements

The District could provide assistance to the County and villages of Waverly and Piketon to renew franchise agreements that are currently on automatic renewal. The new franchise agreements could provide for curbside recycling.

b. Feasibility Study for Curbside Recycling in Waverly and Piketon

The District met with the Village of Waverly administration to discuss curbside recycling and inclusion of the curbside recycling feasibility study in the Solid Waste Plan. The village administration supports the curbside recycling feasibility program, and it was included in the plan update. In 2021, the District is planning to conduct a feasibility study to evaluate implementing curbside recycling in the villages of Waverly and Piketon. Both communities currently have twice-a-week curbside trash pickup, and the feasibility study would evaluate switching to weekly trash and weekly curbside recycling collection. The feasibility study would also evaluate the potential impact on the new Pike Recycling Facility from the increased diversion from the curbside programs.

c. New Residential Curbside Programs

If the communities want to pursue curbside recycling at the conclusion of the feasibility study, the District could assist the two largest communities in the District (Waverly and Piketon) to start a curbside recycling program. The District could provide processing at the new Pike Recycling Center to support the programs

The feasibility study will evaluate several different recycling collection and processing options including:

- Current hauler collecting and hauling to the Pike Recycling Center
- Current hauler collecting and hauling to the Chillicothe MRF
- Third-party hauler collecting and hauling to the Pike Recycling Center.
- District providing collection and hauling to the Pike County Recycling Facility.

d. *Increase Types of Materials Accepted*

The new Pike Recycling Center will pursue grant funding to add a sort processing line. With a sort line the drop-offs can consider new materials to collect and process. In particular, the District will begin collecting steel cans once the processing line is in place.

e. *Potential: Drop-Off Use Study*

The District will periodically conduct a drop-off study to estimate the number of residents who use the drop-off and sort the material correctly. The District could use the OEPA study structure as a guide for the project. The drop off study will evaluate:

- Effectiveness of education on contamination
- Effectiveness of education for materials accepted
- Effectiveness of education to increase volume
- Drop-off location awareness
- Potential for new materials i.e. steel cans
- Potential for fiber-only drop-offs for businesses

f. *Potential: Fiber-only Drop-Offs*

The District could place containers in clusters of small commercial companies located in Waverly, Piketon, and other areas of the county. These companies could utilize these containers to divert cardboard out of their waste stream. Cardboard could be taken to the new Pike Recycling Center

g. *Potential: Promote Drop-offs to Multi-Family Housing*

The District could develop a drop-off promotional program flyer for multi-family properties. The district could work with landlord and renter stakeholder groups like the Pike County Metropolitan housing authority to distribute the information. The district could meet with the stakeholders to communicate the opportunities and benefits of recycling and to obtain their support in making the information available to their tenants.

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 are presented in **Table I-3** and **Table I-4** 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	Total Average
Other Commercial/Institutional Programs	<p>Strategic Approach to Target Businesses for Assistance and Surveys The District could use a database to target businesses where there are greatest opportunities to recycle based on factors such as number of employees, NAICS code, geographic cluster, or proximity to recycling processors. The District could collaborate and survey these targeted businesses to determine if they are interested in District support to start or increase recycling. Based on survey results, the District could design workshops targeting businesses either by NAICS or geographic region. Additionally, the District can create a relationship with these businesses so that they respond to annual surveys.</p>	2
Other Industrial Programs	<p>Zero Waste Planning Services for Industry The District could help industrial facilities consider the development of a zero-waste plan. This would include establishing an industrial green team and the development of recommendations for the industry's waste streams.</p>	2
Market Development Programs	<p>Promote Ohio Materials Marketplace The District can direct businesses and industries to the Ohio Materials Marketplace. The Ohio Materials Marketplace aims to create a closed-loop, collaborative network of businesses, organizations, and entrepreneurs where one organization's hard-to-recycle waste and by-products becomes another organization's raw material. In addition to diverting waste from landfills, these recovery activities could generate significant cost savings, energy savings, and create new jobs and business opportunities.</p>	3
Market Development Programs	<p>Additional "Buy Recycled" Promotion In addition to the District's current "Buy Recycled" promotional activities, the District could create a model environmentally preferable policy for procurement that government agencies, institutions, and businesses could adopt in the District. This policy could be advertised on the website as well as general information about buying recycled.</p>	3

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	Total Average
Yard Waste Programs	Yard Waste Processing Feasibility The District used to have a composting site in Waverly that discontinued in 2013. The Village of Waverly now operates a brush-only drop-off. The District will conduct a yard waste feasibility study for a new composting site in the District. Alternatively, the District and the community could compromise on a yard waste drop-off that eventually gets hauled to an out-of-District composting site.	4
Yard Waste Programs	Yard Waste as Part of Curbside Program The District plans on assisting interested communities in implementing recycling curbside programs. The District could discuss with the community and hauler to see if yard waste curbside collection would be an option.	3
Fiber (Paper) Recycling Programs	District-Sponsored Paper Collection Boxes The District could investigate the feasibility of establishing fiber-only containers at public drop-offs located throughout the County or at private businesses willing to partner with the District. These could potentially increase the paper and cardboard collected for recycling. See H-1, Section B for more information on this opportunity.	3

a. Potential: Promote the Ohio Materials Marketplace

The District can direct businesses and industries to the Ohio Materials Marketplace. The Ohio Materials Marketplace aims to create a closed-loop, collaborative network of businesses, organizations, and entrepreneurs where one organization’s hard-to-recycle waste and by-products becomes another organization’s raw material. In addition to diverting waste from landfills, these recovery activities could generate significant cost savings, energy savings, and create new jobs and business opportunities.

b. Potential: Create Additional “Buy Recycled” Promotions

In addition to the District’s current “Buy Recycled” promotional activities, the District could create a model environmentally preferable policy for procurement that government agencies, institutions, and businesses could adopt in the District. This policy could be advertised on the website as well as general information about buying recycled.

c. Yard Waste Processing Feasibility Study

The District will conduct a yard waste feasibility study to evaluate the current system used to manage yard waste. In addition, the study could evaluate collection and central processing for the cities of and villages of Pike County including Waverly and Piketon. The study could also evaluate the synergies of working with a consolidated yard waste system.

d. Potential: Yard Waste as Part of Curbside Program

The District plans on assisting interested communities in implementing recycling curbside programs. The District could discuss with the community and hauler to see if yard waste curbside collection would be an option.

e. Potential: District-Sponsored Paper Collection Boxes

The District could investigate the feasibility of establishing fiber-only containers at public drop-offs located throughout the County or at private businesses willing to partner with the District. These could potentially increase the paper and cardboard collected for recycling. See H-1, Section B for more information on this opportunity.

Table I-5. Ranked Suggested Opportunities from Appendix H for the Restricted and difficult to Manage Waste

Opportunities from Section H-6. Restricted and difficult to Manage Waste Analysis		
Program Category	Suggested Action or Program Name	Total Average
HHW	Research and Advertise More Outlets The District may research additional businesses in and around Pike County that accept hazardous materials (or other hard-to-manage materials described below).	3
HHW	Collaborate with Neighboring Solid Waste Districts Pike County Solid Waste District is surrounded by four other solid waste districts. Pike and these other rural districts may be able to plan HHW collection events or location together in order to cut costs for both parties.	4
Tires	Advertise Other Outlets for Recycling Tires The District has multiple solutions for the management of scrap tires. The District could target its outreach efforts on other locations to take scrap tires. This could also decrease funds needed for tire collection events.	3
Tires	Advertise the Importance of Recycling Tires Tire dumps can become a pest, health, and community issue if not managed properly. The District could focus more educational topics on the importance of the correct management of tires.	4

Opportunities from Section H-6. Restricted and difficult to Manage Waste Analysis		
Program Category	Suggested Action or Program Name	Total Average
E-Waste	<p>Develop Long-Term Relationship with E-Waste Processors</p> <p>In 2018, the District operated an e-waste collection event, and had a local processor lined up to collect the material for processing. However, this arrangement did not happen. The District may want to connect with other processors in and out of the District to prepare for future issues.</p>	2

f. *Potential: Research and Advertise More Outlets*

The District may research additional businesses in and around Pike County that accept hazardous materials (or other hard-to-manage materials described below). Identified businesses will be updated on the District website and outreach materials used for education.

g. *Collaborate with Neighboring Solid Waste Districts*

The District could partner with neighboring districts to create a multi-district HHW program that could aggregate volumes possibly getting reduced rates. The District will reach out to other Districts to investigate the possibilities of partnering possibly utilizing the new recycling center. In addition, the multi-district program would be available for all residents, in participating districts, creating more opportunities for residents to use the program. The program could rotate during the year between the participating districts and be available to all residents of the districts.

h. *Potential: Advertise other Outlets for Recycling Tires*

The District will research other outlets for recycling tires and create a resource list for residents. This would allow the residents opportunities to recycle tires during the year and could lower overall cost for the District to recycle tires.

i. *Advertise the Importance of Recycling Tires*

The District will create an outreach campaign to educate the public on the public health issues caused by storing tires outdoors and dumping tires. In addition, the campaign would promote the District’s tire recycling program and other resources available to the residents.

Table I-6. Ranked Suggested Opportunities from Appendix H for the Restricted and difficult to Manage Waste

Opportunities from Section H-7. Diversion Analysis		
Program Category	Suggested Action or Program Name	Total Average
Other Industrial Programs	Create Relationships with Large Manufacturers Private companies are more likely to respond to surveys, requests for information, and requests for assistance when there is an existing relationship. The District should target the largest manufacturers in the District to create a closer relationship.	4

j. Create Relationships with Large Manufacturers

The District will target the largest manufacturers in the District and reach out and develop long term relationships. The District could engage the manufacturers for assistance on District programs and at a minimum obtain annual recycling data from the manufacturers. Assistance could include providing tours of the facilities, sponsoring events, and promoting events to increase participation.

Table I-7. Summary of Actions and Programs for Residential, Commercial/Institutional, Industrial Programs & Restricted/Hard to Recycle Materials for the Planning Period (2020-2034)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Commercial and Institutional Sector				
Potential	Promote the Ohio Materials Marketplace	2022	Ongoing	1, 2, 8
Potential	Additional “Buy Recycled” Promotion	2022	Ongoing	1, 2, 8
Existing	Technical Assistance for Businesses	Existing	Ongoing	1, 2
Existing	Collection Services for Schools	Existing	Ongoing	1, 2
Residential Waste Composition Sector				
New	Yard Waste Processing Feasibility study	2022	2023	1, 2, 5
Potential	Yard Waste as Part of Curbside Program	2022	Ongoing	1, 2, 5
Potential	District-Sponsored Paper Collection Boxes	2022	Ongoing	1, 2
Restricted & Difficult-to-Manage Wastes, Special Collection Events				
Existing	Electronics Collection Events	Existing	Ongoing	1, 2, 5
Existing	Scrap Tire Collection Event	Existing	Ongoing	1, 2, 5
Existing	Appliance Curbside Collection	Existing	Ongoing	1, 2, 5
Existing	HHW Collection Programs	Existing	Ongoing	1, 2, 5
Potential	Advertise other options for residents to dispose of tires	2022	Ongoing	1, 2, 5

Status	Program / Action Name	Start Date	End Date	Goal(s)
New	Advertise importance of properly managing used tires	2022	Ongoing	2, 4, 5
Potential	Advertise other options for residents to dispose of HHW	2022	Ongoing	1, 2, 5
New	Collaborate with other Solid Waste Districts for HHW	2022	2025	1, 2, 5
Industrial Sector				
New	Develop relationships with large manufacturers	2022	Ongoing	1, 2, 4, 9
Existing	Waste Assessments & Audits	Existing	Ongoing	1, 2, 4

3. Education/Outreach

The District listed opportunities for actions or programs identified through the evaluations conducted in Appendix H and are presented in **Table I-8** below. After ranking, the opportunities were prioritized for new programs.

Table I-8. Ranked Suggested Opportunities from Appendix H for the Education and Outreach Analysis

Opportunities from Section H-13. Education and Outreach Analysis		
Program Category	Suggested Action or Program Name	Total Average
Communities and Elected Officials	Curbside Technical Assistance Promote the significance and offer technical assistance to communities to implement non-subscription curbside recycling, volume-based programs, yard waste collection programs, or others. Target the larger communities.	2
Residents	Increase Recycling Campaign Educate residents on the importance of recycling and recycling right.	4
Commercial Businesses and Institutions	Commercial/Industrial Technical Assistance Contact large employers in the District to create a list of coordinators of sustainability/environmental/recycling. Offer to assist with starting recycling programs, contract assistance, conduct waste audits, or other requested assistance.	3

Table I-9. Summary of Actions and Programs for Education/Outreach for the Planning Period (2020-2034)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Education/Outreach				
Existing	Website	Existing	Ongoing	3, 4
Existing	Displays at Special Events	Existing	Ongoing	3, 4
Existing	Teacher Evaluation Form/Survey	Existing	Ongoing	3, 4
Existing	Recycling Education at Schools	Existing	Ongoing	3, 4
Existing	Recycling Education Assistance for Teachers	Existing	Ongoing	3, 4

Status	Program / Action Name	Start Date	End Date	Goal(s)
Existing	Yard waste and composting educational materials and workshops	Existing	Ongoing	3, 4, 5
Existing	Recycling presentations to civic groups	Existing	Ongoing	3, 4
Existing	Annual recycling poster contest	Existing	Ongoing	4
Existing	Public service announcements	Existing	Ongoing	4
Existing	Brochures, flyers, and other media	Existing	Ongoing	3, 4
Existing	Curbside recycling technical assistance	Existing	Ongoing	1, 4
Existing	List of lead-acid battery recyclers	Existing	Ongoing	4, 5
Existing	HHW educational materials	Existing	Ongoing	4, 5
Existing	Recycling Bins for Rent Available	Existing	Ongoing	4
Existing	Partner with Health District to promote technical assistance	Existing	Ongoing	4
New	Increase Recycling Campaign	2022	Ongoing	4
Potential	Commercial/Industrial Technical Assistance	2023	Ongoing	4

a. Increase Recycling Campaign

Reach out to community groups to present information on waste reduction and recycling as well as the availability of the Collection Center for HHW, electronics, and scrap tires. Initially, the focus will be on the current drop -off program. When the new Pike County Recycling Center opens up the District could develop a media event with tours of the facility at its grand opening. If Waverly and/or Piketon begin a curbside recycling program the Increase Recycling campaign could expand to support the curbside programs.

b. Potential: Commercial/Industrial Technical Assistance

Contact large employers in the District to create a list of coordinators of sustainability/environmental/recycling. Offer to assist with starting recycling programs, contract assistance, conduct waste audits, or other requested assistance.

