2021 SOLID WASTE MANAGEMENT PLAN

Gallia Jackson Meigs Vinton Solid Waste Management District

PREPARED BY:

RRS recycle.com

COMMISSIONED BY:

The Gallia, Jackson, Meigs, Vinton Solid Waste Management District

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SECTION i SOLID WASTE MANAGEMENT DISTRICT INFORMATION

Table i-1 Solid Waste Management District Information

SWMD Name	Gallia Jackson Meigs Vinton Solid Waste Management District
Member Counties	Gallia County, Jackson County, Meigs County, Vinton County
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Table i-2 Members of the Policy Committee/Board of Trustees

Member Name	Representing
Gallia	
Harold Montgomery	County Commissioners
Tony Gallagher	Municipal Corporations
James Allen	Townships
John McKean	Health District
Randy Halley	Generators
Terri Walters	Citizens
Brett Boothe	Public
Jackson	
Paul Haller	County Commissioners
Randy Evans	Municipal Corporations
Shane Smith	Townships
Kevin Aston	Health District
Tom Woltz	Generators
Greg Ervin	Citizens
Sam Brady	Public
Meigs	
Tim Ihle	County Commissioners
Fred Hoffman	Municipal Corporations

Member Name	Representing
Marilyn Anderson	Townships
Steve Swatzel	Health District
Tom Anderson	Generators
John Musser	Citizens
Jon Jacobs	Public
Vinton	
Tim Eberts	County Commissioners
Steve Hammond	Municipal Corporations
Craig Case	Townships
Janelle McManis	Health District
Gerald (LJ) Stewart	Generators
Heidi McIntire	Citizens
Vicki Maxwell	Public

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

Name	Harold Montgomery
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Table i-4 Board of County Commissioners/Board of Directors

Commissioner Name	County	Chairperson/President
Brent Saunders	Gallia	President
Harold Montgomery	Gallia	Vice-President
David K. Smith	Gallia	
Paul Haller	Jackson	President
Ed Armstrong	Jackson	Vice-President
Jon Hensler	Jackson	
Tim Ihle	Meigs	President
Randy Smith	Meigs	Vice-President
Jimmy Will	Meigs	
Tim Eberts	Vinton	President
Mark Fout	Vinton	Vice-President
William Wellman	Vinton	

Technical Advisory Committee: Not utilized for this Plan Update.

Consulting Information

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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, protective 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

As a result 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 through a resolution. 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]

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

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

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

information that is provided and the manner in which that information is presented. This format is very similar in concept to a permit application for a solid waste landfill.

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

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

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

C. District Overview

The SWMD re-configured and formed in 1993 comprised of Gallia, Jackson, Meigs and Vinton Counties. Located in southeast Ohio, the SWMD consists of one centralized office which operates out of Wellston, Ohio in Jackson County. Since 1993, solid waste management plans were prepared, ratified, and implemented to ensure residents had adequate capacity to solid waste disposal capacity and meet the state plan goals.

The SWMD's role is to administer the programs in the solid waste management plan. These programs reduce the reliance on landfills through diversion. Equally important is the assurance of landfill capacity for the waste generated that is not diverted. The landscape of landfills has not changed and the SWMD continues to dispose of the majority of waste in the two in-district landfills. Additionally, a waste transfer facility is located in Meigs County which provides transfer capability for management of waste.

Diversion opportunities has been more challenging through the years. Low landfill tip fees add to the economic challenge of recycling that is very difficult to overcome in these four counties. When the SWMD was a direct service provider offering collection and processing of recyclables there were four residential curbside recycling programs and over 25 drop-off programs. The financial burdens of operating these services were felt when the waste disposal patterns at one of the in-district landfills changed. Plus, aging equipment needed re-investment to operate efficiently and produce recyclables for market. After vetting different scenarios, the SWMD embarked on a different path to function as a program administrator.

Drop-off program placement was streamlined, service was bid out to a private service provider and recycling rates increased. In 2006 the waste reduction and recycling rate measured 4% and in 2018 measures 11%.

D. Waste Reduction and Recycling Goals

As explained earlier, a SWMD must achieve goals established in the state solid waste management plan. This Plan was prepared using the 2019 State which establishes nine goals as follows

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

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.

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.

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

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

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

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.

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

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

All nine 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 considered to be the primary goals of the state plan.

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

A SWMD's solid waste management plan will provide programs to meet up to eight of the goals. Goal 8 (market development) is an optional goal. Goal 9 requires submitting annual reports to Ohio EPA, and no demonstration of achieving that goal is needed for the solid waste management plan.

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

CHAPTER 2 DISTRICT PROFILE

Purpose of Chapter 2

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

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

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

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

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

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

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

A. Profile of Political Jurisdictions

1. COUNTIES IN THE SOLID WASTE MANAGEMENT DISTRICT

The Gallia, Jackson, Meigs, and Vinton Solid Waste Management District (SWMD) is a four-county District geographically located in southeastern Ohio.

2. COUNTY OVERVIEW

Gallia County – Roughly 8% of the land is developed. Wayne National Forest covers approximately 18,000 acres in the southern portion of the County. The Ohio River forms the eastern boundary.

Jackson County – Roughly 8% of the land is developed. One-third of the population resides in either City of Jackson or Wellston.

Meigs County – Just over 7% of the land is developed. Population is almost equally distributed throughout the County. Middleport Village and Chester Township has slightly more population. The Ohio River forms the eastern and southern boundaries.

Vinton County – Just over 6% of the land is developed. Of the four Counties, Vinton County has the smaller population base and is the least populous county in the state.

Gallia, Jackson, Meigs and Vinton Counties are located in Appalachia Ohio and share similar physical characteristics: winding roads, rolling hills, rivers and creeks.

B. Population

1. REFERENCE YEAR POPULATION

In the reference year, 2018, the population of the SWMD was 98,608. By population, Jackson County and Gallia County are the larger counties in the SWMD as seen in Figure 2-1.

2. POPULATION DISTRIBUTION

Table 2-1 shows the largest community in each county and the size of the community relative to the total population of the county. Green Township in Gallia County and Jackson City in Jackson Township each comprise a significant portion of the population for their respective counties.

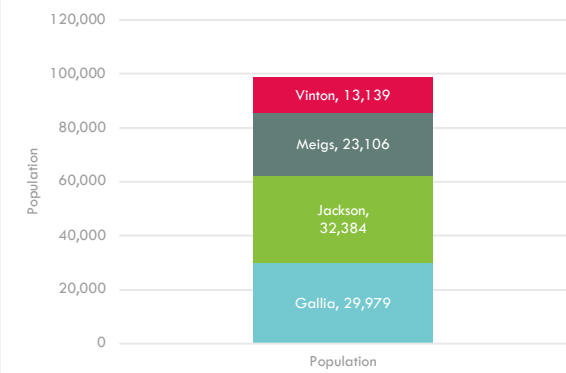


Figure 2-1 Reference Year Population

Table 2-1 Population Distribution in the Reference Year

County		Largest Political Jurisdiction		
Name	**Population**	**Community Name**	**Population**	**Percent of Total County Population**
Gallia	29,979	Green Township	5,451	18%
Jackson	32,384	Jackson City	6,233	19%
Meigs	23,106	Middleport Village	2,446	11%
Vinton	13,139	McArthur Village	1,653	13%
Total	**98,608**			

Table 2-2 shows distribution of the population in cities, villages, and townships and the distribution of the population in incorporated versus unincorporated areas. In all 4 counties the population is mostly distributed in unincorporated townships. Jackson County has about one-third located in two cities, Jackson and Wellston.

Table 2-2 Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Gallia	0%	17%	83%

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Jackson	36%	6%	58%
Meigs	0%	26%	74%
Vinton	0%	22%	78%

3. POPULATION CHANGE

The population in all 4 counties is following a decreasing trend line. Gallia, Jackson and Meigs Counties all decreased from 2010 to 2018 by 3%. During this same Vinton County's population decreased by 2% so that from 2010 to 2018 the combined population of the Counties declined by 3%. Over the same time period, the statewide population increased by 1.3%.

Over the planning period, population is projected to decrease 4% from 2021 to 2036, averaging a 0.3% annual decrease.

Projections of population through the planning period are based on the latest population projections from the Ohio Development Services Agency (ODSA), Office of Statistical Research. The ODSA Planning Research and Strategic Planning Office provided year 2010 census data and projected estimates for 2015, 2020, 2025, 2030, 2035, and 2040. To determine population estimates between these years, straight-line interpolation was used.

4. IMPLICATIONS FOR SOLID WASTE MANAGEMENT

The SWMD sees several implications of the residential population characteristics on managing solid waste and providing recycling programs. The first is the higher number of persons living in unincorporated townships. Townships embody the values of "grassroots governments". A limited government structure drives the nature of programming and direction. Township officials have not placed emphasis on levying taxes to deliver recycling services. With higher percentages of population in the townships the majority of residents are served by programs that require individual homeowners to voluntarily sign up and pay additional cost for curbside recycling. Low disposal costs in the region, higher recycling processing costs, and low recycling commodity values contribute to create more challenges to rural township recycling.

Another implication is the number of renter occupied homes as shown in Figure 2-2. Almost a quarter of each county has population in renter occupied homes. Further investigation into the type of homes, as shown in Figure 2-3, shows single family detached structures and mobile homes are the predominant type of housing in each county. Waste services for mobile homes are typically managed like apartments and are not included in curbside programs. Drop-off recycling programs provide opportunity to recycle for this significant portion of the population.

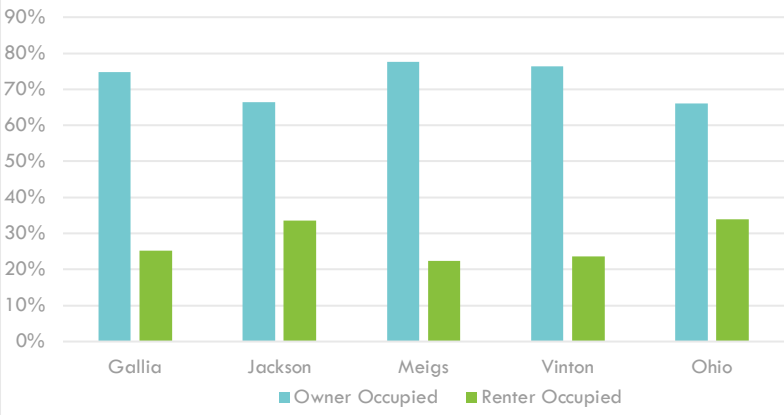


Figure 2-2 Housing Units Occupied

County data source: Ohio County Profiles for Gallia, Jackson, Meigs and Vinton Counties. 2017. Ohio data source: US Census QuickFacts Ohio. 2018

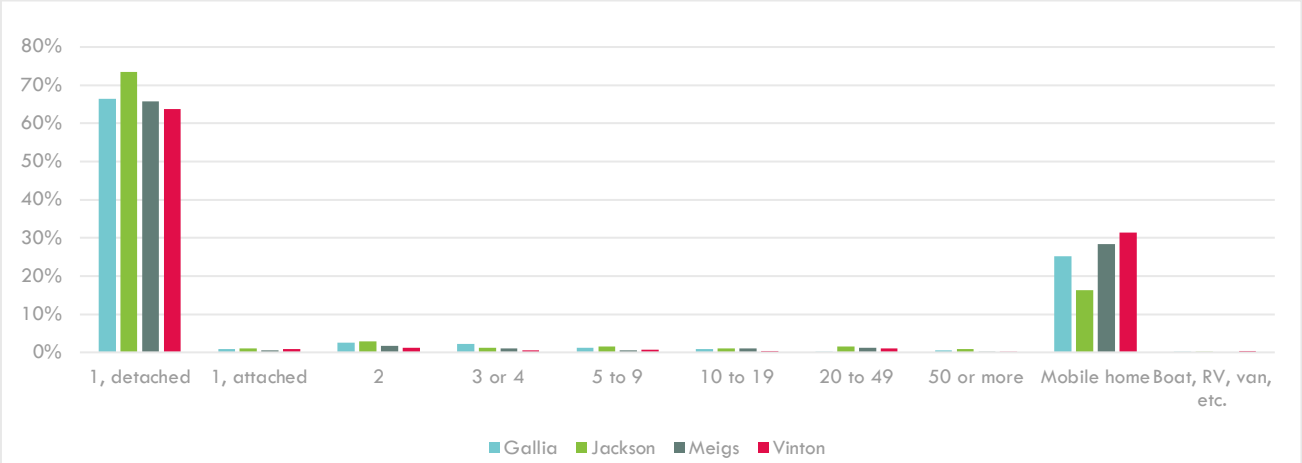


Figure 2-3 Housing Types

Ohio data source: US Census QuickFacts Ohio. 2018

Another implication is the low population densities in each County. Curbside recycling is typically more cost effective in urban areas where streets and buildings are close together. The lower population density of rural towns usually cannot support the cost of curbside collection. Except for Jackson County, 74% of people or more in each of the County's reside in the rural low population density areas.

C. Profile of Commercial and Institutional Sector

By employment education and health services, and trade, transportation and utilities are the top employers in Gallia, Meigs and Vinton Counties. In Jackson County the top employment is manufacturing as shown in Figure 2-4.

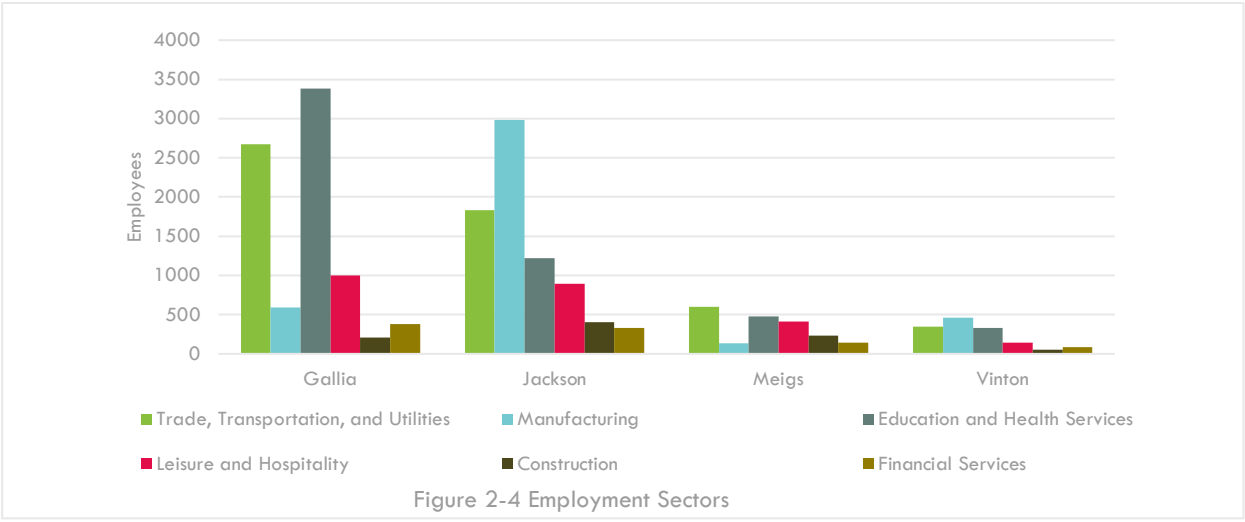


Figure 2-4 Employment Sectors

County data source: Ohio County Profiles for Gallia, Jackson, Meigs and Vinton Counties. 2017.

In Gallia County commercial/institutional employment is predominantly located in Gallipolis. In Jackson County it's dotted along major transportation corridors throughout the county. Both Meigs and Vinton County demonstrate smaller commercial/institutional properties with concentrations in the county seats with a few dotted along main transportation corridors.

Commercial/institutional businesses are financially responsible for contracting waste and recycling services.

D. Profile of Industrial Sector

By employment, manufacturing is in the top 5 employment sectors in all 4 counties. Manufacturing is the top employer sector in Jackson County. Two employers, Bellisio Foods, Inc and General Mills Inc have 1,000 employees. Sixteen manufacturers throughout the SWMD employ 0-300 employees. The waste disposed by manufacturing businesses is not large.

Solid waste from the industrial sector is dominated by waste from American Electric Power and Ohio Electric Power Corp to dispose of flue gas desulfurization (FGD) waste - a type of pollution control waste that has typically been difficult to recycle. To minimize air pollutants from the coal burning process, scrubbers are installed at power plants resulting in sludge and FGD by-products.

FGD is classified as industrial waste, specifically a residual solid waste. Residual solid wastes are wastes generated by seven specific industries that are named in Ohio's rules and by legal definition are not exempt from being classified as a solid waste. Wastes from these two power plants accounts for approximately 98% of total SWMD waste disposal.

The Gavin Power Plant located in Gallia County is the largest coal-burning power plant in Ohio and disposes waste in the Gavin Plant Residual Landfill. The landfill has approximately 3.7 years of permitted capacity. The Kyger Creek Plant also located in Gallia County recently permitted and constructed the Kyger Creek Landfill. The landfill has 40.6 years of disposal capacity.

Including waste disposal from these two power plants has a huge impact on calculations for waste generation and planning. For planning purpose the SWMD is providing additional plan tables and explanations excluding the waste from these power plants later in Appendices.

Industries are financially responsible for implementing their own recycling programs and contracting for trash and recycling services.

E. Other Characteristics

The counties are rural in Appalachia region which is heavily forested and not conducive to large-scale economic activity. The Appalachian Regional Commission predicts a shrinking population for the region. Additionally, in this region of the State, the median household income is lower than the rest of state and poverty rate is higher than the rest of the state. Poverty rates for Gallia County is 20.9%, Jackson is 20.6%, Meigs is 22.5%, and Vinton is 21.1%. Ohio's poverty rate is 14.9%[3]

[3] Ohio Development Services Agency. "The Ohio Poverty Report." February 2019.

In the challenging economic times, the communities prioritize services they are able to finance, and recycling is usually at the bottom of the list.

CHAPTER 3 WASTE GENERATION

Purpose of Chapter

This chapter of the solid waste management plan provides a summary of the SWMD's historical and projected solid waste generation. The policy committee needs to understand the waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the policy committee 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 SWMD's policy committee calculated how much solid waste was generated for the residential/commercial and industrial sectors. Residential/commercial waste is essentially municipal solid waste and is the waste that is generated by a typical community. Industrial solid waste is generated by manufacturing operations. To calculate how much waste was generated, the policy committee added the quantities of waste disposed of in landfills and reduced/recycled.

The SWMD's policy committee obtained reduction and recycling data 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 policy committee relies upon an entity's ability and willingness to provide data. When entities do not respond to surveys, the policy committee gets only a partial picture of recycling activity. How much data the policy committee obtains has a direct effect on the SWMD's waste reduction and recycling and generation rates.

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

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

A. Solid Waste Generated in Reference Year

Waste generation refers to the volume of materials that enter the waste stream before recycling, composting, landfilling or other waste management. To determine a waste generation, estimate GJMV collected data from several sources including:

- Ohio EPA Facility Data Reports (some facilities are required to submit annual reports to Ohio EPA)
- Surveys of commercial and industrial businesses recyclers, buybacks, brokers, and scrap dealers (these surveys are voluntary and relies on the willingness of any company to provide the data)
- Ohio EPA MRF reports (Ohio EPA collects data from commercial 'big box stores' and material recovery facilities)

Waste Generation = Wastes Disposed + Wastes Diverted

In 2018, GJMV generated 3,347,315 tons of material, as shown in Table 3-1 and Figure 3-1.

Table 3-1 Solid Waste Generated in the Reference Year

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	84,306
Industrial	3,264,918
Excluded	0
Total	3,349,223

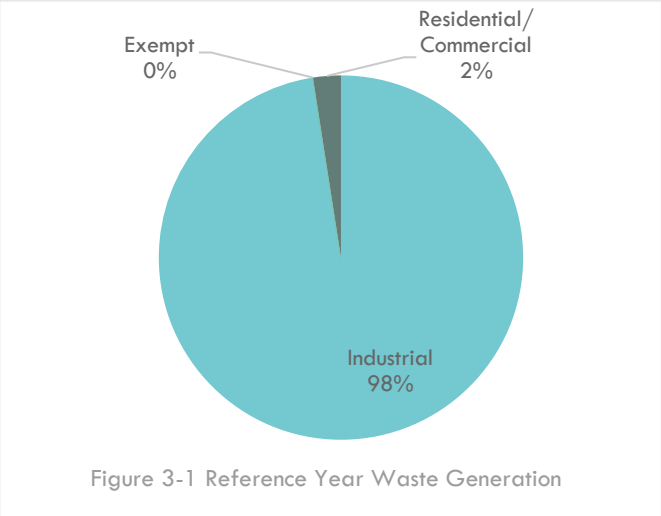


Figure 3-1 Reference Year Waste Generation

1. Residential/Commercial Waste Generated in the Reference Year

GJMV generated 84,306 tons of waste in the residential/commercial sector. This estimated generation indicates each person generates approximately 4.68 pounds per person per day.

2. Industrial Waste Generated in the Reference Year

The industrial sector generated 3,264,918 tons of waste. Industrial generation is skewed by large amounts of waste disposal from captive landfills. Approximately 99.7% of the industrial waste disposed is from coal-fired power plants in captive landfills. Excluding captive landfill disposal, the generation total is 32,543 tons. Thus, industrial waste generation trends higher because of captive landfill waste.

3. Excluded Waste Generated in the Reference Year

Excluded waste is waste material excluded from the definition of solid waste in ORC 3734.01. All excluded waste is also fee exempt. Ohio EPA Format 4.0 adds a threshold for excluded waste which excludes excluded waste from calculations if less than 10% of waste generated. Excluded waste for GJMV is less than 10% of waste generated and is therefore not considered in the analysis of this plan.

B. Historical Waste Generated

1. Historical Residential/Commercial Waste Generated

Figure 3-2 depicts the historical residential/commercial waste generation. Waste generation follows a decreasing trendline until 2018 when a slight increase is measured.

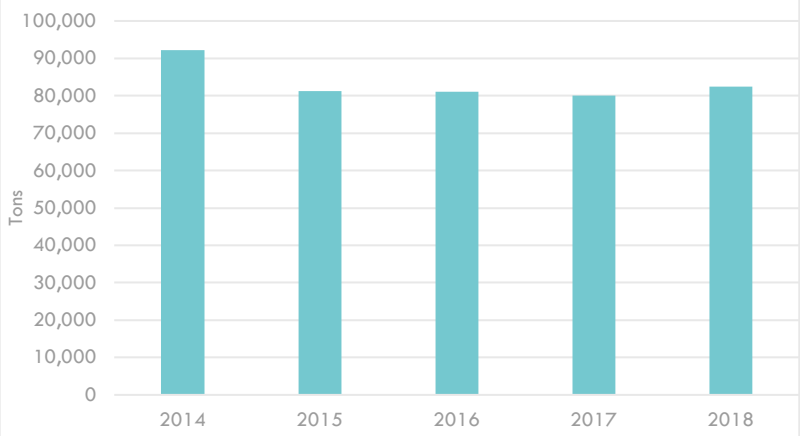


Figure 3-2 Historical Residential/Commercial Waste Generated

2. Historical Industrial Waste Generated

Industrial waste historically is higher because of volumes of waste disposed in the captive landfills. A decline in production results in less waste disposal. Figure 3-3 shows the breakdown of captive landfill waste disposal (power plant landfill) versus typical industrial landfill waste disposal. Industrial waste is 0.3% of total waste so is barely visible on the figure.

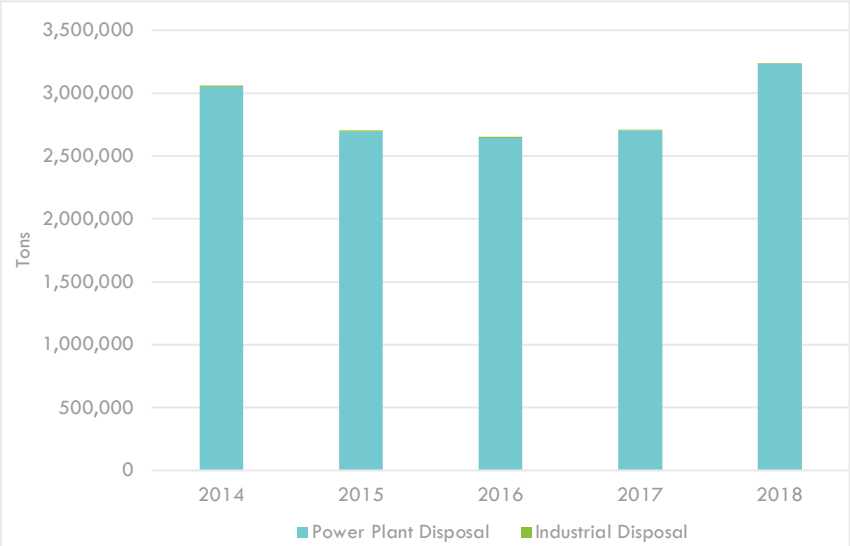


Figure 3-3 Historical Industrial Waste Generated

C. Waste Generation Projections

Historical and reference year data assist in forecasting waste generation to plan future infrastructure needs. Table 3-2 presents projected waste generation for the first 6 years of the planning period.

Table 3-2 Waste Generation Projections

Year	Residential Commercial Waste	Industrial Waste	Excluded Waste	Total
	Waste (tons)	Waste (tons)	Waste (tons)	Waste (tons)
2021	84,073	3,186,282	0	3,270,355
2022	84,388	3,160,494	0	3,244,882
2023	84,718	3,134,915	0	3,219,633
2024	85,063	3,109,543	0	3,194,606
2025	85,423	3,084,377	0	3,169,800
2026	85,741	3,059,415	0	3,145,156

Source: Appendices G and K
Sample Calculation:
Generation = Disposal + Recycle
Total = Residential/Commercial Generation + Industrial Generation
Per Capita Generation = ((Generation x 2000) / 365) / Population

CHAPTER 4 WASTE MANAGEMENT

Purpose of Chapter 4

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

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

To ensure that the SWMD has access to facilities, the solid waste management plan identifies the facilities the policy committee 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 policy committee must demonstrate that the SWMD will have access to enough landfill capacity for all of the waste the SWMD will need to dispose of. If there isn't adequate landfill capacity, then the policy committee develops a strategy for obtaining adequate capacity.

Ohio has more than 30 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 get waste to an existing landfill instead of building a new landfill.

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

A. Waste Management Overview

GJMV manages waste through a combination of landfills, recycling programs and facilities, transfer stations, and composting facilities. Table 4-1 depicts total waste generation management in the reference year and the first 6 years of the planning period. The majority of waste generated is managed through landfill disposal.

Table 4-1 Methods for Managing Waste Projections

Year	Generate[1]	Recycle[2]	Compost[3]	Transfer[4]	Landfill[5]
2018	***3,342,184***	***35,718***	***0***	***7,445***	***3,306,466***
2021	3,244,882	35,926	0	7,209	3,208,956
2022	3,219,633	36,149	0	7,152	3,183,484
2023	3,194,606	36,387	0	7,095	3,158,219
2024	3,169,800	36,641	0	7,039	3,133,159
2025	3,145,156	36,853	0	6,983	3,108,303

Source:
[1]Reference Year Appendix Table G-1 and Projections Table G-2
[2]Reference Year Appendix Table E-5 and Projections Table K-3 subtracting compost
[3]Reference Year Appendix Table B-5 and Projections Table E-7
[4]Reference Year Appendix Table D-2 and Projections Table D-5
[5]Reference Year Appendix Table D-3 and Projections Table D-5

B. Profile of Waste Management Infrastructure

1. Landfill Facilities

Municipal solid waste and captive landfills were used in the reference year. A wide variety of wastes are disposed in municipal solid waste landfills and includes waste generated from households, commercial businesses, institutions, and industrial plants. In addition, asbestos (if permitted to do so), construction and demolition debris, dewatered sludge, contaminated soil, and incinerator ash may also be disposed in municipal solid waste landfills.

Roughly 82% of the municipal solid waste is disposed in the Beech Hollow Sanitary Landfill and 7% in the Gallia County Sanitary Landfill as shown in Figure 4-1. Both landfills are located within the SWMD's boundaries. Beech Hollow Sanitary Landfill is in Jackson County and Gallia County Sanitary Landfill is located in Gallia County. Permitted capacity at Beech Hollow is 80 years, and 26 years at Gallia County Sanitary Landfill. Additionally, there are several landfills within reasonable direct haul and transfer distance.

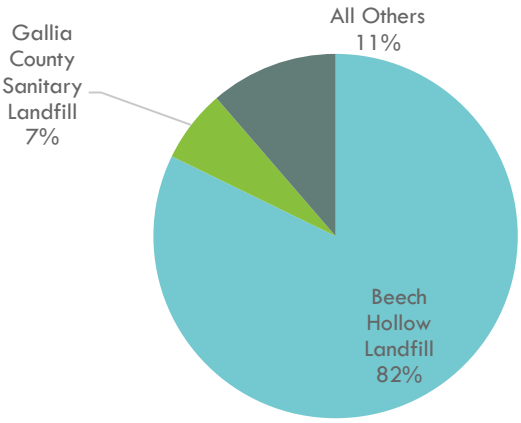


Figure 4-1 Reference Year Landfills Used

Captive or residual waste landfills are designated exclusively for the disposal of one or any combination of wastes from seven specific industrial categories. Due to regulations these facilities will not receive municipal solid waste. Residual/captive landfills are landfills used to dispose of waste generated exclusively by the manufacturing company that owns the landfill. Two energy companies, American Electric Power and Ohio Electric Power Corp have scrubbers to minimize air pollutants from the coal burning process. The flue gas desulfurization (FGD) equipment produces two byproducts (synthetic gypsum and chloride purge stream

solids)[4] which are types of pollution control waste that has typically been difficult to recycle. By Ohio law this material is not exempt from being classified as a solid waste and as a result is included in the total amount of solid waste generated.

The Gavin Power Plant located in Gallia County is the largest coal-burning power plant in Ohio and disposes waste in the Gavin Plant Residual Landfill. The landfill has approximately 3.7 years of permitted capacity. The Kyger Creek Plant also located in Gallia County recently permitted and constructed the Kyger Creek Landfill. The landfill has 40.6 years of disposal capacity.

2. Transfer Facilities

Public, private haulers, or self-haul provide waste collection service in the SWMD. Waste flows to landfills either by direct haul or through a transfer facility. Approximately 99% of the waste was direct hauled, meaning a refuse truck picked up waste from clients and directly hauled that waste to a landfill for disposal. Direct hauled waste is disposed in in-state and out-of-state landfill facilities. If captive landfill waste is excluded from calculations direct hauled waste is approximately 92%.

Waste flowed through one transfer facility in the reference year, Meigs County Transfer Station, located in the SWMD in Meigs County.

3. Composting Facilities

There are no registered composting facilities located in the SWMD.

4. Processing Facilities

GJMV relies on out-of-district material recovery facility (MRF) processing capacity for curbside single stream recyclables. A MRF is a specialized facility that receives, separates and prepares recyclable materials for marketing to end-user manufacturers. Materials collected at the curb and through drop-off programs are sent to MRFs. The drop-off programs in the reference year were contracted with Rumpke for collection and processing service. Three Rumpke facilities reported receiving and processing the SWMD materials. These facilities are located in Dayton, Columbus and Chillicothe. Both the Dayton and Columbus locations are MRFs equipped to handle the processing of single stream materials. These facilities have complex sorting equipment and are able to process materials (plastic bottle and jugs, paper, cardboard, glass, and cans). If other materials are placed in the bins or drop-off containers destined for these MRF it can be dangerous for the workers and sorting machinery. The Chillicothe facility is a buyback location.

5. Waste Collection

Municipal solid waste is collected from residents, businesses or institutions and transported to landfills by a number of private waste operators. There is little competition for collection of municipal solid waste. Curbside recycling collection is available in some areas but has challenges for service, chiefly higher costs. The SWMD contracts for collection and processing service to provide drop-off recycling access.

C. Solid Waste Facilities Used in the Reference Year

1. Landfill Facilities

[4] Ohio EPA letter. "Re: Cardinal FAR1 Residual Waste Landfill Waste Characterization Report for 2008". April 24, 2008

Table 4-2 lists the landfills receiving waste from the SWMD in the reference year, which is direct hauled, i.e., not transferred through a transfer facility.

Table 4-2 Landfill Facilities Used by the District in the Reference Year (2018 Direct Hauled)

Facility Name	Location		Waste Accepted from SWMD (tons)	Percent of all SWMD Waste Disposed	Remaining Capacity (years)
	County	State			
In-District					
Beech Hollow Landfill	Jackson	Ohio	73,149	82%	80
Gallia County Sanitary Landfill	Gallia	Ohio	5,742	6%	26
Out-of-District					
Franklin County Sanitary Landfill	Franklin	Ohio	0	0%	44
Rumpke Waste Inc Hughes Rd Landfill	Hamilton	Ohio	41	0%	8
Pike Sanitation Landfill	Pike	Ohio	7,493	8%	32
Wood County Landfill	Wood	Ohio	8	0%	7
Athens Hocking C&DD/Reclamation Center Landfill	Athens	Ohio	2,146	2%	46
Suburban Landfill, Inc	Perry	Ohio	154	0%	55
Pine Grove Regional Facility	Fairfield	Ohio	58	0%	65
Out-of-State					
Boyd Co Sanitary Landfill		Kentucky	43	0%	
Green Valley Landfill General Partnership		Kentucky	74	0%	
Northwestern Landfill		West Virginia	15	0%	
Meadowfill Landfill		West Virginia	55	0%	
Total			88,977	100%	363

Source: "2018 Ohio Facility Data Report Tables". Ohio EPA . October 29, 2019.
Appendix D, Table D-1
Appendix M, Table M-1

Facility Name	Location		Waste Accepted from District Tons
	County	State	
Captive Landfills			
Kyger Creek Landfill	Gallia	Ohio	544,118
Gavin Plant Residual Waste Landfill	Gallia	Ohio	3,017,339
Total			3,561,457

2. Transfer Facilities

Table 4-3 lists the transfer facilities receiving waste from the SWMD in the reference year before landfilling.

Table 4-3 Transfer Facilities Used by the District in the Reference Year (2018)

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Transferred	Landfill Where Waste was Taken to be Disposed
	County	State			
In-District					
Meigs County Transfer Station	Meigs	Ohio	7,445	100%	Athens Hocking C&DD/Reclamation
Out-of-District					
none		Ohio		0%	
Out-of-State					
none				0%	
Total			7,445	100%	

Source: "2018 Ohio Facility Data Report Tables". Ohio EPA . October 29, 2019.
Appendix D, Table D-1
Appendix D, Table D-2

3. Composting Facilities

Table 4-4 lists the permitted composting facilities receiving materials from the SWMD in the reference year.

Table 4-4 Compost Facilities Used by the District in the Reference Year (2018)

Facility Name	Location (County)	Material Composted (tons)	Percent of all Material Composted
In District			
none			
Out-of-District			
none			
Total		0	

Source:
Appendix B, Table B-*5*

4. Processing Facilities

Table 4-*5* lists the processing facilities receiving materials from the SWMD in the reference year.

Table 4-5 Processing Facilities Used by the District in the Reference Year (2018)

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
	County	State		
In-District				
none				
Out-of-District				
Rumpke - Columbus	Franklin	OH	MRF, SS	470
Rumpke - Dayton	Montgomery	OH	MRF, SS	17
Rumpke - Chillicothe	Ross	OH	Buyback	2,105
Out-of-State				
none				
			Total	**2,592**

Source:
Appendix B, Table B-7
Note:
SS – single stream, MRF – material recovery facility

D. Use of Solid Waste Facilities During the Planning Period

The SWMD continues to support an open market for the collection, transport and disposal of solid waste. There is sufficient access to municipal solid waste landfill capacity for the planning period and access to transfer facilities to manage waste. Landfill capacity remains abundant and exceeds available volume of waste generated locally. Consequently, tipping fees are low, and landfills continue to be the most feasible and economical disposal option today.

The SWMD is not expecting changes in the management of waste through the planning period. Following historical trends, the planning period expects waste to be similarly managed as shown in Figure 4-2. The SWMD does not expect any changes to the recyclable processing facilities or flows to processing facilities during the planning period. Additional capacity is not needed.

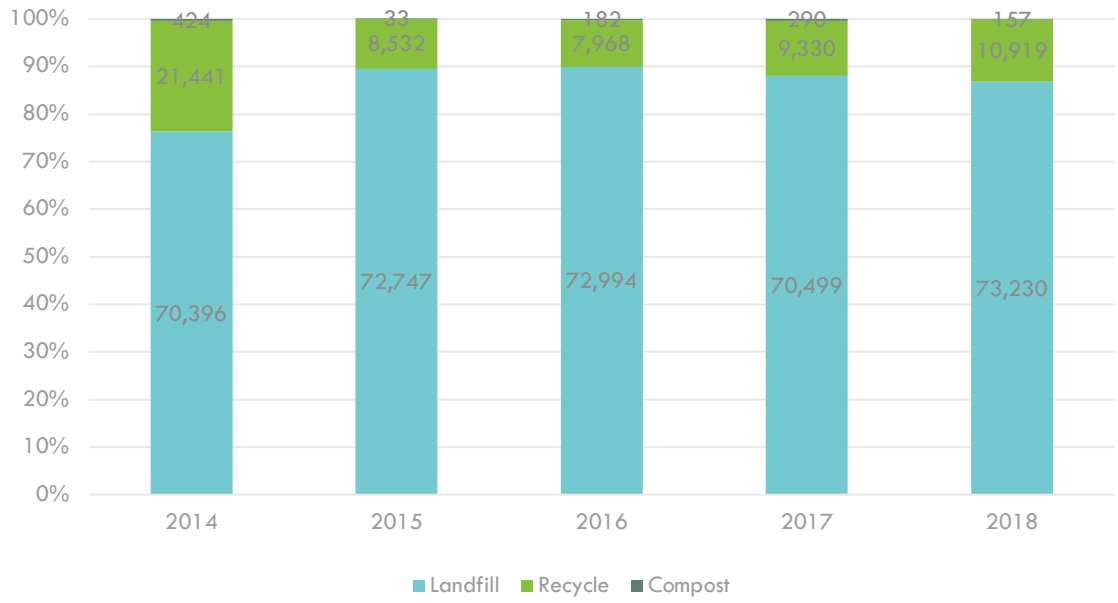


Figure 4-2 Historical MSW Management Methods

E. Siting Strategy

As explained earlier, the solid waste management plan must demonstrate that the SWMD will have access to enough capacity at landfill facilities to accept all of the waste the SWMD will need to dispose of during the planning period. If existing facilities cannot provide that capacity, then the policy committee must develop a plan for obtaining additional disposal capacity.

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

GJMV will rely upon the Ohio EPA siting strategy contained in Ohio Administrative Code 3745-27, 3745-30, and 3045-37 as well as other available siting criteria guidance from the Southeast District Office.

F. Designation

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

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

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

Once the board of directors designates facilities, only designated facilities can take the SWMD's waste. That means, 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 in a situation where, 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 how long the board has to make a decision on a waiver request.

If the board of directors designates facilities, then the next section will provide a summary of the designation process and Table 4-6 will list currently designated facilities.

1. Description of the SWMD's Designation Process

The Board of County Commissioners is hereby authorized to designate solid waste management facilities in accordance with ORC Section 343.014, and reserves the right to do so during the period covered by the Plan Update. At this time, the Board chooses not to designate facilities and will allow any industry, political jurisdiction, and solid waste hauler to use any solid waste management facility. If circumstances change and the Board of Directors determines it is appropriate to designate, the designation process outlined in Ohio Revised Code shall be followed.

2. List of Designated Facilities

Not applicable.

CHAPTER 5 WASTE REDUCTION AND RECYCLING

Purpose of Chapter 5

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.

Between 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. These programs and services collectively represent the SWMD's strategy for furthering reduction and recycling in its member counties.

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 SWMD's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall operations. This review consisted of a series of 12 analyses that allowed the policy committee to obtain a holistic understanding of the SWMD 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/how well is it performing?
- What is the SWMD's financial situation and ability to fund programs?

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

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

A. Solid Waste Management District's Priorities

The SWMD has identified the following as priorities to address first in this Plan.

- Campaign to address drop-off contamination.

- Promote commercial business/institutions assistance (contract assistance, Ohio EPA's material exchange program, etc.)
- Assist schools in obtaining classroom recycling bins.
- Explore grants available for schools and help apply.

B. Program Descriptions

This section briefly describes major programs and services available during the planning period. Appendix I contains complete descriptions.

1. Residential Recycling Infrastructure

Curbside Recycling Services

Non-Subscription Curbside Services

Table 5-1 Curbside

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
NSC1	Gallia County, Gallipolis	Rumpke	1998 to ongoing
NSC2	Jackson County, Jackson	City of Jackson	2008 to cease in 2020

Gallipolis has a long history of recycling at the curb. Residents have access to weekly collection using an 18-gallon bin. A new service provider contract beginning October 1, 2019 provides an option of cart-based (65-gallon) recycling for a nominal cart rental fee. The recycling cart rental gets billed directly to the resident. Service costs (collection and processing) are included on the utility bill. Service is non-subscription; residents do not have a choice to opt out. Materials accepted include metal cans, plastic bottles, glass bottles and jars, paper, cartons, and cardboard. Materials are collected in a single stream (commingled) all in one container.

Program is expected to continue through the planning period.

City of Jackson residents have access to bi-weekly collection using an 18-gallon bin. The City provides collection service hauling recyclables to Rumpke in Chillicothe, Ohio. The City of Jackson does not charge a service for the curbside pickup. Service is non-subscription residents. Materials accepted include metal cans, plastic bottles, glass bottles and jars, paper, cartons and cardboard. Materials are collected in a single stream (commingled) all in one container.

City of Jackson collects the materials and then pays a processing tip fee to a local MRF processor to process the materials. Each year the MRF processing tip fee has increased. It 2019 and early spring 2020 costs raised to a level that exceed the budget available to operate this program. City of Jackson curbside program ceased operations in May 2020.

Drop-off Recycling Locations

Table 5-2 Drop-off Recycling Locations

ID #	Name	Service Provider	When Service was/will be Available
Gallia County			
FTU2	Gallipolis Township, Silver Bridge Plaza	GJMV contracts with Rumpke	Cease 2019
FTU3	Green Township, Rodney Marathon Station	GJMV contracts with Rumpke	ongoing
FTU11	Green Township, High Road Towing & Truck Repair	GJMV contracts with Rumpke	Begin 2020
Jackson County			
FTU4	Jackson City Maintenance Building	GJMV contracts with Rumpke	ongoing
FTU5	Wellston City, GJMV office	GJMV contracts with Rumpke	ongoing
FTU6	Wellston City, 93 North	GJMV contracts with Rumpke	Cease 2020
FTU7	Wellston City, Wellston Ballfields	GJMV contracts with Rumpke	ongoing
FTU10	Jackson City, Behind Police Station 199 Portsmouth Street	GJMV contracts with Rumpke	Begin 2020
Meigs County			
FTU8	Village of Middleport Across from Police Station Pearl Street	GJMV contracts with Rumpke	ongoing
FTU9	Village of Pomeroy, SR7 & Hiland	GJMV contracts with Rumpke	ongoing
Gallia County			
FTR1	Walnut Twp, Cadmus Village, Township Garage	GJMV contracts with Rumpke	ongoing
FTR2	Cheshire Township, Cheshire Village, Maintenance Building	GJMV contracts with Rumpke	ongoing
FTR3	Mercerville, Guyan Township Trustee Building	GJMV contracts with Rumpke	ongoing
FTR4	Rio Grande Village, Fire Dept	GJMV contracts with Rumpke	ongoing
FTR5	Vinton Village, Fire Dept	GJMV contracts with Rumpke	Cease 2020
FTR21	Gallipolis Township, Gallipolis City, Senior Citizens Center	GJMV contracts with Rumpke	ongoing
Jackson County			
FTR6	Coalton Village, corner of Church and Second	GJMV contracts with Rumpke	ongoing
FTR7	Oak Hill Village, Piggly Wiggly	GJMV contracts with Rumpke	ongoing
FTR22	Bloomfield Township, A&A Truck Stop 80 Dixon Rd	GJMV contracts with Rumpke	Begin 2020
Meigs County			
FTR8	Chester Township, Chester Commons	GJMV contracts with Rumpke	ongoing
FTR9	Columbia Township, Fire Department	GJMV contracts with Rumpke	ongoing
FTR10	Rutland Township, Village Garage	GJMV contracts with Rumpke	ongoing
FTR11	Salem Township, Salem Center Fire Department	GJMV contracts with Rumpke	ongoing
FTR12	Sutton Township, Village of Syracuse Corner of Bridgeman & Second	GJMV contracts with Rumpke	ongoing
FTR13	Sutton Township, Village of Racine Village, 301 S Third Street	GJMV contracts with Rumpke	ongoing
FTR14	Olive Township, Tuppers Plains Across from Eastern Local 5009 SR 681	GJMV contracts with Rumpke	ongoing
Vinton County			
FTR15	Village of Hamden, Behind Village Hall 275 Buffalo Street	GJMV contracts with Rumpke	ongoing
FTR16	McArthur Village, Vinton Industries	GJMV contracts with Rumpke	ongoing
FTR17	Richland Township, Kemptons Lot	GJMV contracts with Rumpke	Cease 2019
FTR18	Wilkesville Village, Old School Parking Lot Wilton Street	GJMV contracts with Rumpke	ongoing
FTR19	Zaleski Village, Corner of Mill & Broadway	GJMV contracts with Rumpke	ongoing
FTR20	Elk Township, Sr. Citizens SR 93 North	GJMV contracts with Rumpke	Begin 2020

Single-stream recycling drop-off containers serviced (collection and processing) by private contractor. SWMD pays for contract. Available for use 24/7. Materials accepted include: plastic bottles and jugs, glass bottles and jars, cans, paper, cartons and cardboard.

The Gallia County Silver Bridge Plaza and Vinton Village Fire Department and Vinton County Kempton's Lot locations were removed because of trash and contamination. Most of the open dumping at the sites is mattresses or other larger bulky items. Three other sites (Pomeroy, Wellston, and Coalton) frequently have issues with contamination. Recyclable materials are also getting left on the ground around the containers when containers are full. The SWMD uses education tactics of visible on-site signs and banners to deter contamination by educating on proper materials accepted at the site. The SWMD made temporary signs and rotates them around to the sites that are experiencing contamination and recyclables outside the containers. Banners were also made. The problem sites are then monitored to be evaluated for removal or relocation. The last course of action is to remove the site.

With the loss of the City of Jackson curbside program, the SWMD is providing another drop-off site to Jackson to accommodate the recyclables that were once collected at the curb. In addition, this site is needed to demonstrate access in Jackson County.

Drop-off site locations are subject to change at any time for unforeseen reasons or to maintain performance and reasonable costs.

Table 5-3 Programs

Name	Description
Commercial/Institutional Sector Reduction and Recycling Programs	
Community Connection	The purpose of this program is to build community relationships. This campaign is designed to offer services to the commercial and institutional sectors. In addition to the in-person communications the SWMD will promote services on the Facebook page and add to the website a dedicated page describing commercial resources.
Industrial Sector Reduction and Recycling Programs	
Industrial Best Practices	Industries tend to be top leaders in environmental leadership, in fact for many it's an integral part of business behavior. The SWMD has a couple top industries within the district that have established environmental management systems with objectives, targets, monitoring and measurement, etc. The SWMD is establishing a goal to connect with one industry a year over the next 5 years to identify what sets them apart. The goal is to develop an industrial best practices guide that can be distributed to other local industrial business that would benefit by a guide and to also have as a ready resource on the webpage. Planned to begin in 2021.
Restricted/Difficult to Manage Wastes	
Restricted/Difficult to Manage Wastes Education/Information	The structure for this program is to provide education and information. The residents can find available outlets to divert or safely dispose materials on the website. The SWMD also educates on the safety of proper management of materials on Facebook. Fortunately, a number of outlets exist for motor oil, antifreeze, batteries, compact fluorescent lights (CFLs), electronics, and propane tanks. The SWMD receives phone inquiries for proper

	management of HHW and distributes literature at presentations. The SWMD plans to add education to purchasing more environmentally friendly products thus preventing the generation of HHW to the webpage and Facebook posts. Additionally, the SWMD has a backyard composting guide on the webpage.
Other	
Annual District Report	Annually the SWMD surveys both the commercial and industrial sector as well as scrap businesses.
Health Department Funding	Funding provided for inspections and investigations. Funding is planned to reduce in 2020 and cease in 2024.
Litter Collection Funding	Funding is to Meigs County Soil and Water for litter collection and education and outreach in Meigs County. Funding is planned to reduce in 2020 and cease in 2024.
Sheriff Department Funding	Funding to sheriff departments is for program administration, enforcement of illegal dumping and littering laws, illegal dump and litter cleanup, tire recycling collection/processing programs. Funding is planned to reduce in 2020 and cease in 2024.

Outreach, Education, Awareness, and Technical Assistance

Minimum education requirements prescribed by Goal 3:

- GJMV maintains a website at www.gjmv.recycle.com
- The Solid Waste Management Plan and website serve as a resource guide.
- Executive Director is available for presentations.

As prescribed by the 2020 State Plan, each SWMD will provide education, outreach, marketing, and technical assistance regarding education and reuse through an outreach and marketing plan. Per *Format 4.*0 the outreach and marketing plan needs to have the following components:

1. Five target audiences as identified in Ohio EPA Format 4.0.
2. Follow basic best practices when developing and selecting outreach programs.
3. Outreach priority.
4. Education and outreach programs to all appropriate audiences in the context of the priority using social marketing principles and tools.

The outreach and marketing plan needs to demonstrate these best practices

- Demonstrate that the SWMD will address all of the five target audiences;
- Explain how the SWMD will align its outreach and education programs with recycling opportunities (both existing and needed); and
- Explain how the SWMD will incorporate principles and tools for changing behavior into the outreach and marketing plan.

To align with *Format 4.0* the SWMD's existing programs were organized by target audience. Some of the existing SWMD programs cross several target audiences.

Education/Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions and Commercial Businesses	Communities and Elected Officials
GJMV Recycles	X			X	X
Community Connections			X	X	X
Our Counties Our Future	X	X			
Go Green with GJMV	X	X	X	X	X
Outreach Coalition					X
Schools		X		X	

OUTREACH PRIORITY – RECYCLE RIGHT

The SWMD has an established network of drop-off recycling locations, and residents are using the drop-offs. However, the SWMD is finding too much trash in the collection receptacles. Outreach priority is on the residential sector to recycle more of the correct materials and less trash.

- Create a baseline measurement on number of sites that have issues.
  - SWMD identify locations.
  - SWMD work with hauler to provide tonnage estimate for locations.
- Work with MRF to determine top contamination material.
- Conduct onsite interviews with recycling users at locations.
- Based on interview data, create strategic recycle right communications campaign.
- Implement recycle right campaign for 3 months.
- Measure impact of campaign by hauler providing tonnage estimates and MRF identifying top contamination material.

Outreach priority will begin in 2021. The SWMD anticipates this campaign will need to be implemented yearly to reinforce messaging.

C. Waste Reduction and Recycling Rates

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

Year	Projected Quantity Collected (tons)	Residential/ Commercial WRR[1] (%)
2021	11,808	14%
2022	12,123	14%
2023	12,453	15%
2024	12,798	15%
2025	13,158	15%
2026	13,476	16%

Notes: WRR = Waste Reduction Rate
Source:
Appendix K, Table K-1
Sample Calculation:
Waste Reduction Rate = Recycled / Total Generated

Table 5-4 Industrial Waste Reduction and Recycling Rate

Year	Projected Quantity Collected (tons)	Industrial WRR[1] (%)
2021	23,910	1%
2022	23,803	1%
2023	23,696	1%
2024	23,589	1%
2025	23,483	1%
2026	23,377	1%

Notes: WRR = Waste Reduction Rate
Source:
Appendix K, Table K-2
Sample Calculation:
Waste Reduction Rate = Recycled / Total Generated

CHAPTER 6 BUDGET

Purpose of Chapter 6

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

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

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

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

A. Overview of SWMD's Budget

The activities and services described in Chapter 5 are supported through tier disposal fees and miscellaneous other revenues. The SWMD's primary funding source is revenue earned through tier disposal fees. The SWMD's existing fee structure is: $1.00 per ton of solid waste in-district; $2.00 per ton of solid waste out-of-district; and $1.00 per ton of solid waste out-of-state. Thus, for every ton generated by the SWMD and disposed at landfills in the SWMD $1.00 per ton is received. For every ton generated out of district by other Ohio counties, the SWMD receives $2.00 per ton. The SWMD receives $1.00 per ton on out-of-state generated waste.

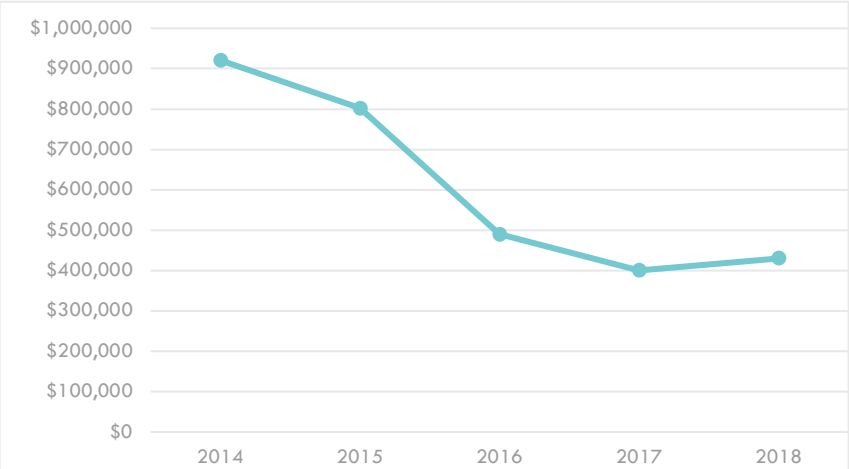


Figure 6-1 Historical Revenues

There are two landfills in the SWMD, Gallia County Landfill and Beech Hollow Landfill which receive waste. The levied tier disposal fees revenues have been declining since 2014, which has resulted in programming cuts. Figure 6-1 provides a historical look at SWMD revenues. Measured decreases in waste disposal from out-of-district waste disposal fees impacted the revenue stream resulting in a decline from $900K to just over $400K. With a tier disposal fee increase to be ratified in this 2021 Plan Update, the SWMD projects the revenues will hold at roughly $422K throughout the planning period.

Expenses will be cut in year 2021 and then again in 2024 to balance the budget at the end of the planning period. Figure 6-2 and 6-3 depict the distribution of expenses towards plan implementation in year 2021 and 2024, respectively.

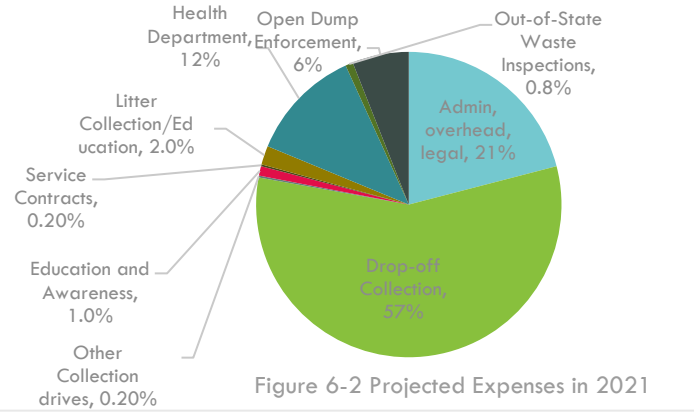


Figure 6-2 Projected Expenses in 2021

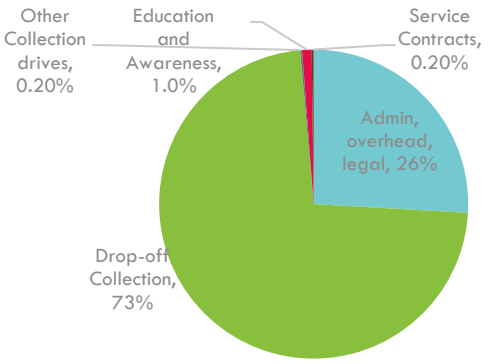


Figure 6-3 Projected Expenses in 2024

B. Revenue

Overview of How Solid Waste Management Districts Earn Revenue

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

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

Disposal Fees (See Ohio Revised Code Section 3734.57(B))
Disposal fees are collected on each ton of solid waste that is disposed at landfills in the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste came from – in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed at landfills in the SWMD. Out-of-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.

1. Disposal Fee

There are two landfills in the SWMD and the SWMD levies fees on waste disposed at those landfills. Those fees are:

- $1.00 per ton of solid waste in-district;
- $2.00 per ton of solid waste out-of-district; and
- $1.00 per ton of solid waste out-of-state.

2. Generation Fee

In accordance with ORC 3734.573, a solid waste management district may levy fees on the generation of solid wastes within the SWMD. In order to support programming through the end of the planning period the SWMD is ratifying a $0.35 per ton generation fee scheduled to begin after plan ratification and approval by Ohio EPA of this 2021 Plan.

3. Fees collected via Designation Agreements

The SWMD does not receive revenues from designation fees.

4. Other Funding Mechanisms Reimbursements
    a. Interest
    Fund balance collects interest in a high-rate interest account. Interest is projected to decrease in annual increments as the fund balance draws down.

Table 6-1 shows the projected revenues for the first five years of the planning period. The SWMD's revenue will average about $442,000. Other revenue contributes about 4% of the SWMDs funding and is sourced from interest.

Table 6-1 Summary of Revenue

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue					Total Revenue
				Interest	Contracts	Recycling Revenue	Grant	Other	
Reference Year									
2018	$406,667	$0	$0	$22,549	$0	$0	$0	$702	$429,919
Planning Period									
2021	$422,157	$6,788	$0	$18,636	$0	$0	$0	$0	$423,287
2022	$422,157	$27,111	$0	$17,604	$0	$0	$0	$0	$442,588
2023	$422,157	$27,111	$0	$16,808	$0	$0	$0	$0	$441,792
2024	$422,157	$27,111	$0	$15,934	$0	$0	$0	$0	$440,918
2025	$422,157	$27,111	$0	$16,358	$0	$0	$0	$0	$441,342
2026	$422,157	$27,111	$0	$16,387	$0	$0	$0	$0	$441,371

Source(s) of Information:
Year 2018 sourced from Quarterly Fee Reports
Planning period years sourced from Appendix O
Sample Calculations:
Total Revenue = Generation Fes + Other Revenue

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 of 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, the majority 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 and scrap tires);
- providing outreach and education;
- providing services (such as curbside recycling services); and
- paying for community clean-up programs.

Table 6-2 summarizes the types of expenses the SWMD expects for implementation of this Plan Update. Detailed information regarding expenses is provided in Appendix O.

Table 6-2 Summary of Expenses

Expense Category	Year						
	Reference	Planning Period					
	2018	2021	2022	2023	2024	2025	2026
Admin, overhead, legal, plan monitoring	$97,047	$102,807	$104,082	$105,473	$106,988	$123,639	$125,439
Facility Operation	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Curbside Collection	$2,792	$ -	$ -	$ -	$ -	$ -	$ -
Drop-off Collection	$223,353	$280,888	$283,696	$286,533	$300,860	$309,886	$319,182
Recycling Collection-Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tire Collection	$2,500	$ -	$ -	$ -	$ -	$ -	$ -
Electronics Collection	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Collection Drives	$ -	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Education and Awareness	$392	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
Service Contracts	$393	$900	$900	$900	$900	$900	$900
Litter Collection/Education	$20,000	$10,000	$10,000	$10,000	$ -	$ -	$ -
Health Department	$64,000	$56,000	$56,000	$56,000	$ -	$ -	$ -
Out-of-State Waste Inspection	$8,000	$4,000	$4,000	$4,000	$ -	$ -	$ -
Open Dump Enforcement	$60,000	$30,000	$30,000	$30,000	$ -	$ -	$ -
Total Expenses	$478,479	$489,595	$493,679	$497,907	$413,749	$439,425	$450,522

Source(s) of Information:
Year 2018 sourced from Quarterly Fee Reports
Planning period years sourced from Appendix O
Sample Calculations:
Total Expenses = sum of expenses category

D. Budget Summary

Table 6-3 Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2018	$429,919	$478,479	-$48,560	$1,399,671
Planning Period				
2021	$423,287	$489,595	($66,308)	$1,130,615
2022	$442,588	$493,679	($51,091)	$1,079,524
2023	$441,792	$497,907	($56,115)	$1,023,409
2024	$440,918	$413,749	$27,170	$1,050,579
2025	$441,342	$439,425	$1,916	$1,052,495
2026	$441,371	$450,522	($9,151)	$1,043,345

Source(s) of Information:
Year 2018 sourced from Quarterly Fee Reports
Planning period years sourced from Appendix O
Sample Calculations:
Net Difference = Revenue – Expenses
Ending Balance = Net Difference + Previous Year Ending Balance

E. Major Facility Project

Purpose of a Budget for a Major Facility Project

SWMDs can own and operate solid waste management facilities, and a number already do. Other SWMDs include feasibility studies or strategies to build new or make renovations to existing facilities in their solid waste management plans.

The types of facilities solid waste management districts own and operate include landfills, transfer facilities, material recovery facilities, recycling centers, household hazardous waste collection centers, and composting facilities.

Solid waste facilities represent major financial undertakings that can result in substantial capital investments along with ongoing operating costs. For this reason, when the policy committee decides that the SWMD will develop a new or make extensive renovations to an existing solid waste management facility, the solid waste management plan provides a specific budget for that facility.

This chapter of the solid waste management plan provides a summary of the SWMD's major facility budget. The full details of the budget are provided in Section D of Appendix O.

A major facility project is not scheduled in this 2021 Plan Update.

APPENDIX A MISCELLANEOUS INFORMATION

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

A. Reference Year

The reference year for this solid waste management plan is 2018.

B. Planning Period

The planning period for this solid waste management plan is 2021 to 2036.

C. Goal Statement

The District will achieve the following Goal:
Goal 1: Access states the District shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

D. 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.

Data does not differ.

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

Data does not differ.

E. Material Change in Circumstances/Contingencies

The District will monitor activity within the District on an ongoing basis to assess material changes and determine if a plan amendment is necessary. The term "material change in circumstances" will be defined by the District as a change (or changes) in the elements of the Plan that are so drastic that the District cannot implement the Plan as approved. Such determinations will be controlled by the following process:

<u>Criteria/Process</u>
The District will evaluate the following whether any significant changes occur in the following areas:

- The generation of waste has increased in the District to such an extent that planned and existing disposal capacity is "less-than" the generation and therefore, cannot be collected and properly disposed of.
- The closing, or change in operation of a solid waste management facility which affects the collection and/or processing of materials. Facility includes, but is not limited to a landfill; recycling collection program; recycling processing center; transfer station.

- District revenue is "less-than" the expense of providing the minimum, regulatory required, waste management services.
- The Ohio Revised Code or the Ohio Administrative Code has changed so drastically that plan changes are required.
- If current recycling collection and/or processing capacity is inadequate to such an extent that the financial cost of upgrading that capacity exceeds available revenue.
- The procedures to be followed for plan implementation have proved to be impractical to follow.

Monitoring Procedures

Monitoring for changes within the District is an ongoing activity. The District will monitor by:

- Formal and informal communications with citizens, elected officials, District staff, employees of waste management, recycling, and law enforcement programs.
- Monthly District financial statements.
- Examination of the monthly District Solid Waste Disposal Reports.
- The Annual District Report.
- Notification that a facility used by the District has ceased operation.
- Periodic in-house status and progress reports.
- Annual review of plan implementation by the Policy Committee.

Timetable

1. The District Policy Committee will evaluate "Monitoring Procedures" to determine if a material change in circumstances has occurred.
2. Within five (5) working days of determining that a material change in circumstances has occurred, the Policy Committee will direct the Executive Director to call a meeting of the Executive Committee of the District Board of Directors.
3. A meeting of the Executive Committee of the District Board of Directors will be scheduled within two (2) weeks of the first executive committee member notified of a material change in circumstance by the District Executive Director.
4. The Executive Committee will hear and evaluate the Policy Committee's position and will decide if they agree that a material change in circumstances has occurred. If they agree, they will instruct the Executive Director to schedule a special meeting of the District Board of Directors within two (2) weeks of that District Executive Committee meeting. In the event that they vote that a material change has not occurred, then the District will continue with the implementation of the current District Management Plan.
5. At the special meeting of the District Board of Directors, the Chairman of the Executive Committee (or his designee) will present, to the full Board of Directors, a report on the determination of a material change in circumstance. The full Board of Directors will then vote to accept, or not accept, that a material change in circumstances has occurred. In the event that they vote that a material change has not occurred, then the District will continue with the implementation of the current District Management Plan. However, if a majority of the full Board of Directors vote that they agree with the determination that a material change in circumstance has occurred, then that will be deemed final determination that material change in circumstances has occurred.
6. At the meeting, where final determination of material change in circumstance was determined, the Board of Directors will instruct the Policy Committee to prepare a draft amended plan for review at a special meeting of the Board of Directors. This meeting of the Board of Directors will be scheduled within one (1) month of the final determination.

Notification

Within one (1) month of a determination that a material change in circumstances has occurred, the Executive Director will notify the Ohio EPA in writing.

APPENDIX B RECYCLING INFRASTRUCTURE INVENTORY

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

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

1. Curbside Recycling Services

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

ID #	Name of Curbside Service	Service Provider	County	How Service is Provided	Collection Frequency	Materials Collected[1]	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)[2]	Service will Continue Throughout Planning Period (Y/N)
NCS1	Gallipolis City	Rumpke	Gallia	Contract between the political jurisdiction and private hauler	weekly	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	single-stream, totes	N	359	Y
NCS2	Jackson City	Rumpke	Jackson	Contract between the political jurisdiction and private hauler	weekly	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	single-stream, totes	N	289	Suspended in 2020
Total									648	

[1]Paper includes: Newspaper, Cardboard, Other Paper, Office Paper, Junk Mail.
[2]Data is 2018 sourced from GJMV SWMD.

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

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected(1)	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
SC1	None								
Total								0	

Curbside recycling is collected in a single stream (all recyclables together). Method of collection is a bin/tote. Non-subscription curbside is provided by private haulers and is contracted by the municipality on behalf of the resident.

2. Drop-Off Recycling Locations

Table B-2a: Inventory of Full Time, Urban Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected[1]	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)[2]	Service will Continue Throughout Planning Period (Y/N)
FTU1	Gallipolis City, Senior Citizens Center	private company contracted by District.	Gallia	Serviced three times weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTU2	Gallipolis Township, Silver Bridge Plaza	private company contracted by District.	Gallia	Serviced three times weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Suspended in 2019
FTU3	Green Township, Rodney Marathon Station	private company contracted by District	Gallia	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTU4	Jackson City Maintenance Building	private company contracted by District.	Jackson	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans,	Y	The District is unable to measure the exact quantity of materials collected.	Y

						paper, cartons			
FTU4	Wellston City, GJMV office	private company contracted by District	Jackson	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTU6	Wellston City, 93 North	private company contracted by District.	Jackson	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Suspended in 2020
FTU7	Wellston City, Wellston Ballfields	private company contracted by District.	Jackson	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTU8	Village of Middleport Municipal Building	private company contracted by District	Meigs	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y, Location moved to Across from Pearl Street in 2020
FTU9	Village of Pomeroy, SR7 & Hiland Rd	private company contracted by District.		Serviced three times weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
Total								1,596	

[1]Paper includes: Newspaper, Cardboard, Other Paper, Office Paper, Junk Mail.
[2]Data is 2018 sourced from GJMV SWMD.

Table B-2b: Inventory of Part-Time, Urban Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PTU1	None								
Total								0	

Table B-2c: Inventory of Full-Time, Rural Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected[1]	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)[2]	Service will Continue Throughout Planning Period (Y/N)
FTR1	Cadmus Village, Walnut Twp. Garage	private company contracted by District.	Gallia	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR2	Cheshire Village, Village Garage	private company contracted by District.	Gallia	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR3	Mercerville, Guyan Township Garage	private company contracted by District.	Gallia	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR4	Rio Grande Village, Fire Dept.	private company contracted by District.	Gallia	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected[1]	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)[2]	Service will Continue Throughout Planning Period (Y/N)
FTR5	Vinton Village, Fire Dept.	private company contracted by District.	Gallia	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Cease in 2020
FTR6	Coalton Village, corner of Church and Second	private company contracted by District	Jackson	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected	Y
FTR7	Oak Hill Village, Municipal Building	private company contracted by District.	Jackson	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR8	Chester Township, Chester Commons	private company contracted by District.	Meigs	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR9	Columbia Township Fire Department	private company contracted by District.	Meigs	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR10	Rutland Township, Village Rutland Garage	private company contracted by District.	Meigs	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected[1]	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)[2]	Service will Continue Throughout Planning Period (Y/N)
								materials collected	
FTR11	Salem Township Salem Center Fire Department	private company contracted by District.	Meigs	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR12	Sutton Township, Syracuse Municipal Park	private company contracted by District.	Meigs	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected	Y, location moved to Corner of Bridgeman & Second
FTR13	Sutton Township, Village of Racine, Star Mill Park	private company contracted by District.	Meigs	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR14	Olive Township, Tuppers Plains Across from Eastern Local 5009 SR681	private company contracted by District.	Meigs	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR15	Village of Hamden, Behind Village Hall	private company contracted by District.	Vinton	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected[1]	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)[2]	Service will Continue Throughout Planning Period (Y/N)
FTR16	McArthur Village, Vinton Industries	private company contracted by District	Vinton	Serviced twice weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR17	Richland Township, Kemptons Lot	private company contracted by District.	Vinton	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Suspended in 2019
FTR18	Wilkesville Village, Wilkesville Park	private company contracted by District	Vinton	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
FTR19	Zaleski Village, Village Hall	private company contracted by District	Vinton	Serviced once weekly	24/7	Plastic bottles and jugs, glass bottles and jars, cans, paper, cartons	Y	The District is unable to measure the exact quantity of materials collected.	Y
Total								0	

[1]Paper includes: Newspaper, Cardboard, Other Paper, Office Paper, Junk Mail.
[2]Data is 2018 sourced from GJMV SWMD.

Table B-2d: Inventory of Part-Time, Rural Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards? (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PTR1	None								
Total								0	

GJMV contracts with a private service provider to provide, collect, and process drop-off containers throughout the four counties. Locations are open to the public 24/7.

3. Mixed Municipal Solid Waste Material Recovery Facility

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

Name of Material Recovery Facility	Location (County, City)	Communities Served	Types of Materials Recovered	Weight of Materials Recovered (tons)	Waste Processed (tons)	Bypass Waste (tons)	Total Waste (tons)	Recovery Rate in Reference Year (percent)
None							0	0

A mixed solid waste materials recovery facility provides residents with access to recycling opportunities by removing recyclables from the trash for the residents. GJMV does not use a mixed waste material recovery facility (aka dirty MRF) to separate recyclables from trash.

B. Curbside Recycling and Trash Collection Service Providers

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

Name of Provider	Counties Served	Trash Collection Services				Curbside Recycling Services		
		PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
City of Point Pleasant	Gallia	N	Y					
City of Ravenswood	Gallia & Meigs	N	Y					
Town of New Haven	Meigs	N	Y					
Racine Village	Meigs	N	Y					
Village of Coalton	Jackson	N	Y	Y	Y			
City of Wellston	Jackson	N	Y	Y	Y			
Village of Oak Hill	Jackson	N	Y	Y	Y			
City of Jackson	Jackson	N	Y	Y	Y	Y		
AB&R Services	Gallia	N	Y	Y	Y			
Allied Waste Systems	Gallia	N	Y					
B&B Trash Service	Gallia	N	Y					
Big O Trash Service	Gallia	N	Y					
Clagg's Waste Disposal	Gallia	N	Y					
D. Marum Hauling	Gallia	N	Y					
Dekes Garbage Service	Gallia	N	Y					
E&B Services	Gallia	N	Y					

Name of Provider	Counties Served	Trash Collection Services				Curbside Recycling Services		
		PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Eblin's Garage Service	Gallia	N	Y					
Gerald Smith Hauling	Gallia	N	Y					
Go Green Waste Worx LLC	Gallia	N	Y					
Happy Hippy Hauling	Gallia	N	Y					
Marcum's Trash Service	Gallia & Vinton	N	Y					
Waste Management	Gallia, Vinton, Jackson, Meigs	N	Y	Y	Y	Y	Y	Y
Henry Eblin's Garbage Service	Meigs	N	Y					
Williams Trash Service	Gallia & Jackson	N	Y					
R&A Trash Service	Gallia	N	Y					
River Cities Refuse	Gallia	N	Y					
Rumpke Waste	Gallia, Vinton, Jackson, Meigs	N	Y	Y	Y	Y	Y	Y
Walters Refuge Service	Gallia	N	Y					
King's Trash Hauling & Service	Jackson & Vinton	N	Y					
A1 Sanitation	Meigs	N	Y					
American Trash Service	Meigs	N	Y					
Big Dog Trash Service	Meigs	N	Y					
Dads Trash Service	Gallia & Meigs	N	Y					
Freeman Sanitation	Meigs	N	Y					
C&R Sanitation	Meigs	N	Y					
McCoy Refuse	Meigs	N	Y					
Oiler's Trash Service	Meigs	N	Y					
P&T Refuse Hauling	Meigs, Vinton, Jackson	N	Y					
Powell's Refuge	Meigs	N	Y					
Southern Ohio Disposal	Meigs	N	Y					
Whites Sanitation	Meigs	N	Y					
Westfall's Sanitation	Meigs	N	Y					
Farmers Refuse	Vinton	N	Y					
Logue Trash Service	Gallia & Vinton	N	Y					
Mercer Sanitation	Jackson & Vinton	N	Y					
Backwoods Trash Service	Vinton	N	Y					
BW Trash Service	Jackson & Vinton	N	Y					
Gene & Eric's Trash	Vinton	N	Y					
Hamilton's Hauling	Vinton	N	Y					
Stevens Disposal	Vinton	N	Y					
Trash A Smoking	Vinton & Jackson	N	Y					
Vickroy's Disposal	Vinton	N	Y					
Viking Sanitation	Vinton	N	Y					
Pike Sanitation	Jackson	N	Y					

C. Composting Facilities

Table B-5: Inventory of Compost Facilities Used in the Reference Year

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
None						
Total				0	0	0

Source: 2018 data Ohio EPA Compost Facility Planning Analytical Report

D. Other Food Waste and Yard Waste Management Programs

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

Facility or Activity Name	Activity Type	Location	Food Waste (tons)	Yard Waste (tons)
Hauler/Grocer Food Waste Data		Gallia	70	
Hauler/Grocer Food Waste Data		Jackson	87	
Total			157	0

Source: 2018 data Ohio EPA Compost Facility Planning Analytical Report

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

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

Facility Name	County	State	Type of Facility	Weight of Material Accepted from SWMD (tons)
Rumpke Recycling Dayton	Montgomery	Ohio	MRF	17
Rumpke Chillicothe	Ross	Ohio	Buyback	2,105
Rumpke Waste Recycling Columbus	Franklin	Ohio	MRF	470
Total				2,592

APPENDIX C: POPULATION DATA

A. Reference Year Population

Table C-1a: Reference Year Population Adjustments

	Gallia
Before Adjustment	29,979
Additions	0
Subtractions	0
After Adjustment	29,979

	Jackson
Before Adjustment	32,384
Additions	0
Subtractions	0
After Adjustment	32,384

	Meigs
Before Adjustment	23,106
Additions	0
Subtractions	0
After Adjustment	23,106

	Vinton
Before Adjustment	13,139
Additions	
Subtractions	
After Adjustment	13,139

Table C-1b: Total Reference Year Population

Unadjusted Population	Adjusted Population
98,608	98,608

Source: Office of Research, Ohio Development Services Agency, "2017 Population Estimates by County, City, Villages and Townships", May 2018.

Reference year population is taken from Ohio Development Services Agency Office of Statistical Research (ODSA, OSR). OSR provided estimate populations for 2017 based on the 2010 census data by governmental unit. Note: Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction's

population. The District has no communities located in more than one solid waste management District. No additions or subtractions were made to the District population.

B. Population Projections

Table C-2: Population Projections

Year	Gallia	Jackson	Meigs	Vinton	Total District Population
2018	29,979	32,384	23,106	13,139	98,608
2019	29,188	31,754	23,626	12,764	97,332
2020	29,010	31,600	23,630	12,680	96,920
2021	28,838	31,468	23,564	12,638	96,508
2022	28,666	31,336	23,498	12,596	96,096
2023	28,494	31,204	23,432	12,554	95,684
2024	28,322	31,072	23,366	12,512	95,272
2025	28,150	30,940	23,300	12,470	94,860
2026	28,022	30,886	23,274	12,446	94,628
2027	27,894	30,832	23,248	12,422	94,396
2028	27,766	30,778	23,222	12,398	94,164
2029	27,638	30,724	23,196	12,374	93,932
2030	27,510	30,670	23,170	12,350	93,700
2031	27,398	30,640	23,070	12,344	93,452
2032	27,286	30,610	22,970	12,338	93,204
2033	27,174	30,580	22,870	12,332	92,956
2034	27,062	30,550	22,770	12,326	92,708
2035	26,950	30,520	22,670	12,320	92,460
2036	26,880	30,542	22,604	12,304	92,330

Source: Office of Research, Ohio Development Services Agency, "2017 Population Estimates by County, City, Villages and Townships", May, 2018.
Sample Calculations:

Gallia Projected Population in 2019 = 29,979 – 791 = 29,188

Projections of population through the planning period are based on the latest population projections from the Ohio Development Services Agency (ODSA), Office of Statistical Research. The ODSA Planning Research and Strategic Planning Office provided year 2010 census data and projected estimates for 2015, 2020, 2025, 2030, 2035, and 2040. To determine population estimates between these years, straight-line interpolation was used. Over the fifteen-year planning period, population figures are expected to decrease 4%, averaging a 0.3% annual decrease. Population projections gauge future demand for services, but in projection calculations there are room for errors because of the difficulty associated with forecasting.

APPENDIX D: DISPOSAL DATA

A. Reference Year Waste Disposed

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

	Location		Waste Accepted from the SWMD			
Facility Name	**County**	**State**	**Residential/ Commercial (tons)**	**Industrial (tons)**	**Excluded (tons)**	**Total (tons)**
Franklin County Sanitary Landfill	Franklin	OH	0	0	0	0
Rumpke Waste Inc Hughes Rd Landfill	Hamilton	OH	41	0	0	41
Pike Sanitation Landfill	Pike	OH	195	212	7,086	7,493
Wood County Landfill	Wood	OH	8	0	0	8
Athens Hocking C&DD/Reclamation Center Landfill	Athens	OH	1,889	257	0	2,146
Suburban Landfill, Inc	Perry	OH	0	130	24	154
Pine Grove Regional Facility	Fairfield	OH	34	23	1	58
Beech Hollow Landfill	Jackson	OH	60,343	5,803	7,003	73,149
Gallia County Sanitary Landfill	Gallia	OH	3,130	1,840	772	5,742
Boyd Co Sanitary Landfill		KY	42	0		43
Green Valley Landfill General Partnership		KY	33	42		74
Northwestern Landfill		Wva	15	0	0	15
Meadowfill Landfill		Wva	55	0	0	55
Total			65,785	8,307	14,886	88,977

Source: Ohio EPA. "2018 Ohio Facility Data Report Tables". October 29, 2019.

A wide variety of wastes are disposed in municipal solid waste landfills. Waste generated from households, commercial businesses, institutions, and industrial plants. In addition, asbestos (if permitted to do so), construction and demolition debris, dewatered sludge, contaminated soil, and incinerator ash. More waste from residential and commercial sources was disposed than from industrial sources.

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

	Location		Waste Accepted from the District		
Facility Name	**County**	**State**	**Industrial (tons)**	**Excluded (tons)**	**Total (tons)**
Kyger Creek Landfill	Gallia	OH	397,991	146,127	544,118
Gavin Plant Residual Waste Landfill	Gallia	OH	2,834,384	182,955	3,017,339
Total			3,232,375	329,082	3,561,457

Source: Ohio EPA. "2018 Ohio Facility Data Report Tables". October 29, 2019.

The District has two Class III Residual Waste Landfills. These landfills are used by American Electric Power and Ohio Electric Power Corp to dispose of flue gas desulfurization (FGD) waste - a type of pollution control waste that has typically been difficult to recycle. To minimize air pollutants from the coal burning process, scrubbers are installed at power plants resulting in sludge and FGD by-products.

FGD is classified as industrial waste, specifically a residual solid waste. Residual solid wastes are wastes generated by seven specific industries that are named in Ohio's rules and by legal definition are not exempt from being classified as a solid waste. Wastes from these two power plants accounts for approximately 98% of total district waste disposal.

The Gavin Power Plant located in Gallia County is the largest coal-burning power plant in Ohio and disposes waste in the Gavin Plant Residual Landfill. The landfill has approximately 3.7 years of permitted capacity. The Kyger Creek Plant also located in Gallia County recently permitted and constructed the Kyger Creek Landfill. The landfill has 40.6 years of disposal capacity.

Including waste disposal from these two power plants has a huge impact on calculations for waste generation and planning. For planning purposes the District is providing additional plan tables and explanations excluding the waste from these power plants in this and later Appendices.

Table D-2 Reference Year Waste Transferred

	Location		Waste Received from the SWMD			
Facility Name	**County**	**State**	**Residential/ Commercial (tons)**	**Industrial (tons)**	**Excluded (tons)**	**Total (tons)**
Meigs County Transfer Station	Meigs	OH	7,445	0	0	7,445
Total			7,445	0	0	7,445

Source: Ohio EPA. "2018 Ohio Facility Data Report Tables". October 29, 2019.