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 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	Total Average
Other Economic Incentives	Begin Curbside Programs as PAYT The District can work with one or two of the larger communities in the District to start curbside collection programs. Starting from scratch gives the community and District the opportunity to make the curbside program volume-based from the start.	2
Other Grants	Create Grant Program Guidelines In order to speed up the process and determine how much funding should go towards each grant, how often a grant should be given out, how many grants should be given out, and all other operational features of this program can be written out and summarized in a grant guidebook. Many other districts have grant guidelines that help them to continue to operate their grant programs year after year.	4
Other Economic Incentives	Recycling Incentive Study Carry out the Recycling Incentive Study to develop strategies to recycle more at businesses, schools, and government entities. These organizations would be able to compete monthly or less or more often as determined.	4

a. Create a Recycling Grant Program

The Community Incentive Grant Program has been developed and will begin in 2020. The program will fund curbside recycling programs, yard waste composting facilities, yard waste drop-offs, special event recycling, or other community recycling programs. Funding is set at \$45,000 with a 25% match required that can include “in-kind” services. Organizations that can apply include community groups, schools, not-for-profits, and businesses. Initial funding is open and available to all programs and communities with recycling and diversion programs. After the first couple years, the approval process will consider previous grant compliance, previous grants awarded to communities or organizations, and fair allocation of grants across the county .

b. Recycling Incentive Study

The District will meet with businesses, schools, and government entities to obtain stakeholder input with respect to interest in recycling competitions, container or collections support needed, and current outreach methods. The District could use this feedback to develop additional programs to support businesses, schools, and other governmental entities. The recycling incentive study and drop-off study

would provide valuable data to support cardboard drop-offs in the business districts and recycling drop-offs at schools.

The new recycling center has a scale where all containers can be weighed by type of recyclable providing valuable and accurate data for each of the drop-off containers.

Table 11. Ranked Suggested Opportunities from Appendix H for Special Program Needs Analysis

Opportunities from Section H-8. Special Program Needs Analysis		
Program Category	Suggested Action or Program Name	Total Average
Other Programs	Road Maintenance Provide funding to Pike County Engineer to repair Roads in Pike County	4
Other Enforcement or Clean-Up Activity	Litter Enforcement Provide funding for supervision of a litter crew and environmental investigations.	4

Table I-12. Ranked Suggested Opportunities from Appendix H for the Data Collection Analysis

Opportunities from Section H-12. Data Collection Analysis		
Program Category	Suggested Action or Program Name	Total Average
Data Collection Efforts – Residential Sector	Require Future Haulers to Report Data Depending on future potential curbside programs, the District could work with future curbside haulers and communities to require recycling and disposal data be provided by community.	3
Data Collection Efforts – Commercial/ Institutional Sector	Online Surveying The District could develop a streamlined easy-to-use online survey which would allow further time to dedicate staff to for generators. The District could target key generators that have not previously participated in the annual survey to identify whether they have a recycling program, introduce them to District programs and services, and request their participation in the survey.	3
	Review Survey Process The District could objectively review its current process for surveying including the mailing list of businesses, businesses' mailing/contact information, user-friendliness of surveys, and method and schedule of follow-ups.	3
	Use Previous Years' Reported Recycling Ohio ADR guidelines permit districts to use the previous two years' reported recycling tonnages from companies as long as they are still in business and running similar operations. In years that the District does not receive a large business's response, the previous year's recycling tonnage could be used.	4

Opportunities from Section H-12. Data Collection Analysis		
Program Category	Suggested Action or Program Name	Total Average
Data Collection Efforts – Industrial Sector	Online Surveying The District could develop a streamlined easy-to-use online survey which would allow further time to dedicate staff to for generators. The District could target key generators that have not previously participated in the annual survey to identify whether they have a recycling program, introduce them to District programs and services, and request their participation in the survey.	3
	Review Process The District could objectively review its current process for surveying including the mailing list of businesses, businesses' mailing/contact information, user-friendliness of surveys, and method and schedule of follow-ups. The District will make an effort to engage industries to participate in District programs and build relationships with key employees. The outreach and engagement will increase probability of returned meaningful surveys.	4
	Use Previous Years' Reported Recycling Ohio ADR guidelines permit districts to use the previous two years' reported recycling tonnages from companies as long as they are still in business and running similar operations. In years that the District does not receive a large business's response, the previous year's recycling tonnage could be used.	4

Table I-13. Ranked Suggested Opportunities from Appendix H for the Processing Capacity Analysis

Opportunities from Section H-14. Processing Capacity Analysis		
Program Category	Suggested Action or Program Name	Total Average
Recycle Processing (MRF)/ Transfer	Accept Out-of-District Recyclables The District could evaluate whether to work with surrounding Districts on using the Pike County facility as it grows in capacity.	4
Recycle Processing (MRF)/ Transfer	Processing Equipment for New Recycling Center Provide funding for processing equipment in new recycling center	4
Recycle Processing (MRF)/ Transfer	Renovate Old Building Provide funding to renovate old recycling facility to create offices and a meeting room for tours and education programs	4

Table I-14. Summary of Actions and Programs for Grants/Incentives, Facilities, Enforcement/Clean-Up, & Other Programs for the Planning Period (2020-2034)

Status	Program / Action Name	Start Date	End Date	Goal(s)
Grants and Economic Incentives				
New	Create Grant Program/Guidelines	2022	Ongoing	1, 2, 6

Status	Program / Action Name	Start Date	End Date	Goal(s)
Existing	Community Incentive Grant	Existing	Ongoing	6
Existing	Grant program for yard waste drop-offs or composting facilities	Existing	Ongoing	5, 6
Enforcement & Clean-up				
Existing	Funding support for community clean-ups	Existing	Ongoing	N/A
Existing	Annual spring clean-up	Existing	Ongoing	N/A
Existing	Cooperation with prosecutor's office to support scrap tire clean-ups	Existing	2029	5
Facility Operations				
New	Accept out of District Recyclables	2023	Ongoing	N/A
New	New processing sorting equipment for new recycling center	2022	2023	1
New	Provide funding to modify existing building for offices and meeting room.	2022	2022	1
Other Programs				
Existing	HHW collection evaluation	Existing	Ongoing	5
Existing	Cardboard dumpster evaluation	Existing	Ongoing	1, 2
Existing/New	Recycling incentive study for institutions	Existing	Ongoing	2, 6
Existing	Develop environmentally preferable purchasing policy	Existing	Ongoing	6
Existing	Partner with health department to administer solid waste surveys	Existing	Ongoing	9
Potential	Require Future Haulers to Report Data	2022	Ongoing	9
Potential	Online Surveying (Commercial)	2022	Ongoing	9
Potential	Online Surveying (Industrial)	2022	Ongoing	9
New	Review Survey Process (Commercial)	2022	Ongoing	9
New	Review Survey Process (Industrial)	2022	Ongoing	9
New	Use Previous Years' Reported Recycling (Commercial)	2022	Ongoing	9
New	Use Previous Years' Reported Recycling (Industrial)	2022	Ongoing	9
New	Road Maintenance	2022	Ongoing	N/A
New	Litter Enforcement	2022	Ongoing	N/A

c. Road Maintenance

With the increase in route truck and transfer trailer traffic to and from the Pike Sanitary Landfill the District will provide funding for road repair and maintenance.

The District has included a plan to fund road repair and maintenance in the current plan update. The following roads are the county roads using the funding to defray the added costs of maintaining the roads that are used by vehicles hauling trash to the Pike County Landfill.

- River Road from Piketon to State Route 220
- Zahns Corner Road leading from Piketon to State Route 220
- River Road from Jackson Township areas to State Route 220
- Portion of Schuster Road leading from southern Pike County to State Route 220
- McCorkle Road from southern Pike County to Schuster Road to State Route 220.

d. Litter Enforcement

The District will fund a litter enforcement position to supervise collection crews and perform environmental investigations & enforcement. This position will work closely with the Pike County General Health District providing support for existing programs. The District will utilize a deputy from the Pike County Sheriff Department to staff the position. There will be a memorandum of understanding that will outline the following:

- Supervise litter crew to clean specific roads and others as needed
- Investigate dumping locations to trace back to source
- Work with Pike County Prosecutor to enforce dumping laws
- Provide illegal dumping education and outreach
- Visit local tire shops to educate operators and review for record compliance.

The District updated the contract with the health department to provide \$50,000 per year for a solid waste nuisance abatement program. \$49,000 covers complaint investigations, open dump investigations, and public education. An additional \$1,000 has been provided to assist the District with solid waste surveys of businesses that are involved in routine inspections.

e. New Processing Equipment & Out of District Recyclables

The new recycling center will be used to process and sort higher volumes than what are currently being processed. The District will provide funding for sorting equipment that will substantially increase the processing capacity. The processing equipment will be elevated with bins under the stations to accumulate materials for baling. The conveyor is flush with the floor to allow for easy loading and moving the materials to the elevated sort stations. The sort stations will be designed to add

magnets and other equipment to automate processing and increase processing capacity.

With increased capacity, the District will review opportunities to partner with other Districts or businesses to accept additional recyclables to fully utilize facility.

f. Modify Existing Building

Once the new recycling center is processing recyclables, the District will provide funding to upgrade the old recycling center with offices and a meeting room. The upgraded building will provide administrative support and educational support for the new recycling center. The buildings are next to each other on the site and will provide the District with a campus that will meet the recycling needs of residents and businesses.

g. Potential: Require Future Haulers to Report Data

The District can approach the haulers in Pike County to identify whether solid waste data is available on a community level. If data is available, the District will begin collecting the information.

h. Potential: Online Surveying of Commercial & Industrial Businesses

The District could develop a streamlined easy-to-use online survey which would allow further time to dedicate staff to for generators. The District could target key generators that have not previously participated in the annual survey to identify whether they have a recycling program, introduce them to District programs and services, and request their participation in the survey.

i. New Review Current Process for Surveying Commercial & Industrial

The District will objectively review its current process for surveying including the mailing list of businesses, businesses' mailing/contact information, user-friendliness of surveys, and method and schedule of follow-ups. In addition, the District will focus on larger businesses for outreach and engagement to develop relationships and support for District programs. Increased support from these businesses will increase the probability of receiving meaningful survey responses.

j. Use Previous Years' Reported Data

For the commercial and industrial sector survey reported data, Ohio ADR guidelines permit districts to use the previous two years' reported recycling tonnages from companies as long as they are still in business

and running similar operations. In years that the District does not receive a large business's response, the previous year's recycling tonnage could be used.

Suggested Opportunities Not Applicable to the Following Sections
Section H-9: Financial Analysis
Section H-10. Regional Analysis
Section H-11. Population 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

Pike County 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, 10, and 15 of the planning period, as well as the population credit received for each opportunity. Some drop-off locations show a credit of zero because the community where the drop-off is located has already reached the maximum credit. Communities are able to receive full credit for the last drop-off needed to provide the entire population for a particular jurisdiction with the opportunity to recycle. For example, unincorporated Beaver Township had 1,221 residents in 2018 and two full-time, rural drop-offs. The FTR2 drop-off earned a population credit of 2,500, and this covered 100%+ of the community’s population; therefore, the FTR3 drop-off did not earn any additional credits in the calculation.

Table J-1a. Opportunity to Recycle

ID #	Pike Name of Community	2018		2022 (Year 1)		2026 (Year 5)		2031 (Year 10)		2036 (Year 15)	
		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Full-time, urban drop-off											
None	None	-	-			-	-	-	-		
Part-time, urban drop-off											
None	None	-	-			-	-	-	-		
Full-time, rural drop-off											
FTR1	Piketon Village, Pike County Fairgrounds	2,157	2,500	2,229	2,500	2,236	2,500	2,261	2,500	2,269	2,500
FTR2	Beaver Twp, Old Beaver Firehouse	1,221	2,500	1,262	2,500	1,266	2,500	1,280	2,500	1,285	2,500
FTR3	Beaver Twp, Garage	1,221	0	1,262	0	1,266	0	1,280	0	1,285	0
FTR4	Perry Twp, Garage	1,008	2,500	1,042	2,500	1,045	2,500	1,057	2,500	1,061	2,500
FTR5	Mifflin Twp, Garage	1,276	2,500	1,319	2,500	1,323	2,500	1,338	2,500	1,343	2,500
FTR6	Camp Creek Twp, Township Building	959	2,500	991	2,500	994	2,500	1,005	2,500	1,009	2,500
FTR7	Piketon Village, Community Action Committee of Pike County	2,157	0	2,229	0	2,236	0	2,261	0	2,269	0
FTR8	Marion Twp, Youth Center	1,113	2,500	1,150	2,500	1,154	2,500	1,167	2,500	1,171	2,500
FTR9	Scioto Twp, Wakefield Firehouse	1,251	2,500	1,293	2,500	1,297	2,500	1,311	2,500	1,316	2,500
FTR10	Seal Twp, Recycling Center	4,270	2,500	4,413	2,500	4,426	2,500	4,476	2,500	4,493	2,500

ID #	Pike	2018		2022 (Year 1)		2026 (Year 5)		2031 (Year 10)		2036 (Year 15)	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FTR11	Jackson Twp, Omega	1,180	2,500	1,219	2,500	1,223	2,500	1,237	2,500	1,242	2,500
FTR12	Pebble Twp, Firehouse	2,496	2,500	2,579	2,500	2,587	2,500	2,616	2,500	2,626	2,500
FTR13	Seal Twp, Garage	1,192	2,500	1,232	2,500	1,236	2,500	1,249	2,500	1,254	2,500
FTR14	Waverly Village, Bristol Village Drop-Off	4,270	2,500	4,413	2,500	4,426	2,500	4,476	2,500	4,493	2,500
FTR15	Pee Pee Township/ Waverly Village, County Government Center	7,658	5,000	7,914	5,000	7,938	5,000	8,027	5,000	8,057	5,000
Part-time, rural drop-off											
None	None	-	-	-	-	-	-	-	-	-	-
Total County Population		28,067		29,004		29,092		29,420		29,530	
Total Population Credit		35,000		35,000		35,000		35,000		35,000	
Percent of Population		125%		121%		120%		119%		119%	

Sources of Information: Ohio Development Services Agency, 2018 Population Estimates by County, City, Village, and Township, May 2019.