In cases where waste is hauled from a transfer facility to a landfill, the county of origin is not recorded at the landfill. This means a load of trash disposed in a landfill from a transfer facility could have waste mixed from several counties. When a transfer facility hauls to more than one landfill, it becomes difficult to track which landfill received a county's waste. For planning purposes, the waste hauled through transfer facilities is listed separately identifying possible destination landfills. Less than 1% of the waste was transferred, meaning a refuse truck picked up waste from clients and hauled that waste to a transfer facility. Waste was tipped, reloaded into transfer trucks, and hauled to landfills for disposal.

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

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

Source: Ohio EPA. "2018 Ohio Facility Data Report Tables". October 29, 2019.

The District did use incineration as a management method in the reference year.
Supplement to Table D-4 Incinerated and Excluded Waste Percentages of Total Waste Disposed

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	65,785	3,240,682	343,968	3,650,434	100%
Transferred	7,445	0	0	7,445	0%
Incinerated	0	0	0	0	0%
Total	73,230	3,240,682	343,968	3,657,879	100%
Percent of Total	2%	89%	9%	100%	

According to Ohio EPA Format 4.0, if excluded waste is 10% or less of total disposal in the reference year, then SWMD's are not required to account for excluded waste in the solid waste management plan. For GJMV, excluded waste accounts for 9% of total disposal in 2018, and therefore will not be included.

Table D-4 Total Waste Disposed in Reference Year

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	65,785	3,240,682	0	3,306,466	99.8%
Transferred	7,445	0	0	7,445	0.2%
Incinerated	0	0	0	0	0%
Total	73,230	3,240,682	0	3,313,911	100%
Percent of Total	2%	98%	0%	100%	

Waste flows to the landfills either by direct haul or through a transfer facility. Almost 100% of the waste was direct hauled, meaning a refuse truck picked up waste from clients and directly hauled that waste to a landfill for disposal. Direct hauled waste is disposed in in-state and out-of-state landfill facilities. The majority of direct hauled waste was disposed in one privately owned landfill located in District in Jackson County. Total disposal refers to the sum of waste direct hauled and transferred.

Table D-4a Total Waste Disposed in Reference Year (Excluding Captive Waste)

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	65,785	8,307	14,886	88,977	92%
Transferred	7,445	0	0	7,445	8%
Incinerated	0	0	0	0	0%
Total	73,230	8,307	14,886	96,422	100%

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Percent of Total	79%	7%	15%	100%

% of Total Waste Disposed

Since wastes from captive facilities accounts for approximately 98% of total district waste disposal the District is including tables to exclude the captive waste to show measurement of the industrial waste needing management. Excluding captive waste shows approximately 8% of waste was transferred.

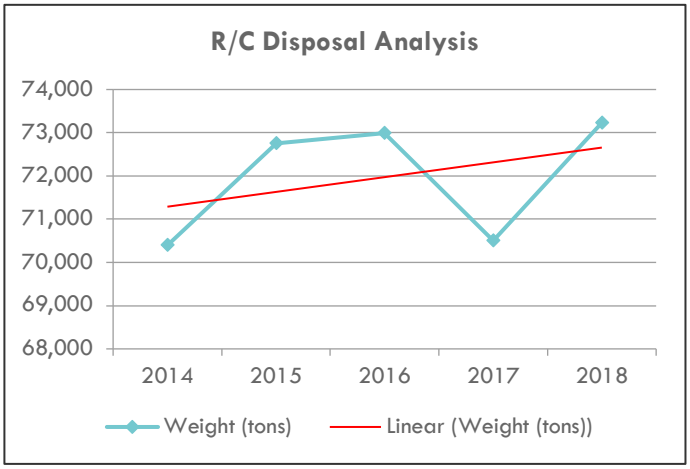
B. Historical Waste Analysis

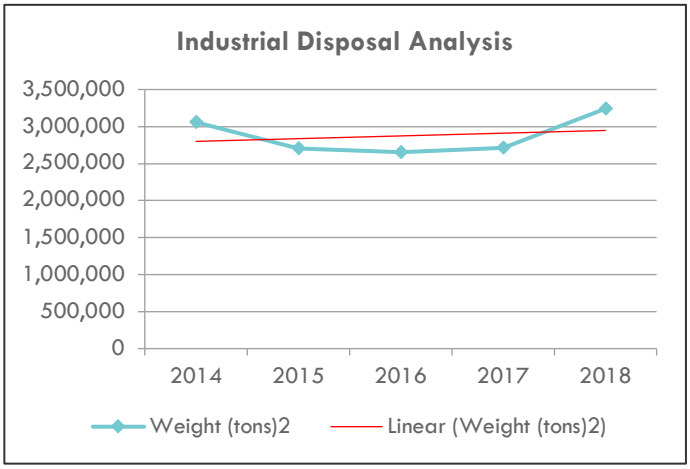
Table D-5 Historical Disposal Data

		Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
			Weight	Weight	Weight	Weight
Year	**Population**	**Rate (ppd)**	(tons)	(tons)[2]	(tons)[3]	(tons)[4]
2014	102,332	3.77	70,396	3,059,463	286,362	3,416,221
2015	101,203	3.94	72,747	2,702,532	315,273	3,090,552
2016	103,094	3.88	72,994	2,653,287	320,432	3,046,713
2017	103,478	3.73	70,499	2,710,016	13,790	2,794,305
2018	98,608	4.07	73,230	3,240,682	0	3,313,911

Source: Ohio EPA ADR Review Forms for 2014, 2015, 2016, and 2017.

Figure D-1 Historical Disposal Analysis





Historical disposal demonstrates a upward trend in residential/commercial and a relatively flat industrial waste disposal trend.

1. Residential/Commercial

A direct correlation between population and waste disposal is not evident. Waste disposal dipped in 2016 and 2017 but otherwise averages about 73,000 tons. Average annual percent change is 1.03% increase. Per capita disposal hovers between 3.73 and 4.07, lower than the statewide average of 4.82 pounds per person per day in 2018.

Actual waste disposal is averaging about 10,000 tons less than projected in the 2015 Plan. The 2015 Plan reference year (2011) waste disposal is on average 10,000 tons per year higher. Population and waste disposal were not forecasted on historical trends which did not predict a decline.

Year	2015 Plan Projected Waste Disposal (tons)	Actual Waste Disposal (tons)
2014	78,494	70,396
2015	79,165	72,747
2016	79,841	72,994
2017	80,523	70,499
2018	81,212	73,230

Declines are attributed to the declining population but also could be contributed to the changing waste stream. Evolving materials such as aseptic/cartons, bulky rigid HDPE plastics, tubs and lids (Nos. 2, 4 and 5 plastics) are becoming more prevalent. This lighter feedstock is taking the place of denser printed materials and consumer packaging. Plus, as manufacturers seek to use less energy and materials for greater savings along the production and distribution chains, the weight of lighter feedstock is also decreasing.

2. Industrial Waste
   Historical data shows little variability in industrial disposal which could be expected since the majority of industrial waste is coming from the power plants and disposed in captive landfills. Excluding the captive waste disposed shows the five-year annual average declined 1%.

Year	Population	Industrial Solid Waste (Excluding Captive Landfill)	Average Annual Percent Change
		(tons)[2]	
2014	102,332	8,725	
2015	101,203	9,171	5%
2016	103,094	9,464	3%
2017	103,478	7,970	-16%
2018	98,608	8,307	4%
		AVERAGE	-1%

C. Disposal Projections

Table D-6 Waste Disposal Projections

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Waste	Total Waste	Waste Transferred (as part of Total Disposal)	Waste Transferred (as part of Total Disposal)
	Weight	Weight	Weight	Weight	Weight	Percent
	(tons)	(tons)	(tons)	(tons)	(tons)	0.22%
2018	72,265	3,240,682	0	3,312,947	7,443	
2019	72,265	3,214,365	0	3,286,630	7,384	
2020	72,265	3,188,263	0	3,260,528	7,325	
2021	72,265	3,162,372	0	3,234,637	7,267	
2022	72,265	3,136,691	0	3,208,956	7,209	
2023	72,265	3,111,219	0	3,183,484	7,152	
2024	72,265	3,085,954	0	3,158,219	7,095	
2025	72,265	3,060,894	0	3,133,159	7,039	
2026	72,265	3,036,038	0	3,108,303	6,983	
2027	72,265	3,011,383	0	3,083,648	6,928	
2028	72,265	2,986,928	0	3,059,193	6,873	
2029	72,265	2,962,673	0	3,034,938	6,818	
2030	72,265	2,938,614	0	3,010,879	6,764	
2031	72,265	2,914,750	0	2,987,015	6,711	
2032	72,265	2,891,081	0	2,963,346	6,657	
2033	72,265	2,867,603	0	2,939,868	6,605	
2034	72,265	2,844,316	0	2,916,581	6,552	
2035	72,265	2,821,219	0	2,893,484	6,500	
2036	72,265	2,798,308	0	2,870,573	6,449	

Source: Ohio EPA ADR review for 2018
Sample Calculation: Residential/Commercial Solid Waste = (365 * population * 3.88 lbs/person/day) / 2000 pounds/ton
Industrial Solid Waste = 2018 tonnage * average annual percent change
Total Waste = Residential/Commercial Solid Waste + Industrial Solid Waste

Residential/Commercial		Industrial
PPD	Average Annual % Change	Average Annual % Change
3.88	1.03%	-0.81%

There are several methods that can be used for projecting waste disposal through the planning period, such as historical per capita, historical averages, and historical trends. The District forecasted residential/commercial waste disposal using the per capita disposal rate of 3.88 pounds per person per day and found using a constant per capita disposal rate applied to a declining population predicts the waste disposal will decline to 65,346 at the end of the planning period. The waste disposed projected using this methodology declines below historical trends of waste disposal. The District next applied the linear trend of average annual change which resulted in a forecasted disposal of 88,119 tons at the end of the planning period. This projection methodology forecasts a growth that has not historically been demonstrated and is difficult to imagine when population is declining. Since residential/commercial waste disposal demonstrated fluctuated from 2014 to 2018, the District feels the average

is more representative for projecting into the planning period. Therefore, projections for residential/commercial waste disposal through the planning period are held constant at the 5-year average of 72,265 tons. Industrial waste disposal is also projected to decrease based on a declining average annual percent change. Based on analysis of available capacity for disposing waste, the policy committee did not identify any reasons to suspect that the amount of waste routed through transfer facilities will change during the planning period. For the first year of the planning period, it is expected 0.22% of total waste will be routed through transfer facilities.

APPENDIX E: RESIDENTIAL/COMMERCIAL RECOVERY DATA

A. Reference Year Recovery Data

Tables E-1 through E-4 account for all material being credited to the waste reduction and recycling rate for the residential/commercial sector. These tables were adjusted for double counting. Double counting occurs when the same material is reported by more than one survey respondent, typically both the generator of the material and the processor that receives the material from the generator. Material is "double counted" if the quantities from both respondents are credited to total recovery. In those instances, the total quantity recovered was adjusted to subtract the quantity reported by one source or the other to avoid crediting the material twice.

Table E-1 Commercial Survey Results

NAICS	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Yard Waste	
42																
44								87								
45																
48																
49																
51																
52																
53																
54																
55																
56																
61																
62																
71																
72																
81																
92																
Other:																
Unadjusted Total	0	0	0	0	0	0	0	87	0	0	0	0	0	0	0	87
Adjustments																

NAICS	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Yard Waste	
Adjusted Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**87**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**87**

Source: District surveys conducted in 2019 for 2018 data.

Table E-1 is reserved for commercial data obtained from District survey efforts. In some cases, generator data from a survey conducted prior to 2018 was used. The District verified the current status of the generator(s) during the report year with follow-up phone calls. Calendar year 2017 and 2016 data was used for some businesses. No adjustments were needed to exclude recycling that was reported from processors. In general, there are a lack of businesses to survey in the District. The District mails on average 49 commercial and 15 industrial surveys annually. Survey efforts include hard copy mailings or via email and follow up via email/or phone to the largest businesses in attempts to receive responses.

Table E-2 Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Yard Waste	Other	
Buybacks																	
One Buyback Reported							1263	417	183	135							
Scrap Yards																	
None																	
Brokers																	
None																	
Processors/MRF's																	
Rumpke Recycling Dayton - Residential					0	0	0	0	5	1							
Rumpke Recycling Dayton - Commercial					0	0	0	4	4	1							
Rumpke Chillicothe - Commercial					0	124	0	15	54	0				1,908		4	
Rumpke Waste Recycling Columbus					95	12	7	89	228	40							
Unadjusted Totals	0	0	0	0	96	136	1,270	526	474	176	0	0	0	1,908	0	4	**4,590**
Adjustments																	**1,908**
Adjusted Totals	0	0	**0**	**0**	**96**	**136**	**1,270**	**526**	**474**	**176**	**0**	**0**	**0**	1,908**0**	**0**	**4**	**4,590**

Source: Ohio EPA. "2018 Material Recovery Facility and Commercial Recycling Data." May 3, 2019.

Quantities reported in Table E-2 were obtained from buyback surveys and Ohio EPA reports on processors. Processors capture the recyclables and process them to get them ready to be recycled. These are typically buybacks, processors and MRFs. Adjustments exclude double counting and non-creditable materials such as construction and demolition debris and vehicle salvage operations.

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

Ohio EPA Data Source	Glass	Plastic	Newspaper	Cardboard	Mixed Paper	Nonferrous	Ferrous	Wood	Food: Compost	Food: Other	Commingled	Other	
GALLIA COUNTY													
Walmart	0	11	0	557	1	0	0	0	0	0	0	69	
Dollar General Corporation	0	0	0	109	1	0	0	0	0	0	0	0	
Big Lots Corporation	0	0	0	21	0	0	0	0	0	0	0	0	
United States Postal Service	0	1	0	2	30	0	0	0	0	0	0	0	
JACKSON COUNTY													
Walmart	0	28	0	633	3	0	0	0	0	0	0	108	
Dollar General Corporation	0	0	0	73	1	0	0	0	0	0	0	0	
Big Lots Corporation	0	0	0	31	0	0	0	0	0	0	0	0	
Kroger	0	27	0	254	1	0	0	0	0	0	0	8	
United States Postal Service	0	1	0	2	32	0	0	0	0	0	0	0	
MEIGS COUNTY													
Dollar General Corporation	0	0	0	107	1	0	0	0	0	0	0	0	
United States Postal Service	0	1	0	1	24	0	0	0	0	0	0	0	
VINTON COUNTY													
Dollar General Corporation	0	0	0	83	1	0	0	0	0	0	0	0	
United States Postal Service	0	0	0	1	13	0	0	0	0	0	0	0	
Unadjusted Total	0	68	0	1,874	108	0	0	0	0	0	0	184	2,234
Adjustments													0
Adjusted Total	**0**	**68**	**0**	**1,874**	**108**	**0**	**0**	**0**	**0**	**0**	**0**	**184**	**2,234**

Source: Ohio EPA. "2018 Material Recovery Facility and Commercial Recycling Data." May 3, 2019.

Quantities reported in Table E-3 were obtained from Ohio EPA reports. No adjustments were needed.

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

Other Programs or Sources of Data	Electronics	Scrap Tires	Lead-Acid Batteries	Food	Ferrous Metals	Commingled Recyclables (Mixed)	*Unadjusted Total*	*Adjustments*	*Adjusted Total*
Curbside Recycling Services						648	648		648
Drop-off Recycling Locations						1,596	1,596		1,596
Composting Facilities							0		0
Other Food and Yard Waste Management Activities				157			157		157
Ohio EPA Scrap Tire Data		1,740					1,740		1,740
Open Dump & Scrap Tire Clean-Up		15					15	15.34	0
Meigs County Clean Up	17						17		17
Jackson County Health Department			0			0	0		0
Vinton County Health Department					6		6		6
Unadjusted Total	17	1,755	0	157	6	2,244	4,180	15	4,164
Adjustments		15					15		
Adjusted Total	17	1,740	0	157	6	2,244	4,164		

Source: Ohio EPA. District recorded program data.

Table E-4 presents quantities diverted through programs and services in the reference year. This table includes all residential/commercial programs and services through which materials being credited to total diversion were recovered. Adjustments exclude recycling that was reported from processors shown on Table E-2 and other data collected. Most materials collected from programs are recycled to a processor listed on Table E-2 thus, are credited to the processor to avoid double counting recycling quantities. As such, this table removes scrap tires to adjust for double counting since this material from open dump cleanups is included with Ohio EPA data.

Table E-5 Reference Year Residential/Commercial Material Reduced/Recycled

Material	Quantity (tons)
Appliances/ "White Goods"	0
Household Hazardous Waste	0
Used Motor Oil	0
Electronics	17
Scrap Tires	1,740
Dry Cell Batteries	0
Lead-Acid Batteries	0
Food	157
Glass	96
Ferrous Metals	142
Non-Ferrous Metals	1,270
Corrugated Cardboard	2,486

Material	Quantity (tons)
All Other Paper	582
Plastics	245
Textiles	0
Wood	0
Rubber	0
Commingled Recyclables (Mixed)	4,152
Yard Waste	0
Other (Aggregated)	189
Total	11,076

The District diverted 11,076 tons from the residential/commercial sector. Table E-5 reports quantities of each material diverted. Cardboard and scrap tires are the two largest material categories recycled in the reference year.

Table E-6 Quantities Recovered by Program/Source

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	87
Data from Other Recycling Facilities	4,590
Ohio EPA Commercial Retail Data	2,234
Curbside Recycling Services	648
Drop-off Recycling Locations	1,596
Composting Facilities	0
Other Food and Yard Waste Management Activities	157
Ohio EPA Scrap Tire Data	1,740
Open Dump & Scrap Tire Clean-Up	0
Meigs County Clean Up	17
Jackson County Health Department	0
Vinton County Health Department	6
Total	11,076

Table E-6 reports quantities diverted for each program/source.

B. Historical Recovery

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

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	Curbside Recycling Services	Drop-off Recycling Locations	Other Food and Yard Waste Management Activities	Ohio EPA Scrap Tire Data	Open Dump & Scrap Tire Clean-Up	Meigs County Clean Up	Jackson County Health Department	Vinton County Health Department	Meigs County Health Department	Totals
2014	15,401	960	2,340	227	1,228	424	1,284	0	0	0	0	0	21,865
2015	1,810	1,100	1,885	330	1,354	33	2,013	41	0	0	0	0	8,565
2016	1,704	1,063	1,811	392	1,433	182	1,523	16	17	0	8	0	8,150
2017	2,479	1,666	2,127	441	1,441	290	1,147	0	19	0	9	1	9,620
2018	***87***	***4,590***	***2,234***	***648***	***1,596***	***157***	***1,740***	***0***	***17***	***0***	***6***	***0***	***11,076***
2014													
2015	-88%	15%	-19%	45%	10%	-92%	57%	-	-	-	-	-	-61%
2016	-6%	-3%	-4%	19%	6%	451%	-24%	-60%	-	-	-	-	-5%
2017	45%	57%	18%	12%	1%	59%	-25%	-100%	7%	0%	6%	-	18%
2018	***-96%***	***176%***	***5%***	***47%***	***11%***	***-46%***	***52%***	***-***	***-8%***	***52%***	***-29%***	***-100%***	***15%***

Table E-7a2 Average Percentage Change in Tons Recovered

	-36%	61%	0%	31%	7%	93%	15%	-	-	-	-	-	-8%
2014													
2015	-13,591	139	-456	103	126	-391	729	41	0	0	0	0	-13,300
2016	-106	-36	-74	62	79	149	-490	-24	17	0	8	0	-415
2017	775	603	317	49	8	108	-376	-16	1	0	1	1	1,470
2018	***-2,392***	***2,924***	***107***	***207***	***156***	***-133***	***593***	***0***	***-2***	***0***	***-3***	***-1***	***1,456***

Table E-7a3 Annual Per Capita Recovery Rate (pounds/person/day)

2014	0.82	0.05	0.13	0.01	0.07	0.02	0.07	0.00	0.00	0.00	0.00	0.00	1.17
2015	0.10	0.06	0.10	0.02	0.07	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.46
2016	0.09	0.06	0.10	0.02	0.08	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.43
2017	0.13	0.09	0.11	0.02	0.08	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.51
2018	***0.00***	***0.26***	***0.12***	***0.04***	***0.09***	***0.01***	***0.10***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.62***

Table E-7a4 Average Per Capita Recovery Rate

	0.23	0.10	0.11	0.02	0.08	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.64

Table E-7a6 Average Tons of Material Recovered

	4,296	1,876	2,079	407	1,410	217	1,542	11	11	0	5	0	11,855

In 2014, more responses from commercial businesses resulted in higher recovery. Challenges in receiving this data since then has resulted in less recovery tonnages. Excluding 2014, total recovery has increased an average of 7%. Growth is attributable to Ohio EPA's collection of Material Recovery Facility and Commercial data, however curbside and drop-off recycling both show modest growth. Commercial survey data fluctuates depending on responding businesses.

C. Residential/Commercial Recovery Projections

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

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	Curbside Recycling Services	Drop-off Recycling Locations	Composting Facilities	Other Food and Yard Waste Management Activities	Ohio EPA Scrap Tire Data	Open Dump & Scrap Tire Clean-Up	Meigs County Clean Up	Jackson County Health Department	Vinton County Health Department	Meigs County Health Department	Totals
2018	***87***	***4,590***	***2,234***	***648***	***1,596***	***0***	***157***	***1,740***	***0***	***17***	***0***	***6***	***0***	***11,076***
2019	87	4,797	2,234	687	1,628	0	217	1,542	0	17	0	6	0	**11,216**
2020	87	5,013	2,234	728	1,660	0	217	1,542	0	17	0	6	0	**11,505**
2021	87	5,238	2,234	772	1,694	0	217	1,542	0	17	0	6	0	**11,808**
2022	87	5,474	2,234	818	1,728	0	217	1,542	0	17	0	6	0	**12,123**
2023	87	5,720	2,234	867	1,762	0	217	1,542	0	17	0	6	0	**12,453**
2024	87	5,978	2,234	919	1,797	0	217	1,542	0	17	0	6	0	**12,798**
2025	87	6,247	2,234	974	1,833	0	217	1,542	0	17	0	6	0	**13,158**
2026	87	6,528	2,234	974	1,870	0	217	1,542	0	17	0	6	0	**13,476**
2027	87	6,528	2,234	974	1,907	0	217	1,542	0	17	0	6	0	**13,513**
2028	87	6,528	2,234	974	1,946	0	217	1,542	0	17	0	6	0	**13,552**
2029	87	6,528	2,234	974	1,984	0	217	1,542	0	17	0	6	0	**13,590**
2030	87	6,528	2,234	974	2,024	0	217	1,542	0	17	0	6	0	**13,630**
2031	87	6,528	2,234	974	2,065	0	217	1,542	0	17	0	6	0	**13,671**
2032	87	6,528	2,234	974	2,106	0	217	1,542	0	17	0	6	0	**13,712**
2033	87	6,528	2,234	974	2,148	0	217	1,542	0	17	0	6	0	**13,754**
2034	87	6,528	2,234	974	2,191	0	217	1,542	0	17	0	6	0	**13,797**
2035	87	6,528	2,234	974	2,235	0	217	1,542	0	17	0	6	0	**13,841**
2036	87	6,528	2,234	974	2,279	0	217	1,542	0	17	0	6	0	**13,886**

- *Commercial survey* is forecasted to hold flat through the planning period. One buyback reporting in the commercial survey was allocated into the "data from other recycling facilities" category in year 2018 unlike previous years. This re-allocation adds in an outlier when looking at data analytics for historical reference.
- *Data from other recycling facilities* is forecasted to increase 2% through the planning period. From 2014 to 2018 recovery increased an average of 32% or 6% per year. An uptick in 2018 is attributed to a re-allocation of a survey from a buyback into this category. A modest increase of 4.5% annually was applied from 2019 to 2026, then projections were held constant.
- *Ohio EPA commercial retail data* is forecasted to hold flat through the planning period. Data fluctuates depending on participating retail stores. A loss of reporting commercial businesses resulted in a decline in recovery for years 2015 and 2016. Ohio EPA's increased efforts to collect data from more commercial retail resulted in additional recovery data demonstrated in 2017 and 2018.
- *Curbside recycling* is forecasted to increase 2% over the planning period. From years 2019 through 2025 a 6% annual increase is forecasted. Since 2014, annual increases were measured in the curbside programs. The 5-year average is 31%. Both curbside programs have room to continue to grow. Gallipolis is about 400 pounds per household and Jackson is about 200 pounds per household in 2018. Jackson's program will cease in 2020. Growth is expected in Gallipolis. Applying a 6% annual increase over 7 years forecasts moderate growth.
- *Drop-off recycling* is forecasted to increase 2% over the planning period. From years 2019 through the end of the planning period a 2% annual increase is forecasted. Drop-off recycling shows a 0.01-pound per capita recovery rate annual growth. Applying a 2% annual increase forecasts a 0.01-pound per capita recovery rate annual growth approximately every 4 years.
- *Other food and yard waste management activities* is forecasted to recover 217 tons annually. Analysis on Table E-7 demonstrates the average annual recovery is 217 tons per year. Infrastructure to handle these materials is not planned and thus growth is not expected.
- *Ohio EPA scrap tire data* is compiled from processor reports provided to Ohio EPA. Annual historical recovery fluctuates but an average of 1,542 tons is annually recovered. Projections are conservatively held constant at the average annual recovery.
- *Meigs County clean-up, Jackson County Health Department, Vinton County Health Department, and Meigs County Health Department* programs divert minimal tons annually. The annual diverted tons are relatively constant and is flatlined for planning years.

APPENDIX F INDUSTRIAL WASTE REDUCTION AND RECYCLING DATA

A. Reference Year Recovery Data

Table F-1 Industrial Survey Results

NAICS	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Ash	Non-Excluded Foundry Sand	Flue Gas Disulfurization	Other: Sludge	
22																
31	14945		133		3828		28		292						5010	
32																
33																
Unadjusted Total	14945	0	133	0	3828	0	28	0	292	0	0	0	0	0	5010	24,236
Adjustments																0
Adjusted Total	**14,945**	**0**	**133**	**0**	**3,828**	**0**	**28**	**0**	**292**	**0**	**0**	**0**	**0**	**0**	**5,010**	**24,236**

Source: District industrial survey results.

Table F-1 shows recovery as reported from industrial businesses surveyed by the District. If an industrial business did not respond to the reference year survey but did respond to a previous survey then supplemental data from calendar years 2017 and 2016 were when the business was verified as operating in the reference year, the nature of the business did not significantly change, and the business still produced the same type of recyclables. Some materials reported as recycled are considered non-creditable. These materials include: train boxcars, construction and demolition debris, metals from vehicles, liquid industrial waste, and hazardous waste. Adjustments were made on Table F-1 to exclude these materials.

Data on Table F-1 is organized by North American Industry Classification System (NAICS). Manufacturing industries are classified under sectors 31-33. Table F-1 aggregates the quantities from all returned surveys for an NAICS code.

Table F-2 Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Ash	Non-Excluded Foundry Sand	Flue-Gas Desulfurization Waste	
Buybacks															
none															
Scrap Yards															
none															
Brokers															
none															
Processors/MRF's															
none															
Unadjusted Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Adjustments															**0**
Adjusted Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Source: District industrial survey results and Ohio EPA. "2018 Material Recovery Facility and Commercial Recycling Data." May 3, 2019.

Table F-3 Other Recycling Programs/Other Sources of Data

Other Recycling Programs or Other Sources of Data	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Ash	Non-Excluded Foundry Sand	Flue Gas Disulfurization Waste	*Unadjusted Total*	*Adjustments*	*Adjusted Total*
none															0		0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustments															0		
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Table F-4 Industrial Waste Reduced/Recycled in Reference Year

Material	Quantity (tons)
Food	14,945
Glass	0
Ferrous Metals	133
Non-Ferrous Metals	0
Corrugated Cardboard	3,828

Material	Quantity (tons)
All Other Paper	0
Plastics	28
Textiles	0
Wood	292
Rubber	0
Commingled Recyclables (Mixed)	0
Ash	0
Non-Excluded Foundry Sand	0
Flue Gas Disulfurization	0
Other (Aggregated)	5,010
Total	24,236

The District diverted 24,236 tons from the industrial sector.

Table F-5 Quantities Recovered by Program/Source

Program/Source of Industrial Recycling Data	Quantity (Tons)
Industrial survey	24,236
Data from other recycling facilities	0
Total	**24,236**

B. Historical Recovery

Table F-6 Historical Industrial Recovery by Program/Source

Year	Industrial survey	Data from other recycling facilities	Totals
2014	8,985	0	8,985
2015	10,340	0	10,340
2016	36,442	0	36,442
2017	26,811	0	26,811
2018	24,236	0	24,236

Table F-6a1 Annual Percentage Change in Tons Recovered

2014			
2015	15%	0%	15%
2016	252%	0%	252%
2017	-26%	0%	-26%
2018	-10%	0%	-10%

Table F-6a2 Average Annual Percentage Change in Tons Recovered

58%	0%	58%

2014			
2015	1,355	0	1,355
2016	26,102	0	26,102
2017	-9,631	0	-9,631
2018	-2,575	0	-2,575

Average Tonnage Change/Year

3,813	0	3,813

Average Tons of Material Over 5 Years

21,363	0	21,363

Data from the industrial sector is obtained from surveys, as seen from Table F-5. An industrial survey was conducted in 2018. Historical recovery fluctuates depending on responding industries. Recovery peaked in 2016 and has been declining since. Lack of survey responses is the primary reason for the decline.

Table F-7 Industrial Recovery Projections by Program/Source

Year	Industrial survey	Data from other recycling facilities	Totals
2018	**24,236**	**0**	**24,236**
2019	24,127	0	**24,127**
2020	24,018	0	**24,018**
2021	23,910	0	**23,910**
2022	23,803	0	**23,803**
2023	23,696	0	**23,696**
2024	23,589	0	**23,589**
2025	23,483	0	**23,483**
2026	23,377	0	**23,377**
2027	23,377	0	**23,377**
2028	23,377	0	**23,377**
2029	23,377	0	**23,377**
2030	23,377	0	**23,377**
2031	23,377	0	**23,377**
2032	23,377	0	**23,377**
2033	23,377	0	**23,377**
2034	23,377	0	**23,377**
2035	23,377	0	**23,377**
2036	23,377	0	**23,377**

Ohio Department of Job and Family Services, Bureau of Labor Market Information (BLMI) predicts manufacturing jobs in southeast Ohio will decline 4.5% from 2016 to 2026[5]. BLMI updates employment projections every two years for use in long-range economic and employment forecasts. Following this forecast, the industrial sector recovery is expected to also decline. Table F-7 predicts a 0.45% annual change through year 2026 and holds constant for subsequent planning years. Overall planning period recovery is expected to decline 2%.

[5] Ohio Department of Job and Family Services, Bureau of Labor Market Information (BLMI). "2026 Job Outlook, JobsOhio Network Southeast Ohio". July 2019.

APPENDIX G WASTE GENERATION

A. Historical Year Waste Generated

Table G-1 Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial				Industrial			Excluded (tons)	Total (tons)
		Disposed (tons)	Recycled (tons)	Generated (tons)	Per Capita Generated (ppd)	Disposed (tons)	Recycled (tons)	Generated (tons)		
2014	102,332	70,396	21,865	92,261	4.94	3,059,463	8,985	3,068,448	286,362	3,447,071
2015	101,203	72,747	8,565	81,312	4.40	2,702,532	10,340	2,712,872	315,273	3,109,457
2016	103,094	72,994	8,150	81,144	4.31	2,653,287	36,442	2,689,729	320,432	3,091,305
2017	103,478	70,499	9,620	80,119	4.24	2,710,016	26,811	2,736,827	13,790	2,830,736
2018	**98,608**	**73,230**	**11,076**	84,036	4.68	**3,240,682**	***24,236***	***3,264,918***	**0**	3,349,223

Source(s) of Information:
Disposal from Appendix D
Recycled from Appendices E and F
Populations: Annual district reports
Sample Calculations:
Waste generation = disposed + recycled = generated
Per Capita Generation = ((generated * 2,000) / 365) / population

Waste generation is calculated by adding the quantities of waste disposed from Appendix D and quantities of recycled from Appendices E and F. Quantities resulting from the disposal and recycling as presented in Table G-1 accurately represent waste generation for the SWMD. Waste disposal is holding between 70,000 and 74,000 tons. Diversion declined but has seen recent growth.

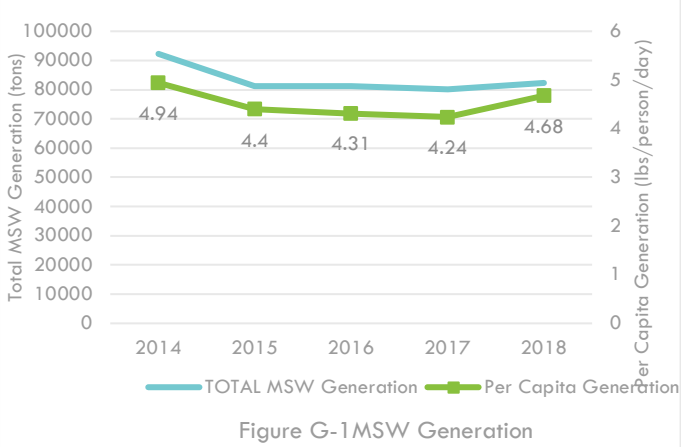


Figure G-1MSW Generation

Residential/commercial per capita waste generation shows annual rises and falls, reaching a high of 4.94 pounds per person per day in 2014. The District's 2018 residential/commercial generation falls above the national generation rate of 4.51 pounds per person per day (2017) and below Ohio's generation of 6.85 pounds per person per day (2018). (Note: National generation rates were not yet published for 2018.)

Industrial generation also shows rises and falls. A major contributor that influences waste disposal is waste from power plants. Operations at these electric utilities significantly impact the annual waste disposal. Diversion also fluctuates and is dependent on the responding industries.

Benchmarking the residential/commercial stream to see how this compares in other Ohio solid waste management districts, the SWMD compared the other four county solid waste management districts. Figure G-2 shows GJMV generates less per capita than the other solid waste districts for year 2018.

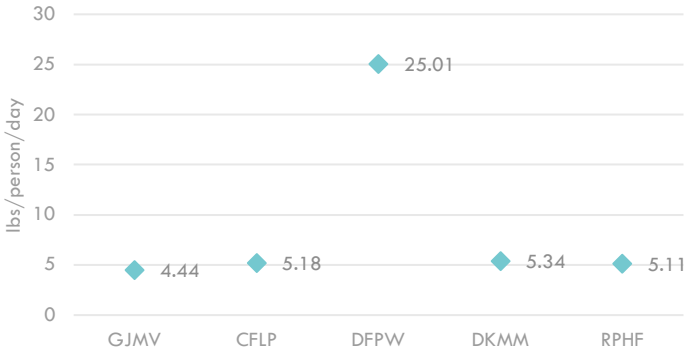


Figure G-2 Benchmark Per Capita Waste Generation

B. Generation Projections

Table G-2 Generation Projections

Year	Population	Residential/ Commercial				Industrial			Excluded Waste (tons)	Total (tons)
		Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycle (tons)	Generation (tons)		
2018	***98,608***	***73,230***	***11,076***	***82,398***	***4.58***	***3,240,682***	***24,236***	***3,264,918***	***0***	***3,349,223***
2019	97,332	72,265	11,216	83,481	***4.70***	3,214,365	24,127	3,238,492	0	3,321,973
2020	96,920	72,265	11,505	83,770	***4.74***	3,188,263	24,018	3,212,281	0	3,296,051
2021	96,508	72,265	11,808	84,073	***4.77***	3,162,372	23,910	3,186,282	0	3,270,355
2022	96,096	72,265	12,123	84,388	***4.81***	3,136,691	23,803	3,160,494	0	3,244,882
2023	95,684	72,265	12,453	84,718	***4.85***	3,111,219	23,696	3,134,915	0	3,219,633
2024	95,272	72,265	12,798	85,063	***4.89***	3,085,954	23,589	3,109,543	0	3,194,606
2025	94,860	72,265	13,158	85,423	***4.93***	3,060,894	23,483	3,084,377	0	3,169,800
2026	94,628	72,265	13,476	85,741	***4.96***	3,036,038	23,377	3,059,415	0	3,145,156
2027	94,396	72,265	13,513	85,778	***4.98***	3,011,383	23,377	3,034,760	0	3,120,538
2028	94,164	72,265	13,552	85,817	***4.99***	2,986,928	23,377	3,010,306	0	3,096,122
2029	93,932	72,265	13,590	85,855	***5.01***	2,962,673	23,377	2,986,050	0	3,071,905
2030	93,700	72,265	13,630	85,895	***5.02***	2,938,614	23,377	2,961,991	0	3,047,886
2031	93,452	72,265	13,671	85,936	***5.04***	2,914,750	23,377	2,938,127	0	3,024,063
2032	93,204	72,265	13,712	85,977	***5.05***	2,891,081	23,377	2,914,458	0	3,000,435
2033	92,956	72,265	13,754	86,019	***5.07***	2,867,603	23,377	2,890,980	0	2,976,999
2034	92,708	72,265	13,797	86,062	***5.09***	2,844,316	23,377	2,867,693	0	2,953,755
2035	92,460	72,265	13,841	86,106	***5.10***	2,821,219	23,377	2,844,596	0	2,930,701
2036	92,330	72,265	13,886	86,151	***5.11***	2,798,308	23,377	2,821,686	0	2,907,836

Source(s) of Information:
Disposal from Appendix D
Recycled from Appendices E and F
Populations: Annual district reports
Sample Calculations:
Waste generation = disposed + recycled = generated
Per Capita Generation = ((generated * 2,000) / 365) / population

APPENDIX H STRATEGIC EVALUATION

The state solid waste management plans establish recycling and reduction goals for solid waste management districts. At the time of the SWMD's 2015 Plan Update, Ohio had issued a 2009 State Plan but was lacking a new Format for solid waste management districts to follow. While it was encouraged districts incorporate 2009 State Plan goals it was not a requirement. The SWMD's 2015 Plan demonstrated compliance with the 2001 State Plan but developed several programs to guide the SWMD towards the 2009 State Plan goals. Programs and strategies approved by Ohio EPA in the 2015 Plan are evaluated in this Appendix H. In this Appendix, the Policy Committee completed a strategic process of evaluating its reduction and recycling efforts. To do this, the status of the reduction and recycling efforts were evaluated in the context of factors presented in the 14 analyses described in Format 4.0. The strategic program evaluation was performed on the following:

- Residential Recycling Infrastructure Analysis
- Commercial Sector Analysis
- Industrial Sector Analysis
- Waste Composition Analysis
- Economic Incentive Analysis
- Restricted and Difficult to Manage Waste Analysis
- Diversion Analysis
- Special Program Needs Analysis
- Financial Analysis
- Regional Analysis
- Population Analysis
- Data Collection Analysis
- Education and Outreach Analysis
- Processing Capacity Analysis

1. Residential Recycling Infrastructure Analysis

This evaluation of the SWMD's existing residential recycling infrastructure determines whether the needs of the residential sector are being met and if the infrastructure is adequately performing. There are many materials that can be recycled. The SWMD's waste management system relies on various collection systems and programs to divert materials from the landfill to be recycled. The residential recycling infrastructure consists of curbside programs, drop-off recycling programs, special event drop-offs, take-back retailers, reuse centers, thrift stores, and network of food banks. The SWMD's role instituting this network of available opportunities varies.

a. Evaluation

CURBSIDE AND DROP-OFF

Recycling at the curb or through the drop-offs targets a specific stream of materials. The SWMDs is in Rumpke's MRF shed. Traditional recyclables accepted through these programs include: plastic bottles and jugs, glass bottles and jars, cartons and aseptics, metal cans, and paper products.

In the four county District there are two curbside recycling programs which provide roughly 10% of the population with curbside recycling. One of the major challenges for curbside recycling is the cost of service. Gallia, Jackson, Meigs, and Vinton Counties sparse population density and economic challenges (high poverty rates and near the bottom in the state for income) prioritize curbside recycling low when it comes

to budget spending. All four counties are rural with low population densities which are variables that could affect the costs of operating a curbside recycling program. The lack of access of curbside programs in the four counties is an infrastructure challenge the SWMD has had little success with changing historically. In the SWMD, providing drop-off recycling locations is a solution for making recycling accessible for those who do not have curbside recycling. The challenge with drop-off infrastructure is usage and placing the right materials in the containers.

Figure H-1 shows the pounds per person per year collected through the curbside programs. According to The Recycling Partnership's (TRP) 2016 study, on average Americans recycle 143-pounds per person per year via curbside recycling[6]. In their survey, TRP found that high performing communities captured approximately 160 pounds per person per year and that the vast majority of those communities had universal (no sign up required) single-stream cart-based curbside programs with automatic collections. Additionally, high performing communities tend to have local governments that are highly engaged in programs that incentivize waste diversion and recycling, such as mandated recycling with trash services or pay as you throw programs. For reference, on average American's generate 320 to 400 pounds of recyclables per capita.