The District will continue to meet Goal 1 for each year of the planning period. All drop-offs operating during the reference year are expected to continue. 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 more than 1 drop-off and had already reached the maximum credit; therefore, additional population credit for drop-offs cannot be counted toward achieving Goal 1.

Summary of Recycling Infrastructure

Eleven communities have drop-off recycling available in the community’s jurisdiction, including most of the largest communities in the District. This allows the District to reach 100% access for the residents.

Table J-1b. Opportunity to Recycle Summary

Pike Programs	2018		2022 (Year 1)		2026 (Year 5)		2031 (Year 10)		2036 (Year 15)	
	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-Subscription Curbside	0	0	0	0	0	0	0	0	0	0
Subscription Curbside	0	0	0	0	0	0	0	0	0	0
Drop-Offs	25,771	30,000	26,631	30,000	26,712	30,000	27,013	30,000	25,771	30,000
Total Population Credit	28,067		29,004		29,092		29,420		29,530	
Total County Population	30,000		30,000		30,000		30,000		30,000	
Percent of Population	107%		103%		103%		102%		102%	

Tables J-2 and J-3 are not applicable to the District and have been omitted.

Commercial Sector Opportunity to Recycle

Table J-4. Infrastructure Demonstration for the Commercial Sector

Service Provider	Type of Recycling Service Provided	Cc	Mp	SM	PI	O
Pike						
Pike County Solid Waste District	MRF	✓	✓	✓	✓	
Rumpke Waste & Recycling	Hauler	✓	✓	✓	✓	
Klinker’s Lumber	Broker, Buy-Back					✓
Radio Shack	Broker, Buy-Back					✓
McConkey Auto Parts	Broker, Buy-Back			✓		✓
Lowe’s	Broker, Buy-Back					✓
Barker’s Recycling	Scrap Yard			✓		
Daniel’s Metal Company	Scrap Yard			✓		
AutoZone	Broker, Buy-Back					✓

CC = corrugated cardboard, MP = mixed paper, SM = scrap metals, PL = plastics, O = other

Table J-4, “Infrastructure Demonstration for the Commercial Sector,” presents drop-offs, buy backs and brokers, scrap yards, haulers, and material recovery facilities that provide recycling opportunities to the commercial/institutional sector. The total number of recycling opportunities in Pike County’s jurisdiction for five materials designated for the commercial sector to demonstrate compliance with Goal 1 are as follows:

- Corrugated cardboard: 2
- Mixed paper: 2
- Scrap metals: 5
- Plastics: 2
- Other (EW, FI Bulbs, etc.): 5

Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate

In the reference year, Pike’s residential/commercial sector achieved a 5.14% waste reduction and recycling rate, which falls short of the 25% requirement to achieve Goal 1. The waste reduction and recycling rate for the R/C sector is projected to increase throughout the planning period based on anticipated volumes of recycling from scrap yards, processors,

MRFs, retailers that report to Ohio EPA, scrap tire recyclers, Pike's HHW program, Pike's Recycling Drop-Off Program, and potential new curbside recycling programs.

2. Industrial Waste Reduction and Recycling Rate

In the reference year, Pike's industrial sector achieved a 31.6% waste reduction and recycling rate, which is below the 66% requirement to achieve Goal 1. The waste reduction and recycling rate for the industrial sector is not projected to exceed the 66% requirement throughout the planning period based on anticipated volumes of recycling from scrap yards, processors, and MRFs, but it is projected to increase.

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 that can also be found in Appendices I and L for further description:

- Promotional Items
- Pamphlets and Flyers
- Special Event Displays
- Poster Contest
- District Website
- Classroom Presentations
- Community Presentations
- Public Service Announcements
- Campaign to Increase Recycling
- Technical Assistance



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, and at least 66% of the solid waste generated by the industrial sector.

Table K-1 below shows the waste reduction and recycling (WRR) rates for the residential/commercial sector in the reference year and projected for the planning period. The District does not yet 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	WRR Rate	Per Capita WRR Rate (PPD)
First Year of Planning Period →	2018	28,067	1,227	22,629	23,855	5.14%	0.24
	2019	28,534	1,236	20,896	22,132	5.58%	0.24
	2020	29,000	1,245	21,238	22,483	5.54%	0.24
	2021	29,002	1,255	21,239	22,494	5.58%	0.24
	2022	29,004	1,264	21,241	22,505	5.62%	0.24
	2023	29,006	1,274	21,242	22,516	5.66%	0.24
	2024	29,008	1,283	21,244	22,527	5.70%	0.24
	2025	29,010	1,293	21,245	22,538	5.74%	0.24
	2026	29,092	1,303	21,305	22,608	5.76%	0.25
	2027	29,174	1,313	21,365	22,678	5.79%	0.25
	2028	29,256	1,323	21,426	22,748	5.81%	0.25
	2029	29,338	1,333	21,486	22,818	5.84%	0.25
	2030	29,420	1,343	21,546	22,889	5.87%	0.25
	2031	29,420	1,353	21,546	22,899	5.91%	0.25
	2032	29,420	1,363	21,546	22,909	5.95%	0.25
	2033	29,420	1,374	21,546	22,919	5.99%	0.26
	2034	29,420	1,384	21,546	22,930	6.04%	0.26
2035	29,420	1,395	21,546	22,940	6.08%	0.26	
2036	29,530	1,405	21,626	23,031	6.10%	0.26	

Sources of Information: Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix E, Table E-4 (for reference year) and Table E-5 (for planning period)
- Waste Disposed: Appendix D, Table D-3 (for reference year) and Table D-5 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)

- Population: Appendix C, Table C-1 (for reference year) and Table C-2 (for planning period)

Sample Calculations:

2018 Waste Reduction & Recycling Rate = (2018 Waste Reduced & Recycled ÷ 2018 Waste Generated) x 100

5.14% = (1,227 tons ÷ 23,855 tons) x 100

2018 Per Capita Waste Reduction and Recycling Rate = ((2018 tons recycled x 2,000) ÷ 365) ÷ population

0.24 PPD = ((1,227 tons x 2,000) ÷ 365 days/year) ÷ 28,067 residents

Table K-1 demonstrates that the District does not exceed the requirements of Goal 2 to reduce and recycle at least 25% of the solid waste generated by the residential/commercial during the reference year or during the planning period. However, the WRR is projected to increase during the planning period.

Table K-2 shows that the District does not exceed the requirements of Goal 2 to reduce and recycle at least 66% of the solid waste generated by the industrial during the reference year, but it does project to reach this goal during the planning period.

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 →	2018	230	499	730	31.57%
	2019	8,632	2,209	10,841	79.63%
	2020	8,675	2,166	10,841	80.02%
	2021	8,719	2,124	10,843	80.41%
	2022	8,762	2,083	10,845	80.79%
	2023	8,806	2,043	10,849	81.17%
	2024	8,850	2,004	10,854	81.54%
	2025	8,894	1,965	10,859	81.90%
	2026	8,939	1,927	10,866	82.26%
	2027	8,939	1,927	10,866	82.26%
	2028	8,939	1,927	10,866	82.26%
	2029	8,939	1,927	10,866	82.26%
	2030	8,939	1,927	10,866	82.26%
	2031	8,939	1,927	10,866	82.26%
	2032	8,939	1,927	10,866	82.26%
	2033	8,939	1,927	10,866	82.26%
	2034	8,939	1,927	10,866	82.26%
2035	8,939	1,927	10,866	82.26%	
2036	8,939	1,927	10,866	82.26%	

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:

$$2018 \text{ Waste Reduction \& Recycling Rate} = (2018 \text{ Waste Reduced \& Recycled} \div 2018 \text{ Waste Generated}) \times 100$$

$$31.57\% = (230 \text{ tons} \div 730 \text{ tons}) \times 100$$

The combined WRR rate for residential/commercial and industrial sectors is shown in **Table K-3**. Overall, the WRR rate is projected to fluctuate between 30.06% and 30.60% percent from 2022 to the end of the planning period.

Table K-3. Annual Rate of Waste Reduction: Total Solid Waste

	Year	Waste Reduced and Recycled	Waste Disposed	Waste Generated	Waste Reduction and Recycling Rate
First Year of Planning Period →	2018	1,457	23,128	24,585	5.93%
	2019	9,868	23,105	32,973	29.93%
	2020	9,920	23,404	33,325	29.77%
	2021	9,973	23,364	33,337	29.92%
	2022	10,026	23,324	33,351	30.06%
	2023	10,080	23,286	33,365	30.21%
	2024	10,133	23,248	33,381	30.36%
	2025	10,187	23,210	33,398	30.50%
	2026	10,242	23,233	33,474	30.60%
	2027	10,251	23,293	33,544	30.56%
	2028	10,261	23,353	33,614	30.53%
	2029	10,271	23,413	33,684	30.49%
	2030	10,282	23,473	33,754	30.46%
	2031	10,292	23,473	33,765	30.48%
	2032	10,302	23,473	33,775	30.50%
	2033	10,312	23,473	33,785	30.52%
	2034	10,323	23,473	33,796	30.54%
2035	10,333	23,473	33,806	30.57%	
2036	10,344	23,553	33,897	30.52%	

Sources of Information:

Tables K-1 and K-2

Sample Calculations:

2018 Waste Generated = 2018 Waste reduced and recycled + 2018 waste disposed

24,585 tons = 1,457 tons + 23,128 tons

2018 Waste Reduction & Recycling Rate = (2018 Waste Reduced & Recycled ÷ 2018 Waste Generated) x 100

5.93% = (1,457 tons ÷ 24,585 tons) x 100

Although the District is committed to achieving Goal 1, the District will strive to maintain its achievement of Goal 2. The specific programs and activities that will help in achieving the targeted WRR rate are discussed in Appendix I.



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 v4.0:

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 maintained several pages of information within its general website for the Pike County Office of Community and Economic Development. The District’s main page can be accessed at http://pikecountydevelopment.com/?page_id=14.

The website is regularly updated and 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, recycling tips, and more.

Name	Start Date	End Date	Goal
Website	Ongoing	Ongoing	3, 4

2. Comprehensive Resource List

The District’s website includes a downloadable version of the Recycling Guide on the top of the front page. The document is 36 pages long and includes a list of 30 materials to be recycled. Each material is further broken down by one or more locations for recycling the material along with contact information. The guide was last updated in 2015.

Name	Start Date	End Date	Goal
Resource Guide (on website)	Ongoing	Ongoing	3

3. Inventory of Available Infrastructure

The District website includes a tab titled “Recycling Drop Off Locations” 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’s Assistant Director doubles as the District’s education specialist. The District will hire a part time education specialist to assist the District Assistant Director. The duties of the Assistant Director and part-time

education specialist are to provide presentations to residents, schools, communities, and other groups in the District. During 2018, the specialist performed the following activities:

- Handed out Earth Day activity books to students in 1st through 6th grade at all 6 schools in the County and America Recycles Day activity book to all 2nd graders on America Recycles Day.
- Presented the “Reduce, Reuse, Recycle” presentation to all 3rd graders in the County at the Pike County Farm Bureau 3rd Grade Ag Day.
- Presented America Recycles Day presentation to all 2nd graders.
- Coordinated 2nd grade Poster Contest for all 6 County schools.
- Coordinated unique educational activities for k-5 students using recycled materials.
- Partnered with other entities to host composting class
- Gave recycling presentations at the local libraries and to seniors
- Set up booth at Community Action Committee’s Shred It Day event to promote recycling and hand out pamphlets and promotional items
- Set up booth at the Pike County Fair to promote recycling and hand out pamphlets and promotional items
- Met with other governmental/non-profit entities to inform each other of ongoing events and how to help participate/advertise

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
Promotional Items	✓	✓	✓	✓	✓
Pamphlets and Flyers	✓	✓	✓	✓	✓
Special Event Displays	✓	✓	✓	✓	✓
Poster Contest		✓			
District Website	✓		✓	✓	
Classroom Presentations		✓			

Community Presentations	✓		✓	✓	✓
Public Service Announcements	✓	✓	✓	✓	✓
Total Program per Group	6	6	6	6	5

1. Audience: Residents

a. Overview

The District provides a website for residents to find appropriate information on the many program opportunities for residents (see Appendix H). The District also provides educational materials on its website, in presentations, at special events, and in the District office.

The District uses its tools for reaching out to residents to link the infrastructure available and promote more recycling. These tools include information on the website about recycling locations by material, advertisements for special collections, and educational material on benefits of recycling.

Name	Start Date	End Date	Goal
Increase Recycling Campaign	2022	2023	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 District attends large gathering events in Pike County to meet and pass out educational materials to residents.