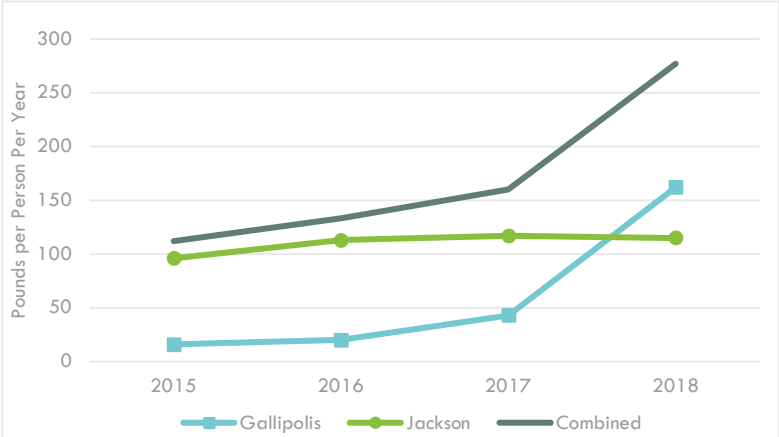


Figure H-1 Curbside Recycling Recovery

Using the TRP study average as a benchmark, Gallipolis and Jackson fall below the high performing communities. In 2018, curbside recovery in Gallipolis rose above the per capita recovery average found in TRP's study. However, Benchmarking curbside programs on a per capita level to other comparable sized cities in Ohio found Jackson and Gallipolis are performing well.

Table H-1 Benchmarked Curbside Programs

City	Tons Recycled	Population	Per Capita (lbs/person/year)	Program Details
Cedarville (Greene County)	89	4,130	43	Bin, Weekly, Automatic
Wilmington (Clinton County)	334	12,401	54	Cart, Weekly, Automatic
Jackson (Jackson County)	359	6,242	115	Bin, Bi-weekly, Request Bin
Gallipolis (Gallia County)	289	3,564	162	Bin, Weekly, Automatic
Yellow Springs (Greene County)	577	3,702	312	Cart, Weekly, Automatic

In 2020, the City of Jackson cancelled its curbside programs to save costs to the City. The City did not share collection costs for the SWMD to analyze cost per ton. The City could consider contracting for services. The City of Gallipolis contracts for services bundling the trash and recycling into one cost. With the City of Jackson providing their own trash services, cost benefits of bundling may not be realized. Another option is to implement a volume-based trash and recycling service (aka pay-as-you-throw). The revenues generated from residents subscribing to larger containers could cover the costs for the recycling

[6] The 2016 State of Curbside Report by The Recycling Partnership: https://recyclingpartnership.org/wp-content/uploads/2018/05/state-of-recycling-report-Jan2017.pdf

collection. Without actual data and cost figures it's a challenge for the SWMD to provide technical assistance to offer alternatives for the program.

The SWMD did not analyze the service area of haulers and their service offerings. If curbside recycling is offered residents would need to sign up to participate and pay a monthly fee. This is an open market subscription system. If there are any, the SWMD does not have any data on subscription service accounts.

Beginning in 2014, the SWMD implemented the drop-off program by contracting services to a private sector service provider. This created uniformity in all 4 counties to the labeling, container size and brought single stream recycling to the residents.

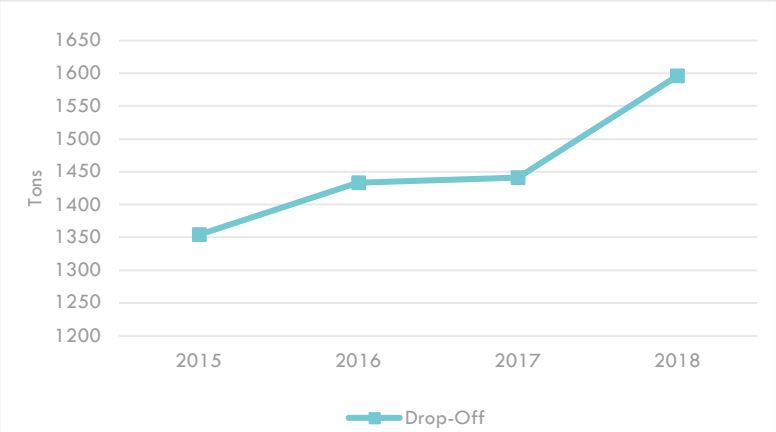


Figure H-2 Drop-Off Recycling Recovery

Service contracted includes provision of container, collection, and processing of drop-off recycling to 9 urban and 19 rural locations throughout the counties. Each single stream drop-off container is 8-yard. The number of containers per site varies depending on usage. Frequency of service per location also depends on usage and is monitored and adjusted by the SWMD. Recovery increases are documented over the past 4 years. The contract for servicing drop-offs does not report quantities of material collected per drop-off. Sites with open/illegal dumping or contamination are reported to the SWMD.

All locations are available because a host allows the drop-off containers to be placed on their property. At anytime the drop-offs are subject to change if the host requests the containers to be removed. As such the SWMD cannot add permanent signage. The service providers containers are marked with stickers/signs showing and stating (photos and words) the acceptable materials to include in the containers. Containers are available 24/7.

The SWMD does not track usage or participation for the drop-off program. To estimate a per capita recovery the SWMD used the Ohio EPA rural and urban service area parameters. Assuming 92,500 persons (2,500 for rural and 5,000 for urban), the 2018 per capita recovery is 35 pounds per person per year.

Even though the containers are well marked with stickers/signs, contamination is an issue at some of the sites. The Gallia County Silver Bridge location was removed in the summer of 2019 because it was being used as a trash dumpster. Most of the open dumping at the sites is mattresses or other larger bulky items. Three other sites (Pomeroy, Wellston, and Coalton) frequently have issues with contamination. Recyclable materials are also getting left on the ground around the containers when containers are full. The last course of action is to remove the site. The SWMD first uses education tactics of visible on-site signs and banners. The SWMD made temporary signs and rotates them around to the sites that are experiencing contamination and recyclables outside the containers. Banners were also made. The problem sites are then monitored to be evaluated for removal or relocation.

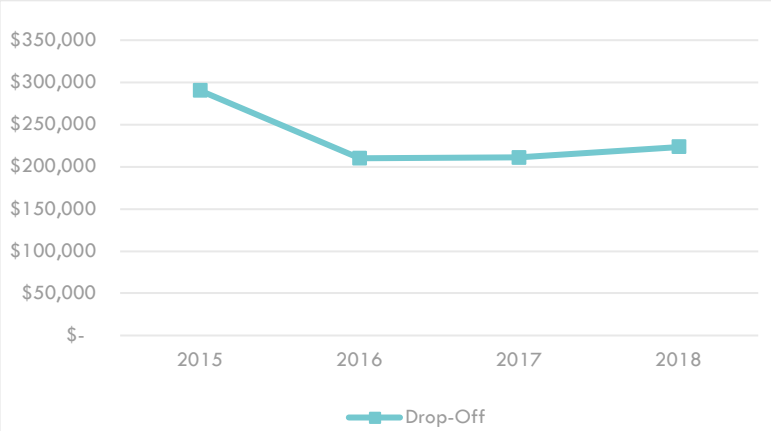


FIgure H-3 Drop-Off Costs

Figure H-3 shows drop-off program costs, which average just under $250,000 annually. Program costs include containers, transportation/hauling, processing of recyclables, and any site work/repairs. A decrease in costs of service is due to adjustments to service frequency and number of containers serviced throughout the SWMD. The program fully rolled-out in 2014 and so adjustments were made as needed.

TAKE BACK RETAILERS, REUSE AND THRIFT STORES

Buybacks, take-back retailers, reuse centers, and thrift stores are other outlets for diversion. The SWMD surveys these businesses however if a survey is not returned the recovery of materials to be recycled or reused is not captured. The SWMD maintains a list of scrap yards, buybacks and take-back retailers. As well as other collection points for materials such as batteries, used oil, etc. These lists are located on the SWMD website.

Current opportunities for waste minimization and reuse within the SWMD are not organized into an inventory list. Reuse and thrift stores are available throughout all counties. Reuse infrastructure heavily falls on non-profits and their development of reuse centers. The SWMD is not involved and does not plan to be involved in developing reuse infrastructure. An area of focus that could be expanded is the SWMD's role to encourage support of reuse and thrift stores. Additionally, education to address waste minimization for residents and businesses could be enhanced and added to the website. Programs with proven success to address waste minimization and reuse are volume-based incentive-fee collection systems, education and outreach approaches, creation and promotion of a reuse and repair network. It could be useful to develop a resource guide to donating.

FOOD BANKS AND FOOD DONATION CENTERS

The US EPA food recovery hierarchy, shown in Figure H-4, moves from preferred to least preferred food recovery methods reinforcing the highest and best use of food waste. The top management hierarchy is reducing waste at the source. The second is feeding hungry people. The second hierarchy is where food banks and food donation centers fall. The SWMD does not actively serve a role in the management or education but there are synergies where the SWMD could be a resource. Could the SWMD serve an organizational role to bring all stakeholders to the table to explore the management methods available in each county? Could the SWMD develop a network? Could the SWMD provide educational support? These are avenues to explore as the Policy Committee looks at programming in the next plan update.

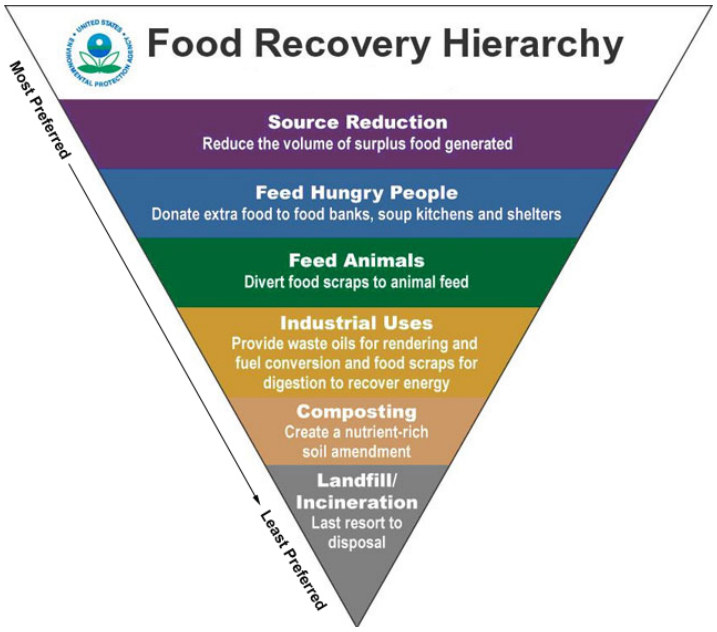


Figure H-4 U.S EPA's Food Recovery Hierarchy

b. Conclusions/Findings

Provision of 18-gallon bins to the curbside programs show documented increases in recovery. While research has not been completed to understand barriers to recycling, the SWMD feels strongly that residents want to participate in recycling. Making sure residents had a container to use for recycling helped to make residents aware of the service but also give them tools to use the service.

The SWMD identifies cost for recycling service as the primary barrier. The SWMD is concerned the increased costs for curbside recycling service may discontinue the programs. Additionally, as a SWMD, being able to provide drop-off recycling as the primary infrastructure for "traditional" recyclable materials recycling access is a great benefit to the community. The rising processing costs negatively impacts the budget.

In areas where the hauler provides open market subscription curbside recycling it requires residents to opt-in or sign up to receive recycling collection services. The requirement to sign up to participate in the program, requires research and a monthly fee to receive services, both of which may be barriers to participation.

Increasing diversion is very positive. Both the curbside and drop-off programs demonstrate increases in volume each year. Drop-off programs are an accessible rural solution for recovery from residents. The SWMD views increasing recovery volume as evidence of resident participation.

One of the greater challenges for the SWMD is getting residents to not use the drop-off sites as trash containers. Abuse of the drop-off sites with mattresses and bulky trash items may take stronger enforcement to deter the actions. Other options include the following: fencing, cameras, and restricted hours of use. The SWMD has attempted signage which is little success to change the behavior. Leaving recyclable materials on the ground around the containers when containers are full is also a problem. The SWMD will access the service frequency and education. Recycling has to be easy. If containers are full,

people are not going to be inconvenienced to take their items and return when there is space in the containers.

2. Commercial/Institutional Sector Analysis

Commercial/institutional sector is identified as the following (non-exhaustive list): commercial businesses, schools and Universities, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals and non-profit organizations.

a. Evaluation

Businesses are financially responsible for implementing their own recycling programs. SWMD annually surveys a list of commercial businesses in all counties to gather recycling data. GJMV offers technical, education, etc. assistance through programs but in more recent years minimal assistance occurs mostly because business growth in the two counties is minimal. Additionally, there are recycling/scrap operations available providing generators opportunities to recycle their paper, cardboard, scrap metal, etc. Engagement with this sector is challenging. Service costs are a barrier for many businesses. In the past when audits have been performed businesses have not secured recycling services because of the associated costs for service.

Low response on surveys, lack of interest for assistance, cost of recycling service, and insufficient staff resources of the SWMD are identified barriers. In 2018, the SWMD conducted a survey and presented to schools. Commercial retail chain stores (Walmart, Dollar General, etc.) have recycling service accounts as well as some of the schools. With the resources available to the SWMD, more focus is placed on the residential sector.

The model for the four counties is to let the private sector hauling companies outreach for services to the businesses. It's the role of the private business to determine the needs and provide the right-sized service.

Through this evaluation gaps for promoting what assistance the SWMD offers were noted. Online media for promoting services and adding more details on the webpage are cost effective measures to help.

GJMV encompasses four counties, and each county's commercial/institutional base is unique to that county. This analysis gives a snapshot inventory of each county separately.

GALLIA COUNTY

Over 92% of the county's land use is undeveloped with just over 7% developed.

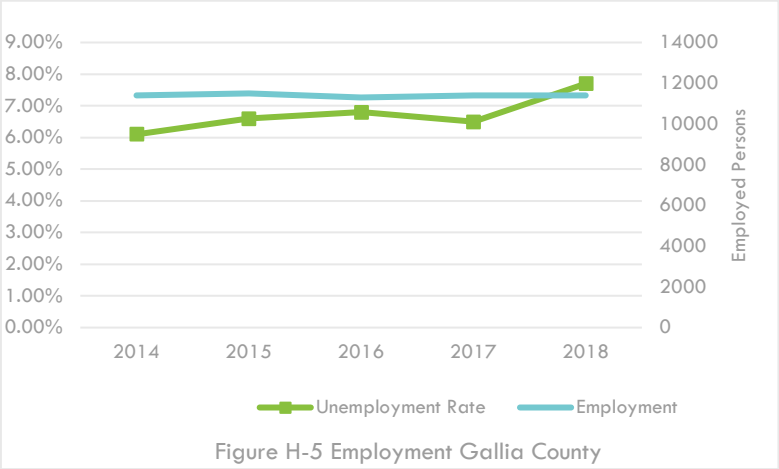


Figure H-5 Employment Gallia County

Gallia County has 2 public school districts at an estimated enrollment of 4,270. One registered hospital has roughly 287 beds and a county jail with 22 beds (Gallia County is planning to build a new jail to be operational by year 2022). The county has 1 public library, 1 public golf course, and 6 parks (state parks, nature preserves, scenic waterways, and wildlife areas). The largest employer is American Electric Power followed by Gallia County Local Schools.

A complete analysis of service to the commercial/institutional sector was not completed. Locations known to have recycling service include: University of Rio Grande, Holzer Medical Center, Family Dollar, Dollar Tree, Speedway, and a few other businesses and restaurants.

JACKSON COUNTY

Over 91% of the county's land use is undeveloped with just over 7% developed.

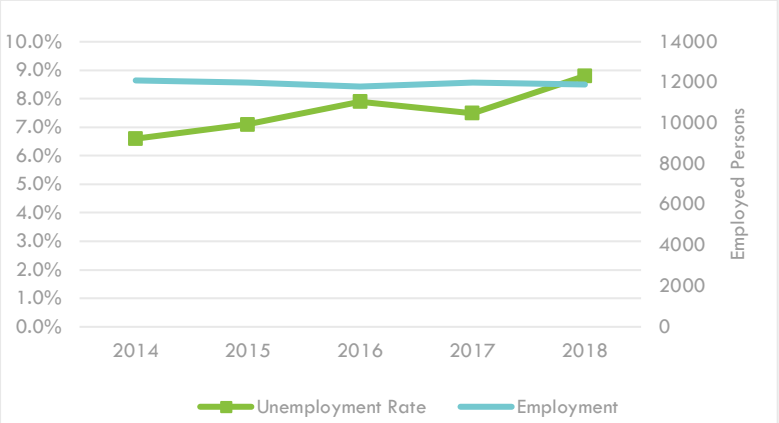


Figure H-6 Employment Jackson County

Jackson County has 3 public school districts at an estimated enrollment of 4,894. One registered hospital with roughly 25 beds and a Correctional Facility Prison with roughly 40 beds. The county has 3 public libraries, 1 museum, 2 public golf courses, and 11 parks (state parks, nature preserves, scenic waterways, and wildlife areas). The largest employer is Holzer Medical Center followed by Jackson City Schools.

A complete analysis of service to the commercial/institutional sector was not completed. Locations known to have recycling service include: Wellston City Schools, Holzer Medical Center, Family Dollar, Dollar Tree, Bob Evans, Pizza Hut, KFC, LaRosa's, and a few other businesses and restaurants.

MEIGS COUNTY

Over 92% of the county's land use is undeveloped with approximately 7% developed.

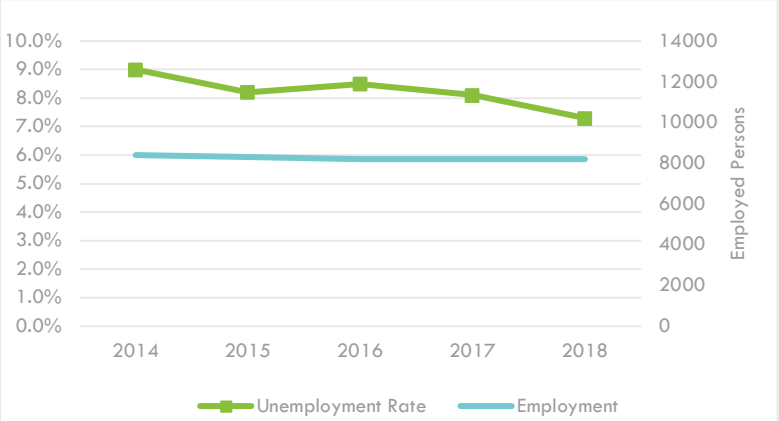


Figure H-7 Employment Meigs County

Meigs County has 3 public school districts at an estimated enrollment of 3,279. One county jail with roughly 60 beds. The county has 4 public libraries, 3 museums, 1 public golf course, and 11 parks (state parks, nature preserves, scenic waterways, and wildlife areas). The largest employer is Arbors at Pomeroy followed by Eastern Local Schools.

A complete analysis of service to the commercial/institutional sector was not completed. Locations known to have recycling service include: Meigs Local School District, Meigs County Board of MMRD, Wendy's, and a few other businesses and restaurants.

VINTON COUNTY

Over 93% of the county's land use is undeveloped with approximately 6% developed.

Vinton County has 1 public school district at an estimated enrollment of 1,984. One county jail with roughly 200 inmates. The county has 1 public library and 10 parks (state parks, nature preserves, scenic waterways, and wildlife areas). The largest employer is Huston Nursing Home followed by State of Ohio.

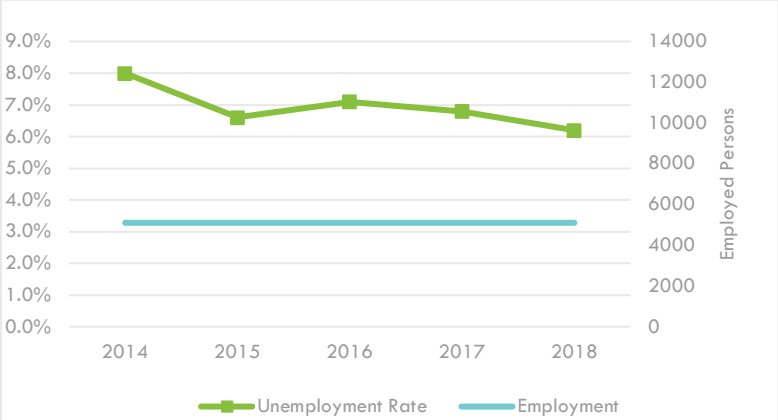


Figure H-8 Employment Vinton County

A complete analysis of service to the commercial/institutional sector was not completed. Locations known to have recycling service include Vinton County School.

b. Conclusions/Findings

The SWMD has attempted to engage the commercial sector in the past. The most identified barrier is cost of service. Overall, the commercial base is relatively small in each of the four counties and the larger retail chain stores (Walmart, Dollar General, etc.) have recycling service accounts. The SWMD is limited in staff and budget resources both of which are needed to engage the smaller commercial businesses. The commercial/institutional sector is not a focus area for the SWMD. Service areas not explored, but could provide opportunities for the SWMD to work with include: jails/correctional facilities, hospitals, parks or other public spaces. SWMD will have to be creative to find the bandwidth to offer more assistance to this sector. Facebook could provide a way to encourage engagement with this sector. Additionally, online resources would help provide information such as self-waste assessments and how to set up business recycling. This would allow businesses to access the information since staff resources are limited. The SWMD could also develop a sticker recognition program where businesses that recycle or compost could proudly display the sticker on a store front window/door.

In research, it was found some rural county districts work with institution facilities to install composting programs to divert food waste from the landfill. The SWMD could add case studies to the webpage to help educate businesses about these programs.

Ohio EPA offers grant funding for private companies to purchase recycling and processing equipment. Additionally, Ohio EPA's statewide materials exchange if promoted could be of interest to SWMD businesses.

3. Industrial Sector Analysis

a. Evaluation

According to web-based research, the largest industries in the four counties include the following:

Gallia County		Jackson County		Meigs County		Vinton County	
Company	# Employees	Company	# Employees	Company	# Employees	Company	# Employees
ElectoCraft/DMI Technology	150	Bellisio Foods Inc	1000	Imperial Electric	50	Austin Powder Co	250
GKN Sinter Metals	200	General Mills Inc	1000	Facemyer Lumber	61	Crownover Lumber Co Inc	107
OVEC	300	Osco Industries Inc	100			Paul Mercer Sawmill Inc	50
Lightstone Generation	270	J-Vac Industries	74			ITL Corp	45
Southern Cabinetry	35	Superior Hardwoods of Ohio	70				
Ohio Valley Trackwork Inc	12	Oak Hill Foundry & Machine Works	37				

SWMD did not confirm whether the largest entities have recycling services, but it is very likely that recycling programs are in place. Many of the companies on the list publish annual sustainability reports or discuss sustainability initiatives on their websites.

Industries are financially responsible for implementing their own recycling programs. SWMD annually surveys a list of industrial businesses in all counties to gather recycling data. GJMV offers technical, education, etc. assistance through programs. Minimal assistance to provide technical assistance to the industrial sector occurs. Engagement with this sector is challenging. Low response on surveys, lack of interest for assistance, and insufficient bandwidth resources of the SWMD are identified barriers. In 2018, other than the survey, the SWMD is not engaging this sector.

The model for the four counties is to let the private sector hauling companies outreach for services to the businesses. It's the role of the private business to determine the needs and provide the right-sized service.

Historical diversion fluctuates depending on responding industries. As shown in Figure H-9 recovery peaked in 2016 as an additional business began reporting. The decline reflects decreases as reported by the responding industries.

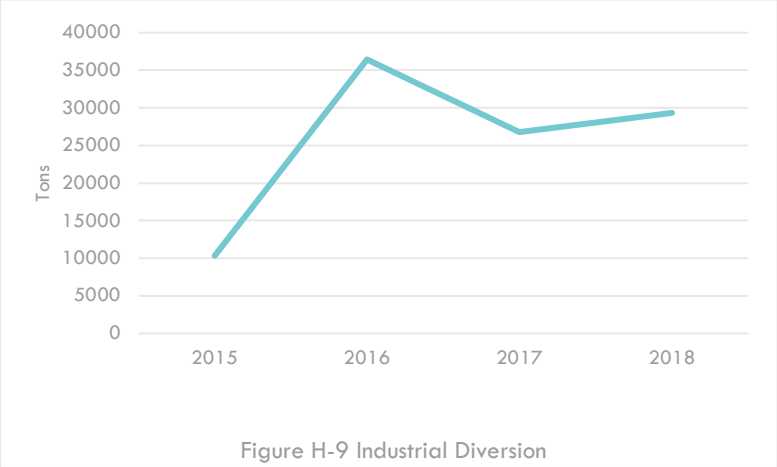


Figure H-9 Industrial Diversion

Desktop review of neighboring solid waste management districts show all conduct surveys and offer waste audits to the industrial sector. The same services offered by the SWMD.

b. Conclusions/Findings

Overall, the number of industries is relatively small in each of the four counties. The industrial sector is not a focus area for the SWMD.

Ohio EPA offers grant funding for private companies to purchase recycling and processing equipment. Additionally, Ohio EPA's statewide materials exchange if promoted could be of interest to SWMD businesses.

4. Residential/Commercial Waste Composition Analysis

a. Evaluation

Waste Generation = Wastes Disposed + Wastes Diverted

82,398 tons = 73,230 tons (disposed) + 9,168 tons (diverted)

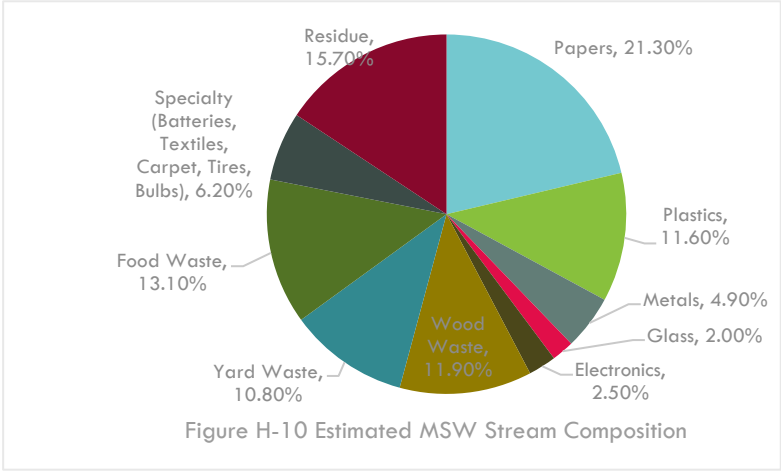


Figure H-10 Estimated MSW Stream Composition

Of the 82,398 generated in the SWMD in 2018, over 85% was landfilled. To better understand what is being landfilled, the 2018 State of Ohio's waste composition commodity percentages was applied to the SWMD's landfilled tonnage. As shown in Figure H-10, the largest component of the residential/commercial trash stream is projected to be paper including cardboard and office paper making up approximately one-fifth of the material landfilled (21.3%). Excluding residue material (non-recyclable, -compostable or -recoverable material), food waste (13.1%), wood waste (11.9%), plastics (11.6%) and yard waste (10.8%) make up the next four largest categories of landfilled material. These top 5 categories which can be recyclable/compostable make up over two-thirds of the residential/commercial waste landfilled.

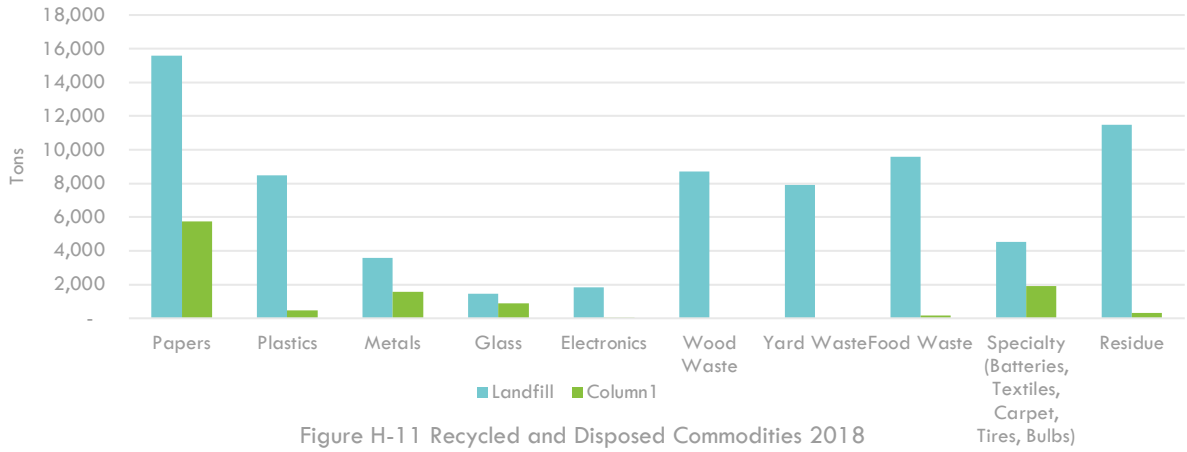


Figure H-11 Recycled and Disposed Commodities 2018

Figure H-11 shows how much of the materials landfilled were diverted in 2018. Using the State of Ohio's waste compositions provide a guide, however, the SWMD is mindful that this waste characterization accounts for both rural and urban areas. Each of the 4 counties are very rural so the amount of wood and yard waste being landfilled may be overestimated.

Fiber (Paper Materials) Waste Stream:
Using the State of Ohio waste composition and the SWMD's tons of MSW disposed from the residential and commercial sectors, an estimated 15,585 tons of paper category materials are being disposed at the landfill. The SWMD recycled 5,749 tons of paper in 2018, capturing 27% of the paper generated in the county for recycling, the third highest capture rate of materials. However, fiber materials (cardboard and

paper materials) have potential to be recovered in higher rates. In fact, American Forest and Paper Association stated the U.S paper recovery rate in 2018 is approximately 68.10%[6].

Programs in place to divert fiber materials include non-subscription curbside, drop-off, and commercial businesses. Additionally, businesses independently may hold shred events at various times.

All SWMD residents have access to fiber recycling through the drop-off collection program. Residents who have access to curbside or drop-off recycling service could be encouraged by the hauler or SWMD to recycle high value office paper and cardboard to increase capture rates.

The biggest opportunity to recover paper materials is in the commercial/institutional sector. Commercial businesses have the opportunity to contract with local haulers for recycling dumpster service. The SWMD could facilitate this by offering technical assistance. Typical challenges include costs for recycling services (container, processing and hauling), space for recycling containers, time and effort to collect recyclables on-site. In addition to contracting with haulers for recycling, larger commercial businesses can also bale and recycle their cardboard independently.

Yard Waste and Food Waste Stream:
The SWMD is rural, so it is believed most residents manage yard waste and wood waste by smart landscaping, grass-cycling, leaf mulching or mowing in place, and land-applying. Using Ohio's waste composition, Figure H-10 demonstrates there a considerable amount of yard waste being landfilled. As mentioned, this composition includes both rural and urban areas. The SWMD rural nature of it's counties may not be as well represented in this composition study when it comes to yard waste and wood waste. Despite Ohio legislation in 1995, attempting to limit and restrict the use of landfills for disposal of yard waste, some residents still manage their yard waste at the curb with their household trash. If residents mix yard waste with municipal trash the yard waste is disposed in the landfill.

SWMD reported composting 157 tons of food waste in 2018. Based on the state waste composition, the SWMD disposed of roughly 7,902 tons of yard waste and 9,585 tons of food waste.

The Village of McArthur operates a chipping program for residents. Materials can be brought to the village for mulching which is returned to the resident.

Yard waste and food waste management is decentralized and processing infrastructure is absent in all four counties, except for the Village of McArthur. Haulers in the SWMD do not offer curbside separate yard or food waste collection hauling. Keeping organics onsite – at residences, schools, institutions, etc. – or not producing them in the first place, offers the most cost-effective organics management solution. These practices save money by reducing offsite organics management and collection needs.

The type of plastic (denoted by its resin code) often determines what type of products it can be used to manufacture. See chart below.

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

Figure H-12 Plastic Resin Codes

Plastic Waste Stream:
Residential/commercial estimated waste composition identifies plastics as one of the larger percentage of waste streams being landfilled.

The terms "plastic #1" and "plastic #2" refer to a plastic container's resin identification code. Put simply, this code refers to what type of polymer comprises a container. Which type of plastic a container is made from is identified by the recycling symbol on the container. Inside the symbol will be a number, 1-7, which is the resin code.
As with other materials in the recycling industry, acceptability of plastics into a recycling program is largely determined by market forces. #1 and #2 plastics are accepted into nearly every drop-off and curbside recycling program because there is strong post-consumer demand for them from manufacturers. Though plastics #3 through #7 are actually recyclable, there is not a strong market for them in the central Ohio region. The MRF where SWMD materials are taken accepts only #1 and #2 plastics.

Prior to December 2017, most recycling collected in the United States was shipped to China to be manufactured into new products and packaging. However, in January 2017 China's government announced that it would no longer accept certain recycling by the end of 2017. The recycling targeted by China's Operation Blue Skies include mixed paper and mixed plastics. When China stopped accepting targeted materials, it impacted municipal programs and today some of these programs continue to struggle with the impacts of China's Operation Blue Skies resulting in a tough time securing alternative markets for the recycling targeted. In addition, it has had a negative impact on the revenues derived from recycling in comparison to previous years with stronger market prices.

Plastics collected at the curb and in the drop-off programs are captured in Rumpke's MRF shed which limits the plastics collected to only plastic bottles and jugs. There are a lack of outlets available for #3-#7 plastics which will continue to impact the SWMD as those plastics will continue to be landfilled. A facility, PureCycle Technologies, located in neighboring Lawrence County is commercializing a solution to recycle polypropylene plastic. It is hopeful once this facility is fully operational Rumpke will include #5 plastics in the collection points.

Increases in container recycling isn't reflected in the recycling rate (tons recovered) since plastic containers have continued their trend of becoming lighter due to improved container design and engineering. This trend of lighter container weights is commonly referred to as "light-weighting." Under weight-based recycling rates, the light-weighting of containers can result in decreasing recycling rates even when the individual number of containers recycled is increasing.

b. Conclusions/Findings

The more cost-effective organics management solution is to implement additional education tactics to increase awareness. The SWMD could promote programs focused on other landfill alternatives like grasscycling where mowed grass is left on lawns to provide nutrients for the soil or backyard composting. The SWMD can use social media at the beginning of the fall to promote leaf mulching and again in early spring to promote grasscycling. The SWMD can also develop a home composting workshop and incorporate organics reduction.

While participation in such programs can be low, programs can raise awareness around waste and landfilling issues. Additionally, offering backyard compost bin sales could help increase awareness and the practice of backyard composting for alternative management methods.

Upstream strategies reduce food at the source before entering the waste stream to be managed and if programs are developed can greatly reduce waste generation. USEPA developed 'Food: Too Good to Waste' toolkit designed to reduce wasteful household food management practices. Information in this toolkit can help implement the campaign in the SWMD. The SWMD could explore promoting food waste tools and tracking systems institutions can implement on-site.

Midstream strategies rescue food. These options include rescuing edible food waste for food insecure residents and donation and redistribution. Donation and redistribution could potentially be a significant opportunity the SWMD could promote.

To manage food waste downstream there are several strategies which include: animal feed, on-site diversion (food waste processing systems), anaerobic digestion, and composting. Some of these are not within the SWMD's budget or resources capacity at this time.

5. Economic Incentive Analysis

By definition, economic incentives are designed to encourage participation in recycling programs. In accordance with Goal 7 of the 2020 State Solid Waste Management Plan, the SWMD is required to explore how to incorporate economic incentives into source reduction and recycling programs.

a. Evaluation

Current SWMD funding allocations do not support the SWMD offering economic incentives. There are other District's offering grants or rebates to incentivize diversion and showing reasonably good success. The biggest limitation for implementing such program in the District is funding.

The SWMD benchmarked two other rural solid waste management districts: Jefferson Belmont Regional Solid Waste Authority (JBRSWA) and Clinton County Solid Waste Management District. In both district's economic incentives were designed to help with gaps in their waste management system. JBRSWA's economic incentives were designed for litter, closing the loop, developing markets, and recycling collection. JBRSWA had varied success with the incentives. Clinton County's economic incentives were designed to address targeted audiences. By providing grants to these target audiences, the SWMD assists with infrastructure gaps these audiences may experience to divert materials and litter issues. To date the grants have been successful in meeting their goals.

The majority of SWMD's offering economic incentives in the state either tie the amount recycled to some sort of financial compensation or reduce the cost of recycling. A major restriction for the SWMD is funding to offer incentives.

b. Conclusions/Findings

Incentive-based programs that either tie the amount recycled to some sort of financial compensation or reduce the cost of recycling have the potential to significantly increase participation in an available recycling program. This type of incentive can change consumer behavior and can increase the tonnage of recyclables collected. One type of policy and economic incentive-based program is pay as you throw (PAYT). Also referred to as unit pricing, variable rate pricing or user-pay, this per-usage-pricing model has been effective in reducing waste by 50% and increasing recycling while seeing significant savings in tipping fees depending on the community. PAYT communities often charge a flat-rate based on their waste consumption; similar to other household utilities (electricity, water, gas).

There are some perceived barriers to implementing these programs that can be challenging. The SWMD could support these incentivized recycling programs by providing clear and easy to understand information on PAYT and other economic incentive programs directly to communities within the SWMD as well as post on the SWMD's website. The SWMD could encourage the community to apply for applicable grant funds to get these programs started.

6. Restricted and Difficult to Manage Waste Streams Analysis

Goal 5 of the 2009 State Plan requires SWMD's to provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste, and obsolete/end-of-life electronic devices. This analysis evaluates the SWMD strategies and considers other materials and programs for difficult to manage waste.

a. Evaluation

HHW:

The 2015 Plan Update allowed for one-time collection events of HHW if funding and budgeting permitted. Unfortunately, the SWMD was not able to hold events for the collection of HHW. A number of outlets exist for motor oil, antifreeze, batteries, compact fluorescent lights (CFLs), and propane tanks. Education on alternative outlets is the strategy utilized for proper management of HHW. The SWMD receives phone inquiries for proper management of HHW and distributes literature.

The SWMDs webpage lists outlets for other difficult to manage waste such as: chargeable batteries, lead-acid batteries, tires, prescriptions, smoke alarms, used motor oil, cell phones and electronics. The SWMD strategy relies on retailer take-back and product stewardship for proper management. In 2018, approximately 1,946 tons were diverted.

As funding declined the SWMD could not allocate funding to hold HHW collection events for the residents. With funding limitations expected in the future planning period, it is not anticipated HHW collection events will be feasible. The SWMD could direct education and awareness to purchasing more environmentally friendly products thus preventing the generation of HHW.

Table H-1 Hard To Recycle Materials Diverted

Hard to Recycle Materials	Tons
Scrap Tires	1,740

Hard to Recycle Materials	Tons
Appliances/"White Goods"	-
Other (Aggregated)	189
Textiles	-
Used Motor Oil	-
Lead-Acid Batteries	-
Household Hazardous Waste	-
Electronics	17
Dry Cell Batteries	-
Rubber	-
Subtotal	1,946

Scrap Tires:

As seen in Table H-1, the material tonnage mostly diverted is scrap tires. In 1996, regulations banning disposal of whole scrap tires at solid waste landfill facilities and incinerators became effective. Opportunities available to properly manage scrap tires and divert them from the landfill include Beech Hollow Landfill, retailer take back (nominal charges applied) and county tire amnesty/spring clean-up days. A scrap tire outlet list is maintained on the SWMD's website. County health departments hold tire amnesty/spring clean-up days when grants are received. Figure H-12 Lack of resources to plan, manage and fund collection programs are barriers. Figure H-13 shows diverted tire tons from 2015 through 2018. The drop in diversion tonnages in the County's follows the years grants were not received - no grant no collection.

There are many retail outlets accepting unwanted tires throughout the SWMD, however scrap tire collection events offer residents a no-cost opportunity to recycle scrap tires. The events provide opportunities for those not able or not willing to pay user fees, although, the services come at a cost. County health departments fund these events and may use some of the funding provided to the health departments by the SWMD.