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, flyers, and advertisements from partner entities 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 conduct a plan

to advertise recycling, the benefits of recycling, and how easy recycling could be in more places than just the District website. Campaigns like this have been conducted in other districts and have been successful in educating residents. The campaign could expand on the educational material currently on the website and emphasize 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 would keep track of pieces of media sent out, number of views, costs, and other measurable data for residential education.

The Repeat Message

All posters, flyers, 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 educational opportunities for students throughout the school year (see Appendix H) using presentations, promotional items, and their own mascot "Spotless" who promotes recycling and anti-litter. In 2018, the District conducted presentations to all 6 schools throughout the county to students from kindergarten to 6th grade. The District also distributed student activity books about Earth Day, America Recycles Day, and "Reduce, Reuse, Recycle" to students from all 6 schools throughout the county. When applicable, the district references the school's own recycling program; some schools in the district currently have a recycling program serviced by the district. The district continues to work with other schools to add recycling in the future.

In addition to presentations given to students, special projects were conducted with the students. Four special activities were conducted with students:

- Don't Be a Litterbug: Make shakers from plastic water bottles and harmonicas out of popsicle sticks
- Reduce Reuse Recycle: Make instruments out of small boxes
- Recycled Paper: Make recycled paper Christmas ornaments
- Earth Day: Make seed bombs out of recycled paper or clay

The District also coordinated the annual 2nd grade poster contest for America Recycles Day. Second graders from all six schools participated in the contest, and winners received recycling promotional items as prizes. All students receive a presentation about the holiday and an activity book.

Name	Start Date	End Date	Goal
Development and Use of Survey to Review Presentation	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, mascot, art activities, activity books, and poster competition. These programs can be further 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 could measure the school education programs by counting the number of presentations and students attended. The participation of the contest should be counted as well.

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 and contest participation. Additionally, multiple schools receive recycling assistance from the District and could measure the resulting changes in recycling each month/year.

3. Audience: Institutions & Commercial Businesses

a. Overview

The District provides educational and program opportunities to the business and institutional sector such as a phone line, the recycling guide online, website with all District information, annual contact via surveys, presentations as requested, available recycling containers for rent, and promotion of the “Buy Recycled” ideology. These programs allow for the District to assist institutions & commercial businesses with access to infrastructure opportunities the business can take advantage of.

Name	Start Date	End Date	Goal
Continuing and Improving 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 Lorain County members, 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, special event booths, 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 could recommend assisting the businesses with waste audits, starting recycling programs, contract assistance, and answer 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. Additionally, the District could create a specialized flyer to post on the website, post on social media, and hand out at special events that pertains specifically to businesses. Handing out a flyer with information can provide a connection from the District to a business employee to help pass information up the chain.

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 will create a branded message for businesses to focus on what opportunities the District can assist with and infrastructure available.

Measuring Effectiveness

The District can track waste audits performed, 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.

4. Audience: Industries

a. Overview

The District provides educational and program opportunities to the industrial sector such as a phone line, the recycling guide online, website with all District information, annual contact via surveys, presentations as requested, available recycling containers for rent, and promotion of the “Buy Recycled” ideology. These programs allow for the District to assist industrial businesses with access to infrastructure opportunities the business can take advantage of.

Name	Start Date	End Date	Goal
Technical Assistance	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 plans to create relationships with large manufacturers in order to improve the number of connections the District has with the industrial sector in Pike County.

5. Audience – Communities & Elected Officials

a. Overview

The District has a good relationship with many communities and elected officials. However, the District and communities do not often have communication due to the fact that no communities have community-hosted recycling programs.

Name	Start Date	End Date	Goal
Curbside Technical Assistance	Existing	Ongoing	3, 4

b. Outreach Methodologies

Audience Needs

Communities and elected officials would benefit from witnessing the works of the District 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 assist with.

Behavior Change Focus

There are currently no curbside recycling programs in the District. Therefore, the District should focus its assistance and education about programs like these 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 districts 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. Once curbside recycling has begun, education for the curbside program(s) 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

Determining the participation for the officials would allow the District to target future events to help get more officials involved with their communities and the opportunities they can help improve.

C. Outreach Priority

The District has identified increasing correct recycling participation as an outreach priority. This priority would focus on drop-off recycling as well as beginning new curbside and business recycling collection programs. Hosting, operating, and

improving recycling programs in the District becomes expensive and ineffective if there are not enough recycling programs operating in the District. By focusing on the number of new 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
 - TV and radio
 - District website
 - Other outlets such as flyers, events, word of mouth
- Advertise importance of recycling often *and* correctly
- Set up time each month to reach out to major commercial, institutional, and industrial generators to offer assistance and answer questions
- Participate in community meetings when applicable to educate leaders on promoting recycling to residents
- The District will hire a part-time education specialist to assist in the education and outreach.

Milestones

- Continuous meetings with community leaders
- Increasing interest from residents
- Increased outreach and advertisement for technical assistance to commercial, institutional, and industrial businesses

- 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: Increasing Recycling 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 Pike County Solid Waste Management District has one in-District landfill that provides 99% of solid waste disposal capacity needed each year. At the end of 2018, the landfill was estimated to have 32.8 years of remaining permitted capacity (see **Table M-1**).

The District does not foresee any issues related to the operator obtaining approval for expansion permits in the future and anticipates that this facility will remain active throughout the entire planning period. 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 includes other regional landfills that currently receive additional Pike County volumes.

Table M-1. Remaining Operating Life of Publicly Available Landfills

Facility	County	Years of Remaining Capacity
<i>In-District</i>		
Pike Sanitation Landfill	Pike	32.8
<i>Out-of-District</i>		
Beech Hollow Landfill	Jackson	80
American Landfill, Inc.	Stark	62.4
Athens Hocking C&DD/Reclamation Center Landfill	Athens	46.2
<i>Out-of-State</i>		
Boyd Co Sanitary Landfill	Boyd, KY	167.9

Source(s) of Information: Ohio EPA Facility Data, 2018.
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 2027. Both residential/commercial and industrial waste has been included in this analysis, and 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 Metals” material category represents the sum of “appliance/white goods” and “Other” recyclable materials that were notated on the reference year’s Annual District Report.

Table N-1 shows the material categories as well as the amounts recycled, landfilled, and composted which were entered into the model. This first analysis compares reference year data to projected data for year six of the planning period (2027). The top half of **Table N-1** provides results from the WARM analysis of actual recycling tonnage and MTCO₂E generation in 2018. The bottom half of the table represents the projected recycling tonnage and MTCO₂E generation for year 2027.

Table N-1. Tons of Solid Waste Applied to WARM

2018 WARM

GHG Emissions from Baseline Waste Management (MTCO ₂ E):						(4,193.68)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	781.41	-	-	NA	NA	(2,449.98)
Mixed Paper (general)	183.18	-	-	NA	NA	(649.47)
Food Waste	NA	-	-	82.83	-	(14.58)
Branches	NA	-	-	3.40	-	(0.50)
Mixed Plastics	52.85	-	-	NA	NA	(54.48)
Aluminum Cans	64.54	-	-	NA	NA	(589.08)
Steel Cans	68.00	-	-	NA	NA	(124.58)
Mixed Metals	55.99	-	-	NA	NA	(245.86)
Glass	0.10	-	-	NA	NA	(0.03)
Tires	158.29	-	-	NA	NA	(59.57)
Mixed Recyclables	1.95	-	-	NA	NA	(5.55)

2027 WARM

GHG Emissions from Alternative Waste Management Scenario (MTCO₂E): (29,509.84)

Material	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	5,498.58	-	-	NA	NA	(17,239.90)
Mixed Paper (general)	-	1,288.99	-	-	NA	NA	(4,570.14)
Food Waste	-	NA	-	-	582.85	-	(102.59)
Branches	NA	NA	-	-	23.92	-	(3.50)
Mixed Plastics	-	371.89	-	-	NA	NA	(383.39)
Aluminum Cans	-	454.15	-	-	NA	NA	(4,145.20)
Steel Cans	-	478.50	-	-	NA	NA	(876.65)
Mixed Metals	-	393.99	-	-	NA	NA	(1,730.07)
Glass	-	0.70	-	-	NA	NA	(0.19)
Tires	-	1,113.85	-	-	NA	NA	(419.15)
Mixed Recyclables	NA	13.72	-	-	NA	NA	(39.05)

The two scenarios in **Table N-1** above are combined into **Table N-2** below to show that 2027 will save 25,316.16 MTCO₂E more than were saved in 2018.

Table N-2. Net GHG Reductions for 2027: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (2027-2018)
Corrugated Containers	(14,789.92)
Mixed Paper (general)	(3,920.68)
Food Waste	(88.01)
Branches	(3.00)
Mixed Plastics	(328.91)
Aluminum Cans	(3,556.12)
Steel Cans	(752.07)
Mixed Metals	(1,484.21)
Glass	(0.17)
Tires	(359.58)
Mixed Recyclables	(33.50)
Net Totals	(25,316.16)

The top half of **Table N-3** shown below provides the results from the WARM analysis, assuming that all waste generated in the reference year was disposed in landfills. The model estimates a net production of 277.46 metric tons of carbon dioxide equivalents (MTCO₂E) using this assumption which is characterized as the baseline scenario. The second half of **Table N-2** represents the actual amounts recycled and composted in 2018 and is termed the alternative scenario. The alternative scenario results in a net emission of (4,193.68) MTCO₂E.

Table N-3. Greenhouse Gas Emissions Printout for 2018

GHG Emissions from Baseline Waste Management (MTCO₂E): **277.46**

Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	781.41	-	NA	NA	199.76
Mixed Paper (general)	-	183.18	-	NA	NA	26.20
Food Waste	NA	82.83	-	-	-	44.91
Branches	NA	3.40	-	-	-	(1.69)
Mixed Plastics	-	52.85	-	NA	NA	1.07
Aluminum Cans	-	64.54	-	NA	NA	1.31
Steel Cans	-	68.00	-	NA	NA	1.38
Mixed Metals	-	55.99	-	NA	NA	1.13
Glass	-	0.10	-	NA	NA	0.00
Tires	-	158.29	-	NA	NA	3.21
Mixed Recyclables	-	1.95	-	NA	NA	0.18

GHG Emissions from Alternative Waste Management Scenario (MTCO₂E): **(4,193.68)**

Material	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Corrugated Containers	-	781.41	-	-	NA	NA	(2,449.98)
Mixed Paper (general)	-	183.18	-	-	NA	NA	(649.47)
Food Waste	-	NA	-	-	82.83	-	(14.58)
Branches	NA	NA	-	-	3.40	-	(0.50)
Mixed Plastics	-	52.85	-	-	NA	NA	(54.48)
Aluminum Cans	-	64.54	-	-	NA	NA	(589.08)
Steel Cans	-	68.00	-	-	NA	NA	(124.58)
Mixed Metals	-	55.99	-	-	NA	NA	(245.86)
Glass	-	0.10	-	-	NA	NA	(0.03)
Tires	-	158.29	-	-	NA	NA	(59.57)
Mixed Recyclables	NA	1.95	-	-	NA	NA	(5.55)

Combining the results from the two scenarios in **Table N-3** 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-4**). The total estimated GHG emissions savings are (4,471.14) MTCO₂E.

Table N-4. Net GHG Reductions for 2018: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (Alternative-Baseline)
Corrugated Containers	(2,649.75)
Mixed Paper (general)	(675.66)
Food Waste	(59.49)
Branches	1.19
Mixed Plastics	(55.56)
Aluminum Cans	(590.39)
Steel Cans	(125.96)
Mixed Metals	(247.00)
Tires	(0.03)
Mixed Recyclables	(62.77)
Net Totals	(4,471.14)

Note: "MTCO₂E" means metric tons of carbon dioxide equivalent.



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 2022-2036. The District has prepared the budget section of this Plan Update to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.

The budget tables prepared for this Plan Update demonstrate that the District has the financial funding throughout the planning period to implement the planned programs and initiatives.

The District receives all its funding from fees generated from the Pike Sanitation Landfill which is owned and operated by Rumpke and is centrally located in the District. Significant funding is generated by out of district volumes that the District has no certainty with respect to future expectations. The out of district revenues provide significant funding for District programs. The out of district revenues have been conservatively projected for the District; however, significant reductions in these revenues would result in reductions in District expenses as outlined in this section.

A. FUNDING MECHANISMS AND REVENUE GENERATED

1. Disposal Fees

Disposal fees are greatly affected by the volume of out-of-district material. Historical revenue has significantly increased about 80% from 2014 to 2020. To project revenues, the last five years were averaged resulting in a 12% reduction from the 2020's actual revenue. The out-of-district revenue is projected to increase 1% each year through the seventh year of the planning period. District revenue is held flat after the seventh year of the planning period.

Out-of-state revenue is based on an average of the last 5 years' revenue. After the seventh year, the revenue is projected flat for the remainder of the planning period. The out-of-state revenue is projected to increase 1% each year through the seventh year of the planning period. District revenue is held flat after the seventh year of the planning period.

The in-district revenue is projected based on the yearly expected change in disposal during the planning period.

Table O-1. Disposal Fee Schedule and Revenue

Year	Disposal Fee Schedule (\$/ton)			Revenue			Total Disposal Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2014	\$1.50	\$3.00	\$1.50	\$61,347	\$464,293	\$12	\$525,651
2015	\$1.50	\$3.00	\$1.50	\$36,463	\$462,377	\$11	\$498,852
2016	\$1.50	\$3.00	\$1.50	\$35,026	\$615,004	\$2,283	\$652,312
2017	\$1.50	\$3.00	\$1.50	\$31,567	\$617,104	\$12,686	\$661,357
2018	\$1.50	\$3.00	\$1.50	\$33,655	\$761,867	\$15,257	\$810,778
2019	\$1.50	\$3.00	\$1.50	\$36,034	\$832,466	\$35	\$868,534
2020	\$1.50	\$3.00	\$1.50	\$34,059	\$832,466	\$0	\$866,525
2021	\$1.50	\$3.00	\$1.50	\$34,001	\$731,781	\$6,052	\$771,834
2022	\$1.50	\$3.00	\$1.50	\$33,943	\$739,099	\$6,113	\$779,155
2023	\$1.50	\$3.00	\$1.50	\$33,887	\$746,490	\$6,174	\$786,551
2024	\$1.50	\$3.00	\$1.50	\$33,831	\$753,955	\$6,236	\$794,022
2025	\$1.50	\$3.00	\$1.50	\$33,777	\$761,495	\$6,298	\$801,570
2026	\$1.50	\$3.00	\$1.50	\$33,809	\$769,109	\$6,361	\$809,280
2027	\$1.50	\$3.00	\$1.50	\$33,897	\$776,801	\$6,424	\$817,122
2028	\$1.50	\$3.00	\$1.50	\$33,984	\$784,569	\$6,489	\$825,042
2029	\$1.50	\$3.00	\$1.50	\$34,072	\$784,569	\$6,489	\$825,129
2030	\$1.50	\$3.00	\$1.50	\$34,159	\$784,569	\$6,489	\$825,216
2031	\$1.50	\$3.00	\$1.50	\$34,159	\$784,569	\$6,489	\$825,216
2032	\$1.50	\$3.00	\$1.50	\$34,159	\$784,569	\$6,489	\$825,216
2033	\$1.50	\$3.00	\$1.50	\$34,159	\$784,569	\$6,489	\$825,216
2034	\$1.50	\$3.00	\$1.50	\$34,159	\$784,569	\$6,489	\$825,216
2035	\$1.50	\$3.00	\$1.50	\$34,159	\$784,569	\$6,489	\$825,216
2036	\$1.50	\$3.00	\$1.50	\$34,276	\$784,569	\$6,489	\$825,334

2. Generation Fees

The District does not receive revenue from generation fees.

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 any loans; therefore, **Table O-4** has been omitted.

5. Other Sources of Revenue

Historical other revenue, except for grant revenue, is primarily immaterial miscellaneous revenue or refunds from various sources that could have all been classified as other revenue or as credits to expense line items. No Other Revenue is projected from these sources.

a. **Tipping Fees**

The District does not currently charge any tipping fees.

b. **Rates and Charges**

The District does not currently charge any rates or charges.

c. **Recycling Revenue**

Revenue generated from the sale of commodities from the District's drop-off program was immaterial because of market conditions and low volume.

d. **Grants**

The District received a grant from Ohio EPA in 2019. The District will continue to submit request for grants; however, Ohio EPA's grants are competitive and not guaranteed. Conservatively, the District is not projecting grant revenue during the planning period. The District is planning on submitting for a grant to support installation of sorting equipment for the new recycling center in 2022.

e. **Reimbursements, Project, and Other**

The District classifies refunds from the Ohio Bureau of Workers Compensation, insurance refunds, and returned supplies in these line items.

f. **User Fees**

In 2019, the District charged user fees for TV recycling amounting to \$540. The other user fees were comprised of a refund of insurance premiums.

Table O-5. Other Revenue and Other Revenue Sources

Year	Disposal Fee Schedule (\$/ton)			Revenue			Total Disposal Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2014	\$1.50	\$3.00	\$1.50	\$61,347	\$464,293	\$12	\$525,651
2015	\$1.50	\$3.00	\$1.50	\$36,463	\$462,377	\$11	\$498,852
2016	\$1.50	\$3.00	\$1.50	\$35,026	\$615,004	\$2,283	\$652,312
2017	\$1.50	\$3.00	\$1.50	\$31,567	\$617,104	\$12,686	\$661,357
2018	\$1.50	\$3.00	\$1.50	\$33,655	\$761,867	\$15,257	\$810,778
2019	\$1.50	\$3.00	\$1.50	\$36,034	\$813,244	\$35	\$849,313
2020	\$1.50	\$3.00	\$1.50	\$31,387	\$784,429	\$8	\$815,823
2021	\$1.50	\$3.00	\$1.50	\$31,333	\$846,513	\$6,054	\$883,900
2022	\$1.50	\$3.00	\$1.50	\$31,280	\$854,978	\$6,114	\$892,372
2023	\$1.50	\$3.00	\$1.50	\$31,228	\$863,528	\$6,175	\$900,931
2024	\$1.50	\$3.00	\$1.50	\$31,177	\$872,163	\$6,237	\$909,577
2025	\$1.50	\$3.00	\$1.50	\$31,127	\$880,885	\$6,299	\$918,312
2026	\$1.50	\$3.00	\$1.50	\$31,157	\$889,694	\$6,362	\$927,213
2027	\$1.50	\$3.00	\$1.50	\$31,237	\$898,591	\$6,426	\$936,254
2028	\$1.50	\$3.00	\$1.50	\$31,318	\$907,577	\$6,490	\$945,385
2029	\$1.50	\$3.00	\$1.50	\$31,398	\$907,577	\$6,490	\$945,465
2030	\$1.50	\$3.00	\$1.50	\$31,479	\$907,577	\$6,490	\$945,546
2031	\$1.50	\$3.00	\$1.50	\$31,479	\$907,577	\$6,490	\$945,546
2032	\$1.50	\$3.00	\$1.50	\$31,479	\$907,577	\$6,490	\$945,546
2033	\$1.50	\$3.00	\$1.50	\$31,479	\$907,577	\$6,490	\$945,546
2034	\$1.50	\$3.00	\$1.50	\$31,479	\$907,577	\$6,490	\$945,546
2035	\$1.50	\$3.00	\$1.50	\$31,479	\$907,577	\$6,490	\$945,546
2036	\$1.50	\$3.00	\$1.50	\$31,587	\$907,577	\$6,490	\$945,654

Source(s) of Information: Quarterly Fee Reports, District Records

6. Summary of District Revenues

The total revenue, comprised of disposal fees and other revenue, was \$813,247 during the reference year. Revenue in the first year of the planning period (2022) is projected to be \$779,155. The following table presents a summary of the District's actual and projected total revenue from 2014 to 2036.

Table O-6. Total Revenue

First Year of Planning Period → x	Year	Disposal Fees	Other Revenue	Total Revenue
	2014	\$525,651	\$1,138	\$526,790
	2015	\$498,852	\$154	\$499,005
	2016	\$652,312	\$20	\$652,332
	2017	\$661,357	\$1,389	\$662,746
	2018	\$810,778	\$2,469	\$813,247
	2019	\$849,313	\$95,245	\$944,557
	2020	\$815,823	\$58,596	\$874,420
	2021	\$883,900	\$0	\$883,900
	2022	\$892,372	\$0	\$892,372
	2023	\$900,931	\$0	\$900,931
	2024	\$909,577	\$0	\$909,577
	2025	\$918,312	\$0	\$918,312
	2026	\$927,213	\$0	\$927,213
	2027	\$936,254	\$0	\$936,254
	2028	\$945,385	\$0	\$945,385
	2029	\$945,465	\$0	\$945,465
	2030	\$945,546	\$0	\$945,546
	2031	\$945,546	\$0	\$945,546
	2032	\$945,546	\$0	\$945,546
2033	\$945,546	\$0	\$945,546	
2034	\$945,546	\$0	\$945,546	
2035	\$945,546	\$0	\$945,546	
2036	\$945,654	\$0	\$945,654	

Source(s) of Information: Quarterly Fee Reports

Sample Calculations (2018): Total Revenue = Disposal Fees + Other Revenues

$$\$813,247 = \$810,778 + \$2,469$$

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	2018	2019	2020	2021	2022	2023
1	1. Plan Monitoring/Prep.	\$255,841	\$2,941	\$36,281	\$2,000	\$0	\$0
1.a	a. Plan Preparation	\$156	\$2,941	\$36,281	\$2,000	\$0	\$0
1.b	b. Plan Monitoring	\$230,662	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$25,024	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$378,937	\$885,756	\$1,028,961	\$638,201	\$784,965	\$781,965
2.a	a. District Administration	\$265,882	\$214,769	\$199,945	\$209,610	\$213,802	\$218,078
2.a.1	Personnel	\$169,807	\$200,522	\$193,735	\$197,610	\$201,562	\$205,593
2.a.2	Office Overhead	\$0	\$0	\$0	\$0	\$0	\$0
2.a.3	Other	\$96,076	\$14,247	\$6,210	\$12,000	\$12,240	\$12,485
2.b	b. Facility Operation	\$0	\$162,468	\$225,410	\$114,919	\$252,217	\$219,561
2.b.1	MRF/Recycling Center	\$0	\$162,468	\$225,410	\$114,919	\$252,217	\$219,561
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	\$0	\$315,780	\$472,965	\$115,000	\$162,300	\$164,646
2.d.1	Curbside	\$0	\$0	\$0	\$0	\$0	\$0
2.d.2	Drop-off	\$0	\$170,359	\$390,139	\$115,000	\$117,300	\$119,646
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	\$145,420	\$82,825	\$0	\$45,000	\$45,000
2.e	e. Special Collections	\$25,822	\$29,719	\$28,660	\$27,500	\$28,050	\$28,611
2.e.1	Tire Collection	\$5,644	\$0	\$4,986	\$6,000	\$6,120	\$6,242
2.e.2	HHW Collection	\$6,397	\$8,998	\$7,966	\$10,000	\$10,200	\$10,404
2.e.3	Electronics Collection	\$281	\$4,319	\$125	\$1,000	\$1,020	\$1,040
2.e.4	Appliance Collection	\$281	\$530	\$125	\$500	\$510	\$520
2.e.5	Other Collection Drives	\$13,219	\$15,872	\$15,458	\$10,000	\$10,200	\$10,404
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$87,232	\$93,612	\$99,189	\$121,173	\$123,596	\$146,068
2.g.1	Education Staff	\$74,735	\$82,894	\$87,237	\$108,982	\$111,162	\$113,385
2.g.2	Advertisement/Promotion	\$5,572	\$6,885	\$8,442	\$8,611	\$8,783	\$28,959
2.g.3	Other	\$6,925	\$3,833	\$3,510	\$3,580	\$3,652	\$3,725
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	\$30,441	\$2,792	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$50,000	\$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	\$38,969	\$0	\$0	\$5,000	\$5,000
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0
	Pike County General Health District	\$0	\$0	\$0			
4	4. County Assistance	\$0	\$0	\$0	\$0	\$100,000	\$100,000
4.a	a. Maintaining Roads	\$0	\$0	\$0		\$100,000	\$100,000
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	\$25,000	\$25,000	\$50,000	\$50,000	\$120,000	\$120,000
7.a	a. Health Departments	\$25,000	\$25,000	\$50,000	\$50,000	\$50,000	\$50,000
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$70,000	\$70,000
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Heath 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	\$659,778	\$913,697	\$1,115,243	\$690,201	\$1,004,965	\$1,001,965

Table O-7. Expenses (continued)

Line #	Category/Program	2024	2025	2026	2027	2028	2029
1	1. Plan Monitoring/Prep.	\$20,000	\$20,000	\$0	\$0	\$0	\$21,250
1.a	a. Plan Preparation	\$20,000	\$20,000	\$0	\$0	\$0	\$21,250
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$674,204	\$706,688	\$699,422	\$732,410	\$725,658	\$745,658
2.a	a. District Administration	\$222,440	\$226,888	\$231,426	\$236,055	\$240,776	\$240,776
2.a.1	Personnel	\$209,705	\$213,899	\$218,177	\$222,541	\$226,992	\$226,992
2.a.2	Office Overhead	\$0	\$0	\$0	\$0	\$0	\$0
2.a.3	Other	\$12,734	\$12,989	\$13,249	\$13,514	\$13,784	\$13,784
2.b	b. Facility Operation	\$121,952	\$124,392	\$126,879	\$129,417	\$132,005	\$132,005
2.b.1	MRF/Recycling Center	\$121,952	\$124,392	\$126,879	\$129,417	\$132,005	\$132,005
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	\$167,039	\$169,480	\$171,969	\$174,509	\$177,099	\$177,099
2.d.1	Curbside	\$0	\$0	\$0	\$0	\$0	\$0
2.d.2	Drop-off	\$122,039	\$124,480	\$126,969	\$129,509	\$132,099	\$132,099
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	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
2.e	e. Special Collections	\$29,183	\$29,767	\$30,362	\$30,969	\$31,589	\$31,589
2.e.1	Tire Collection	\$6,367	\$6,495	\$6,624	\$6,757	\$6,892	\$6,892
2.e.2	HHW Collection	\$10,612	\$10,824	\$11,041	\$11,262	\$11,487	\$11,487
2.e.3	Electronics Collection	\$1,061	\$1,082	\$1,104	\$1,126	\$1,149	\$1,149
2.e.4	Appliance Collection	\$531	\$541	\$552	\$563	\$574	\$574
2.e.5	Other Collection Drives	\$10,612	\$10,824	\$11,041	\$11,262	\$11,487	\$11,487
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$128,590	\$151,161	\$133,785	\$156,460	\$139,190	\$159,190
2.g.1	Education Staff	\$115,653	\$117,966	\$120,325	\$122,731	\$125,186	\$125,186
2.g.2	Advertisement/Promotion	\$9,138	\$29,320	\$9,507	\$29,697	\$9,891	\$29,891
2.g.3	Other	\$3,799	\$3,875	\$3,953	\$4,032	\$4,112	\$4,112
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	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Pike County General Health District</i>						
4	4. County Assistance	\$100,000	\$100,000	\$100,000	\$100,000	\$50,000	\$50,000
4.a	a. Maintaining Roads	\$100,000	\$100,000	\$100,000	\$100,000	\$50,000	\$50,000
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	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
7.a	a. Health Departments	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
7.b	b. Local Law Enforcement	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000
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	\$914,204	\$946,688	\$919,422	\$952,410	\$895,658	\$936,908