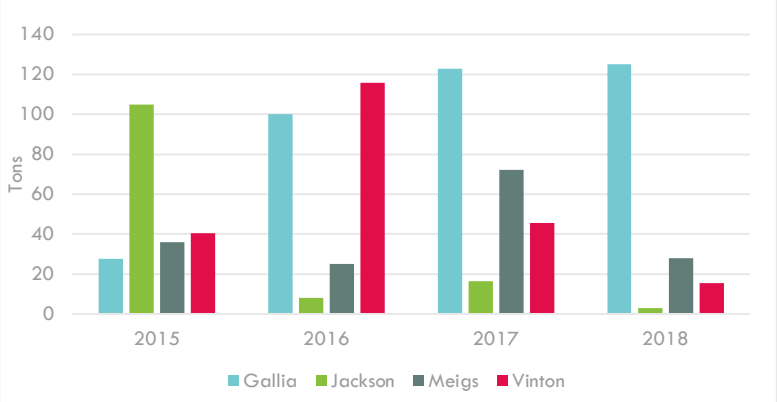


Figure H-13 Tires Diverted at County Collections

Ohio EPA estimates more than 12 million scrap tires are generated in Ohio annually. Scrap tires not properly disposed have the potential to end up in illegal dumps creating hazards to public health and the environment. The number of tires and the cost to handle tires are challenges the SWMD is addressing consistently. The SWMD could develop a targeted marketing campaign to educate residents on scrap tire disposal management to complement the waste tire amnesty (collection) day.

Lead-Acid Batteries:
In 2008, regulations banning disposal of lead-acid batteries in landfills became effective. Lead-acid batteries have a high recycling value and Ohio has a retailer take-back law. Despite this the SWMD does not receive surveys from commercial businesses taking lead-acid batteries back. The past few years collected no data to record towards diversion. The SWMD's webpage lists 12 locations where lead-acid batteries can be recycled and 5 sites which accept rechargeable batteries.

Electronics:
Electronics contain hazardous materials that can pose health and environmental risks after disposal. The preferred method of handling is donation for working electronics and recycling for nonworking electronics. The SWMD maintains a list of retailer take-back, secondhand retailers, and scrap yard outlets where residents may take electronics. Each location varies as to the type of electronics accepted and user fees charged. To disseminate information to residents the SWMD uses the webpage and social media.

Beginning in 2015, electronics collection events were held in Jackson, Meigs and Gallia Counties. A total of 6 tons of electronics were collected. Jackson and Meigs Counties charged user fees for their events. In 2017 Gallia County provided collection of electronics in conjunction with the Spring clean-up and collected 14 tons. In 2018, no electronics collection events were held. The SWMD collects cellphones using "Call2Recycle" program. Residents may drop off cell phones at the SWMD offices. Another service offering is the availability for residents to drop-off fluorescent tubes for recycling at the SWMD offices.

Surveyed retailer take-back, secondhand retailers, and scrap yards do not always report data. The SWMD recognizes e-waste is a growing material stream and wants to be of assistance in diverting these materials from the landfill. The major obstacle is costs thus the SWMD directs residents to the local outlets accepting these materials. Table H-2 demonstrates costs other SWMD's in the region spend.

Table H-2 Electronic Collection Costs

SWMD	Cost
Belmont Jefferson	$35,245.35
Pike County	$4,318.78

Note: Costs are based on 2019 quarterly fee reports as SWMD's report per the Special Collections – Electronics line item allocation.

Other - Pharmaceuticals:
The SWMD participates in the statewide and national initiatives for managing pharmaceuticals by advertising outlets on the SWMD website.

b. Conclusions/Findings

Households produce hazardous wastes containing chemicals that pose environmental risk. Informing the public to these dangers and providing outlets for proper disposal or recycling can be a priority item for the SWMD. Education on using less-harmful ingredients and more environmentally friendly products can be increased on the webpage and social media outlets. Should a HHW collection event be planned, the SWMD can use a study conducted by Cascadia Consulting Group as a guide for planning purposes. The study reported the 2015 per pound basis median costs for HHW collection nationwide was at $0.79/lb[7]. The median in metro areas was typically $0.85/lb.

[7] "A Comparison of Household Hazardous Waste Programs", Cascadia Consulting Group, 2005.

To manage electronic waste the SWMD could look partnerships and collaborations.

7. Diversion Analysis

a. Evaluation

The GJMV District has met Goal 1, providing 90% of their population with access, but not Goal 2, which is having a recycling rate of 25% for the residential and commercial sector. Figure H-14 shows GJMV's recovery rate compared to the State Goal and the overall State of Ohio's diversion rate.

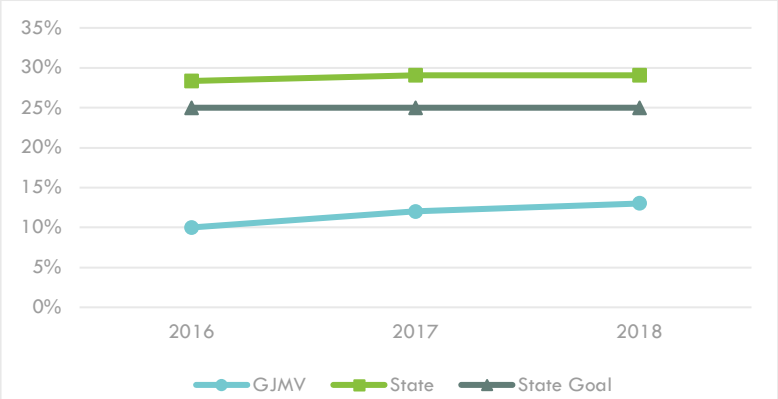


Figure H-14 Ohio EPA Goal 2 Diversion Status

Compared to the state average, the SWMD's diversion rate for the residential/commercial sector is lower. Ohio state-wide generated 14,076,671 tons in 2017 and recycled 4,068,376 tons or achieving a recycling rate of 28.90%. GJMV generated 82,398 tons of waste from the residential/commercial sector and was able to recycle 9,168 tons or 11% in 2018[8]. As shown, the SWMD's diversion rate also falls below the State Goal. Compared to the surrounding SWMDs, GJMV is somewhere in the middle of the pack. The Athens-Hocking District has a recycling rate of 24.73%, the Lawrence-Scioto District has a recycling rate of 16.93%, and Pike District has a recycling rate of 4.95%.

Historically from years 2013 to 2018, there has been drastic changes in the diversion rates as shown in Figure H-15. Starting in 2013, in the residential/commercial sector, GJMV had a diversion total of 23,970 tons. In the following year, 2014, there was a slight decrease to a total of 21,865 tons. In 2015, there was a steep decrease, with a total of only 8,565 tons. This decrease was due to a change in data collection methods. The largest decreases came from metals, both ferrous and non-ferrous metals. From 2014 to 2015, ferrous metals went from 12,436 tons to 31 tons and non-ferrous metals went from 2,476 tons to 1,436 tons. Once this drastic decrease occurred though, there has been a slight increase from years 2015 to 2017. In 2015, there was a total of 8,575 tons, in 2016 there was a total of 8,150 tons, and in 2017, there was a total of 9,619 tons. This large decrease was because starting in 2015, GJMV was no longer able to report the ferrous metal from L&L Recycling.

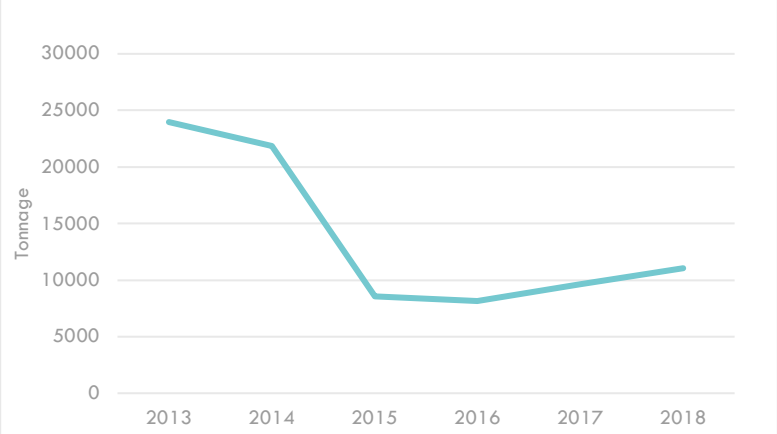


Figure H-15 Residential/Commercial Diversion

[8] https://epa.ohio.gov/Portals/34/document/general/disp%20gen%20recycle2017.pdf

The material categories reported as most recycled in 2018 includes commingled recyclables, cardboard, non-ferrous metals, and scrap tires as shown in Table H-3.

Table H-3 Diverted Commodities in 2018

Recycled Material	Tons
Standard Recyclables	
Corrugated Cardboard	2,486
Ferrous Metals	142
All Other Paper	582
Plastics	245
Glass	96
Non-Ferrous Metals	1,270
Commingled Recyclables (Mixed)	2,244
Subtotal	7,065
Organics	
Food	157
Wood	-
Yard Waste	-
Subtotal	157
Hard to Recycle Materials	
Scrap Tires	1,740
Appliances/"White Goods"	-
Other (Aggregated)	189
Textiles	-
Used Motor Oil	-
Lead-Acid Batteries	-
Household Hazardous Waste	-
Electronics	17
Dry Cell Batteries	-
Rubber	-
Subtotal	1,946
Total Tons	9,168

b. Conclusions/Findings

There are diversion opportunities for common recyclables and other hard to recycle materials. In more recent years, diversion is showing an increasing trend as residents are utilizing the drop-off program. Lack of data from the commercial and industrial sector impedes the SWMD from reaching the Ohio state diversion rate goals. The SWMD could look at ways to increase the response rates to obtain additional

data. Downstream infrastructure for some materials such as yard waste and food waste will continue to be a challenge without funding. Tackling these material streams with waste minimization and reduction are approaches the SWMD could explore.

8. Special Program Needs Analysis

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

Health Department Funding:
Health Departments must be certified by the Ohio EPA to operate a solid waste program. Some of the programs/services provided by the Health Departments with these funds include: program administration, landfill and out-of-state waste inspections, enforcement of illegal dumping and littering laws, illegal dump and litter cleanup, tire recycling collection/processing programs. Other activities may also be provided.

The Gallia County and Jackson Health Departments each received $25,000 while the Meigs County and Vinton County departments each received $21,000 until year 2018. Funding was reduced to $20,000 and $16,000, respectively in 2018 as outlined in the 2015 Plan. Gallia and Jackson Health Departments each received a higher amount of funds to offset the costs associated with landfill and out-of-state waste inspections.

Per the 2015 Plan health departments track and report their inspections and investigations. In 2018, Gallia, Jackson, Meigs and Vinton reported the majority of funds were used for salaries. Approximately $3,000 was reported for nuisance investigations, clean ups and supplies. The number of nuisances and abatements reported are shown in Table H-4.

Table H-4 Total Nuisance and Abated Reports from Health Departments

Year	Nuisance	Abated	Total Incidents
2017	53	12	65
2018	61	15	76

*excludes the additional funding provided for out-of-state waste inspections.
Note: Not all health departments reported. This data is based on the reports that were provided.

Types of reporting could include number of inspections (landfill, out-of-state waste); complaints filed; investigations conducted; expenditure of funds for program administration; prosecutions completed, fines/penalties levied; results/status of complaints, investigations, court proceedings.

Sheriff Department Funding:
Some of the programs/services that can be provided by the sheriff departments with these funds include: program administration, enforcement of illegal dumping and littering laws, illegal dump and litter cleanup, and tire recycling collection/processing programs. Other activities may also be provided.

Gallia, Jackson and Vinton county sheriff departments were provided $25,000 each. Funding was reduced in 2018 to $20,000 each. In 2018, sheriff departments reported 94 complaints, 65 dumps cleaned and 344 man hours used. Table H-5 shows the sheriff department reports per year. When funding was reduced in 2018 the services provided were not impacted.

Table H-5 Total Sherriff Department Reports

Year	2016	2017	2018
Complaints	101	76	94
investigated	**104**	76	88
Man Hours	243	364	344
Other Man Hours	655	596	568
Dumps Cleaned	99	62	65
Cases Filed	1	0	5
Fines	1	0	0
Dump Clean No Court Action	0	14	23
FUNDING PROVIDED TO EACH DEPARTMENT	$25,000	$25,000	$20,000

Litter Collection Funding:
Meigs County Soil and Water Conservation District was provided $25,000. Funding was reduced in 2018 to $20,000. Meigs County litter collection crew spends 3 days a week picking up litter along County and Township roads. Soil and Water reported cleaning 17 dumps and 375 miles of roads and collecting 366 tires and 1,786 bags of trash. Additionally, Soil and Water provide education outreach to Meigs County. Educational events geared toward school aged children include recycling and litter prevention topics.

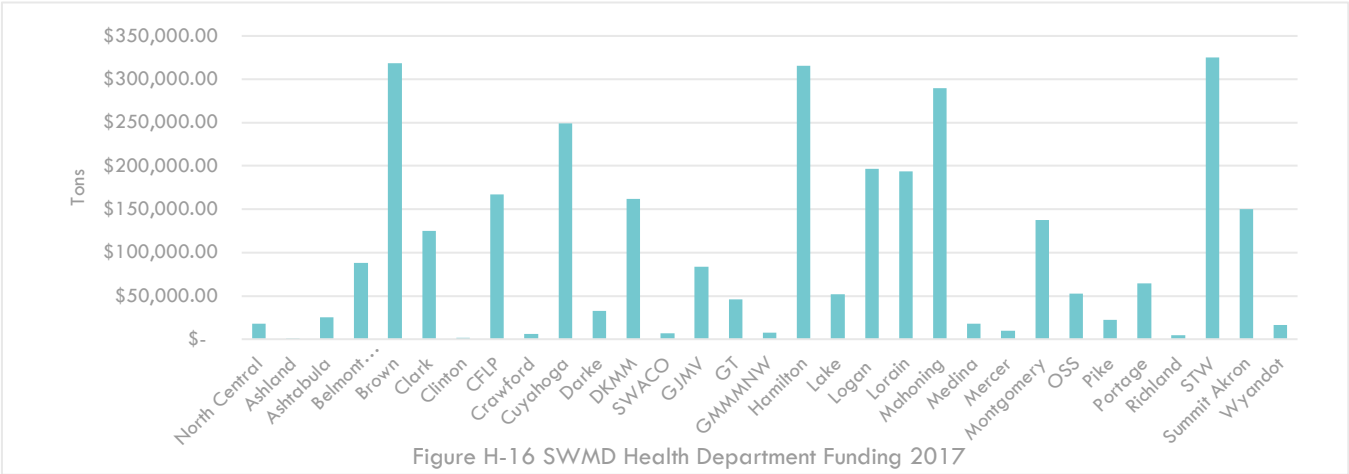


Figure H-16 SWMD Health Department Funding 2017

Figure H-16 shows the funding provided by Ohio solid waste management districts in 2017. Thirty-one out of the fifty-two solid waste management districts provide funding to health departments. Brown, Hamilton, Mahoning, and Stark Tuscawarus Wayne Solid Waste Districts expended the most in 2017.

Historically health and sheriff department provide a needed service for the SWMD. The 2018 tier disposal fee revenue amounted to roughly one-half of historical waste receipts. While the work these programs perform is important the reduced funding and forecasted lower revenue receipts requires the Policy Committee to take a closer look at all future programming. Questions the Policy Committee will be looking to answer is whether the SWMD should continue to allocate 25% of its budget to these programs?

9. Financial Analysis

For this analysis, the policy committee evaluates the SWMD's financial position, not just in terms of its current situation but also in terms of the SWMD's financial situation over the course of the planning period.

a. Evaluation

Revenues dropped over 50% from 2014 to 2018. The SWMD is funded through a tiered disposal fee. For every ton of waste disposed at a municipal solid waste landfill located in Gallia, Jackson, Meigs or Vinton County, the SWMD receives $1/ton for in-District waste, $2/ton for out-of-District waste, and $1/ton for out-of-state waste. With disposal shifting to other landfills, SWMD revenue has declined to an average of approximately $439,000. Revenue began to decrease in 2015 because of significant shifting in disposal of out-of-district waste to landfills outside of the SWMD. Table H-6 outlines revenues generated between 2014 and 2017 from the tiered disposal fees. As shown out-of-district as well as out-of-state revenues declined.

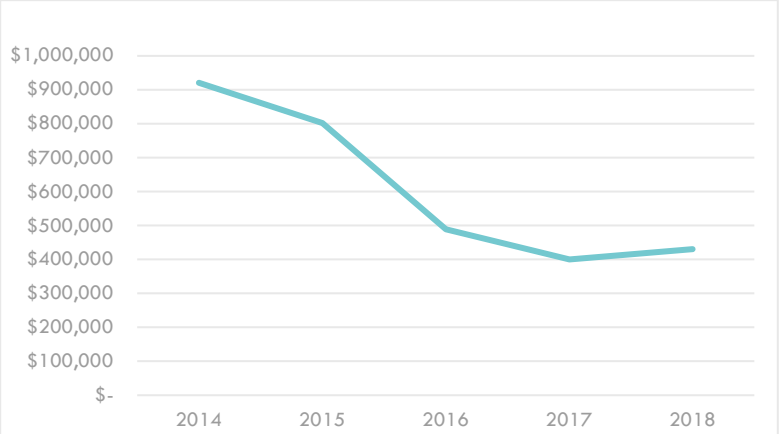


Figure H-17 Historical Revenue

Table H-6 Historical Revenues from Tiered Disposal Fees

Year	Waste Disposed at In-District Landfills (tons)			Revenue ($)			Total Disposal Fee Revenue ($)
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2014	68,971.58	253,032.17	36,083.46	$68,971.58	$506,064.34	$36,083.46	$611,119
2015	70,197.73	247,235.50	40,318.29	$70,197.73	$494,471.00	$40,318.29	$604,987
2016	69,780.46	176,967.10	43,546.36	$69,780.46	$353,934.20	$43,546.36	$467,261
2017	68,066.47	140,326.10	28,250.11	$68,066.47	$280,652.20	$28,250.11	$376,969

The SWMD's 2015 Plan projected an average of $703,000 annually in revenue. As shown in Table H-4, the projected 2015 Plan revenue is significantly higher than actual waste receipts. Projections in the 2015 Plan forecasted a decrease in out-of-district revenues but not to the level seen in 2018. The reduction in out-of-district waste disposed at Beech Hollow Landfill is the biggest difference between projected and actual.

Table H-7 Actual vs Projected Revenues

Year	Waste Disposed at In-District Landfills (tons)			Total Disposal Fee Revenue ($)
	In-District	Out-of-District	Out-of-State	
2018 - Actual	70,810	152,731	30,395	$406,667
2018 – 2015 Plan projections	74,045	290,000	49.702	$703,757

Compared to surrounding solid waste management districts, the SWMD reported the lowest revenues in 2017 as well as one of the lowest fee structures. GJMV, Athens-Hocking, and Pike are the only districts listed in Table H-8 that have a landfill located in their district. Comparatively, GJMV's per capita revenue is the second lowest.

Table H-8 Benchmarked District Revenues

District	Type of Revenue	Fee	Revenue	Per Capita Revenue
Ross-Pickaway-Highland-Fayette	Generation Fee	$3	$536,558.86	$2.59

District	Type of Revenue	Fee	Revenue	Per Capita Revenue
GJMV*	**Tier Disposal Fee**	**$1/$2/$1**	**$400,159.73**	**$3.87**
Athens-Hocking*	Tier Disposal Fee Generation Fee	$1/$2/$1 $3	$440,879.04	$4.64
Lawrence-Scioto	Rates and Charges	$12/year per parcel	$671,056.19	$4.73
Pike*	Tier Disposal Fee	$1.5/$3/$1.50	$662,746.13	$23.18

Source: Solid Waste Management District Fee Summary: 2017 Ohio EPA Division of Materials and Waste Management
*At least 1 active landfill located within the solid waste management District.

The change in wasteshed flows impacted the budget significantly (see Regional Analysis for additional analysis on wasteshed flows). As revenues are declining the SWMD made adjustments to expenditures and used the fund balance to support expenditures. The average distribution of SWMD expenditures is outlined in Figure H-18. Staff has worked to decrease expenditures over the past 4 years; however, the SWMD continues to pull from the fund balance to bridge the gap between expenditures and revenue. In 2018, expenditures were $478,479 compared to revenue of $429,919, requiring the SWMD to use approximately $52,060 of the fund balance.

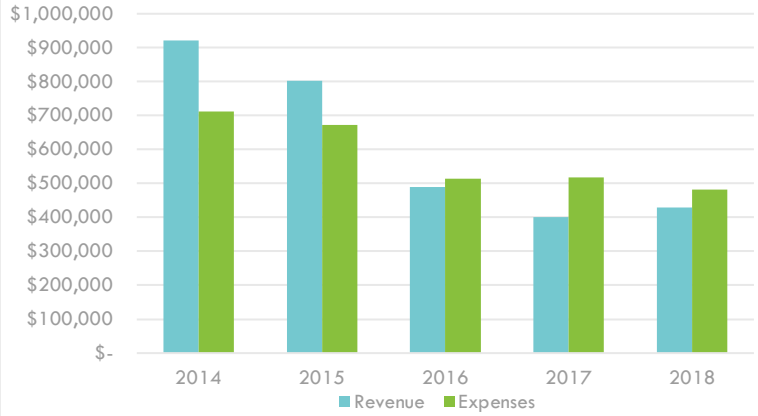


Figure H-18 Historical Revenues and Expenses

The SWMD's 2015 Plan projected expenditures on average of $795,000 annually. As shown in Table H-9, the actual expenses were reduced.

Table H-9 Actual vs Projected Revenues

Year	Total Expenditures ($)
2018 - Actual	$478,479
2018 – 2015 Plan projections	$747,398

The SWMD program expenditures are outlined in Figure H-19. The largest program expenses are the drop-off program followed by programming to the health and sheriff departments.

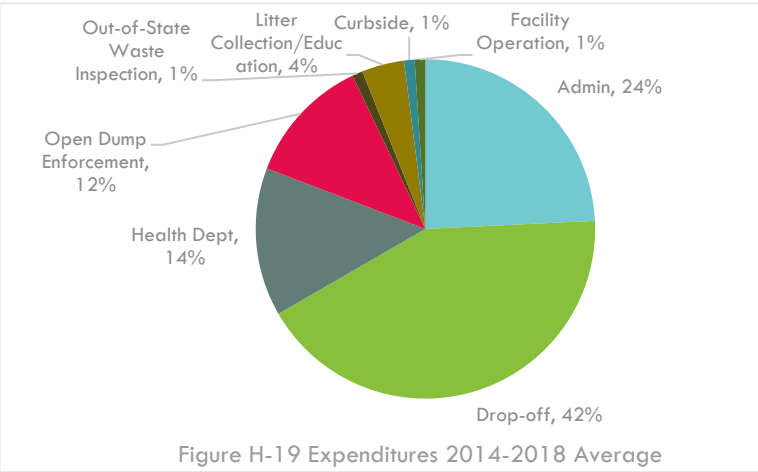


Figure H-19 Expenditures 2014-2018 Average

Comparison of neighboring solid waste management districts program expenses is found in Table H-10. Except for Pike County, all the districts expend $5 per person or below. The SWMD is the second lowest in per capita expenses.

Table H-10 Benchmarked District Expenditures

District	Expenditures	Per Capita Expenses
Ross-Pickaway-Highland-Fayette	$517,692.84	$5.00
GJMV	**$432,906.25**	**$4.55**
Athens-Hocking	$557,672.70	$2.70

District	Expenditures	Per Capita Expenses
Lawrence-Scioto	$678,099.61	$4.78
Pike	$511,762.19	$17.90

Source: Solid Waste Management District Fee Summary: 2017 Ohio EPA Division of Materials and Waste Management

The largest expense category for these benchmarked districts varies. Comparatively, the majority of the budget expenses funds the drop-off programs in these districts as seen in Figure H-20. Athens-Hocking expends more funds for program collections drives such as HHW and tires than the compared districts.

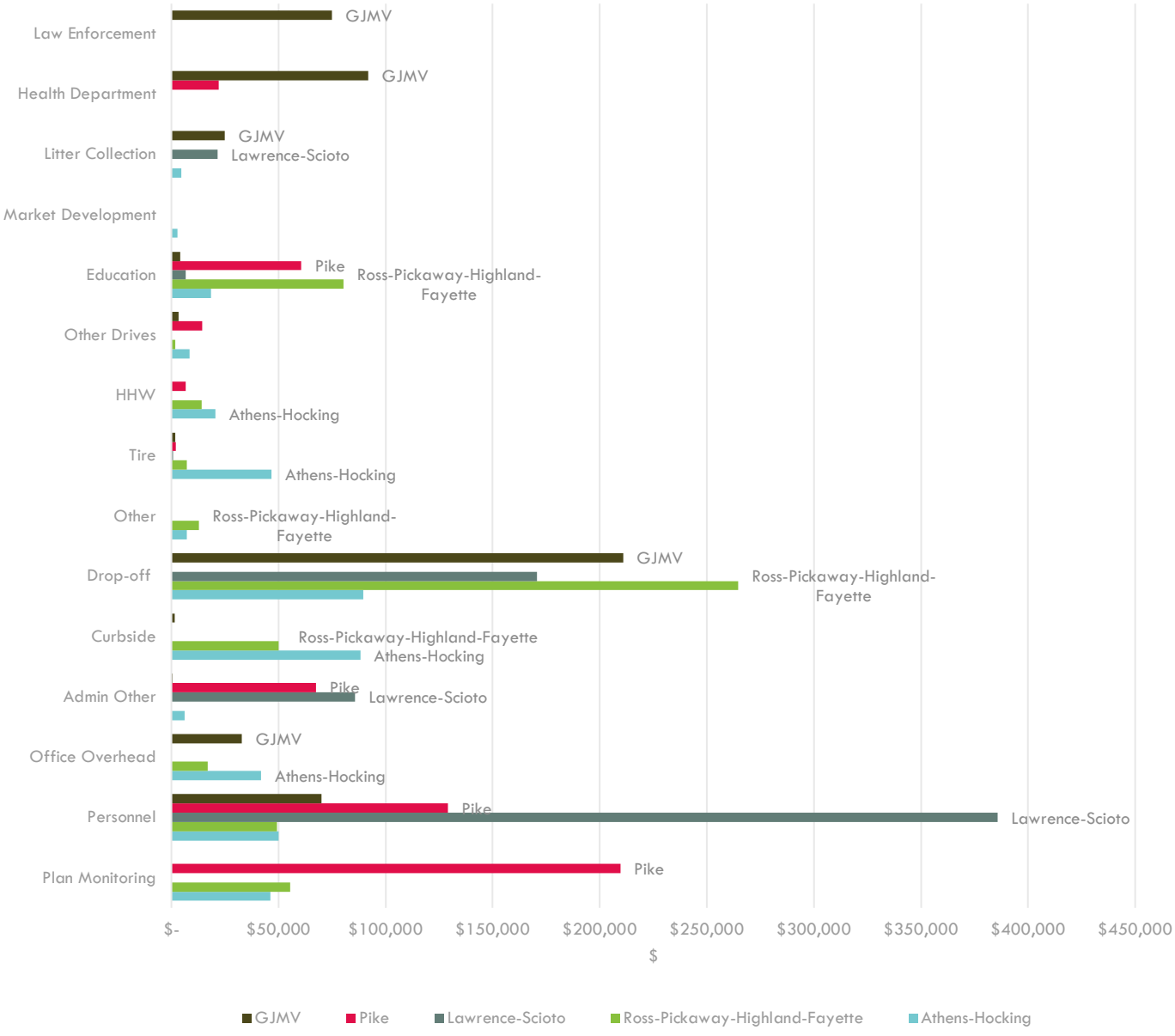


Figure H-20 SWMD Expense Categories 2017

At current expense the SWMD is drawing down the fund balance. Figure H-21 demonstrates as revenues decrease the balance is also decreasing. The SWMD does not currently have a policy on the carryover balance but will explore for planning. If the expenses and revenues are forecasted to hold flat – the SWMD forecasts that as of 2035, the SWMD will be operating in the negative as shown in Figure H-22.

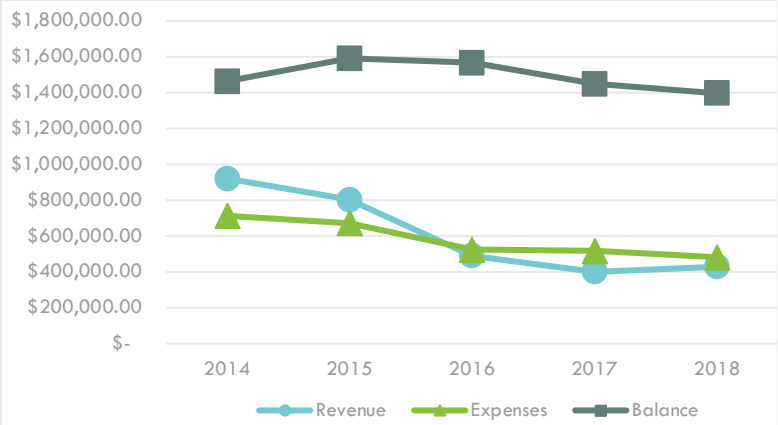


Figure H-21 Historical Fund Balance

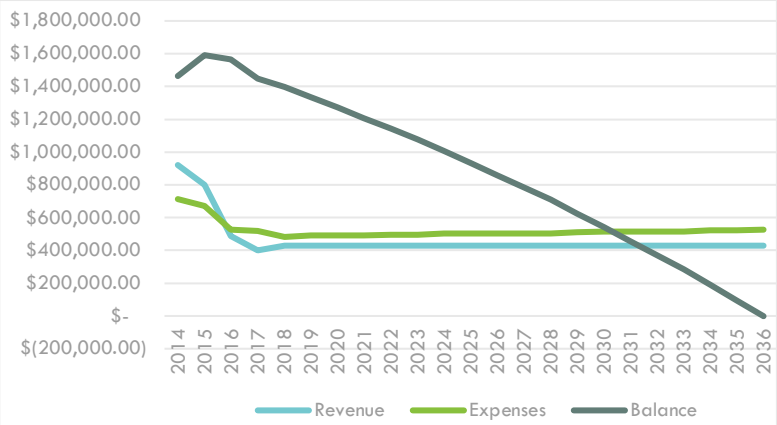


Figure H-22 Forecasted Status Quo

Realistically inflation costs are expected. Continuing with the $1/$2/$1 tiered disposal fee is not an option without reduction in the SWMD expenses. The SWMD developed 3 financial scenarios for consideration.

- Scenario 1 – Tiered disposal fee of $1/$2/$1 and decreased expenses. This will require approximately $150,000 in budget reductions.
- Scenario 2 – Tiered disposal fee increase to $1.50/$2/$1.50. Revenue expected to generate funds to support health and sheriff department programs for a few years more.
- Scenario 3 – Tiered disposal fee of $1/$2/$1 and generation fee. Revenue expected to generate funds to support health and sheriff department programs through the planning period.

SCENARIO 1

Under this scenario the disposal fee remains $1/$2/$1 which requires a reduction in SWMD expenses. Reducing expenses over $150,000 annually requires no funding for the County Health Departments, Sheriff Departments and Meigs County Solid and Water. Even at these reductions the expenses (due to inflation) begin to exceed the revenues.

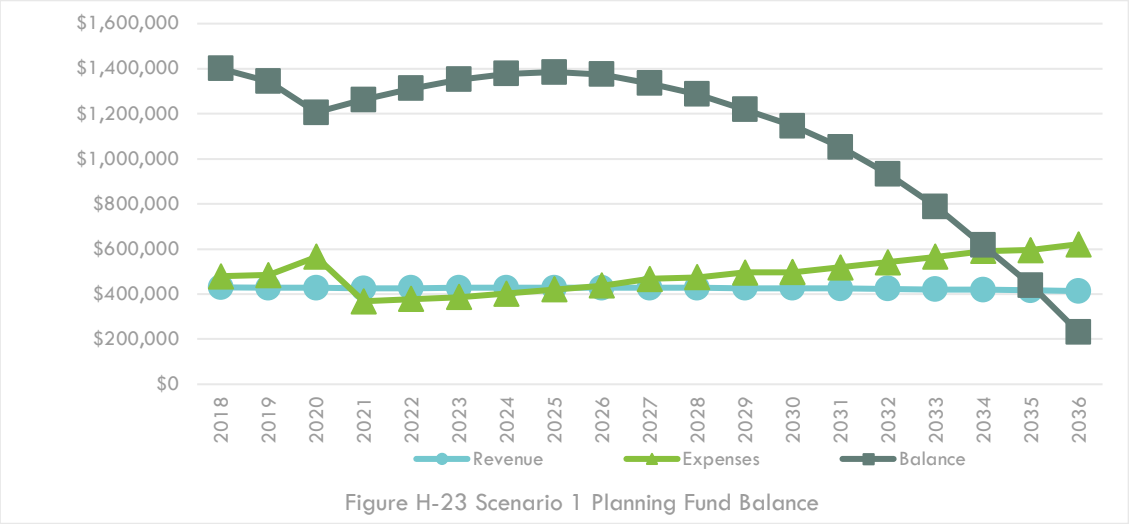


Figure H-23 Scenario 1 Planning Fund Balance

SCENARIO 2

Under this scenario the disposal fee increases to $1.50/$2/$1.50. With this level of revenues the SWMD will need to reduce expenditures to the County Health Departments, Sheriff Departments and Meigs County Soil and Water. Beginning in 2021, Health Department allocations decrease to $14,000 for Meigs and Vinton County and $16,000 for both Jackson and Gallia County. Sheriff and Meigs County Soil and Water allocations decrease to $10,000 each. In 2030 allocations need to drop to $0 to remain financially solvent.

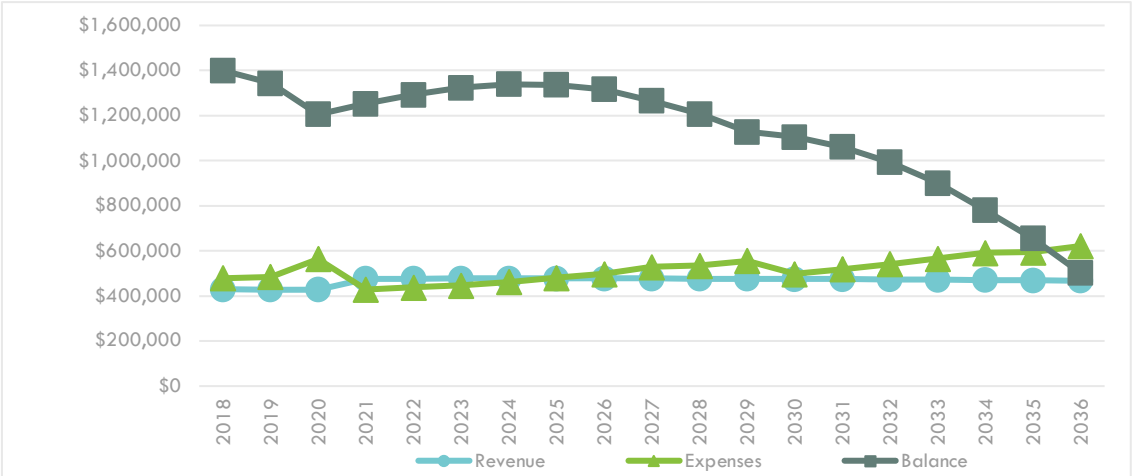


Figure H-24 Scenario 2 Planning Fund Balance

SCENARIO 3

Under this scenario the disposal fee remains $1/$2/$1 and SWMD levies a $0.35 generation fee. With this level of funding expenditures to the County Health Departments, Sheriff Departments and Meigs County Soil and Water end at the end of 2023.

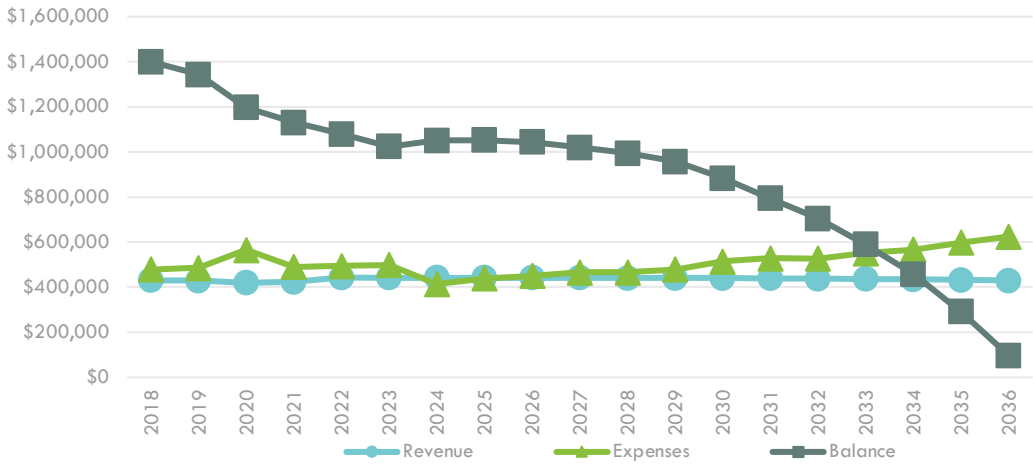


Figure H-25 Scenario 3 Planning Fund Balance

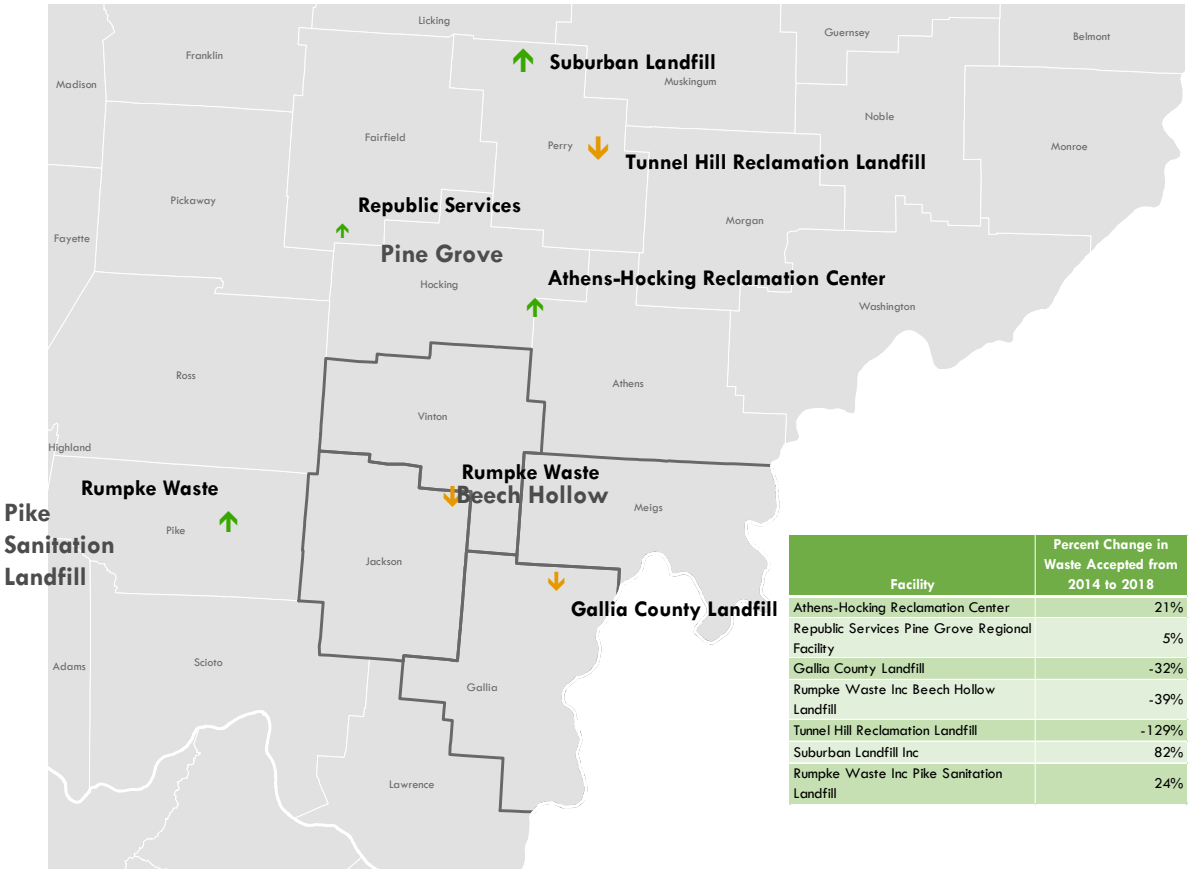
10. Regional Analysis

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

a. Evaluation

WASTE IMPACTS

Regionally the SWMD has been impacted by the landfill wasteshed. Wasteshed is a term used in the materials management field to describe where, and how, materials 'flow' throughout a given geographical area. Much like a watershed, waste is not confined to city or county boundaries and can flow along multiple channels. Unlike water however, the flow of waste is based around economic drivers, the presence of facilities, roads and highways, and contracts between haulers and processors. In 2014 and years prior, landfill waste flows from other solid waste districts were being disposed in-district at the Beech Hollow Landfill. Since 2014, the SWMD is tracking a decrease in the out-of-district waste disposed at Beech Hollow. Figure H-26 depicts the percent change in waste accepted at regional landfills. Beech Hollow and Gallia County landfills report decreases in waste accepted while Pike County Landfill and Athens Hocking Reclamation Center report increases.



Facility	Percent Change in Waste Accepted from 2014 to 2018
Athens-Hocking Reclamation Center	21%
Republic Services Pine Grove Regional Facility	5%
Gallia County Landfill	-32%
Rumpke Waste Inc Beech Hollow Landfill	-39%
Tunnel Hill Reclamation Landfill	-129%
Suburban Landfill Inc	82%
Rumpke Waste Inc Pike Sanitation Landfill	24%

Figure H-26 Landfill Waste Disposal Changes

Historically, waste disposal at Beech Hollow was predominantly received from neighboring Ross Pickaway Highland Fayette and Lawrence Scioto Solid Waste Districts. Since 2014, the flows to landfills for final disposal changed. Disposal in Pike Sanitation increased by 24% and Beech Hollow decreased by 39%. Landfilled waste from Ross Pickaway Highland Fayette and Lawrence Scioto Solid Waste Districts is more recently being directed to Pike Sanitation Landfill. Pike Sanitation Landfill had a change in ownership in the fall of 2013 when it was acquired by Rumpke Waste.

Because of the SWMD's revenue fee structure the changes in disposal waste flows adversely impact the SWMD's budget. With Rumpke's ownership in both Beech Hollow and Pike Sanitation Landfills the SWMD is not expecting the out-of-district waste flows to return to Beech Hollow anytime soon. As of the end of 2018, Beech Hollow's permitted capacity is 80 years and Pike Sanitation's is 32 years. Since 2015, Pike Sanitation's available capacity is trending downward at a faster rate. Rumpke submitted a draft expansion permit for Pike Sanitation in 2019. The outcome of that permit will impact the waste flows. If the permit is granted the SWMD does not expect waste flow to come back to Beech Hollow. If, the permit is denied, waste may flow back to Beech Hollow.

The SWMD notes there is little differential in the fee structures among the district's with landfills. Thus, fee structures do not appear to be a driving factor in waste flows. Facility location and transportation costs are more likely the driving factors in the business decisions to which landfill is the final destination for waste.

Because of these regional impacts to the management of waste, the Policy Committee feels conservative estimates and forecasts will prepare the SWMD best as programs and fees are considered in this Plan Update.

DIVERSION IMPACTS

Currently the SWMD is not collaborating on opportunities with neighboring solid waste management districts. Since collaborations have not thoroughly been explored this analysis explores some of the SWMD's challenges and attempts to identify where regional opportunities for collaboration and partnerships could have shared synergies, benefits, unified efforts, and mutually beneficial financial outcomes.

Challenge: Cost for Drop-off Services

Except for Athens Hocking, regionally the costs for drop-off services are comparable. Athens Hocking drop-off costs are somewhat less. The drop-off services were contracted in 2018 and prior with a local non-profit Athens Hocking Recycling Center. Materials were also processed by the Athens Hocking Recycling Center MRF. In 2019, the collection service agreement changed to a private sector. Even though Athens Hocking collection contracts changed, the SWMD could explore crossing district boundaries for service provision and/or processing. Questions could be explored, such as: Could the Athens Hocking Recycling Center handle additional materials from the SWMD? If so at what service level and costs? Could a contract arrangement support the non-profit for services? Etc.

Challenge: Commercial/Institutional/Industrial Sector Diversion

In these four counties Gallia, Jackson, Meigs, and Vinton some regional stakeholders identified are large commercial employers, colleges and school districts, neighboring SWMD's, as well as the recycler in this area.

General Mills has a production facility in Jackson County and is a top employer in the area. They have ambitious sustainability goals that will impact their products packaging and recyclability. One of their goals is to have 100% recyclable packaging by 2030. Also, they want to have their production facilities be 100% zero waste to landfill by 2025. As General Mills has a production facility within this region, the initiatives led by General Mills has the ability to greatly impact the region. This facility is a part of the broader General Mills network and will be able to learn what the other facilities are doing. If General Mills is successful in their zero waste program, they could serve as a model for the rest of the region.[9] The SWMD could explore how to leverage a partnership or collaboration with a strong industry leader.

The University of Rio Grande and Rio Grande Community College has the goal to "reduce, reuse, and recycle" on campus. They work with Rumpke Waste and Recycling Services to offer their students single-stream recycling. Acceptable items include paper, magazines, newspapers, paperboard, cardboard, glass, plastic bottles & jugs, cartons, metals, glass bottles & jars. The University of Rio Grande could work with neighboring schools to benchmark how their recycling program compares to others and figure out

[9] https://www.generalmills.com/en/Responsibility/Sustainability/packaging-statement

ways to improve. Some universities in the surrounding areas include Ohio University that has campuses in Chillicothe, Ironton, and Athens, Hocking College, and Shawnee State University.

In a neighboring SWMD there is a company called Geo-Tech that processes plastics and turns them into reusable products. They are working towards a circular economy and take waste from markets including automotive, retail food packaging, optical media, and consumer electronics. Because of the close proximity, these counties can look to utilize these services.[10]

Other identified stakeholders in the region that may have a key interest and involvement in SWMD programs, problems, and solutions.

- Neighboring SWMD's
- Neighboring Soil and Water Conservation Districts
- Private service providers
- Non-profit organizations
- Chambers of Commerce

b. Conclusions/Findings

Collaboration is a process where people or organizations come together to solve problems with a common goal. Through the process of sharing differing perspectives, experiences and resources the SWMD could potentially expand opportunity and improve performance. Geographically and economically Appalachian Ohio has challenges that could benefit by regional solutions, if explored further. Joining forces and economies of scale, Appalachia districts may be able to explore best available technologies while implementing projects that individually would have been too expensive to develop for a single district.

Because of the funding structure waste flows impact the revenue stream. If the Policy Committee chooses to not increase fees, the SWMD will need to explore creative ways to divert more material.

Potential program collaboration areas could include:

- Collaborations for small regional collection and processing.
- Collaboration with universities to improve recycling programs.
- Working with General Mills to increase visibility in diversion programs and zero waste.

11. Population Analysis

The population in all 4 counties are following a decreasing trend line. Gallia, Jackson and Meigs Counties all decreased from 2010 to 2018 by 3%. During this same Vinton County's population decreased by 2% so that from 2010 to 2018 the combined population of the Counties declined by 3%. Over the same time period, the statewide population increased by 1.3%. Population in the 2015 Plan Update projected an increase of 2.6% from 2011 to 2018. Projections in the 2015 Plan Update were based on the Ohio Department of Development percent population change forecasted for 2010 to 2030.

Population factors into waste generation rate calculations and directly affects the rate. The calculation does not take into account the contributing factors for population growth such as: household income, educational attainment levels, people per household, and economic activity. Economic activity and population growth affect household

[10] http://www.geo-tech.com

income and household income impacts per capita waste generation; and higher income households tend to produce higher amounts of waste. However, higher income households tend to achieve higher recycling participation rates. These complex factors impact waste generation and dynamically occur over time. It's not so simple to say the decreasing population will decrease generation rates.

While population projections can gauge future demand for services, there are room for errors in projection calculations because of the difficulty associated with forecasting social factors. Based on historical generation rates, the SWMD does not anticipate major fluctuations or changes due to population.

12. Data Collection Analysis

Waste is generated by three sectors: residential, commercial and industrial. Waste source reduced, recycled, composted, incinerated, and disposed are measured to establish a baseline and determine waste generation, and measure recycling rates. Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Issues encountered when surveying include:

- Low participation rates,
- SWMD time commitment,
- Lack of response,
- Survey costs, and
- Errors in reported values.

The data collection process for each sector is described below.

Residential
The SWMD gathers data from service providers (including City of Jackson and Gallipolis), health departments, recyclers, and Ohio EPA annual published data.

Commercial
The SWMD gathers data from commercial businesses and Ohio EPA annual published data. Businesses surveyed are mailed a cover letter, survey, and postage-paid return envelope. Survey recipients are given the option to submit their completed surveys online or via email. Approximately two to three follow up requests are sent via e-mail or phone to contacts every two to three weeks. Follow up phone calls are placed to entities if data has not been submitted after receiving the final follow-up request via e-mail. The quantity of follow-up phone calls made to each survey recipient varies on a case-by-case basis. Non-responders are prioritized. The SWMD makes an effort to understand how materials are obtained and managed by entities that submit recycling information. To avoid double counting the SWMD strives to identify if there are any materials that might be reported by more than one entity. Surveys from previous years are not included in response rate statistics. Ohio EPA is providing the majority of usable recycling data. Only a fraction of commercial businesses are surveyed and an even smaller proportion contribute to the recycling data through the survey. The challenge of capturing accurate diversion data from businesses is evident after multiple years of surveying using mailed paper survey options.

Table H-11 benchmarks other solid waste management district response rates. Comparably, Clinton County is achieving a better response rate. Clinton County sends out post card notifications and hard copies to a smaller group of larger generating commercial businesses. Then focus is placed on follow up phone calls and emails which are time consuming but ultimately result in returned surveys.

Table H-11 Benchmarked District Survey Responses

District	Response Rate
GJMV	**8%**
Clinton County	22%
Belmont Jefferson	2%

Across the state of Ohio, many districts are challenged with low response rates. The SWMDs survey mechanisms are similar to other district survey mechanisms. The SWMD could consider a post card notification and making the survey available online. The SWMD could also log the follow up calls for tracking to gain better analysis.

Industrial

The SWMD gathers data by surveying the industrial sector businesses. The same survey procedure described for the commercial sector is also used for the industrial sector. The SWMD supports the Ohio Recycles Survey, a collaborative statewide recycling survey effort promoted by Ohio's solid waste management districts, the Ohio Council of Retail Merchants, the Ohio Chamber of Commerce, the Ohio Manufacturers' Association, and the Ohio Environmental Protection Agency (Ohio EPA). While this is survey formal is no longer maintained, the SWMD continues to use the survey form.

13. Education/Outreach Analysis

The 2015 Plan developed several education and outreach strategies to work towards the 2009 State Plan goals. The 2009 State Plan goals restructured the education and awareness goals with the intention of creating minimum standards for outreach programming but still allow for flexibility for localized outreach and education. The 2009 State Plan refocused the general "awareness" of recycling to changing behavior through outreach which also carries through in the 2020 State Plan. This analysis evaluates the SWMD's existing education, outreach and technical assistance efforts to determine:

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

GOAL 3: MINIMUM REQUIREMENTS

District Website

The SWMD maintains a website at www.gjmvrecycle.com. The website is a resource providing much of the information that residents would seek. The homepage is key to user navigation and has the ability to be updated regularly to reflect recycling services. The webpage provides an inventory of outlets for materials, drop-off program information (locations, materials accepted), backyard composting, scrap tire collections, and school-age children activities.

Conclusions/Findings:

- Use bold colors, fonts and graphics/photos that create a coherent visual to be carried across all communications.
- Keep layouts simple.
- Consider embedding interactive maps for drop-off site locations.
- Consider short less than 1-minute videos instructing how to recycle right.
- There is no listing for what commercial businesses should do with their recyclables.
- There is no listing for what industrial businesses should do with their recyclables.
- Add community recycling opportunities – curbside program information and links to communities.

Comprehensive Resource Guide

The website is a resource guide. In addition, the SWMD developed a hard copy print and mailed to all government entities, libraries, schools, churches, and civic organization in 2015. The SWMD updates the guide annually and maintains the latest copy at the District offices.

Conclusions/Findings:

- With the information provided on the internet a hard copy mailing was not found to provide additional outreach.

Inventory

An inventory of solid waste management options and recycling locations was developed and is annually updated. The inventory is located at District offices.

Speaker

The SWMD administration is streamlined to one employee, the Executive Director. The Executive Director serves the role to be available for speaking engagements.

Conclusions/Findings:

- Staffing levels limit the outreach engagements to all target audiences.

GOAL 4: OUTREACH AND EDUCATION

GJMV Recycles (Target Audience: Residents)

This program served as the campaign for education and outreach as the SWMD transitioned from district operated services to privately operated services for drop-off and curbside services. The SWMD branded "GJMV Recycles" to incorporate on all communication materials and marketing collateral.

Late 2014, just before the transition direct mail recycling information sheets were sent to commercial and industrial businesses, government agencies, chambers of commerce and school districts.

In addition to the education and outreach, SWMD staff:

- Supervises container service frequency.
- Ensures containers are adequately sized.
- Monitors open and illegal dumping.

Very little transition issues were noticed. Residents immediately began using the drop-off boxes. Some locations experience overflow and materials being left on the ground outside of the containers. The SWMD developed a banner and signs that are transportable and can be used at the various drop-off sites for additional information. GJMV continues the education at various sites.

A promotional campaign used is "Get Caught Recycling". Residents caught recycling are provided a restaurant gift card. This promotional campaign started in 2015 and continues. This campaign positively promotes recycling, allows the SWMD a chance to connect one-on-one with residents, reinforces the right way to recycle and promotes social influence.

Conclusions/Findings:

- Branding through the drop-off program expanded into other promotional items (t-shirts, pencils, etc).
- Get Caught Recycling is positive and well received.

Community Connections (Target Audience: Industries, Institutions and Commercial Businesses)
The purpose of this program is to build community relationships. This campaign is designed to offer services to the commercial and institutional sectors. Technical services is available:

- Help establish or improve apartment building recycling programs;
- Provide training to reinforce good recycling habits;
- Conduct workshops;
- Perform waste audits;
- Offer reduction assistance;
- Conduct recycling surveys;
- Present or speak at community/business meetings; and
- Connect community programs with other community programs to help close the loop.

In 2016, Make Wellston Beautiful Organization was provided recycling containers to divert waste for their summer recreation program.

Conclusions/Findings:

- A plan for releasing this campaign didn't come to fruition. Word-of-mouth and speaking engagements of the Executive Director are the main source of advertisement for this service. Lack of information about this program and services is a limiting factor.

Our Counties Our Future (Target Audience: Residents)
This campaign is designed to have several topics/themes relaying one overall message: Reduce Reuse Recycle. The goal is to change household behaviors by using persuasive arguments and social influence, two effective behavior change approaches. Persuasive arguments attempt to address poor attitudes with communicating social norms, showing accepted beliefs, and demonstrating specific actions. Social influence incorporates volunteers to assist at outreach events (example events: schools and county fairs). Additionally, the SWMD wants to create partnerships with community groups (boy scouts, garden clubs, 4-H, farmers, etc.) to promote the campaign message. This campaign is flexible to reach all target audiences.

The outreach to school age children is through school presentations and 4-H clubs. In 2015, outreach to school age children included a collaboration with the SWMD and both the Gallia County and Meigs County Soil and Water. Recycling presentations were given to 150 first grade students in Gallia County and 90 in Meigs County. Backpacks were provided to all student attendees. In 2016, 2017, and 2018, the SWMD targeted third graders in all schools throughout the district for school presentations. Meigs County Soil and Water continued to also provide presentations to first and third graders in Meigs County. Backpacks and pencils are provided to all student attendees. In 2015, 2016, 2017, and 2018, at all four county fairs, the SWMD sponsored the 4-H awards and provided SWMD logo T-shirts. In 2017, the SWMD also co-sponsored with Rumpke to present to pre-schoolers.

Residential outreach occurs through Facebook and special events. In 2015, resident outreach was provided in Vinton County through a collaboration with Vinton County Health Department. This included a Fall Litter Clean up event and paper shredding event. All participants received SWMD logo T-shirts. Facebook outreach is addressed in the "Go Green with GJMV" program.

Conclusions/Finding:

- Due to reduced levels of revenue receipts the development of collateral such as billboards and other marketing tactics planned were not developed and distributed.
- Collaborations with Health Departments and Soil and Water help promote the importance of landfill diversion and proper handling of materials.
- Staff levels limit the outreach to all target audience groups.
- Facebook postings could add waste reduction tips and could expand to the commercial and institutional sector. To increase Facebook traffic, add a link to the webpage and on all outreach collateral.

Go Green with GJMV (Target Audiences: all target audience groups)

Using social media is another outreach tool for reaching targeted audiences in all four counties. Facebook was created in 2016 and continues to grow. In 2020, the SWMD has 28 followers. The SWMD posts at least quarterly and posts events, recycling, and reuse information. Facebook is an outreach tool that is relatively easy and very cost effective for the SWMD.

Another social media tool available and considered is You Tube. You Tube channels offer the ability to develop SWMD content such as videos. After consideration the SWMD did not have the time to develop a channel and maintain. Efforts are focused towards Facebook.

Conclusions/Findings:

- Facebook is a two-way communication tool. The more personality and interaction the more followers will be drawn to the page. Using tactics such as contests and giveaways, factoids, multi-media, sharing links, inspirational quotes, trivia, questions will be asked for follower input, etc. will draw fans. The more interactive the more effective the tool is.

Outreach Coalition (Target Audience: Community and Elected Officials)

The intent of this program is to bring targeted audience members and stakeholders from each County together to work as one community. The SWMD set a goal to host "town meetings" to explain the purpose of the coalition and solicit volunteer participants. Once the coalition is formed members will meet regularly (at least quarterly) to brainstorm, share ideas and create campaigns that will address recycling, buying recycled content, composting, and market development.

Attempts to get this organized was complex and the SWMD didn't have the bandwidth to bring the stakeholders together. This outreach never got off the ground.

Schools (Target Audience: Schools)

The intent is to increase the containers at schools to expand recycling. Commingled containers are located at: Wellston City Schools, Vinton County Schools, Meigs Local School District, and University of Rio Grande. Schools contract with the private sector to provide service. Outreach to superintendents, principals, and school boards has mostly been conducted by private sector looking to expand recycling services. The SWMD will assist schools as needed with education and contract assistance.

Conclusions/Findings:

- Outreach was challenging for the SWMD because of lack of details about service costs. The SWMD found the private sector businesses offering the service provided the best outreach for recycling service.
- Expanding to all schools would be a target.

- It could be useful for the SWMD to connect with schools to make sure they have the tools on-site to recycle. Do they have education signs, do they need classroom bins, do cafeteria staff need training for materials to divert? Having these tools will ensure program success.

14. Processing Capacity Analysis

a. Evaluation

A MRF is a specialized facility that receives, separates and prepares recyclable materials for marketing to end-user manufacturers. Materials collected at the curb and through drop-off programs are sent to MRFs. Since 2014, the SWMD contracts with Rumpke of Ohio for collection and processing of the drop-off containers. As shown in Table H-12 there are several single stream MRFs available for processing.

Table H-12 MRF Processing Capacity

Material Recovery Facility	County	Type Ownership	Material Processed	Processing Capacity (tph)
Rumpke Recycling	Montgomery	Private	SS	14 tph
Rumpke Recycling	Hamilton	Private	SS	27 tph
Rumpke Recycling	Franklin	Private	SS	30 tph
Athens Hocking Recycling Center	Athens	Non-profit	SS	Processing capacity uncertain, processing about 25 tons per day

Notes: SS = single stream, MS = multi stream, tpy = tons per year, tph = tons per hour

Per private sector records, the majority of recyclables flows first to Rumpke Chillicothe. Rumpke Chillicothe is a buyback site which has the capability to transfer recyclables to either of the MRFs.

The Rumpke Recycling MRF located in Montgomery County is a Category III facility, which pre-sorts, compacts, and transfers recyclables. Once the material is sorted at the Dayton location, the materials are sent to other locations. The screened glass will be sent to a processor and the other materials will be sent to Rumpke's Cincinnati MRF, which processes 27 tones per hour. Rumpke processes glass bottles & jars, aluminum & steel cans, plastic bottles & jugs, mixed paper, cardboard, and cartons.

Athens Hocking Recycling Center is a non-profit material recovery facility which processes single stream recyclables.

APPENDIX I CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

A. Actions and Priorities

The 2015 Plan was developed to meet the 2009 State Plan goals. To fulfill the directives in Ohio Revised Code Section 3734.50 the SWMD's plan must demonstrate having strategies and programs in place to address all of the required goals. Appendices J and K show the SWMD's progress to meeting Goals 1 and 2 of the 2009 State Plan. In order to obtain approval from Ohio EPA for the solid waste management plan, SWMD must demonstrate being able to achieve either Goal 1 or Goal 2. The SWMD demonstrates adequate infrastructure to meet Goal 1.

The most hindering challenge to meeting the 2009 State Plan goals and other programming described in the 2015 Plan was lower than anticipated revenue receipts. Over 40% of the budget is to support drop-off programs which provide access to demonstrate compliance with Goal 1. To adjust for the decreased revenues other program budgets were cut. This ensured the necessary funding to support the drop-off infrastructure.

The evaluation performed in Appendix H helps the SWMD move forward in planning programs to implement for this 2021 Plan Update. From the identified strengths, challenges, and gaps the SWMD created a list of actions that could be addressed and a list of priorities that will be addressed in this 2021 Plan Update.

1. Actions (what could be addressed)
    - Improve survey responses by increasing follow up phone calls.
    - Develop an education campaign to address drop-off contamination.
    - Increase diversion by maintain drop-off programs and utilizing social media to encourage recycling.
    - Promote commercial business/institutions assistance (contract assistance, Ohio EPA's material exchange program, etc.) through the website and social media.
    - Promote food waste tracking systems in institutions by benchmarking successful programs and meeting one on one with institutions to present findings.
    - Hold HHW collection events.
    - Hold E-waste collection events.
    - Develop a resource guide to donations.
    - Offer grants to assist curbside recycling programs.
    - Increase social media reach by including Facebook on all SWMD communications including email tag line and on the webpage.
    - Develop a waste reduction campaign.
    - Support health departments.
    - Support sheriff departments and soil and water.
    - Assist schools in obtaining classroom recycling bins by seeking grants to assist with bins and looking for partnerships.
    - Explore grants available for schools and help apply.
    - Outreach to schools to survey gaps and brainstorm solutions for recycling.

2. Priorities

Not all of the actions identified will be listed as priorities to address in this 2021 Plan Update. Much of what can be implemented hinders on the budget to be able to implement. A small fee increase is planned however, program budgets need to remain lean to balance the budget through the planning period. Working from a budget estimate of roughly $422K annually the SWMD has identified the following as priorities to address in this Plan.

- Develop an education campaign to address drop-off contamination.
- Promote commercial business/institutions assistance (contract assistance, Ohio EPA's material exchange program, etc.) through the webpage and social media.
- Assist schools in obtaining classroom recycling bins by seeking grants to assist with bins and looking for partnerships.
- Explore grants available for schools and help apply.

B. Programs

1. Residential Recycling Infrastructure

Curbside Recycling Services

Non-Subscription Curbside Services

ID	Name	Start Date	End Date	Goal
NSC1	Gallia County, Gallipolis	1998	Ongoing	1 and 2

Gallipolis has a long history of recycling at the curb. Residents have access to weekly collection using an 18-gallon bin. Gallipolis curbside recycling program is a service provided to the residents through a private contracted service provider. A new service provider contract beginning October 1, 2019 provides an option of cart-based (65-gallon) recycling for a nominal cart rental fee. The recycling cart rental gets billed directly to the resident. Service costs (collection and processing) are included on the utility bill. Service is non-subscription; residents do not have a choice to opt out. The service provider developed a waste and recycling guideline flyer detailing all information for the program which is maintained on the City's webpage. When the service provider changed the city advertised in the newspaper on their Facebook page. Materials accepted include metal cans, plastic bottles, glass bottles and jars, paper, cartons and cardboard. Materials are collected in a single stream (commingled) all in one container.

Recycling tonnages increased each year since 2015 as shown in the table.

Year	Tons	Pounds/Capita	Pounds/Participating Household
2015	28	16	36
2016	37	20	47
2017	77	43	100
2018	289	162	375

Notes: Pounds per capita is calculated from total City population. Pounds per household is calculated from participating households.

In 2018 curbside recycling increased almost 4 times that reported in 2017 with the provision of 100 18-gallon curbside bins from the SWMD. Program is expected to continue through the planning period.

ID	Name	Start Date	End Date	Goal
NSC2	Jackson County, Jackson	2008	2020	1 and 2

City of Jackson residents have access to bi-weekly collection using an 18-gallon bin. The City provides collection service hauling recyclables to Rumpke in Chillicothe, Ohio. The City of Jackson did not charge a service for the curbside pickup. Service is non-subscription but residents must request a bin. Materials accepted include metal cans, plastic bottles, glass bottles and jars, paper, cartons and cardboard. Materials are collected in a single stream (commingled) all in one container.

Recycling tonnages increased each year except for 2018 as shown in the table.

Year	Tons	Pounds/Capita	Pounds/*Participating* Household
2015	302	96	594
2016	355	113	700
2017	364	117	717
2018	359	115	707

Notes: Pounds per capita is calculated from total City population. Pounds per household is calculated from participating households.

In 2017, the SWMD provided 200 18-gallon bins to the City. Since 2015, tracked household participation rate is holding at approximately 33% equating to 1,015 households serviced.

City of Jackson collects the materials and then pays a processing tip fee to a local MRF processor to process the materials. Each year the MRF processing tip fee has increased. It 2019 and early spring 2020 costs raised to a level that exceed the budget available to operate this program. City of Jackson curbside program ceased operations in May 2020.

Drop-off Recycling Locations

Full-Time, Urban Drop-offs

ID	Name	Start Date	End Date	Goal
Gallia County				
FTU2	Gallipolis Township, Silver Bridge Plaza	ongoing	2019	1 and 2
FTU3	Green Township, Rodney Marathon Station	ongoing	ongoing	1 and 2
FTU11	Green Township, High Road Towing & Truck Repair	2020	ongoing	1 and 2
Jackson County				
FTU4	Jackson City Maintenance Building	ongoing	ongoing	1 and 2
FTU5	Wellston City, GJMV office	ongoing	ongoing	1 and 2
FTU6	Wellston City, 93 North	ongoing	2020	1 and 2
FTU7	Wellston City, Wellston Ballfields	ongoing	ongoing	1 and 2
FTU10	Jackson City, Behind Police Station 199 Portsmouth	2020	ongoing	1 and 2
Meigs County				
FTU8	Village of Middleport, Across from Police Station Pearl Street	Ongoing, location moved here in 2020	ongoing	1 and 2
FTU9	Village of Pomeroy	ongoing	ongoing	1 and 2

Single-stream recycling drop-off containers serviced (collection and processing) by private contractor. SWMD pays for contract. Available for use 24/7. Materials accepted include: plastic bottles and jugs, glass bottles and jars, cans, paper, cartons, and cardboard.

The Gallia County Silver Bridge Plaza location was removed in the summer of 2019 because it was being used as a trash dumpster. Most of the open dumping at the sites is mattresses or other larger bulky items. Three other sites (Pomeroy, Wellston, and Coalton) frequently have issues with contamination. Recyclable materials are also getting left on the ground around the containers when containers are full. The SWMD uses education tactics of visible on-site signs and banners to deter contamination by educating on proper materials accepted at the site. The SWMD made temporary signs and rotates them around to the sites that are experiencing contamination and recyclables outside the containers. Banners were also made. The problem sites are then monitored to be evaluated for removal or relocation. The last course of action is to remove the site. In 2020, the Wellston, 93 North site was suspended because of contamination.

With the loss of the City of Jackson curbside program, the SWMD is providing another drop-off site to Jackson to accommodate the recyclables that were once collected at the curb. In addition, this site is needed to demonstrate access in Jackson County.

Drop-off site locations are subject to change at any time for unforeseen reasons or to maintain performance and reasonable costs.

Full-Time, Rural Drop-offs

ID	Name	Start Date	End Date	Goal
Gallia County				
FTR1	Walnut Twp, Cadmus Village, Township Garage	ongoing	ongoing	1 and 2
FTR2	Cheshire Township, Cheshire Village, Maintenance Building	ongoing	ongoing	1 and 2
FTR3	Mercerville, Guyan Township Trustee Building	ongoing	ongoing	1 and 2
FTR4	Rio Grande Village, Fire Dept	ongoing	ongoing	1 and 2
FTR5	Vinton Village, Fire Dept	ongoing	2020	1 and 2
FTR21	Gallipolis City, Senior Citizens Center	ongoing	ongoing	1 and 2
Jackson County				
FTR6	Coalton Village, corner of Church and Second	ongoing	ongoing	1 and 2
FTR7	Oak Hill Village, Piggly Wiggly	ongoing	ongoing	1 and 2
FTR22	Bloomfield Township, A&A Truck Stop 80 Dixon Rd	2020	ongoing	1 and 2
Meigs County				
FTR8	Chester Township, Chester Commons	ongoing	ongoing	1 and 2
FTR9	Columbia Township, Fire Department	ongoing	ongoing	1 and 2
FTR10	Rutland Township, Village Garage	ongoing	ongoing	1 and 2
FTR11	Salem Township, Salem Center Fire Department	ongoing	ongoing	1 and 2
FTR12	Sutton Township, Village of Syracuse Corner of Bridgeman & Second	ongoing	ongoing	1 and 2
FTR13	Sutton Township, Village of Racine Village, 301 S Third St	ongoing	ongoing	1 and 2
FTR14	Olive Township, Tuppers Plains Across from Eastern Local 5009 SR 681	ongoing	ongoing	1 and 2
Vinton County				
FTR15	Village of Hamden, Behind Village Hall	ongoing	ongoing	1 and 2
FTR16	McArthur Village, Vinton Industries	ongoing	ongoing	1 and 2
FTR17	Richland Township, Kemptons Lot	ongoing	2019	1 and 2
FTR18	Wilkesville Village, Old School Parking Lot Wilton Street	ongoing	ongoing	1 and 2
FTR19	Zaleski Village, Corner of Mill & Broadway	ongoing	ongoing	1 and 2
FTR20	Elk Township, Sr Citizens SR 93 North	2020	ongoing	1 and 2

Single-stream recycling drop-off containers serviced (collection and processing) by private contractor. SWMD pays for contract. Available for use 24/7. Materials accepted include plastic bottles and jugs, glass bottles and jars, cans, paper, cartons, and cardboard.

Several changes occurred to the full-time rural locations. Gallipolis' population fell below 5,000 which re-allocated the full-time location at Gallipolis City Senior Citizens Center to full time rural classification. Due to contamination issues the Kempton's Lot and Vinton Village Fire Department locations were removed and Village of Syracuse location was moved to a different location within the same community.

Drop-off site locations are subject to change at any time for unforeseen reasons or to maintain performance and reasonable costs.

2. Commercial/Institutional Sector Reduction and Recycling Programs

Name	Start Date	End Date	Goal
Community Connection	2016	Ongoing	2 and 4

This campaign is designed to offer services to the commercial and institutional sectors. Technical services available:

- Help establish or improve apartment building recycling programs – The SWMD is available to conduct cost benefit analysis to determine cost of recycling services. The SWMD has brochures, literature, etc to promote drop-off recycling.
- Provide training to reinforce good recycling habits – The SWMD is available to help train employees of commercial establishments on the proper recycling of materials.
- Conduct workshops – The SWMD is available to conduct workshops to businesses, groups, employees on composting, recycling, reuse, etc.
- Perform waste audits – The SWMD is available to conduct a waste audit to determine the areas a businesses can improve or begin recycling programs.
- Offer reduction assistance – The SWMD is available to assess businesses waste stream to determine areas for reducing waste.
- Present or speak at community/business meetings – The SWMD is available for speaking engagements.
- Connect community programs with other community programs to help close the loop – The SWMD is available to work with local businesses.

In 2016, the SWMD provided "Make Wellston Beautiful Organization" recycling containers to divert waste for their summer recreation program. Word-of-mouth and speaking engagements of the Executive Director are the main source of advertisement for this service. Lack of information about this program and services is a limiting factor resulting in minimal assistance to this sector.

This next plan cycle will be focused on promoting the services available. To promote the services offered, the SWMD will promote services on the Facebook page and add to the website a dedicated page describing commercial resources. The SWMD will include a self-waste audit that businesses can complete on their own and will add a link to Ohio EPA's Material Marketplace. The number of waste audits performed annually and presentations will be tracked. When the SWMD conducts the annual surveys effort to communicate about the Community Connection services will be offered to each business where follow up phone calls are needed.

3. Industrial Sector Reduction and Recycling Programs

Name	Start Date	End Date	Goal
Industrial Best Practices	2021	2026	5 and 4

Industries tend to be top leaders in environmental leadership, in fact for many it's an integral part of business behavior. The SWMD has a couple top industries within the district that have established environmental management systems with objectives, targets, monitoring and measurement, etc. The SWMD is establishing a goal to connect with one industry a year over the next 5 years to identify what sets them apart. The SWMD will use phone solicitation and known contacts to set up one-on-one meetings or phone interviews with key sustainability personnel at the industries. The SWMD is aiming to interview at least 4 businesses. Questions asked will relate to the sustainability measures, recycling goals, etc. The answers will form the basis of a best practice recycling guide for the local industrial businesses. The industrial best practices guide can be distributed to other local industrial business that would benefit by a guide and to also have as a ready resource on the webpage.

4. Restricted/Difficult to Manage Wastes

Name	Start Date	End Date	Goal
Restricted/Difficult to Manage Wastes Education/Information	Ongoing	Ongoing	6 and 4

The structure for this program is to provide education and information. The residents can find available outlets to divert or safely dispose materials on the website. The SWMD also educates on the safety of proper management of materials on Facebook. Fortunately, a number of outlets exist for motor oil, antifreeze, batteries, compact fluorescent lights (CFLs), electronics, and propane tanks. The SWMD receives phone inquiries for proper management of HHW and distributes literature at presentations. The SWMD plans to add education to purchasing more environmentally friendly products thus preventing the generation of HHW to the webpage and Facebook posts. Additionally, the SWMD has a backyard composting guide on the webpage.

5. Other

Name	Start Date	End Date	Goal
Annual District Report	Ongoing	Ongoing	2 and 5

Annually the SWMD surveys both the commercial and industrial sector as well as scrap businesses. In 2018, surveys were mailed to 54 commercial and scrap haulers and 15 industrial businesses.

Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Businesses surveyed are mailed a cover letter, survey, and postage-paid return envelope. Survey recipients are given the option to submit their completed surveys online or via email. Approximately two to three follow up requests are sent via e-mail or phone to contacts every two to three weeks.

Name	Start Date	End Date	Goal
Health Department Funding	Ongoing	2024	none

The County Health Departments funding was reduced in 2018. Health departments track and report their inspections and investigations. Types of reporting could include number of inspections (landfill, out-of-state waste); complaints filed; investigations conducted; expenditure of funds for program administration; prosecutions completed, fines/penalties levied; results/status of complaints, investigations, court proceedings. In 2018, Gallia,

Jackson, Meigs and Vinton reported the majority of funds were used for salaries. Approximately $3,000 was reported for nuisance investigations, clean ups and supplies. Gallia and Jackson Health Departments each received a higher amount of funds to offset the costs associated with landfill and out-of-state waste inspections.

In 2018 all combined departments reported 61 nuisances and 15 abatements. In addition, the health departments held tire collections if Ohio EPA grants were received. The health departments reported collecting the following tons of tires:

- Gallia County - 125 tons
- Jackson County - 3 tons
- Meigs County - 28 tons
- Vinton County - 15.34 tons

Funding is planned to reduce in 2020 and cease in 2024.

Name	Start Date	End Date	Goal
Litter Collection Funding	Ongoing	2024	none

Funding was reduced in 2018. Meigs County Soil and Water reported cleaning 17 dumps and 375 miles of roads and collecting 366 tires and 1,786 bags of trash. Meigs County litter collection crew spends 3 days a week picking up litter along County and Township roads. Additionally, Soil and Water provide education outreach in Meigs County. Educational events geared toward school aged children include recycling and litter prevention topics.

Funding is planned to reduce in 2020 and cease in 2024.

Name	Start Date	End Date	Goal
Sheriff Department Funding	Ongoing	2024	none

The sheriff department funding was reduced in 2018. Some of the programs/services that can be provided by the sheriff departments with these funds include: program administration, enforcement of illegal dumping and littering laws, illegal dump and litter cleanup, tire recycling collection/processing programs. Gallia, Jackson and Vinton county sheriff departments receive funding. In 2018, sheriff departments reported 94 complaints, 65 dumps cleaned and 344 man hours used.

Funding is planned to reduce in 2020 and cease in 2024.

APPENDIX J REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL 1

A. Residential Sector Opportunity to Recycle

The SWMD is using the standard demonstration established in the 2009 State Plan to show compliance with Goal 1. Demonstration involves assigning population credits to the opportunities. Generally, the most convenient programs that serve the largest populations receive the most population credits. Residential infrastructure credits for achieving Goal 1 include non-subscription curbside recycling, subscription curbside recycling, full-time urban drop-offs and full-time rural drop-offs.

The SWMD achieved Goal 1 in the reference year, demonstrating 90% access. *Format 4.0* limits the credit for infrastructure in a community to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve 100% of the residential population with access to recycling infrastructure. This limit affects the access credit demonstration for the SWMD. The Cities of Jackson and Wellston receive the full population credit with two drop-offs so cannot receive additional population credit for more than two drop-off recycling locations provided in their community.

Additionally, the SWMD must:

1) Demonstrate that the SWMD will meet the applicable standards established in the Format for the remainder of the planning period.
2) Calculate the solid waste reduction and recycling rate for the residential/commercial sector. If less than 25% in the reference year then demonstrate achieving annual increases in the solid waste reduction and recycling rate for the residential/commercial sector.
3) Demonstrate that commercial and institutional generators of solid waste have adequate opportunities to recycle solid waste.
4) Calculate the solid waste reduction and recycling rate for the industrial sector. If less than 66% demonstrate progress toward achieving Goal #2.
5) Demonstrate that the SWMD will encourage participation in available recycling infrastructure.
6) Demonstrate that the SWMD will maintain the required infrastructure throughout the entire planning period.

Technical elements of the demonstration include:

1) Components of the residential infrastructure must collect at least *5* materials from a specified list in the Format.
2) The SWMD must demonstrate that the commercial sector has adequate opportunities to collect at least *5* materials from a specified list in the Format.
3) The Format will specify the "credits" for various types of infrastructure. The amount of the credit assigned is dependent upon the type of recycling service being provided.
    - Non-Subscription Curbside: Credit the entire population of each community.
    - Subscription Curbside: Credit 25% of the community population.

- Full-Time Urban Drop-off: Credit 5,000.
- Full-Time Rural Drop-off: Credit 2,500.
- Part-Time Urban Drop-off: Credit 2,500.
- Part-Time Rural Drop-off: Credit 2,500.

4) The following minimum standards apply to drop-offs:
    - Residents can easily find and access the site.
    - All drop-off sites must provide a minimum of 6-cubic yards of capacity.
    - There are signs that are adequate to, at a minimum:
        i. Direct the public to the site or indicates the location of the site;
        ii. Lists the materials that are accepted; and
        iii. Provide days and hours of operation
    - The SWMD has made a reasonable attempt to meet the demand of the population for use of the drop-off site.
5) "Credit" for infrastructure in a community is limited to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve 100% of the residential population with access to recycling infrastructure.

The State Plan allows for multi-county SWMD's an alternative demonstration to meet Goal #1. The SWMD will use this alternate demonstration to show compliance with Goal #1. In this demonstration, the SWMD will demonstrate all of the following:

- Provide recycling opportunities to no less than 90% of the total residential population of the entire SWMD.
- Provide recycling opportunities to no less than 85% of the residential population in each individual county.

This alternative demonstration achieves a more cost-effective solution and eliminate low-performing drop-offs.