Table O-7. Expenses (continued)

Line #	Category/Program	2030	2031	2032	2033	2034	2035	2036
1	1. Plan Monitoring/Prep.	\$21,250	\$0	\$0	\$0	\$22,500	\$22,500	\$0
1.a	a. Plan Preparation	\$21,250	\$0	\$0	\$0	\$22,500	\$22,500	\$0
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$725,658	\$745,658	\$725,658	\$745,658	\$725,658	\$745,658	\$725,658
2.a	a. District Administration	\$240,776	\$240,776	\$240,776	\$240,776	\$240,776	\$240,776	\$240,776
2.a.1	Personnel	\$226,992	\$226,992	\$226,992	\$226,992	\$226,992	\$226,992	\$226,992
2.a.2	Office Overhead	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.a.3	Other	\$13,784	\$13,784	\$13,784	\$13,784	\$13,784	\$13,784	\$13,784
2.b	b. Facility Operation	\$132,005	\$132,005	\$132,005	\$132,005	\$132,005	\$132,005	\$132,005
2.b.1	MRF/Recycling Center	\$132,005	\$132,005	\$132,005	\$132,005	\$132,005	\$132,005	\$132,005
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$177,099	\$177,099	\$177,099	\$177,099	\$177,099	\$177,099	\$177,099
2.d.1	Curbside	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.2	Drop-off	\$132,099	\$132,099	\$132,099	\$132,099	\$132,099	\$132,099	\$132,099
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
2.e	e. Special Collections	\$31,589	\$31,589	\$31,589	\$31,589	\$31,589	\$31,589	\$31,589
2.e.1	Tire Collection	\$6,892	\$6,892	\$6,892	\$6,892	\$6,892	\$6,892	\$6,892
2.e.2	HHW Collection	\$11,487	\$11,487	\$11,487	\$11,487	\$11,487	\$11,487	\$11,487
2.e.3	Electronics Collection	\$1,149	\$1,149	\$1,149	\$1,149	\$1,149	\$1,149	\$1,149
2.e.4	Appliance Collection	\$574	\$574	\$574	\$574	\$574	\$574	\$574
2.e.5	Other Collection Drives	\$11,487	\$11,487	\$11,487	\$11,487	\$11,487	\$11,487	\$11,487
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$139,190	\$159,190	\$139,190	\$159,190	\$139,190	\$159,190	\$139,190
2.g.1	Education Staff	\$125,186	\$125,186	\$125,186	\$125,186	\$125,186	\$125,186	\$125,186
2.g.2	Advertisement/Promotion	\$9,891	\$29,891	\$9,891	\$29,891	\$9,891	\$29,891	\$9,891
2.g.3	Other	\$4,112	\$4,112	\$4,112	\$4,112	\$4,112	\$4,112	\$4,112
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Pike County General Health District							
4	4. County Assistance	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
4.a	a. Maintaining Roads	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
7.a	a. Health Departments	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
7.b	b. Local Law Enforcement	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$916,908	\$915,658	\$895,658	\$915,658	\$918,158	\$938,158	\$895,658

2. Explanation of Expenses

Table O-7 includes actual expenses from 2014 to 2019, actual expenses through the 3rd quarter of 2020 and projections for the fourth quarter of 2020, and projected expenditures from 2021 to 2036. 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.

1. *Plan Preparation and Monitoring*

1.a Plan Preparation – Budget includes estimated expenses related to retaining a consultant for assistance with plan preparation for each 5-year update that will occur during the planning period. Planning assistance is projected to increase 12% from the 2022 plan cycle to the 2036 plan cycle.

2. *Plan Implementation*

2.a District Administration

- **2.a.1 Personnel** – Budget includes expenditures for District administrative employee salaries, OPERS, workers' compensation, Medicare, life insurance, unemployment insurance, and health insurance. Expenditures are projected to increase 2% annually based on historic trends and District practices. Salaries and benefits are projected to increase at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.
- **2.a.3 Other** –Funding for all support and ancillary costs for the administration staff. Costs are based of historic trends increasing at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.

2.b Facility Operation

- **2.b.1 MRF/Recycling Center** – Salary and benefits for the staff of the recycling processing center only. Costs to collect materials from the drop-offs are allocated to the drop-off line item. Salaries and benefits are projected to increase at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.

In 2022, funding of \$35,000 will be used to update and modify the old recycling center into an education facility with offices, conference room, and a bathroom. The old recycling center is next to the new recycling center which will allow students and adults the opportunity to see the new facility in operation after attending an education program in the old recycling facility.

In 2022 and 2023, this includes funding for a processing line to sort recyclables. It is estimated that \$200,000 will be needed to purchase and install the processing line in the new Recycling Center. These costs are evenly split between 2022 and 2023. The District plans to pursue grant funding to provide some funding, however, the District has projected funding the entire project if necessary.

- **2.d.2 Drop-off**

Salary and benefits for the staff to service drop-offs and haul the material to the recycling center. Costs to process materials from the drop-offs are allocated to the MRF line item. Salaries and benefits are projected to increase at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.

- **2.d.6 Other**

The community incentive grant program will provide funding for recycling programs and services for communities and schools in Pike County. The grant program will include funding for equipment, education & outreach, buy recycled content and other items to enhance recycling in Pike County. The scholarship and the grant program will be funded at a flat \$45,000 per year for the planning period.

2.e Special Collections

- **2.e.1 Tire Collection** – The cost of operating the program and contractor costs. Costs are projected to increase by 2% each year from until the 7th year of the planning period, 2028, then the costs are held flat.

- **2.e.2 HHW Collection** –The cost of operating the District's county-wide household hazardous waste collection and disposal program. Costs are projected to increase by 2% each year from until the 7th year of the planning period, 2028, then the costs are held flat.

- **2.e.3 Electronics Collection** – The cost of operating the program and contractor costs. Costs are projected to increase by 2% each year from until the 7th year of the planning period, 2028, then the costs are held flat.
- **2.e.4 Appliance Collection** – The cost of operating the program and contractor costs. Costs are projected to increase by 2% each year from until the 7th year of the planning period, 2028, then the costs are held flat.
- **2.e.5 Other Collection Drives** – The cost of operating the program and contractor costs. Costs are projected to increase by 2% each year from until the 7th year of the planning period, 2028, then the costs are held flat.

2.g Education/Awareness

- **2.g.1 Education Staff** – Includes funding for the salaries and benefits for the District Coordinator and an part time educator. Salaries and benefits are projected to increase at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.
- **2.g.2 Advertisement/Promotion** – Includes funding for advertising and promotion for District programs. Costs are based of historic trends increasing at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.

In 2023 and every other year afterward the District will commit \$20,000 for programmatic support for an increase recycling campaign or recycling right campaign. This campaign could be managed by a third party.

- **2.g.3 Other** – Funding for all support and ancillary costs for the education staff and programs. Costs are based of historic trends increasing at 2% per year. After the 7th year of the planning period, 2028, the costs are flat.

2.j Feasibility Studies – Includes \$25,000 funding for a feasibility study for a curbside recycling program in the cities of Waverly and Piketon. Another feasibility study will be funded for \$25,000 to evaluate the yard waste recycling system in Pike County and provide recommendations for enhancements to divert more yard waste from the landfill. Both feasibility studies are planned for 2021.

2.p Other – Includes funding for a scholarship program The scholarship program will provide tuition assistance to a local

student(s) pursuing an environmental degree from an accredited university.

4. County Assistance

Beginning in the first year of the planning period in 2022, the District will provide the Pike County Engineer with funding to maintain roads affected by truck traffic transporting MSW to the local landfill. In the 7th year the funding will be reduced to \$50,000. If the county has a surplus that significantly exceeds the amount projected in year 7 of the planning period, the District may continue funding up to the \$100,000 per year. Conversely, if the surplus is significantly less than the amount projected for the planning period, the district may reduce funding for road maintenance to achieve an adequate surplus year over year.

7. Open Dump and Litter Enforcement

7.a Health Department Enforcement – In 2018, all funding provided to health departments in Pike County, regardless of the purpose, was reported in budget line item *7.a Health Departments*. The District historically had been allocating \$25,000 to the health Department. Moving forward, a flat amount of \$50,000 is allocated annually for the Pike County General Health District from 2020 to 2036. Because of the significant increase in funding the amount will remain flat for the planning period.

7.b Local Law Enforcement – Beginning the first year of the planning period, 2022, the District will fund local law enforcement to supervise cleaning crews from local correctional programs. In addition, law enforcement will design and implement an environmental enforcement program. The District budget is \$70,000 for each year of the planning period. It is expected that law enforcement will have other duties not associated with the District programs representing the balance of expected salary and benefits and any annual increases.

The District started the 2018 reference year with a carry-over balance of approximately \$920,569. Based on revenue and expenditure projections discussed throughout this appendix, the District is expected to begin the planning period in 2022 with a carry-over balance of \$892,372 and end the planning period with a carry-over balance of \$930,666. 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. The District believes that it has projected

revenue conservatively and has an adequate surplus reserve for each year of the planning period.

Table O-8. Budget Summary

	Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
	x First Year of Planning Period →	2013	Ending Balance		
2014		\$526,790	\$297,932	\$228,858	\$341,266
2015		\$499,005	\$468,562	\$30,443	\$371,709
2016		\$652,332	\$407,925	\$244,407	\$616,116
2017		\$662,746	\$511,762	\$150,984	\$767,100
2018		\$813,247	\$659,778	\$153,469	\$920,569
2019		\$944,557	\$913,697	\$30,860	\$951,429
2020		\$874,420	\$1,115,243	-\$240,823	\$710,607
2021		\$883,900	\$690,201	\$193,698	\$904,305
2022		\$892,372	\$1,004,965	-\$112,593	\$791,712
2023		\$900,931	\$1,001,965	-\$101,033	\$690,679
2024		\$909,577	\$914,204	-\$4,626	\$686,052
2025		\$918,312	\$946,688	-\$28,376	\$657,676
2026		\$927,213	\$919,422	\$7,791	\$665,467
2027		\$936,254	\$952,410	-\$16,156	\$649,311
2028		\$945,385	\$895,658	\$49,726	\$699,038
2029		\$945,465	\$936,908	\$8,557	\$707,595
2030		\$945,546	\$916,908	\$28,638	\$736,232
2031		\$945,546	\$915,658	\$29,888	\$766,120
2032		\$945,546	\$895,658	\$49,888	\$816,007
2033	\$945,546	\$915,658	\$29,888	\$845,895	
2034	\$945,546	\$918,158	\$27,388	\$873,282	
2035	\$945,546	\$938,158	\$7,388	\$880,670	
2036	\$945,654	\$895,658	\$49,996	\$930,666	



APPENDIX P

DESIGNATION



Appendix P. Designation

A. Statement Authorizing/Precluding Designation

The Board of Directors of the Pike County Solid Waste Management District is authorized to designate facilities in accordance with Section 343.014 of the ORC. However, the District has chosen not to exercise the authority to designate any solid waste facilities under previous plan updates and has also declined to designate facilities with this *Plan Update*.

B. Waiver Process for the Use of Undesignated Facilities

The Board of Directors may implement the following waiver process when they determine it is in the best interest of the District to approve the disposal of solid waste at undesignated solid waste facilities. In the event that any person desires to use a facility, other than a designated facility, for the disposal of solid waste, the person must submit a written request for a waiver of designation to the Board of Directors of the District. The request must state the type and amount of the material, the facility to be used, the intended duration of the waiver, and the reason for requesting the waiver.

District staff will review the request and may request additional information if necessary. The District Board of Directors will act on the request for a waiver within 30 days after receiving the request. The Board of Directors may grant the request for a waiver if the Board of Directors determines that:

1. Issuance of the waiver is not inconsistent with projections contained in the District's approved plan under ORC Sections 3734.53 (A)(6) and (A) (7); and
2. Issuance of the waiver will not adversely affect implementation and financing of the District's approved plan.



APPENDIX Q

DISTRICT RULES



APPENDIX Q. DISTRICT RULES

A. Existing Rules

The Board of Directors (County Commissioners) of the Pike County Solid Waste Management District in accordance with Ohio Revised Code Section 343.01(G) reserves the right as authorized by law, to adopt, amend, rescind, and enforce rules to assist the District with the implementation of its approved Solid Waste Management Plan but does not have any rules currently in place.

B. Rule Making Authority – ORC 343.01

The solid waste management plan provides the authority to the Board of County Commissioners to adopt, publish, and enforce all the rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

ORC 343.01(G)(1)

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

- (1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities covered by the plan, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code, except that the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
 - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs

within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

- (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
- (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;
- (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

ORC 343.01(G)(2)

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the

reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

“Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility under general plans and specifications for the proposed improvement have been submitted to and approved by the Board of County Commissioners . . . as complying with solid waste management plan or amended plan of the District. The construction of such a facility . . .”

ORC 343.01(G)(3)

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district’s solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district’s solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

ORC 343.01(G)(4)

Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan or amended plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

C. Rule Making Authority – ORC 3734.53

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

- (1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
 - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
 - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
 - (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;
 - (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

- (2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;
- (3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;
- (4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

D. Proposed Rules

Any proposed rule as authorized by ORC Section 3734.53(C) will be subject to review by the District's counsel and determined at that time to be within the District's statutory authority to promulgate. In the event any portion of any rule reservation stated herein is determined to be unenforceable by a court of competent jurisdiction, such a determination shall not affect the remainder of the District's reserved authority to develop rules. All reservations of rights to develop rules contained herein are severable and the invalidity of any one or more shall not affect the remainder.

With the writing of this Plan, there are no rules promulgated by the District or proposed for adoption. The District Board of Directors reserves the right to adopt rules at any time after the approval of this Solid Waste Management Plan.