Technical Elements	Drop-offs
Easily accessible	All sites easily accessible.
Container Size	All containers 6-cubic yards.
Signage	All sites have signage.
Reasonable attempt to meet population demand	Yes
Materials	Paper, plastic bottles and jugs, glass, aluminum cans, steel cans, cartons

Table J-1 Opportunity to Recycle

ID #	Gallia	2018		2021		2026	
	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	Community Population	Population Credit
Non-subscription curbside							
NSC1	Gallipolis	3405	3405	3,323	3,323	3,193	3,193
Subscription curbside							
	none						
Full-time, urban drop-off							
FTU1	Gallipolis City, Senior Citizens Center	4798	5000	TWP population fell below 5000. This site classification is rural.			
FTU2	Gallipolis Township, Silver Bridge Plaza	4798	5000	Suspended. Site removed			
FTU3	Green Township, Rodney Marathon Station	5,451	5000	5,386	5000	5,279	5000
FTU11	Green Township, High Road Towing & Truck Repair	0	0	5,386	5000	5,279	5000
Part-time, urban drop-off							
	none						
Full-time, rural drop-off							
FTR1	Walnut Township, Cadmus Village, Township Garage	929	2500	918	2500	900	2500
FTR2	Cheshire Township, Cheshire Village, City Hall	956	2500	943	2500	921	2500
FTR3	Mercerville, Guyan Township Trustee Building	726	2500	717	2500	703	2500
FTR4	Rio Grande Village, Fire Dept.	2,048	2500	2,023	2500	1,983	2500
FTR5	Vinton Village, Fire Dept.	1,402	2500	Discontinued. Site removed.			
FTR21	Gallipolis Township, Gallipolis City, Senior Citizens Center			4,688	2500	4,510	2500
Part-time, rural drop-off							
	none						
Mixed municipal waste material recovery facility							
	none						
Total County Population		29,838		29,436		28,780	
Total Population Credit		30,905		25,823		25,693	
Percent of Population		104%		88%		89%	

ID #	Jackson	2018		2021		2026	
	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	Community Population	Population Credit
Non-subscription curbside							
NSC2	Jackson City	6233	6233	6177	-	6085	-
Subscription curbside							
	none						
Full-time, urban drop-off							
FTU4	Jackson City, Maintenance Building	6233	5000	6177	5000	6085	5000
FTU10	Jackson City, Behind Police Station 199 Portsmouth Street	-	-	6177	5000	6085	5000
FTU5	Wellston City, GJMV office	5509	5000	5460	5000	5379	5000
FTU6	Wellston City, 93 North	5509	5000	5460	Suspended Site Removed		
FTU7	Wellston City, Wellston Ballfields	5509	5000	5460	5000	5379	5000
Part-time, urban drop-off							
	none						
Full-time, rural drop-off							
FTR6	Coalton Village, corner of Church and Second	470	2500	467	2500	463	2500
FTR7	Oak Hill Village, Piggly Wiggly	1512	2500	1494	2500	1464	2500
FTR22	Bloomfield Township, A&A Truck Stop 80 Dixon Road	0	0	1102	2500	1085	2500
Part-time, rural drop-off							
	none						
Mixed municipal waste material recovery facility							
	none						
Total County Population			32,344		32,031		31,516
Total Population Credit			31,233		27,500		27,500
Percent of Population			97%		86%		87%

ID #	Meigs	2018		2021		2026	
	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	Community Population	Population Credit
Non-subscription curbside							
	none						
Subscription curbside							
	none						
Full-time, urban drop-off							
FTU8	Village of Middleport Across from Police Station Pearl Street	6117	5000	6032	5000	5891	5000
FTU9	Village of Pomeroy, SR7 & Hiland	6117	5000	6032	5000	5951	5000
Part-time, urban drop-off							
	none						
Full-time, rural drop-off							
FTR8	Chester Township, Chester Commons	2422	2500	2393	2500	2346	2500
FTR9	Columbia Township, Fire Department	1144	2500	1127	2500	1099	2500
FTR10	Rutland Township, Village Garage	1894	2500	1872	2500	1835	2500
FTR11	Salem Township, Salem Center Fire Department	1016	2500	1004	2500	984	2500
FTR12	Sutton Township, Village of Syracuse Corner of Bridgeman & Second	811	2500	807	2500	798	2500
FTR13	Sutton Township, Village of Racine, 301 S Third Street	650	2500	640	2500	624	2500
FTR14	Olive Township, Tuppers Plains Across from Eastern Local 5009 SR 681	1737	2500	1716	2500	1682	2500
Part-time, rural drop-off							
	none						
Mixed municipal waste material recovery facility							
	none						
Total County Population			22,984		22,698		22,230
Total Population Credit			27,500		27,500		27,500
Percent of Population			120%		121%		124%

ID #	Vinton	2018		2021		2026	
	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	Community Population	Population Credit
Non-subscription curbside							
	none						
Subscription curbside							
	none						
Full-time, urban drop-off							
	none						
Part-time, urban drop-off							
	none						
Full-time, rural drop-off							
FTR15	Village of Hamden, Behind Village Hall	857	2500	850	2500	837	2500
FTR16	McArthur Village, Vinton Industries	1646	2500	1627	2500	1594	2500
FTR17	Richland Township, Kemptons Lot	1697	2500	Suspended Site Removed.			
FTR18	Wilkesville Village, Old School Parking Lot Wilton Street	143	2500	141	2500	138	2500
FTR19	Zaleski Village, Corner of Mill & Broadway	269	2500	266	2500	260	2500
FTR20	Elk Township, Sr. Citizens SR 93 North	0	0	1546	2500	1523	2500
Part-time, rural drop-off							
	none						
Mixed municipal waste material recovery facility							
	none						
Total County Population		13,046		12,908		12,682	
Total Population Credit		12,500		12,500		12,500	
Percent of Population		96%		97%		99%	

Table J-1a Alternative Demonstration – SWMD total at least 90%.

	2018	2021	2026
Total County Population	98,211	97,074	95,208
Total Population Credit	102,138	93,323	93,193
Percent of Population	104%	96%	98%

In Gallia County the decline in population throughout the County resulted into a few adjustments with the access demonstration. Another location was added in Gallia County to be operational in 2020. Jackson County has an adequate number of drop-off containers to service the population but because of the "credit" limit the containers located in Wellston are not creditable. The three Wellston sites will remain to service the population even though

one is not creditable. Additionally, the City of Jackson's curbside program is ceasing in 2020. The SWMD added two drop-off locations in Jackson County in 2020.

With the additions in Gallia and Jackson in 2020 they still both fall below 90%. To meet access the SWMD demonstrates compliance with the Alternative Demonstration showing a cumulative SWMD access score of 90% and individual county access scores not less than 85%. See Table J-1a.

B. Commercial Sector Opportunity to Recycle

Table J-2 Demonstration of Commercial Opportunity to Recycle

Service Provider	Type of Recycling Service Provided	Cardboard	Newspaper	Mixed Paper	Steel Containers	Aluminum Containers
Rumpke Waste, Inc.	Hauler Collection	x	x	x	x	x
Waste Management	Hauler Collection	x	x	x	x	x

The SWMD obtains credit for commercial infrastructure to meet Goal 1 from recycling service providers/haulers that offer collection services to commercial/institutional generators throughout the county and buybacks operations/scrap yards located within the county. The following five minimum materials are collected: corrugated cardboard, newspaper, mixed paper, steel containers, and aluminum containers.

C. Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate
   As a requirement to achieving Goal 1 the SWMD must demonstrate that the SWMD did achieve a 25% residential/commercial waste reduction and recycling rate or will achieve annual increases in the reduction and recycling rate during the planning period. Appendix K calculates the residential/commercial solid waste reduction and recycling rate for the reference year and the planning period. The reference year rate is 12.4%, with the state goal established at 25%, thus the SWMD is striving to raise this rate over the planning period.

   If the SWMD could capture more data from the commercial sector the recycling rate would most likely calculate higher than demonstrated. Commercial data was obtained from reporting commercial surveys and Ohio EPA data efforts. The SWMD is limited in staff and resources to conduct commercial sector surveys. During this planning period a targeted survey effort will be made to capture more commercial sector information. Programs are described in Appendices I and L.

2. Industrial Waste Reduction and Recycling Rate
   As a requirement to achieving Goal 1 the SWMD must demonstrate that the SWMD did achieve a 66% industrial waste reduction and recycling rate in the reference year or will achieve annual increases in the reduction and recycling rate during the planning period. Appendix K calculates the industrial solid waste reduction and recycling rate for the reference year and the planning period. The reference year rate is 0.7%, less than the state diversion goal of 66%, but anticipates small annual increases.

3. Encouraging Participation
   The SWMD will encourage residents and commercial generators to participate in available recycling infrastructure. Appendices I and L provide explanation of outreach/education programs anticipated for this planning period.

APPENDIX K WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL 2

Even though the SWMD is demonstrating compliance with Goal 1, it must complete this Appendix to demonstrate the progress towards achieving Goal 2.

Goal 2: Waste Reduction and Recycling Rates
The SWMD shall reduce and recycle 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 Residential Commercial Annual Rate of Waste Reduction

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate (%)	Per Capita Waste Reduction & Recycling Rate (ppd)
2018	***98,608***	***11,076***	***73,230***	***84,306***	***13.14%***	***0.62***
2019	97,332	11,216	72,265	83,481	13.43%	0.63
2020	96,920	11,505	72,265	83,770	13.73%	0.65
2021	96,508	11,808	72,265	84,073	14.04%	0.67
2022	96,096	12,123	72,265	84,388	14.37%	0.69
2023	95,684	12,453	72,265	84,718	14.70%	0.71
2024	95,272	12,798	72,265	85,063	15.05%	0.74
2025	94,860	13,158	72,265	85,423	15.40%	0.76
2026	94,628	13,476	72,265	85,741	15.72%	0.78
2027	94,396	13,513	72,265	85,778	15.75%	0.78
2028	94,164	13,552	72,265	85,817	15.79%	0.79
2029	93,932	13,590	72,265	85,855	15.83%	0.79
2030	93,700	13,630	72,265	85,895	15.87%	0.80
2031	93,452	13,671	72,265	85,936	15.91%	0.80
2032	93,204	13,712	72,265	85,977	15.95%	0.81
2033	92,956	13,754	72,265	86,019	15.99%	0.81
2034	92,708	13,797	72,265	86,062	16.03%	0.82
2035	92,460	13,841	72,265	86,106	16.07%	0.82
2036	92,330	13,886	72,265	86,151	16.12%	0.82

Source:
Population – Appendix C, Table C-1
Recycled – Appendix E, Table E-4 and E-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated
Per Capita Waste Reduction & Recycling Rate = (Recycled x 2000 lbs/ton) / (Population x 365 days)

GJMV did not meet the 25% residential/commercial waste reduction rate goal in the reference year, 2018. Unfortunately, historically the SWMD has not met the percentage goal, but rates have improved. In 2006 the rate measured 4% and is currently measuring 11%. Waste reduction rate is growing at a slow rate. The biggest

challenge facing the SWMD during this planning cycle is how to increase the waste reduction rate with a reduced budget.

For the residents, communities are not eager to implement curbside programs at the service level costs charged by the private sector. Additionally, the SWMD is not able to support or subsidize curbside programs. This pushes the reliance for residential access to the drop-off program. The SWMD's educational and outreach efforts encourages residents to use the drop-offs and increases are measured (see Appendix H). Challenges of right-sizing service (number of containers and service frequency at each site) is an ongoing process. The SWMD is continually working with the service provider to address issues.

The commercial retailers located in the counties are not tracking data and/or not reporting the data in the annual surveys. Data collection efforts from Ohio EPA greatly contributed to the increased waste reduction rate but there is no requirement for generators to track their diversion efforts. Another factor could be lack of recycling by the commercial base. The SWMD did not conduct a rate analysis for private sector commercial services but service level costs could be another factor for lack of increased waste reduction rates.

The drop-off education and the commercial sector data collection are two program areas the SWMD is strategizing efforts to increase the waste reduction rate (see Appendix I and L). The SWMD projects slight increases in the recycling rate through the planning period.

Table K-2 Industrial Annual Rate of Waste Reduction

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Non-Recyclable Waste	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2018	***24,236***	***3,240,682***		***3,264,918***	***0.74%***
2019	24,127	3,214,365		3,238,492	0.75%
2020	24,018	3,188,263		3,212,281	0.75%
2021	23,910	3,162,372		3,186,282	0.75%
2022	23,803	3,136,691		3,160,494	0.75%
2023	23,696	3,111,219		3,134,915	0.76%
2024	23,589	3,085,954		3,109,543	0.76%
2025	23,483	3,060,894		3,084,377	0.76%
2026	23,377	3,036,038		3,059,415	0.76%
2027	23,377	3,011,383		3,034,760	0.77%
2028	23,377	2,986,928		3,010,306	0.78%
2029	23,377	2,962,673		2,986,050	0.78%
2030	23,377	2,938,614		2,961,991	0.79%
2031	23,377	2,914,750		2,938,127	0.80%
2032	23,377	2,891,081		2,914,458	0.80%
2033	23,377	2,867,603		2,890,980	0.81%
2034	23,377	2,844,316		2,867,693	0.82%
2035	23,377	2,821,219		2,844,596	0.82%
2036	23,377	2,798,308		2,821,686	0.83%

Source:
Recycled – Appendix F, Table F-4 and F-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated

The waste reduction rate for the industrial sector in the reference year 2018 is 0.74%. This waste reduction rate includes wastes from the captive landfills. If the SWMD excluded the captive landfills the waste reduction rate is 26%. The SWMD did not meet the 66% goal in the reference year but is projecting slight increases throughout the planning period.

Over 90% of industrial waste disposal is a result of byproduct pollution control measures at the power companies located in the SWMD. At this time this landfilled waste is unrecyclable thereby making it impossible for the SWMD to demonstrate compliance with the industrial sector goal.

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

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2018	***35,312***	***3,313,911***	***3,349,223***	***1.05%***
2019	35,342	3,286,630	3,321,973	1.06%
2020	35,524	3,260,528	3,296,051	1.08%
2021	35,718	3,234,637	3,270,355	1.09%
2022	35,926	3,208,956	3,244,882	1.11%
2023	36,149	3,183,484	3,219,633	1.12%
2024	36,387	3,158,219	3,194,606	1.14%
2025	36,641	3,133,159	3,169,800	1.16%
2026	36,853	3,108,303	3,145,156	1.17%
2027	36,891	3,083,648	3,120,538	1.18%
2028	36,929	3,059,193	3,096,122	1.19%
2029	36,968	3,034,938	3,071,905	1.20%
2030	37,007	3,010,879	3,047,886	1.21%
2031	37,048	2,987,015	3,024,063	1.23%
2032	37,089	2,963,346	3,000,435	1.24%
2033	37,131	2,939,868	2,976,999	1.25%
2034	37,174	2,916,581	2,953,755	1.26%
2035	37,218	2,893,484	2,930,701	1.27%
2036	37,263	2,870,573	2,907,836	1.28%

Recycled – Appendix F, Table F-4 and F-5 and Appendix E, Table E-4 and E-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated

APPENDIX L MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS

A. Minimum Required Education Program

District Website

The SWMD maintains a website at www.gjmvrecycle.com. The website is updated by district staff as program changes occur. Planned website changes include:

- Add commercial business assistance dedicated information.
- Add community recycling opportunities – curbside program information and links to communities.

Comprehensive Resource Guide

The website as well as the solid waste management plan serve as a resource guide. In addition, the SWMD developed a hard copy print resource guide in 2015. This will be updated every 5 years and be available at SWMD offices. Goal 6 of the 2020 State Plan requires SWMD's to provide strategies to manage wastes that are restricted from disposal in solid waste facilities. These materials include scrap tires, yard waste and lead-acid batteries. Additionally, Goal 6 requires SWMD's provide strategies to address HHW and end of-life/obsolete electronic devices. Strategies the SWMD uses is to provide a list of outlets (found in this resource guide) available and education on alternative products.

Inventory

An inventory of solid waste management options and recycling locations was developed and is annually updated. The inventory is located at District offices and on the website. This inventory also lists available recovery outlets for scrap tires, yard waste, lead-acid batteries and electronic devices.

Speaker

The SWMD administration is streamlined to one employee, the Executive Director. The Executive Director serves the role to be available for speaking engagements.

B. Outreach and Education – Outreach Plan and General Education Requirements

As prescribed by the 2020 State Plan, each SWMD will provide education, outreach, marketing, and technical assistance regarding education and reuse through an outreach and marketing plan. Per *Format 4.0* the outreach and marketing plan needs to have the following components:

1. Five target audiences as identified in Ohio EPA Format 4.0.
2. Follow basic best practices when developing and selecting outreach programs.

3. Outreach priority.
4. Education and outreach programs to all appropriate audiences in the context of the priority using social marketing principles and tools.

The outreach and marketing plan needs to demonstrate these best practices

- Demonstrate that the SWMD will address all of the five target audiences;
- Explain how the SWMD will align its outreach and education programs with recycling opportunities (both existing and needed); and
- Explain how the SWMD will incorporate principles and tools for changing behavior into the outreach and marketing plan.

To align with *Format 4.0* the SWMD's existing programs were organized by target audience. Some of the existing SWMD programs cross several target audiences.

Education/Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions and Commercial Businesses	Communities and Elected Officials
GJMV Recycles	X			X	X
Community Connections			X	X	X
Our Counties Our Future	X	X			
Go Green with GJMV	X	X	X	X	X
Outreach Coalition					X
Schools		X		X	

Name	Start Date	End Date	Goal
GJMV Recycles	Ongoing	Ongoing	4

With the infrastructure in place this education and outreach campaign is needed to educate residents on proper recycling and how to 'recycle right'. Branding reinforces the SWMD services and serves as the 'go-to' for education needs. As an incentive the SWMD will continue to use "Get Caught Recycling" to catch residents in the act of recycling. This provides a chance to connect one-on-one with residents, reinforces the right way to recycle and promotes social influence.

At least monthly the SWMD will post on Facebook how to 'recycle right'. The SWMD will use basic social marketing principles to persuade people to recycle. The idea is to use people's desire to fit in as a way of getting them to adopt behaviors their neighbors are doing.

To incorporate additional best practices to this program, the SWMD will use Get Caught Recycling for more outreach engagement with the residents. Photos will be posted on social media outlets and a SWMD recycling fact sheet will be shared. Posting Get Caught Recycling photos at least quarterly will visibly show residents recycling and influence behavior change. The SWMD will research types, styles and cost of various at home recycling containers available to see if the budget supports including those in the incentive promotions for getting caught recycling.

The SWMD will also rotate the temporary signs and banners around to the sites to encourage proper recycling.

Success is based on contamination reports from the service provider, visual site inspections of drop-offs, and increases in residential recycling rates.

Name	Start Date	End Date	Goal
Community Connection	Ongoing	Ongoing	4

The purpose of this program is to build community relationships. This campaign is designed to offer services to the commercial, institutional and industrial sectors. The following are technical services the SWMD has readily available:

- Help establish or improve multi-family recycling programs;
- Provide training to reinforce good recycling habits;
- Conduct workshops;
- Perform waste audits;
- Offer reduction assistance;
- Present or speak at community/business meetings;
- Connect community programs with other community programs to help close the loop.

In 2016, Make Wellston Beautiful Organization was provided recycling containers to divert waste for their summer recreation program. In 2015 and 2017 recycling presentations, backpacks and pencils were provided to church ministries.

Each service available is an opportunity to interact with the businesses to message about recycling and SWMD programs. A focus will be towards promoting and disseminating information about this program to address the awareness gap. A dedicated business services page will be added to the website. This page will identify the services offered to businesses. Services will be promoted annually when business surveys are conducted. Promotion will be added to Facebook. Presentations and engagements with commercial, institutional, and industrial sectors will be tracked.

Name	Start Date	End Date	Goal
Outreach Coalition	Ongoing	Ongoing	4

Bringing community leaders and groups together proved challenging. Immediate issues in the counties requiring community leader focus and management is resulting in diversion issues falling lower on the list. A champion is needed to help bring these leaders together in this format. Staffing resources at the SWMD was not sufficient to organize, facilitate, and follow-up for meetings. Instead the SWMD communicated directly with community leaders regarding recycling services to explore pain points. Both Jackson and Gallipolis received grant funding for curbside recycling bins as a result of this direct communication.

The SWMD is a resource for each political jurisdiction and their residents. The SWMD will connect with each political jurisdiction to encourage adding a link to the SWMD's website either on their webpage or Facebook. The SWMD will annually monitor the progress for adding the link.

Brainstorming how best to reach community leaders for the 2021 Plan Update, the SWMD feels direct communication is the best tactic. It is difficult to set a communication schedule. Communication happens organically but the SWMD commits to contact four communities every quarter to discuss diversion and goals, if none have reached out to the SWMD.

Name	Start Date	End Date	Goal
Our Counties Our Future	Ongoing	Ongoing	4

Changing behavior is challenging because not everyone has the same trigger for bringing about change. Limited staffing requires focus on one area at a time because there is not enough staff bandwidth to reach all issues. Past efforts focused on school age children. Presentations were provided to elementary students to show where trash destined for the landfill goes and benefits of recycling. Partnerships with County Soil and Water Conservation Districts helped spread the message. Over 200 students participated in the presentations and hands on activities each year since 2015.

Outreach was also provided through the clean-up events. Typically, the volunteers (usually from civic groups) are provided educational information and then this is distributed to residents participating in the events. The SWMD uses T-shirts and other promotional item handouts. The clean-up events occur through partnerships the SWMD has developed over the years. These partnerships will continue to be nurtured to explore more opportunities for residents.

Billboards, advertisement media, and display boards are more costly forms of advertising. These are not utilized and will not be used in this planning cycle unless costs for these types of media reduce. Promotional items are well received (re-useable cloth grocery bags, t-shirts, backpacks, pencils, etc.) and re-affirm SWMD brand awareness.

The SWMD will continue this program. Focus will continue to provide education to school-age children as well as the civic groups. Following the civic group presentations, the SWMD will incorporate a questionnaire to determine barriers to recycling. Understanding these barriers is needed to frame how to motivate audiences in these groups to recycle or reduce waste. Based on responses the SWMD will develop a pilot project using community based social marketing. A potential target group is the 4-H groups. The SWMD will meet with the local 4-H groups and conduct a survey to identify the motivations and determine how best to reach the audience. They may need projects, curriculum, craft ideas, etc. The SWMD will document outreach and any projects incorporated. The pilot project depends on the barriers and cannot be designed at this time.

Name	Start Date	End Date	Goal
Go Green with GJMV	Ongoing	Ongoing	4

The SWMD was looking to launch a social media campaign through the use of Facebook and You Tube. After research about the platforms, the SWMD settled on Facebook as the preferred platform for reaching a greater audience. In year 2016, the SWMD started a Facebook platform for communication. Facebook is a new platform for the SWMD. The type of resource this platform is, is continually being vetted and learned. To date the SWMD has 29 followers. Posts typically focus on events with the occasional recycling message.

Facebook followers is growing but for this next planning cycle the SWMD would like to promote the site more to increase the number of followers. During this plan update efforts will be made to increase Facebook followers. The following tactics will be deployed:

- Add social media button to the SWMD webpage.
- Add a link to outgoing email signature block.
- Contact the Soil and Water Conservation Districts to explore cross promoting.
- Potentially run a Facebook ad targeting people who are actively on Facebook.

Additionally, the SWMD will add more types of postings to the page to include source reduction, food waste reduction, back yard composting, recycle right, get caught recycler awards, etc.

The social media campaign is to increase the number of Facebook followers by 10% by year 2024. The SWMD will track when Facebook link is added to the webpage, the attempts to cross promote with any agencies, and any Facebook ads. Tracking of the number of followers will be measured after each to determine impacts.

The type of posts to Facebook will also direct residents to social norms of recycling, composting, and reducing waste. Messages will be tailored to demographics of the counties.

Name	Start Date	End Date	Goal
Schools	Ongoing	Ongoing	4

The 2015 Plan Update found a lack of infrastructure for school recycling. This program was designed to engage with superintendents, principals, and school boards to begin recycling services at schools in all 4 counties. Transitioning to drop-off service with the private sector required more time and effort with political leaders and residents. Then in 2016 the staff decreased to one which limited the ability to implement this program as envisioned. While the SWMD was not able to reach all the stakeholders the private sector service providers increased their efforts to capture more businesses. The following table shows how many schools in the 4 counties have recycling service.

County	Total number of Schools	Total number of Schools with recycling services
Gallia	13	0
Jackson	11	3
Meigs	8	3
Vinton	5	2

Through this planning period superintendents, principals, and school boards will continue to be targeted for discussions regarding recycling services. Additionally, getting bins in the classrooms so students can partake in the recycling program is a next step goal.

The SWMD anticipates spending a lot of time outreaching with direct calls to set up meetings with school stakeholders. The goal is to connect with 3 schools a year. For those schools already implementing recycling services, the SWMD will explore available grants to seek bins for classrooms.

OUTREACH PRIORITY – RECYCLE RIGHT

The SWMD has an established network of drop-off recycling locations, and residents are using the drop-offs. However, the SWMD is finding too much trash in the collection receptacles. Outreach priority is on the residential sector to recycle more of the correct materials and less trash.

- Create a baseline measurement on number of sites that have issues.
    - SWMD identify locations.
    - SWMD work with hauler to provide tonnage estimate for locations.
- Work with MRF to determine top contamination material.
- Conduct onsite interviews with recycling users at locations.
- Based on interview data, create strategic recycle right communications campaign.
- Implement recycle right campaign for 3 months.
- Measure impact of campaign by hauler providing tonnage estimates and MRF identifying top contamination material.

Outreach priority will begin in 2021. The SWMD anticipates this campaign will need to be implemented yearly to reinforce messaging.

APPENDIX M CAPACITY ANALYSIS

This appendix provides the SWMD's strategy for ensuring access to solid waste management facilities. While the primary focus of this strategy is ensuring access to adequate disposal capacity, the SWMD will also ensure that it has access to processing capacity for recyclables, and if needed, access to transfer facilities.

A. Access to Publicly-Available Landfill Facilities

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

Facility	Location	Years of Remaining Capacity
Franklin County Sanitary Landfill	Franklin County, OH	44
Rumpke Waste Inc Hughes Rd Landfill	Hamilton County, OH	8
Pike Sanitation Landfill	Pike County, OH	32
Wood County Landfill	Wood County, OH	7
Athens Hocking C&DD/Reclamation Center Landfill	Athens County, OH	46
Suburban Landfill, Inc	Perry County, OH	55
Pine Grove Regional Facility	Fairfield County, OH	65
Beech Hollow Landfill	Jackson County, OH	80
Gallia County Sanitary Landfill	Gallia County, OH	26

Source(s) of Information:
2018 Ohio Facility Data Report Tables. October 29, 2019. Table 13. Publicly Available Landfill Remaining Capacities and daily Waste Receipt Amounts in 2018

The landfills listed in Table M-1 above combined accepted more than 92% of the SWMD's MSW waste that was disposed in landfill facilities in 2018. Beech Hollow Landfill accepted 88%, Pike Sanitation Landfill accepted 8% and Gallia County Landfill 6%. All of these facilities show adequate remaining capacity to continue accepting waste throughout the planning period. Therefore the SWMD did not conduct a regional capacity analysis or complete Table M-2.

B. Capacity at Private Landfill Facilities

Table M-3 Remaining Operating Life of Privately-Available Landfills

Facility	Location	Years of Remaining Capacity
Kyger Creek Landfill	Gallia County, OH	41
Gavin Plant Residual Waste Landfill	Gallia County, OH	4

Source(s) of Information:
2018 Ohio Facility Data Report Tables. October 29, 2019. Table 13.1. Captive Landfill Remaining Capacities and daily Waste Receipt Amounts in 2018

The SWMD has no reason to suspect a facility will close in the next eight years.

APPENDIX N EVALUATING GREENHOUSE GAS

The Waste Reduction Model (WARM)

WARM is a tool that US EPA developed to quantify the effects of waste management decisions on greenhouse gas emissions. The model demonstrates the benefits of alternative management technologies over traditional management methods. The most recent version of WARM was made available in March 2015. A SWMD can use a different but comparable modelling program to calculate greenhouse gas emission reductions provided the model accounts for waste management and recycling activities.

WARM is intended to compare municipal solid waste management scenarios. Therefore, use data for only the residential/commercial sector.

Each SWMD will run WARM twice and include the results in the solid waste management plan:

- For the first run, enter all quantities recycled in the reference year in the landfill column (for the baseline year) and for the alternative scenario, enter the quantities recycled in the tons recycled column.
- For the second run, enter the quantities of residential/commercial material recycled in the reference year in the tons recycled column (for the baseline scenario), and then enter the quantities projected to be recycled in the sixth year of the planning period in the alternative scenario column.

Include printouts of the results for both runs in the solid waste management plan.

A. GHG Measurement

Gases that trap heat in the atmosphere are called greenhouse gases. The main greenhouse gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Each gas's effect on the climate depends on how much is in the atmosphere, how long they stay in the atmosphere, and how strongly they impact the atmosphere. Disposal and treatment of materials results in greenhouse gas emissions from collection, transport, landfill disposal, manufacture, etc.

The most common way to measure climate impact of waste management is to state the impact in carbon equivalents. Since waste reduction results in the reduction of several types of greenhouse gases, the conversion to a standard carbon equivalent (CO_2E) measurement allow for a total quantification of the impact. It also provides a standard language for people to compare these actions to others such as transportation and energy conservation efforts. A carbon equivalent CO_2E is simply the amount of CO_2 that would have the same global warming potential as the waste reduction impacts, when measured over a specified timescale. The international reporting standard for CO_2 emissions is metric tons, so carbon dioxide amounts may be reported as $MTCO_2E$, metric tons of carbon equivalent.

Produced by US EPA, the Waste Reduction Model (WARM) was designed to help solid waste planners, municipal leaders, and other stakeholder organizations track and report greenhouse gas emissions reductions. It is a database tool that helps decision makers predict the strategies that most reduce GHG emissions. The WARM model calculates GHG emission across six waste management modalities (source reduction, recycling, composting,

anaerobic digestion, combustion, and landfilling). Modeling different combinations of waste management practices sees which approach leads to the least GHG entering the atmosphere.

This report shows the metric tons of carbon dioxide equivalent ($MTCO_2E$), which describes the global-warming potential of all common greenhouse gases as an equivalent of carbon dioxide. Negative values indicate GHG savings and positive values indicate increasing emissions. In 2018, the SWMD generated 82,398 tons of MSW from the residential and commercial sectors, landfilled 89% (73,230 tons), recycled 11% (9,011 tons), and composted less than 1% (157 tons).

EPA's estimates of the GHG-related impacts of composting organics was developed within the framework of the larger WARM development effort and therefore, the presentation of results, estimation of emissions and sinks, and description of ancillary benefits is not comprehensive. One of the limitations is the lack of data and resources thus analyzing a small sampling of feedstocks and specific application scenarios for compost. A full range of soil conservation and management practices are not considered. This makes using the WARM model challenging for modeling GHG in some materials. HHW and batteries were excluded because of lack of material category and no relevant proxy.

Total GHG Emissions from Baseline (Year 2018)	(26,353) MTCOE
Total GHG Emissions from Alternative (Year 2026)	(43,070) MTCOE
Incremental GHG Emissions	(16,717)

This is equivalent to:

- Removing emissions from 3,549 passenger vehicles
- Conserving 1,881,023 gallons of gasoline
- Conserving 696,527 cylinders of propane used for home barbeques

APPENDIX O FINANCIAL PLAN

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the District will obtain money to pay for operating the District and how the District will spend that money. For revenue, the solid waste management plan identifies the sources of funding the District will use to implement its approved solid waste management plan. The plan also provides estimates of how much revenue the District expects to receive from each source.

A. Funding Mechanisms and Revenue Generated

In this section, all of the funding mechanisms expected to be used by the SWMD are discussed. In addition, anticipated revenues from each source listed below are projected for each year of the planning period.

5. Disposal Fee

Table O-1 Disposal Fee Schedule and Revenue (in accordance with ORC Section 3734.57(B))

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	$2	$1	$68,972	$506,064	$36,083	$611,119
2015	$1	$2	$1	$70,198	$494,471	$40,318	$604,987
2016	$1	$2	$1	$69,780	$353,934	$43,546	$467,261
2017	$1	$2	$1	$68,066	$280,652	$28,250	$376,969
2018	***$1***	***$2***	***$1***	***$70,810***	***$305,463***	***$30,395***	***$406,667***
2019	$1	$2	$1	$75,926	$300,737	$27,571	$404,234
2020	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2021	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2022	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2023	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2024	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2025	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2026	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2027	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2028	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2029	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2030	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2031	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2032	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2033	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2034	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2035	$1	$2	$1	$69,565	$300,737	$27,571	$397,873
2036	$1	$2	$1	$69,565	$300,737	$27,571	$397,873

Source(s) of Information:
CY 2014-2018 revenues sourced from SWMD quarterly fee reports. All other amounts projected.
Sample Calculations:
Total Revenue from Disposal Fee (2014) = In District Fee + Out-of-District Fee + Out-of-State Fee
Total Revenue from Disposal Fee (2014) = $68,971.58 + $506,064.34 + $36,083.46 = $611,119

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 was generated – in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the levying SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed 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 ≥ $1.00 and ≤ $2.00;
- The out-of-district fee must be ≥ $2.00 and ≤ $4.00; and
- The out-of-state fee must be equal to the in-district fee.

Statue (Ohio Revised Code 3734.57(B)) allows for the SWMD to generate revenues by levying fees on any waste disposed in landfills located in the SWMD. There are two landfills in the SWMD, Gallia County Landfill and Beech Hollow Landfill. As presented in Table O-1, the SWMD's existing fee structure is: $1.00 per ton of solid waste in-district; $2.00 per ton of solid waste out-of-district; and $1.00 per ton of solid waste out-of-state.

Revenue from the in-district disposal fee over the past 5 years (2014-2018) increased 1%, out-of-district revenues decreased 11%, and out-of-state decreased 2%. Most of the out-of-district waste that landfills in the SWMD receive originates from adjacent solid waste management districts (Lawrence-Scioto and Ross-Pickaway-Highland-Fayette). When Rumpke purchased the Pike County Landfill in neighboring Pike County the SWMD noticed the decline in out-of-district waste. The SWMD will hold the out-of-district waste receipts constant at the 2019 quantity through the planning period. The SWMD does not anticipate waste receipts to return to landfills in the SWMD unless Pike County does not receive expansion permits. In-district waste volumes are projected to hold at the 2014 to 2018 average of approximately 69,565 tons. Out-of-state waste volumes are projected to hold at the 2019 level of 27,571 tons.

Historically the tiered solid waste disposal fees are the main funding source. This will remain the SWMD's main funding source throughout this plan update.

6. Generation Fee

In accordance with ORC 3734.573, a solid waste management district may levy fees on the generation of solid wastes within the SWMD. In order to support programming through the end of the planning period the SWMD is ratifying a $0.35 per ton generation fee scheduled to begin after plan ratification and approval by Ohio EPA of this 2021 Plan. The SWMD estimates 3 months of generation fee to be collected in 2021.

O-2 Generation Fee Schedule and Revenue

Year	Generation Fee Schedule ($ per ton)	Total Revenue from Generation Fee ($)
2014	$0	$0
2015	$0	$0
2016	$0	$0
2017	$0	$0
2018	$0	$0
2019	$0	$0
2020	$0	$0
2021	$0.35	$6,778
2022	$0.35	$27,111
2023	$0.35	$27,111
2024	$0.35	$27,111
2025	$0.35	$27,111
2026	$0.35	$27,111
2027	$0.35	$27,111
2028	$0.35	$27,111
2029	$0.35	$27,111
2030	$0.35	$27,111
2031	$0.35	$27,111
2032	$0.35	$27,111
2033	$0.35	$27,111
2034	$0.35	$27,111
2035	$0.35	$27,111
2036	$0.35	$27,111

Sample Calculations:
Total Revenue from Generation Fee (2022) = Generation Disposal Tonnage * $0.35
Generation Disposal Tonnage estimate = 95% of 2018 R/C landfilled + 2018 Industrial landfilled + Waste Transferred
$27,111 = ((65,875 tons + 8,307 + 7,445) * 0.95) * 0.35

7. Designation Fee

The SWMD does not receive revenues from designation fees.

O-3 Designation Fee Schedule and Revenue

Year	Designation Fee Schedule ($ per ton)	Total Designation Fee Revenue ($)
2014	n/a	n/a
2015		
2016		
2017		
2018		
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		

Year	Designation Fee Schedule ($ per ton)	Total Designation Fee Revenue ($)
2032		
2033		
2034		
2035		
2036		

8. Loans

The SWMD does not anticipate securing loans during this planning period.

O-4 Loans

Year Debt Was/Will be Obtained	Outstanding Balance	Lending Institution	Repayment Term (years)	Annual Debt Service ($)
n/a	n/a	n/a	n/a	n/a

9. Other Sources of District Revenue

Table O-5 Other Revenues and Other Revenue Sources

Year	Interest	Contracts	Recycling Revenue	Equipment Sold	Other	Total Other Revenue
2014	$36,497	$46,738	$32,370	$193,965	$0	$309,570
2015	$22,064	$0	$0	$0	$174,661	$196,726
2016	$22,093	$0	$0	$0	$0	$22,093
2017	$22,194	$0	$0	$0	$997	$23,191
2018	***$22,549***	**$0**	**$0**	**$0**	***$702***	**$23,251**
2019	$22,180	$0	$0	$0	$1,972	$24,152
2020	$20,909	$0	$0	$0	$0	$20,909
2021	$18,636	$0	$0	$0	$0	$18,636
2022	$17,604	$0	$0	$0	$0	$17,604
2023	$16,808	$0	$0	$0	$0	$16,808
2024	$15,934	$0	$0	$0	$0	$15,934
2025	$16,358	$0	$0	$0	$0	$16,358
2026	$16,387	$0	$0	$0	$0	$16,387
2027	$16,245	$0	$0	$0	$0	$16,245
2028	$15,868	$0	$0	$0	$0	$15,868
2029	$15,482	$0	$0	$0	$0	$15,482
2030	$14,892	$0	$0	$0	$0	$14,892
2031	$13,744	$0	$0	$0	$0	$13,744
2032	$12,360	$0	$0	$0	$0	$12,360
2033	$10,961	$0	$0	$0	$0	$10,961
2034	$9,182	$0	$0	$0	$0	$9,182
2035	$7,124	$0	$0	$0	$0	$7,124
2036	$4,540	$0	$0	$0	$0	$4,540

Source(s) of Information:
CY 2014-2018 revenues sourced from SWMD quarterly fee reports.
Sample Calculations:
Other Revenue Total = Interest + Contracts + Recycling Revenue + Amount + Other
Other Revenue Total = $36,496.77 + $46,738.10 + $32,370.12 + $193,964.87 + $0
Other Revenue Total = $309,569.86

Interest
Fund balance collects interest in a high-rate interest account. Interest is projected to decrease in annual increments as the fund balance draws down.

Contracts
Separate agreements held between the SWMD and the landfills for additional revenue based on waste disposal. The contract agreement came to an end in 2015. The 2015 allocation was recorded in "other" column in the quarterly fee reports which is why the last contract amount is recorded in the "other" column on Table O-5.

Recycling Revenue
The SWMD previously collected revenue from sale of recyclables when the District Recycling Center was operational. Recycling revenue is not projected during the planning period.

Equipment Sold
Revenues from sale of District Recycling Center equipment.

Other
Other revenue is not projected during the planning period.

10. Summary of District Revenues

Table O-6 Total Revenue (in accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573)

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue	Total Revenue
2014	$611,119	$0	$0	$309,570	$920,689
2015	$604,987	$0	$0	$196,726	$801,713
2016	$467,261	$0	$0	$22,093	$489,354
2017	$376,969	$0	$0	$23,191	$400,160
2018	**$406,667**	**$0**	**$0**	***$23,251***	**$429,919**
2019	$404,234	$0	$0	$24,152	$428,386
2020	$397,873	$0	$0	$20,909	$418,783
2021	$397,873	$6,778	$0	$18,636	$423,287
2022	$397,873	$27,111	$0	$17,604	$442,588
2023	$397,873	$27,111	$0	$16,808	$441,792
2024	$397,873	$27,111	$0	$15,934	$440,918
2025	$397,873	$27,111	$0	$16,358	$441,342
2026	$397,873	$27,111	$0	$16,387	$441,371
2027	$397,873	$27,111	$0	$16,245	$441,229
2028	$397,873	$27,111	$0	$15,868	$440,852
2029	$397,873	$27,111	$0	$15,482	$440,466
2030	$397,873	$27,111	$0	$14,892	$439,876
2031	$397,873	$27,111	$0	$13,744	$438,728
2032	$397,873	$27,111	$0	$12,360	$437,344
2033	$397,873	$27,111	$0	$10,961	$435,945
2034	$397,873	$27,111	$0	$9,182	$434,166
2035	$397,873	$27,111	$0	$7,124	$432,108
2036	$397,873	$27,111	$0	$4,540	$429,524

Table O-6 includes all funding mechanisms that will be used and the total amount of revenue generated by each method for each year of the planning period. The SWMD's primary funding mechanism is the tier disposal fee. No sources of alternate revenue are projected for the planning period.