E. Rule Approval Process

The Board of Commissioners shall consider the following process when adopting solid waste management rules.

1. Public Notice of the solid waste management rules in a daily newspaper operating in the District.
2. 30-day public comment period.

3. Public Hearing on the proposed rules (Commissioners meetings will suffice as a public hearing).
4. Make any appropriate changes to the proposed rules as a result of C1, C2, and C3.

Following steps (C) 1-4, the Board shall adopt the rules of the solid waste management district.

For the proposed changes in this *Plan Update*, the public notice, comment period and public hearing required for the ratification of this Plan along with the Board of Commissioners approval, will be sufficient for rule adoption.



APPENDIX R

BLANK SURVEY FORMS AND RELATED INFORMATION





116 S. Market Street, Suite 103
 Waverly, Ohio 45690
 Phone: 740-947-4104 / Fax: 740-941-4308
www.pikecountydevelopment.com

Dear Commercial/Industrial Business,

Thank you for completing this survey. The information you provide for your company is crucial to monitoring the Pike County Solid Waste Management District's progress towards achieving Ohio's recycling goals. Your information will be combined with information submitted by other businesses and used to calculate the amount of material commercial businesses recycled in the Pike County Solid Waste Management District and Ohio in 2019. Your company's survey response **will not** be reported individually; all data will be summarized by the North American Industry Classification System (NAICS) category.

For assistance completing this form or any questions related to the survey, please contact Daphne Mosley at daphne@pikecountydevelopment.com or (740) 947-4104.

Please complete and submit this survey no later than April 10, 2020.

Options for Returning the Completed Survey

- Email directly to Daphne Mosley at daphne@pikecountydevelopment.com , Subject Line: 2019 Commercial/Industrial Survey
- Fax to (740) 941-4308, Attention: Daphne Mosley
- Mail to Daphne Mosley at 116 S. Market Street, Suite 103, Waverly, Ohio 45690

Instructions for Table A:

Please provide all information requested in **Table A** below. Even if your business does not currently recycle or is unable to report quantities of materials recycled, please complete **Table A**. Doing so will allow the Pike County Solid Waste Management District to contact you in the future to discuss your recycling needs.

Table A: Company Information			
Name:	County:	Store I.D.	
Address:	City:	Zip:	
Contact Person:	Title:		
Email:	Telephone Number (include area code): ()		
Primary NAICS:	Secondary NAICS:	# of full-time employees:	Part time employees:
Provide the name(s) of your recycling hauler, processor and/or broker:			
Would you like to be contacted by your local solid waste management district for recycling assistance? <input type="checkbox"/> Yes <input type="checkbox"/> No			

Instructions for completing Table B:

Table B provides a list of common materials that are recycled by commercial businesses in Ohio. Please indicate the unit of each quantity of material that is reported (pounds, tons or cubic yards). Provide any comments related to each material as necessary. Please do not report any liquid waste, hazardous waste or construction & demolition debris.

The list in **Table B** is not all-inclusive. If your business recycles a material that is not listed in **Table B**, please enter the name and quantity of that material on a line labeled **“Other.”** Some materials may not apply to your operation. Some of the listed materials are broad categories. For example, **“Plastics”** includes plastics #1-7, plastic films etc. Please refer to the **“Materials Cheat Sheet”** attached to this document for examples of materials and definitions.

If you do not currently track this information internally, your solid waste hauler or recycling processor may be able to provide it upon request. The Pike County Solid Waste Management District may also be able to provide you with assistance.

Table B: Quantities of Recycled Materials			
Recyclable Material Category	Amount Recycled in 2019	Units	Comments
Lead-Acid Batteries		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Food		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Glass		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Ferrous Metals		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Non-Ferrous Metals		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Corrugated Cardboard		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
All Other Paper		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Plastics		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Textiles		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Wood		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Rubber		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Commingled Recyclables		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Yard Waste		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other: Used Motor Oil		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other: Antifreeze		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other:		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other:		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other:		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other:		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other:		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	
Other:		<input type="checkbox"/> lbs. <input type="checkbox"/> tons <input type="checkbox"/> yd ³	

Table C: Please provide any additional information, comments, suggestions, questions etc.

Thank you again for taking the time to complete this survey. Please contact Daphne Mosley with any questions.

Daphne Mosley, Assistant Director
 Pike County Solid Waste Management District
 Phone: (740) 947-4104
 Email: daphne@pikecountydevelopment.com

Materials Cheat Sheet

Food

- Compostable food waste
- Food donations

Glass

- Bottles (any color)
- Jars

Ferrous Metals

- Mild Steel
- Carbon Steel
- Stainless Steel
- Cast Iron
- Wrought Iron

Non-Ferrous Metals

- Aluminum
- Copper
- Brass
- Silver
- Lead
- Misc. Scrap Metals

All Other Paper

- Office paper
- Paperboard
- Newspapers
- Folders
- Telephone Books
- Magazines
- Catalogs
- Junk Mail

Plastics

- Plastics #1-7
- Plastic Bottles
- Plastic Jugs
- Shrink Wrap
- Plastic Films
- Coat Hangers

Textiles

- Fabrics
- Clothes
- Carpet

Wood

- Bark
- Woodchips
- Sawdust
- Scrap Wood
- Shipping Pallets
- Boards

Commingled Recyclables

- This is a mix of several different materials that are placed into one container and hauled for recycling. It can include all or a combination of the materials listed above.
-

Examples of materials that fall under "Other"

- Appliances
 - Household Hazardous Waste
 - Used Motor Oil
 - Electronics
 - Scrap Tires
 - Dry Cell Batteries
 - Any other solid waste that is recycled at your facility
-

Estimating recycling tonnages – if you are not able to obtain exact tonnages of materials recycled, there are numerous ways to estimate the amount of material recycled in any given year. Below are some common conversion factors that may assist you with your estimations:

Material Type	Density (lb/cu yd)
Mixed Paper Recycling	484
Bottles and Cans	200
Single Stream Recycling	139
Cardboard	100

- (size of container (in cubic yards) X number of collections per month X 12) X density (see table above) = Total Pounds per Year
- 2,000 pounds = 1 ton

For more assistance, contact your solid waste management district.



APPENDIX S

SITING STRATEGY



APPENDIX S. Siting Strategy

The District's Siting Strategy includes the following:

Submission and review of plans and specifications and application of siting strategy to proposed solid waste facilities, maximum feasible utilization, and exemption of existing in-District solid waste facilities.

A. Definitions

For the purposes of this appendix, the following definitions shall apply:

- a. **Solid Waste Facilities** shall mean all solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities.
- b. **Incinerator** means any equipment, machine, device, article, contrivance, structure, or part of a structure used to burn solid or infectious wastes to ash.
- c. **Solid Waste Energy Recovery Facility** means any site, location tract of land, installation, or building where mixed solid waste or select solid waste streams, including scrap tires, is used as or intends to be used as fuel to produce energy, heat, or steam.
- d. **Siting Strategy** shall mean the process by which the Board of Commissioners shall review proposals for the construction or modification of any Solid Waste Facility and determine whether such proposal complies with the Plan Update.
- e. **General Plans and Specifications** shall mean that information required to be submitted to the Board for review for the construction or modification of any proposed Solid Waste Facility and includes, but is not limited to, a site plan for the proposed facility, architectural drawings or artist renderings of the proposed facility, the projected size and capacity of the proposed facility, and all other information identified in this Siting Strategy.
- f. **Applicant** shall mean a person, municipal corporation, township, or other political subdivision proposing to construct or modify a Solid Waste Facility, Incinerator, or Solid Waste Energy Recovery Facility within the District.
- g. **Modify** shall mean a significant change in the operation of an existing in-District Solid Waste Facility: (1) that requires the approval of the Director of the Ohio Environmental Protection Agency; or (2) that involves a change in the type of material, manner of operation, or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).

B. Purpose and Objective

The District's Siting Strategy for Solid Waste Facilities ensures that proposals to construct a new Solid Waste Facility within the District or modify an existing Solid Waste Facility within the District are in compliance with the Plan Update. The Board shall not approve the General Plans and Specifications for any proposed Solid Waste Facility or the modification of any existing in-District Solid Waste Facility where the construction and operation of the proposed facility, as determined by the Board, will:

- (1) have significant adverse impacts upon the Board's ability to finance and implement the Plan Update
- (2) interfere with the Board's obligation to provide for the maximum feasible utilization of existing in-District Solid Waste Facilities
- (3) materially and adversely affect the quality of life of residents within 300 feet of the proposed facility
- (4) have material adverse impacts upon the local community, including commercial businesses within 500 feet of the proposed facility and the adequacy of existing infrastructure to serve the proposed facility

Except as otherwise provided herein, all proposed Solid Waste Facilities, whether to be sited by or on behalf of the District, or by or on behalf of any person, municipal corporation, township or other political subdivision, shall be subject to this Siting Strategy and shall comply with the requirement to submit General Plans and Specifications to the District.

C. Siting Procedure Limited Exemption

Notwithstanding the foregoing requirement, existing in-District Solid Waste Facilities specifically identified in this Siting Strategy are not subject to this Siting Strategy unless the owner or operator of any such in-District Solid Waste Facility proposes a modification to the operation of the in-District Solid Waste Facility:

- (1) that requires the approval of the Director of the Ohio Environmental Protection Agency; or
- (2) that involves a change in the type of material, manner of operation or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).

D. Maximum Feasible Utilization of Existing In-District Solid Waste Facilities:

The Board has determined that the owners and operators of existing in-District Solid Waste Facilities rely on market factors in the determination of whether to expand or modify the facilities or current operations and activities at such existing facilities. The private corporate decisions of those owners and operators determine and establish the maximum feasible utilization of those existing in-District Solid Waste Facilities and the limited exemption for such existing in-District Solid Waste Facilities from the application of this Siting Strategy permits the owners and operators of those facilities to determine the maximum feasible utilization of those facilities. Other than the limited exemption from the application of this Siting Strategy, the Board has no additional obligation with respect to the continuing operation or modification of those facilities.

E. Requirements

The District requires that General Plans and Specifications for all proposals to construct any new Solid Waste Facility within the District or modify any existing in-District Solid Waste Facility be submitted for a determination by the Board of whether such General Plans and Specifications and the proposals comply with the *Plan Update*. The District adopted a rule upon final approval of the previous Plan Update as follows:

The Pike County Solid Waste Management District Policy Committee and Board of Directors carefully evaluated the present and future facility needs of the Pike County Solid Waste Management District and included all of the facilities that the District needs to effectively and efficiently manage the transfer, disposal, recycling and recovery of solid waste in the District's Solid Waste Management Plan. In order to assure that the District can meet the obligations to which it is committed in the District Plan, the District must determine if any new facility or facility expansion is consistent with the Plan and will not adversely affect the District's ability to finance Plan implementation.

In order to make such a determination, the Board must have the plans and specification for the facility to review. The Board also has an interest in assuring that any facility that is constructed or enlarged is appropriately designed and sited to meet its intended purpose without creating excessive burdens upon the county's facilities and services or the neighboring properties. The rules clearly state that the Board will exclude any criteria that would establish design standards that are addressed by the rules of the Ohio Environmental Protection Agency for the issuing of a Solid Waste facility permit.

With adoption of this *Plan Update*, the rule quoted above will continue.

F. Procedure Implementing Siting Strategy

Unless otherwise provided herein, or an exemption or waiver from this requirement has been granted by the Board, the following procedure and process shall be followed in the event the construction of a new Solid Waste Facility or the modification of an existing in-District Solid Waste Facility is proposed within the District:

Step 1: Submittal of Plans and Specifications

Any person, municipal corporation, township, or other political subdivision proposing to construct a new Solid Waste Facility or modify an existing in-District Solid Waste Facility shall:

a. Provide General Plans and Specifications of the proposed facility to the Board. Such General Plans and Specifications shall include, but may not be limited to, the following documents and information:

- i. a site plan for the proposed Solid Waste Facility
- ii. architectural drawings or artists renderings of the proposed Solid Waste Facility
- iii. availability of necessary utilities
- iv. projected size and capacity of the proposed Solid Waste Facility
- v. hours of operation
- vi. anticipated source of solid waste or recyclable materials to be received at the proposed Solid Waste Facility. If recycling activities will be conducted at the proposed facility, a detailed description of the recycling activity including materials to be recycled, technology to be utilized to accomplish the separation and processing of the recyclable materials, the anticipated percentage of waste reduction anticipated from the operation of the facility and the identification of the market for the sale of the recyclable materials recovered at the facility must be submitted;
- vii. types and anticipated number of vehicles utilizing the proposed Solid Waste Facility on an hourly and daily basis
- viii. routes to be used by vehicles utilizing the facility and methods of ingress and egress to the facility
- ix. any other information necessary for the Board to evaluate whether the proposed Solid Waste Facility complies with each of the criteria listed below

b. Adequately demonstrate to the Board that the construction or modification and subsequent operation of the proposed Solid Waste Facility will:

- i. be consistent with the goals, objectives, projections, and strategies contained in the *Plan Update*
- ii. not adversely affect financing for the implementation of the *Plan Update*

- iii. not adversely affect the Board's obligation to provide for the maximum feasible utilization of existing in-District solid waste facilities
- iv. be installed, operated, and maintained to be harmonious and appropriate in appearance and use with the existing or intended character of the area
- v. be adequately served by essential public facilities and services
- vi. not create excessive additional requirements at public cost for public facilities or services
- vii. not be detrimental to the economic welfare of the community
- viii. not involve the excessive production of traffic, noise, smoke, fumes, or odors
- ix. have vehicular approaches to the property that are designed not to create an interference with traffic
- x. not result in the destruction, loss, or damage of a natural, scenic, or historic feature of major importance
- xi. not adversely affect property values within the surrounding community

The Applicant shall submit any additional information as the Board requests to establish, to the reasonable satisfaction of the Board, that the construction or modification and subsequent operation of the proposed Solid Waste Facility or proposed modification of an existing in-District Solid Waste Facility will comply with the *Plan Update*.

Step 2: Board Review

The Board shall conduct a review of the information submitted for the proposed Solid Waste Facility to determine whether the Applicant has adequately demonstrated that the proposed Solid Waste Facility will be constructed or modified and subsequently operated in compliance with the *Plan Update* and demonstrated that the impacts listed in Step I do not adversely affect the District, its residents and businesses. The Board may expend District funds to employ a consultant or consultants familiar with Solid Waste Facility construction and operation, land use planning and solid waste planning to assist the Board in implementing this Siting Strategy and in its determination of whether a proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility complies with the *Plan Update*.

Within sixty days of receiving the General Plans and Specifications from an applicant, the Board shall make a determination as to whether the General Plans and Specifications submitted by the applicant contain sufficient information for the Board to complete its review of the proposal. In the event the Board determines that more information is necessary to complete its review of the proposal, the Board shall notify the Applicant of such request in writing within ten days.

Within ninety days of determining that the Applicant has submitted a complete set of General Plans and Specifications, the Board shall determine whether the

proposal complies with the *Plan Update* and the criteria identified in Step 1 herein. The Board shall notify the Applicant of its decision in writing. While the Board has broad discretion regarding the approval of General Plans and Specifications for a proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility, it is the intent of this Siting Strategy that the Board shall not approve General Plans and Specifications for a proposed Solid Waste Facility unless the Board determines that the proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility complies with the *Plan Update* and the criteria identified in Step 1 herein.

Step 3: Development Agreement

In the event the Board determines that the proposed construction or modification and subsequent operation of a Solid Waste Facility complies with the *Plan Update*, the person, municipal corporation, township or other political subdivision proposing to construct or modify the Solid Waste Facility shall enter into a development agreement with the District which memorializes the obligations that are the basis of the Board's conclusion that the General Plans and Specifications demonstrate that the proposed facility or its modification complies with the *Plan Update*. The party proposing to construct a Solid Waste Facility shall have an ongoing obligation to comply with the *Plan Update* and the development agreement.

G. Waiver

The Board reserves the right to waive application of the requirement for the submission and Board approval of General Plans and Specifications, and any portion or all of the Siting Strategy or otherwise grant exceptions to the rules of the District, or unilaterally modify or amend the Siting Strategy if the Board concludes such waiver, modification or amendment is in the best interest of the District, its residents and businesses and will assist the Board in the successful implementation of the *Plan Update* and further District goals with respect to solid waste and waste reduction activities.

A determination by the Board to construct or modify any District-owned Solid Waste Facility shall be deemed to be in compliance with the *Plan Update* and the other requirements of these rules.

Waiver for Legitimate Recycling Facilities

The Board has a strong commitment to encourage the development of recycling and waste reduction activities that are consistent with the waste reduction, reuse and recycling goals as may be required by the Ohio Revised Code, the Ohio Administrative Code, the State Solid Waste Management Plan and the *Plan Update*. Upon adequate demonstration to the Board of the likelihood of attainment of certain waste reduction goals, the Board may waive application of the Siting Strategy for any facility determined by the Board as likely to qualify as a "legitimate

recycling facility” as defined in Section 3745-27-01(L)(2) of the Ohio Administrative Code.

In the event an Applicant desires a waiver from the application of the Siting Strategy for a legitimate recycling facility, the Applicant shall submit sufficient information to the Board regarding the proposed facility, the waste reduction method to be implemented, technology to be used in the operation of the facility, the source and type of waste to be received at the facility, the materials to be removed from the waste stream and the anticipated amount of waste reduction.

The Board shall review the proposal following the procedures and process in Step 2 of this Siting Strategy and determine whether the waste reduction standards required by OAC Section 3745-27-01(L)(2) are likely to be satisfied at the proposed facility. In the event the Board determines that such facility is likely to qualify as a legitimate recycling facility, the Board may grant a waiver of the application of the Siting Strategy to the proposed facility.

Such waiver may be made contingent upon the execution of a development agreement by which the proposed facility will be obligated to meet the proposed waste reduction standards on a continuing basis and such other obligations regarding operation of the facility as the Board shall require, including such recordkeeping and reporting requirements as may be necessary to establish compliance with the waste reduction goals. Failure to comply with the terms of any such agreement may result in the revocation of Board approval for operation of any such facility. As part of any such development agreement, the Board may require such bond or other assurances in such amounts as the Board determines, in its discretion, shall be necessary to assure that funds are available for the removal of the facility or conversion of the facility to a legal use in the event of non-compliance with waste reduction standards or other obligations as set forth in the development agreement.



APPENDIX T

MISCELLANEOUS PLAN DOCUMENTS



CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Pike County Solid Waste Management District (District) do hereby certify that to the best of our knowledge and belief, the statements, demonstrations, and all accompanying materials that comprise the draft Pike County Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen 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 4.0.

Representing the County Commissioners

Date Signed

Representing City of Waverly

Date Signed

Representing the Public
Lewis Pritchett

Date Signed
12/9/2020

Representing Townships
[Signature]

Date Signed
12-09-20

Representing the General Interests of Citizens
[Signature]

Date Signed
12/9/2020

Representing Commercial/Industrial Generators
[Signature]

Date Signed
12/9/20

Representing the Health District



APPENDIX U

RATIFICATION RESULTS





APPENDIX V

MISCELLANEOUS DOCUMENTS REQUIRED BY OHIO REVISED CODE



APPENDIX V. Miscellaneous Required Information

Ohio EPA notified solid waste districts that Format 4.0 did not include several items that are required by Ohio law to be included in solid waste plans. Appendix V has been developed to meet the following miscellaneous requirements:

A. Solid Waste Management and Recycling Inventories Requirement

Ohio Revised Code Section 3734.53 (A)(2) requires "...an inventory of all existing facilities where solid wastes are being disposed of, all resource recovery facilities, and all recycling activities within the district. The inventory shall identify each such facility or activity and, for each disposal facility, shall estimate the remaining disposal capacity available at the facility. The inventory shall be accompanied by a map that shows the location of each such existing facility or activity."

1. 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 2018 reference year.

Figure V-1. 2018 District Access to Drop-Off Recycling

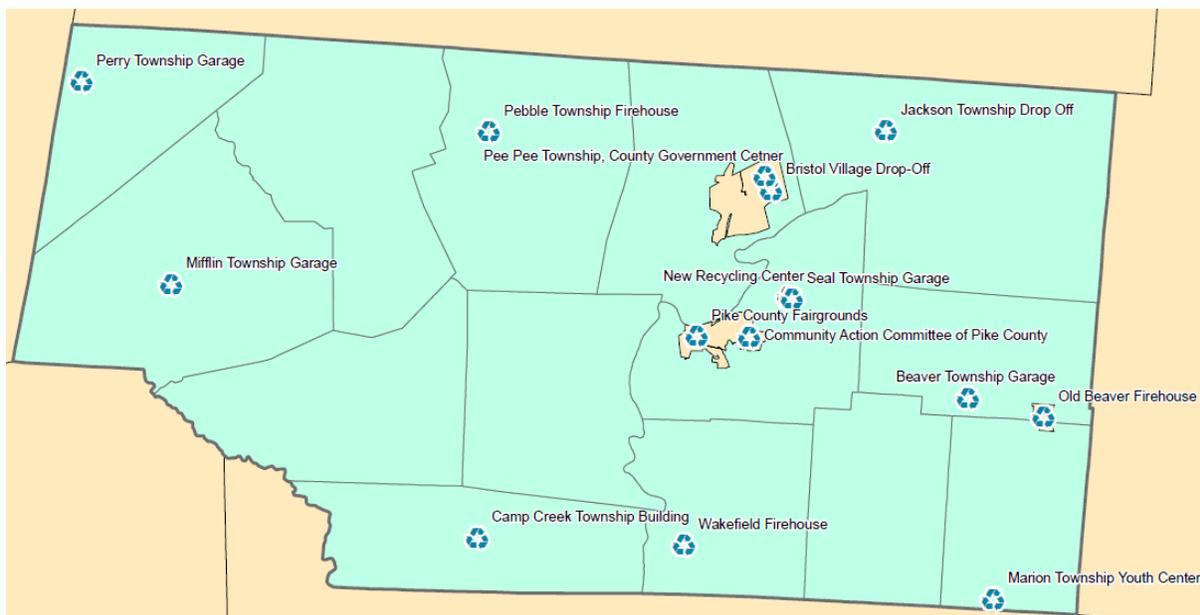
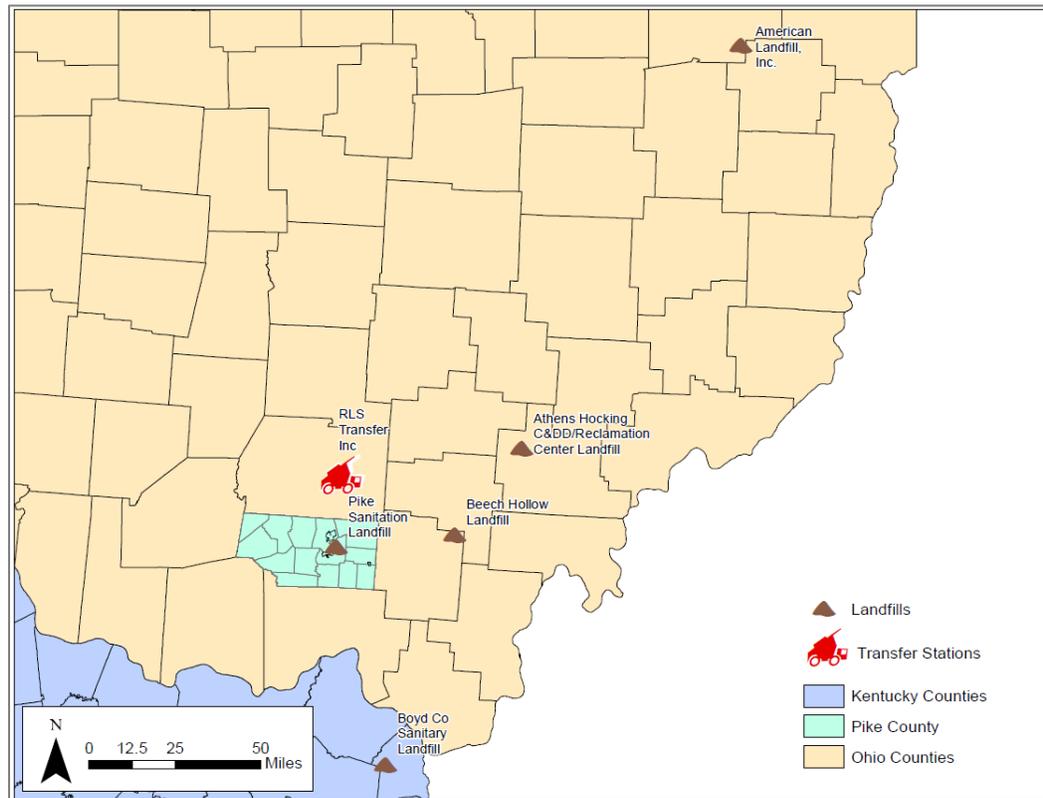


Figure V-2. 2018 Landfills and Transfer Stations Used to Manage District Waste



B. 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. Open Dumping Sites Inventory Response

The District and the health department identified the following open dumps or waste tire dumps existing in the District during the reference year.

- Straight Creek Road
- 209 Maplewood Avenue
- White Oak Hill – tires
- Latham Hill - tires and solid waste
- Ervin Hill - tires and solid waste
- New Fain Road
- Carrs Run Road

- Rapp Montgomery – tires and solid waste
- Johnson Hill Road
- Edwards Road
- Germany Road
- Camp Creek Road
- Marco Run Road
- Bell Hollow Road
- Beach Flat Road
- Long Fork Road
- Viar Road
- Jasper Road
- Gravel wash road
- Beaver Creek road

C. 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. **Tables K-1** and **K-2** include the amount of solid waste generated, recycled, and the amount of solid waste disposed for in-District waste.

The District does receive significant out-of-District waste. The out-of-District revenue was reviewed and projected in Appendix O. **Table V-1** below, provides detail on the historical out-of-District tons received at the Pike Sanitation Landfill and the projected tons for the planning period. The District receives \$3 per ton for all out-of-District tons disposed at the landfill.

Actual out-of-District tons have been increasing; however, the District is conservatively projecting the tonnages based on the average of the last

five years 2016-2020. Years 2022 thru 2027 are projected at a 1% increase each year and flat after 2028 thru 2036.

Table V-1 Out-of-District Revenue and Tonnages

Year	Out of District Revenue	Out of District Tons
2014	\$464,293	154,764
2015	\$462,377	154,126
2016	\$615,004	205,001
2017	\$617,104	205,701
2018	\$761,867	253,956
2019	\$832,466	277,489
2020	\$832,466	277,489
2021	\$731,781	243,927
2022	\$739,099	246,366
2023	\$746,490	248,830
2024	\$753,955	251,318
2025	\$761,495	253,832
2026	\$769,109	256,370
2027	\$776,801	258,934
2028	\$784,569	261,523
2029	\$784,569	261,523
2030	\$784,569	261,523
2031	\$784,569	261,523
2032	\$784,569	261,523
2033	\$784,569	261,523
2034	\$784,569	261,523
2035	\$784,569	261,523
2036	\$784,569	261,523

D. 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 ORC 3734.35 to any political subdivision.

E. 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 presents the table regarding designation and flow control for disposal of solid waste and transfer of solid waste.

2. Facility Closure, Expansion, Establishment Schedule Response

No facilities that the District currently uses or plans to use are projected to close, expand, or be established during the planning period.

F. 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.