B. Cost of Implementing Plan

Table O-7 Expenses

Line #	Category/Program	2014	2015	2016	2017	2018	2019	2020	2021
1	**1. Plan Monitoring/Prep.**	$3,420	$0	$0	$0	$0	$8,751	$27,852	$0
1.a	a. Plan Preparation	$880					$8,751	$27,852	
1.b	b. Plan Monitoring								
1.c	c. Other	$2,540							
2	**2. Plan Implementation**	$542,419	$505,915	$347,672	$350,693	$346,479	$344,372	$404,942	$399,595
2.a	a. District Administration	$214,389	$177,134	$103,947	$103,961	$97,047	$90,972	$121,942	$102,807
2.a.1	Personnel	$175,276	$147,957	$77,258	$70,010	$69,458	$70,843	$75,094	$72,807
2.a.2	Office Overhead	$37,075	$26,864	$24,245	$32,951	$25,393	$18,060	$41,848	$27,000
2.a.3	Other	$2,039	$2,313	$2,443	$1,001	$2,196	$2,069	$5,000	$3,000
2.b	b. Facility Operation	$16,011	$0	$0	$0	$0	$0	$0	$0
2.b.1	MRF/Recycling Center	$16,011							
2.b.2	Compost								
2.b.3	Transfer								
2.b.4	Special Waste								
2.c	c. Landfill Closure/Post-Closure								
2.d	d. Recycling Collection	$284,788	$293,672	$215,077	$212,363	$226,146	$230,726	$252,100	$280,888
2.d.1	Curbside	$8,000	$2,345	$5,000	$1,471	$2,793	$2,573		
2.d.2	Drop-off	$276,788	$290,352	$210,077	$210,892	$223,353	$228,153	$252,100	$280,888
2.d.3	Combined Curbside/Drop-off								
2.d.4	Multi-family								
2.d.5	Business/Institutional								
2.d.6	Other		$975						
2.e	e. Special Collections	$376	$3,693	$240	$5,129	$2,500	$478	$1,000	$1,000
2.e.1	Tire Collection	$376			$1,850	$2,500			
2.e.2	HHW Collection								
2.e.3	Electronics Collection		$2,620						
2.e.4	Appliance Collection								
2.e.5	Other Collection Drives		$1,074	$240	$3,279		$478	$1,000	$1,000
2.f	f. Yard Waste/Other Organics								
2.g	g. Education/Awareness	$0	$6,054	$3,234	$3,614	$392	$1,776	$9,000	$4,000
2.g.1	Education Staff								
2.g.2	Advertisement/Promotion		$5,879	$2,120	$3,541	$132	$1,635	$5,000	$4,000
2.g.3	Other		$175	$1,114	$73	$260	$141	$4,000	
2.h	h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0	$0
2.h.1	General Market Development Activities								
2.h.2	ODNR pass-through grant								
2.i	i. Service Contracts	$1,855	$361	$175	$626	$393	$420	$900	$900
2.j	j. Feasibility Studies								
2.k	k. Waste Assessments/Audits								
2.l	l. Dump Cleanup								
2.m	m. Litter Collection/Education	$25,000	$25,000	$25,000	$25,000	$20,000	$20,000	$20,000	$10,000
2.n	n. Emergency Debris Management								
2.o	o. Loan Payment								
2.p	p. Other								
3	**3. Health Dept. Enforcement**	$84,000	$84,000	$84,000	$84,000	$64,000	$64,000	$64,000	$56,000
4	**4. County Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
5	**5. Well Testing**								
6	**6. Out-of-State Waste Inspection**	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$4,000
7	**7. Open Dump, Litter Law Enforcement**	$75,000	$75,000	$75,000	$75,000	$60,000	$60,000	$60,000	$30,000
7.a	a. Heath Departments								
7.b	b. Local Law Enforcement	$75,000	$75,000	$75,000	$75,000	$60,000	$60,000	$60,000	$30,000
7.c	c. Other								
8	**8. Heath Department Training**								
9	**9. Municipal/Township Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
10	**10. Compensation to Affected Community (ORC Section 3734.35)**								
	*****Total Expenses*****	$712,839	$672,915	$514,672	$517,693	$478,479	$485,123	$564,794	$489,595

Line #	Category/Program	2022	2023	2024	2025	2026	2027	2028	2029
1	**1. Plan Monitoring/Prep.**	$0	$0	$0	$15,000	$15,000	$0	$0	$0
1.a	a. Plan Preparation				$15,000	$15,000			
1.b	b. Plan Monitoring								
1.c	c. Other								
2	**2. Plan Implementation**	$403,679	$407,907	$413,749	$424,425	$435,522	$465,444	$465,636	$478,324
2.a	a. District Administration	$104,082	$105,473	$106,988	$108,639	$110,439	$124,402	$114,540	$116,872
2.a.1	Personnel	$74,082	$75,473	$76,988	$78,639	$80,439	$82,402	$84,540	$86,872
2.a.2	Office Overhead	$27,000	$27,000	$27,000	$27,000	$27,000	$39,000	$27,000	$27,000
2.a.3	Other	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
2.b	b. Facility Operation	$0	$0	$0	$0	$0	$0	$0	$0
2.b.1	MRF/Recycling Center								
2.b.2	Compost								
2.b.3	Transfer								
2.b.4	Special Waste								
2.c	c. Landfill Closure/Post-Closure								
2.d	d. Recycling Collection	$283,697	$286,534	$300,861	$309,886	$319,183	$335,142	$345,196	$355,552
2.d.1	Curbside								
2.d.2	Drop-off	$283,697	$286,534	$300,861	$309,886	$319,183	$335,142	$345,196	$355,552
2.d.3	Combined Curbside/Drop-off								
2.d.4	Multi-family								
2.d.5	Business/Institutional								
2.d.6	Other								
2.e	e. Special Collections	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
2.e.1	Tire Collection								
2.e.2	HHW Collection								
2.e.3	Electronics Collection								
2.e.4	Appliance Collection								
2.e.5	Other Collection Drives	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
2.f	f. Yard Waste/Other Organics								
2.g	g. Education/Awareness	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
2.g.1	Education Staff								
2.g.2	Advertisement/Promotion	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
2.g.3	Other								
2.h	h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0	$0
2.h.1	General Market Development Activities								
2.h.2	ODNR pass-through grant								
2.i	i. Service Contracts	$900	$900	$900	$900	$900	$900	$900	$900
2.j	j. Feasibility Studies								
2.k	k. Waste Assessments/Audits								
2.l	l. Dump Cleanup								
2.m	m. Litter Collection/Education	$10,000	$10,000						
2.n	n. Emergency Debris Management								
2.o	o. Loan Payment								
2.p	p. Other								
3	**3. Health Dept. Enforcement**	$56,000	$56,000	$0	$0	$0	$0	$0	$0
4	**4. County Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
5	**5. Well Testing**								
6	**6. Out-of-State Waste Inspection**	$4,000	$4,000	$0	$0	$0	$0	$0	$0
7	**7. Open Dump, Litter Law Enforcement**	$30,000	$30,000	$0	$0	$0	$0	$0	$0
7.a	a. Heath Departments								
7.b	b. Local Law Enforcement	$30,000	$30,000	$0	$0	$0	$0	$0	$0
7.c	c. Other								
8	**8. Heath Department Training**								
9	**9. Municipal/Township Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
10	**10. Compensation to Affected Community (ORC Section 3734.35)**								
	*****Total Expenses*****	$493,679	$497,907	$413,749	$439,425	$450,522	$465,444	$465,636	$478,324

Line #	Category/Program	2030	2031	2032	2033	2034	2035	2036
1	**1. Plan Monitoring/Prep.**	$15,000	$15,000	$0	$0	$0	$15,000	$15,000

1.a	a. Plan Preparation	$15,000	$15,000				$15,000	$15,000
1.b	b. Plan Monitoring							
1.c	c. Other							
2	**2. Plan Implementation**	$498,643	$512,613	$527,168	$550,262	$566,325	$583,084	$609,406
2.a	a. District Administration	$119,413	$122,183	$125,202	$128,493	$132,080	$135,989	$140,251
2.a.1	Personnel	$89,413	$92,183	$95,202	$98,493	$102,080	$105,989	$110,251
2.a.2	Office Overhead	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000
2.a.3	Other	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
2.b	b. Facility Operation	$0	$0	$0	$0	$0	$0	$0
2.b.1	MRF/Recycling Center							
2.b.2	Compost							
2.b.3	Transfer							
2.b.4	Special Waste							
2.c	c. Landfill Closure/Post-Closure							
2.d	d. Recycling Collection	$373,330	$384,530	$396,066	$415,869	$428,345	$441,195	$463,255
2.d.1	Curbside							
2.d.2	Drop-off	$373,330	$384,530	$396,066	$415,869	$428,345	$441,195	$463,255
2.d.3	Combined Curbside/Drop-off							
2.d.4	Multi-family							
2.d.5	Business/Institutional							
2.d.6	Other							
2.e	e. Special Collections	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
2.e.1	Tire Collection							
2.e.2	HHW Collection							
2.e.3	Electronics Collection							
2.e.4	Appliance Collection							
2.e.5	Other Collection Drives	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
2.f	f. Yard Waste/Other Organics							
2.g	g. Education/Awareness	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
2.g.1	Education Staff							
2.g.2	Advertisement/Promotion	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
2.g.3	Other							
2.h	h. Recycling Market Development	$0	$0	$0	$0	$0	$0	$0
2.h.1	General Market Development Activities							
2.h.2	ODNR pass-through grant							
2.i	i. Service Contracts	$900	$900	$900	$900	$900	$900	$900
2.j	j. Feasibility Studies							
2.k	k. Waste Assessments/Audits							
2.l	l. Dump Cleanup							
2.m	m. Litter Collection/Education							
2.n	n. Emergency Debris Management							
2.o	o. Loan Payment							
2.p	p. Other							
3	**3. Health Dept. Enforcement**	$0	$0	$0	$0	$0	$0	$0
4	**4. County Assistance**	$0	$0	$0	$0	$0	$0	$0
5	**5. Well Testing**							
6	**6. Out-of-State Waste Inspection**	$0	$0	$0	$0	$0	$0	$0
7	**7. Open Dump, Litter Law Enforcement**	$0	$0	$0	$0	$0	$0	$0
7.a	a. Heath Departments							
7.b	b. Local Law Enforcement	$0	$0	$0	$0	$0	$0	$0
7.c	c. Other							
8	**8. Heath Department Training**							
9	**9. Municipal/Township Assistance**	$0	$0	$0	$0	$0	$0	$0
10	**10. Compensation to Affected Community (ORC Section 3734.35)**							
	Total Expenses	$513,643	$527,613	$527,168	$550,262	$566,325	$598,084	$624,406

1.A PLAN MONITORING/PREPARATION

1.a Plan Preparation

2014-2036 -This cost includes staff and contracts with outside consultant to prepare the SWMD's solid waste management plan updates. The SWMD assumed the cost of the contract for all subsequent plan updates would be the same.

1.c Other

2014-2036 - This is the cost for assistance with data collection, surveys, and other.

2.A DISTRICT ADMINISTRATION

2014-2036 -This is the cost for payroll (one full-time Executive Director) and benefits (including PERS, Medicare, and insurance), supplies (including postage, reproductions, advertising, printing, etc.), webpage maintenance, office equipment, utilities and travel. Administrative costs also include staffing time for some program costs, which are difficult to separate into their own line item. The costs of the program in 2014 through 2019 are actual expenses. Salaries are held constant (no inflation or cost of living adjustments) with a 9% annual increase in health insurance forecasted through the planning period.

2.a.2 Office Overhead

Office overhead costs includes rent. The SWMD leases the building for 10-years paying the lease in full at renewal. Except for an increase in 2027 to cover rent for the 10-year lease contract expenses are held constant.

2.a.3 Other

Legal fee expenses are actual expenses through 2019.

2.D. RECYCLING COLLECTION

2.d.1 Curbside

2014-2019 - Actual costs towards curbside collection programs. SWMD provided bins to Gallipolis and Jackson.

2.d.2 Drop-off

2014-2019 - Actual costs to implement drop-off collection program. SWMD contracts with a private sector hauler to provide containers for recycling, collect recyclables, and process recyclables. Decreased costs in 2016 were a result of changes to service and number of containers at sites. Cost for site repair work or bin repairs and signs are included in this line item.

2020-2036 – Cost budgeted in 2021 for additional drop-off sites added in Jackson and Gallia Counties. Cost budgeted for 2022 and 2023 at 1% annual increases per contract. Based on 3-year contract term at 5% increase every third and 3% annual increases beginning in 2024.

2.d.6 Other

2015 - Actual costs.

2.E. SPECIAL COLLECTIONS

2.e.1 Tire Collection

2014-2019 - Actual costs to help with scrap tire amnesty days. The SWMD provided financial assistance if community events received more tires than anticipated for truck fees.

2.e.3 Electronics Collection

2015 - Program costs to host an electronic collection drive in 2015.

2.e.5 Other Collection Drives

2014-2019 - Actual costs to provide recycling containers for special events such as to the Make Wellston Beautiful and for paper shred events. Funding to other collection drives, varies. One year the SWMD provided funds to help with clean-ups in 3 counties.

2.g. Education/Awareness

2.g.2 Advertisement/Promotion

2015-2019 - Actual costs for education and outreach program supplies and promotional items (pencils, t-shirts, backpacks, etc.). Newspaper and other publication advertisement costs.
2020-2036 - Budget costs for outreach and education program supplies.

2.g.3 Other

2015-2019 - Actual costs for school presentations and supplies (edible landfill, etc.).
2020 – Budget costs.

2.I SERVICE CONTRACTS

2014 and 2019 - Outside contracts for service that were not allocated into other line items. These include office administrative costs for security, software, and printer service.
2020 and 2036 – Budget costs.

2.m Litter Collection/Education

2014-2019 - Actual appropriations for Meigs County Commissioners to support the Meigs County Soil and Water District's work for litter clean up and waste reduction and recycling education.
2020-2023 – Last year for budget appropriations is 2023.

3 HEALTH DEPARTMENT ENFORCEMENT

2014-2019 – Actual costs provided to the Gallia, Jackson, Meigs, and Vinton County Health Departments.
2020-2023 - Last year for budget appropriations is 2023.

6 OUT OF STATE WASTE INSPECTION

2014-2019 – Actual costs provided to the Gallia and Jackson Health Departments for out-of-state waste landfill inspections.
2020-2023 - Last year for budget appropriations is 2023.

7 OPEN DUMP, LITTER LAW ENFORCEMENT

7.b Local Law Enforcement

2015-2019 – Actual costs provided to the Gallia, Jackson and Vinton county sheriff departments for complaints, investigations, and dump clean ups.
2020-2023 - Last year for budget appropriations is 2023.

Revenues and expenses may change from projections anticipated in this Plan Update. Additional revenues are not expected, however, revenues could increase or decrease from forecasts in this Plan. In the event additional revenues are received, projected expenses remain within budgeted allowances provided in Table O-7 for the planning period, and yearly revenues exceed the yearly expenses for the prior year, then additional revenues will be used to:

1. Implement additional education and outreach efforts focusing on social marketing.
2. Add at least one electronics recycling event available for all county residents.
3. Re-instate some level of appropriations of funding to the sheriff departments.
4. Re-instate some level of appropriations of funding to the health departments.
5. Add to carryover balance.

If the revenues increase to the historical average levels of $700,000 a year or more, the Policy Committee will review the program appropriations planned and the program appropriations historically needed to determine the levels to appropriate. Sheriff and health department appropriations will not exceed the levels allocated in CY2018.

Nothing contained in these budget projections should be construed as a binding commitment by the SWMD to expend a specific amount of money on a particular strategy, facility, program and/or activity. The Board of County Commissioners, with the advice and assistance of SWMD staff will review and revise the budget as needed to implement planned strategies, facilities, programs and/or activities as effectively as possible with funds available. The SWMD reserves the right to revise the budget and reallocate funds as programs change or as otherwise determined to be in the best interest of the SWMD.

This section is considered a part of the implementation schedule required in accordance with ORC Section 3734.53 (A)(12).

Table O-8 Budget Summary

Year	Revenue ($)	Expenses ($)	Annual Surplus/Deficit ($)	Balance ($)
2013			**Ending Balance**	$1,254,435
2014	$920,689	$712,839	$207,850	$1,462,285
2015	$801,713	$672,915	$128,798	$1,591,083
2016	$489,354	$514,672	-$25,318	$1,565,765
2017	$400,160	$517,693	-$117,533	$1,448,232
2018	$429,919	$478,479	-$48,560	$1,399,671
2019	$428,386	$485,123	-$56,737	$1,342,934
2020	$418,783	$564,794	-$146,011	$1,196,923
2021	$418,783	$489,595	-$66,308	$1,130,615
2022	$423,287	$493,679	-$51,091	$1,079,524
2023	$442,588	$497,907	-$56,115	$1,023,409
2024	$441,792	$413,749	$27,170	$1,050,579
2025	$440,918	$439,425	$1,916	$1,052,495
2026	$441,342	$450,522	-$9,151	$1,043,345
2027	$441,371	$465,444	-$24,215	$1,019,129
2028	$441,229	$465,636	-$24,785	$994,345
2029	$440,852	$478,324	-$37,858	$956,486
2030	$440,466	$513,643	-$73,766	$882,720
2031	$439,876	$527,613	-$88,885	$793,835
2032	$438,728	$527,168	-$89,824	$704,012
2033	$437,344	$550,262	-$114,316	$589,695
2034	$435,945	$566,325	-$132,159	$457,536
2035	$434,166	$598,084	-$165,977	$291,559
2036	$432,108	$624,406	-$194,883	$96,677

C. Alternative Budget

The SWMD does not anticipate the need to identify any type of contingent funding or financing that would be necessary to fund any type of program activity in conjunction with Plan implementation efforts.

D. Major Facility Project

The SWMD is not planning a major facility project.

APPENDIX P DESIGNATION

A. Statement Authorizing/Precluding Designation

The Board of Directors (County Commissioners) of the Gallia Jackson Meigs Vinton Solid Waste Management District is hereby authorized to establish facility designations in accordance with Section 343.014 of the Ohio Revised Code.

B. Designated Facilities

The Gallia Jackson Meigs Vinton Solid Waste Management District is not designating any facilities.

C. Documents

Not applicable.

APPENDIX Q DISTRICT RULES

A. Existing Rules

The Gallia, Jackson, Meigs, Vinton Solid Waste District does not have any rules in accordance with ORC Section 343.01(G).

B. Proposed Rules

The Gallia, Jackson, Meigs, Vinton Solid Waste District is hereby authorized to adopt rules in accordance with ORC Section 343.01(G), to the extent any such rules are determined by the Board from time to time to be necessary or desirable to implement any provision or to accomplish any objective of this Solid Waste Management Plan.

At this time the SWMD is not proposing any rules allowed under these Divisions.

APPENDIX R BLANK SURVEY FORMS AND RELATED INFORMATION

Dear Ohio Business,

Thank you for completing this survey. The information you provide for your company is crucial to monitoring the Gallia, Jackson, Meigs, Vinton 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 Gallia, Jackson, Meigs, Vinton Solid Waste Management District and Ohio in 2019. Your company's survey response **will not** be reported individually.

For assistance completing this form or any questions related to the survey, please contact Cindy Saltsman, the Gallia, Jackson, Meigs, Vinton Solid Waste Management District's Executive Director, at csaltsman.gjmvrecycles@gmail.com. or (740) 384-2164.

Please complete and submit this survey no later than 5/1/2020.

Options for Returning the Completed Survey

- Email directly to Cindy Saltsman at csaltsman.gjmvrecycles@gmail.com, Subject Line: 2019 Commercial Survey
- Mail back in enclosed envelope

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 Gallia, Jackson, Meigs, Vinton 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:	Number of full-time employees:	

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.

Table B: Quantities of Recycled Materials			
Recyclable Material Category	**Amount Recycled in 2019**	**Units**	**Name of hauler or processor that takes the material/ other Comments**
Lead-Acid Batteries		☐ lbs. ☐ tons ☐ yd^3	
Food		☐ lbs. ☐ tons ☐ yd^3	
Glass		☐ lbs. ☐ tons ☐ yd^3	
Ferrous Metals		☐ lbs. ☐ tons ☐ yd^3	
Non-Ferrous Metals		☐ lbs. ☐ tons ☐ yd^3	
Corrugated Cardboard		☐ lbs. ☐ tons ☐ yd^3	
All Other Paper		☐ lbs. ☐ tons ☐ yd^3	
Plastics		☐ lbs. ☐ tons ☐ yd^3	
Textiles		☐ lbs. ☐ tons ☐ yd^3	
Wood		☐ lbs. ☐ tons ☐ yd^3	
Rubber		☐ lbs. ☐ tons ☐ yd^3	
Commingled Recyclables		☐ lbs. ☐ tons ☐ yd^3	
Yard Waste		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ 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 Cindy Saltsman with any questions.

Cindy Saltsman, Executive Director
Gallia, Jackson, Meigs, Vinton Solid Waste Management District
Phone: (740) 384-2164
Email: csaltsman.gjmvrecycles@gmail.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

APPENDIX S SITING STRATEGY

This Plan Update demonstrates the SWMD does not need any new facilities during the planning period for the management of solid waste. Consequently, a siting strategy is not needed and is not included.

APPENDIX T MISCELLANEOUS PLAN DOCUMENTS

During the process of preparing a plan, the policy committee signs three official documents certifying the plan. These documents are as follows:

1. *Certification Statement for the Draft Solid Waste Management Plan* –The Policy committee signs this statement to certify that the information presented in the draft solid waste management plan submitted to Ohio EPA is accurate and complies with the Format 4.0.

2. *Resolution Adopting the Solid Waste Management Plan* (adopted prior to distributing the draft plan for ratification) – The policy committee signs this resolution to accomplish two purposes:

- Adopt the draft solid waste management plan.
- Certify that the information in the solid waste management plan is accurate and complies with the Format 4.0.

The policy committee signs this resolution after considering comments received during the public hearing/public comment period and prior to submitting the solid waste management plan to political jurisdictions for ratification. The policy committee should not make any changes to the solid waste management plan after signing the resolution.

3. *Resolution Certifying Ratification of the Solid Waste Management Plan* – The policy committee signs this resolution to certify that the solid waste management plan was ratified properly by the political jurisdictions within the solid waste management district. The policy committee signs this resolution after the solid waste management plan is ratified and before submitting the ratified plan to Ohio EPA)

Other documents to include in Appendix T include:

- Public notices

Copies of notices sent to:

- adjacent SWMDs;
- the director of Ohio EPA;
- the 50 industrial, commercial or institutional facilities that generate the largest quantities of solid waste within the SWMD; and
- the local trade associations representing the industrial, commercial or institutional facilities generating the largest quantities of solid waste in the SWMD.

Certification Statement for the Draft Plan

We as members of Gallia Jackson Meigs Vinton Policy Committee do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update (2021-2036), and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and in compliance with the requirements in the Ohio EPA *District Solid Waste Management Plan Format*, version 4.0.

Gallia County

Harold Montgomery — Date Signed: 10-29-2020
Representing the County Commissioners

Tony Gallagher — Date Signed
Representing the Largest City

John McKean — Date Signed
Representing the Health Department

James Allen — Date Signed
Representing Townships

Randy Halley — Date Signed
Representing Industrial Generators

Brett Boothe — Date Signed
Representing the Public

Terri Walters — Date Signed: 10/28/20
Representing Citizen

Certification Statement for the Draft Plan

We as members of Gallia Jackson Meigs Vinton Policy Committee do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update (2021-2036), and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and in compliance with the requirements in the Ohio EPA *District Solid Waste Management Plan Format* version 4.0.

Gallia County	
Harold Montgomery Representing the County Commissioners	Date Signed
Tony Gallagher Representing the Largest City Tony Gallagher	Date Signed 10/29/20
John McKean Representing the Health Department	Date Signed
James Allen Representing Townships	Date Signed
Randy Halley Representing Industrial Generators	Date Signed
Brett Boothe Representing the Public	Date Signed
Terri Walters Representing Citizen	Date Signed

Certification Statement for the Draft Plan

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Gallia County

Harold Montgomery Representing the County Commissioners	Date Signed
Tony Gallagher Representing the Largest City	Date Signed
John McKean Representing the Health Department	Date Signed
James Allen Representing Townships	Date Signed
Randy Halley Representing Industrial Generators	Date Signed
Brett Boothe Representing the Public	Date Signed
Terri Walters Representing Citizen	Date Signed

Certification Statement for the Draft Plan

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Gallia County

Harold Montgomery — Date Signed
Representing the County Commissioners

Tony Gallagher — Date Signed
Representing the Largest City

John McKean — Date Signed
Representing the Health Department

James Allen — Date Signed
Representing Townships

Randy Halley 11/5/20
Randy Halley — Date Signed
Representing Industrial Generators

Brett Boothe — Date Signed
Representing the Public

Terri Walters — Date Signed
Representing Citizen

Certification Statement for the Draft Plan

We as members of Gallia Jackson Meigs Vinton Policy Committee do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update (2021-2036), and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and in compliance with the requirements in the Ohio EPA *District Solid Waste Management Plan Format*, version 4.0.

Gallia County

Harold Montgomery Representing the County Commissioners	Date Signed
Tony Gallagher Representing the Largest City	Date Signed
John McKean Representing the Health Department	Date Signed
James Allen Representing Townships	Date Signed
Randy Halley Representing Industrial Generators	Date Signed
Brett Boothe Representing the Public	10-28-20 Date Signed
Terri Walters Representing Citizen	Date Signed

Jackson County

Paul Haller 10/28/20

Paul Haller — Date Signed
Representing the County Commissioners

Randy Evans — Date Signed
Representing the Largest City

Kevin Aston — Date Signed
Representing the Health Department

Roy Arthur — Date Signed
Representing Townships

Tom Woltz — Date Signed
Representing Industrial Generators

Sam Brady — Date Signed
Representing the Public

Greg Ervin — Date Signed
Representing Citizen

Jackson County

Paul Haller Representing the County Commissioners	Date Signed
Randy Evans Representing the Largest City	Date Signed
Kevin Aston Representing the Health Department	Date Signed
Roy Arthur Representing Townships	Date Signed
Tom Woltz Representing Industrial Generators	Date Signed
Sam Brady Representing the Public	10/26/2020 Date Signed
Greg Ervin Representing Citizen	Date Signed

Jackson County

Paul Haller Representing the County Commissioners	Date Signed
Randy Evans Representing the Largest City	Date Signed
Kevin Aston Representing the Health Department	Date Signed
Roy Arthur Representing Townships	Date Signed
Tom Woltz Representing Industrial Generators	Date Signed
Sam Brady Representing the Public	Date Signed
Greg Ervin Representing Citizen	Date Signed

Gregory A. Ervin November 2, 2020

Jackson County

Paul Haller Representing the County Commissioners	Date Signed
Randy Evans Representing the Largest City	Date Signed
Kevin Aston Representing the Health Department	Date Signed
Roy Arthur Representing Townships	Date Signed
Tom Woltz Representing Industrial Generators	Proxy 11-23-20 Date Signed
Sam Brady Representing the Public	Date Signed
Greg Ervin Representing Citizen	Date Signed

Jackson County

Paul Haller Representing the County Commissioners	Date Signed
Randy Evans Representing the Largest City	Date Signed Dan Rauly (Proxy) 10/30/2020
Kevin Aston Representing the Health Department	Date Signed
Roy Arthur Representing Townships	Date Signed
Tom Woltz Representing Industrial Generators	Date Signed
Sam Brady Representing the Public	Date Signed
Greg Ervin Representing Citizen	Date Signed

Meigs County

Tim Ihle Representing the County Commissioners	Date Signed
Fred Hoffman Representing the Largest City	Date Signed
Steve Swatzel Representing the Health Department	10-29-2020 Date Signed
Marilyn Anderson Representing Townships	Date Signed
Tom Anderson Representing Industrial Generators	Date Signed
Jon Jacobs Representing the Public	Date Signed
John Musser Representing Citizen	Date Signed

Meigs County

Tim Ihle Representing the County Commissioners	Date Signed
Fred Hoffman Representing the Largest City	Date Signed
Steve Swatzel Representing the Health Department	Date Signed
Marilyn Anderson Representing Townships	Date Signed
Tom Anderson Representing Industrial Generators	Date Signed
* Jon Jacobs Jon Jacobs Representing the Public	10/30/20 Date Signed
John Musser Representing Citizen	Date Signed

Vinton County

Tim Eberts Representing the County Commissioners	10-28-20 Date Signed
Steve Hammond Representing the Largest City	Date Signed
Janelle McManis Representing the Health Department	Date Signed
Craig Case Representing Townships	Date Signed
Gerald (LJ) Stewart Representing Industrial Generators	Date Signed
Rex Phillips Representing the Public	Date Signed
Vicki Maxwell Representing Citizen	Date Signed

Vinton County

Tim Eberts Representing the County Commissioners	Date Signed
Steve Hammond Representing the Largest City	Date Signed
Janelle McManis Representing the Health Department	Date Signed
Jan Hammond, Proxy ~~Craig Case~~ Janelle McManis Representing Townships	10/30/2020 Date Signed
Gerald (LJ) Stewart Representing Industrial Generators	Date Signed
Rex Phillips Representing the Public	Date Signed
Vicki Maxwell Representing Citizen	Date Signed

Vinton County

Tim Eberts Representing the County Commissioners	Date Signed
Steve Hammond Representing the Largest City	Date Signed
Janelle McManis Representing the Health Department	Date Signed
Craig Case Representing Townships	Date Signed
Gerald (LJ) Stewart Representing Industrial Generators	Date Signed
Rex Phillips Representing the Public	Date Signed
Vicki Maxwell Representing Citizen	Oct 28, 2020 Date Signed

RESOLUTION ADOPTING FEE SCHEDULE

RESOLUTION 1120 - A
Resolution Adopting Fee Schedule of the 2021 Solid Waste Management Plan
Gallia Jackson Meigs Vinton Solid Waste Management District

A resolution declaring that the fee schedule presented in the 2021 Solid Waste Management Plan for the Gallia Jackson Meigs Vinton Solid Waste Management District has been adopted by the policy committee.

WHEREAS, this Solid Waste Management District Policy Committee is ratifying a $0.35 per ton generation fee scheduled to begin after plan ratification and approval by Ohio EPA in order to support programming through the planning period to meet State Goals;

NOW, THEREFORE, BE IT RESOLVED that the Solid Waste Management Policy Committee of the Gallia Jackson Meigs Vinton Solid Waste Management District declares the fee schedule for the Gallia Jackson Meigs Vinton Solid Waste Management District to be adopted, and shall cause the 2021 Plan to undergo the public comment period followed by a public hearing before ratification and submittal to the Director of the Ohio Environmental Protection Agency for approval.

This resolution shall be in effect immediately upon its adoption.

Motion made by TONY GALLAGHER,

Seconded by TIM IHLE.

Upon call of the roll the following vote resulted:

Members	Yes	No	Abstain	Not present
Harold Montgomery	✓			
Tony Gallagher	✓			
James Allen				✓
John Mckean	✓			
Terri Walters	✓			
Randy Halley				✓
Brett Boothe	✓			
Paul Haller	✓			
Roy Hatten, Proxy for Randy Evans	✓			

Members	Yes	No	Abstain	Not present
Greg Ervin	✓			
Kevin Aston	✓			
Tom Woltz	✓			
Roy Arthur				✓
Sam Brady				✓
Tim Ihle	✓			
Fred Hoffman				✓
Steve Swatzel	✓			
Marilyn Anderson				✓
Tom Anderson				✓
Jon Jacobs				✓
John Musser				✓
Tim Eberts	✓			
Steve Hammond				✓
Janelle McManis	✓			
Gerald Stewart				✓
Rex Phillips				✓
Craig Case				✓
Vicki Maxwell	✓			

Chairman, Solid Waste Policy Committee

ATTEST: Terri B. Walters

Member, Solid Waste Policy Committee

11/12/20

Dated

AFFP

Affidavit of Publication

STATE OF OHIO } SS
COUNTY OF GALLIA }

Wilma Gooch, being duly sworn, says:

That she is Sales Rep. of the GALLIPOLIS DAILY TRIBUNE, a Daily newspaper of general circulation, printed and published in GALLIPOLIS, GALLIA County, OHIO; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

Nov 18,2020

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

Wilma Gooch

Subscribed to and sworn to me this 18th day of Nov 2020

Patricia Y. Wamsley, GALLIA County, OHIO

My commission expires: Feb. 17, 2025

$ 238.25

00038811 90107126 740-384-2164

370-Gjmv Solid Waste Management District
1056 S New Hampshire Av
Wellston, OH 45692

PUBLIC NOTICE
Establishing Public Comment Period
And Notification of Public Hearing

The Gallia Jackson Meigs Vinton Solid Waste Management District ("District") has prepared a draft solid waste management plan expected to take effect in 2021 as required by Section 3734.54 of the Ohio Revised Code. The District is establishing a 30-day written comment period (December 1, 2020 to January 1, 2021) on the draft solid waste management plan. The 2021 Plan is available for review on the District's website at http://www.gjmvrecycle.com/ or, at the following location during normal business hours (Monday - Friday, 7:30 a.m. - 3:30 p.m.): Gallia, Jackson, Meigs & Vinton Solid Waste Management District offices, 1056 S. New Hampshire Avenue, Wellston, OH 45692

A public hearing on the draft 2021 solid waste management plan will be held on Thursday, January 7, 2021 at: 10:00 am at Gallia, Jackson, Meigs & Vinton Solid Waste Management District offices, 1056 S. New Hampshire Avenue, Wellston, OH 45692

The 2021 Plan is an update to the previously approved solid waste plan. The 2021 Plan establishes a fifteen-year planning period (2021-2036) and includes a budget to finance the plan, a solid waste facility inventory, projections and strategies, facilities and programs to be used, and an analysis of progress made toward achieving state waste reduction goals.

The 2021 Plan includes details existing programs including residential/commercial recycling programs, education and outreach programs for target audiences, and industrial strategies. The District demonstrates achieving goals required by the State of Ohio for recycling and waste reduction for residential, commercial and industrial solid wastes. The 2021 Plan complies with State Plan Goal #1: Infrastructure Goal.

The 2021 Plan includes a demonstration of access to at least fifteen years of solid waste landfill capacity to meet the solid waste management needs of the District's residents, businesses, and institutions. The Plan authorizes the Board of Directors to make, publish and enforce rules determined to be necessary for the protection, maintenance and use of facilities, the inspection of out of state waste (if received) and any other rules as permitted by law.

The 2021 Plan includes a detailed budget outlining revenues and operational costs for programs. The District currently levies solid waste disposal fees pursuant to ORC Section 3734.57(B) in the amount of $1.00 per ton of solid waste in-district; $2.00 per ton of solid waste out-of-district; and $1.00 per ton of solid waste out-of-state. The 2021 Plan maintains this disposal fee throughout the planning period. The District proposes $0.35 per ton generation fee to be effective upon ratification.

Comments on the 2021 Plan will be accepted for a thirty (30) day period extending from December 1, 2020 to January 1, 2021. During this period, anyone may comment on the draft plan by forwarding their comments, in writing, to: Cindy Saltsman, Gallia Jackson Meigs Vinton Solid Waste Management District, 1056 S. New Hampshire Avenue, Wellston, OH 45692 or via email to: csaltsman.gjmvrecycles@gmail.com.

11/18/20

Affidavit of Publication

Jackson County

State of Ohio

The Telegram

Before the undersigned, a notary public of said county and state, duly co
and authorized by law to administer oaths, personally appeared Caitlin H
duly sworn, deposes and says: that she is the legal clerk of The Telegra
and entered as second class mail in the City of Jackson: that she is auth
affidavit and sworn statement: that the notice or other legal advertiseme
is attached hereto, was published in The Telegram on the following:

PUBLISHED ON: November 18, 2020

TOTAL: $ 180.00

FILED ON: _____

DATE: November 18, 2020

Caitlin Hale: Caitlin Hale

Signature of person making affidavit sworn to and subscribed before me

November, 2020.

NOTARY PUBLIC STATE OF OHIO

RHONDA K. BURTRAND
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES JUNE 11, 2024

Rhonda K. Burtrand

Establishing Public Comment Period And Notification of Public Hearing

The Gallia Jackson Meigs Vinton Solid Waste Management District ("District") has prepared a draft solid waste management plan expected to take effect in 2021 as required by Section 3734.54 of the Ohio Revised Code. The District is establishing a 30-day written comment period (December 1, 2020 to January 1, 2021) on the draft solid waste management plan. The 2021 Plan is available for review on the District's website at http://www.gjmvrecycle.com/ or, at the following location during normal business hours (Monday – Friday, 7:30 a.m. – 3:30 p.m.): Gallia, Jackson, Meigs & Vinton Solid Waste Management District offices, 1056 S. New Hampshire Avenue, Wellston, OH 45692

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The 2021 Plan includes a demonstration of access to at least fifteen years of solid waste landfill capacity to meet the solid waste management needs of the District's residents, businesses, and institutions. The Plan authorizes the Board of Directors to make, publish and enforce rules determined to be necessary for the protection, maintenance and use of facilities, the inspection of out of state waste (if received) and any other rules as permitted by law..

The 2021 Plan includes a detailed budget outlining revenues and operational costs for programs. The District currently levies solid waste disposal fees pursuant to ORC Section 3734.57(B) in the amount of $1.00 per ton of solid waste in-district; $2.00 per ton of solid waste out-of-district; and $1.00 per ton of solid waste out-of-state. The 2021 Plan maintains this disposal fee throughout the planning period. The District proposes $0.35 per ton generation fee to be effective upon ratification.

Comments on the 2021 Plan will be accepted for a thirty (30) day period extending from December 1, 2020 to January 1, 2021. During this period, anyone may comment on the draft plan by forwarding their comments, in writing, to: Cindy Saltsman, Gallia Jackson Meigs Vinton Solid Waste Management District, 1056 S. New Hampshire Avenue, Wellston, OH 45692 or via email to: csaltsman.gjmvrecycles@gmail.com.

RESOLUTION ADOPTING PLAN

RESOLUTION 0121 - A

The Solid Waste Management Policy Committee of the Gallia Jackson Meigs Vinton Solid Waste Management District met in regular session on January 28, 2021 by a Zoom meeting with 15 members attending.

WHEREAS, the Policy Committee completed the draft amended Solid Waste Management Plan and submitted it to the Ohio Environmental Protection Agency for review and comment on May 26, 2020 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion issued on July 10, 2020;

WHEREAS, the Policy Committee considered the Ohio Environmental Protection Agency's non-binding advisory opinion and revised the amended Solid Waste Management Plan as the Policy Committee determined to be necessary or appropriate;

WHEREAS, the Policy Committeee conducted a 30-day public comment period from December 1, 2020 to January 1, 2021 and held a public hearing January 7, 2021, to allow members of the public to provide comments regarding Solid Waste Management Plan; and

WHEREAS, the Policy Committee determines that additional revisions to the amended Plan are appropriate based on public comments that were submitted to the Policy Committee.

NOW, THEREFORE, BE IT RESOLVED by the Policy Committee of the Gallia Jackson Meigs Vinton Solid Waste Management District as follows:

1. The Policy Committee hereby adopts the final amended Solid Waste Management Plan for Gallia Jackson Meigs Vinton Solid Waste Management District: and
2. The Policy Committee certifies that, to the best of its knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the District's draft, amended Solid Waste Management Plan, and availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the planning period covered by the Plan, are accurate and are in compliance with the requirements of Sections 3734.53 to 3734.56 of the Ohio Revided Code, Ohio Administrative Code 3745-27-90, and the state *Solid Waste Management Plan Format* , version 4.0.

This resolution shall be in effect immediately upon its adoption.

TIM IHLE moved the adoption of this RESOLUTION, PAUL HALLER seconded the motion and the roll being called upon its adoption, the vote resulted as follows:

Members	Yes	No	Abstain	Not present
GALLIA COUNTY:				
Harold Montgomery Representing County Commissioners	✓			
Tony Gallagher Representing the Largest City				
John McKean Representing the Health Department				
James Allen Representing Townships				✓
Randy Halley Representing Industrial Generators				✓
Brett Boothe Representing the Public				✓
Terri Walters Representing Citizen				

Members	Yes	No	Abstain	Not present
GALLIA COUNTY:				
Harold Montgomery Representing County Commissioners				
Tony Gallagher Tony Gallagher Representing the Largest City	✓			
John McKean Representing the Health Department				
James Allen Representing Townships				
Randy Halley Representing Industrial Generators				
Brett Boothe Representing the Public				
Terri Walters Representing Citizen				

Members	Yes	No	Abstain	Not present
GALLIA COUNTY:				
Harold Montgomery Representing County Commissioners				
Tony Gallagher Representing the Largest City				
John McKean John McKean Representing the Health Department	✓			
James Allen Representing Townships				
Randy Halley Representing Industrial Generators				
Brett Boothe Representing the Public				
Terri Walters Representing Citizen				

Res. 0121-A

Members	Yes	No	Abstain	Not present
GALLIA COUNTY:				
Harold Montgomery Representing County Commissioners				
Tony Gallagher Representing the Largest City				
John McKean Representing the Health Department				
James Allen Representing Townships				
Randy Halley Representing Industrial Generators				
Brett Boothe Representing the Public				
Terri B. Walters Terri Walters Representing Citizen	✓			

Members	Yes	No	Abstain	Not present
JACKSON COUNTY:				
Paul Haller Representing County Commissioners	✓			
Randy Evans Representing the Largest City				
Kevin Aston Representing the Health Department				
Shane Smith Representing Townships				
Tom Woltz Representing Industrial Generators				✓
Sam Brady Representing the Public				✓
Greg Ervin Representing Citizen				

Members	Yes	No	Abstain	Not present
JACKSON COUNTY:				
Paul Haller Representing County Commissioners				
Randy Evans Representing the Largest City	X			
Kevin Aston Representing the Health Department				
Shane Smith Representing Townships				
Tom Woltz Representing Industrial Generators				
Sam Brady Representing the Public				
Greg Ervin Representing Citizen				

Members	Yes	No	Abstain	Not present
JACKSON COUNTY:				
Paul Haller Representing County Commissioners				
Randy Evans Representing the Largest City				
Kevin Aston Representing the Health Department	David Ramba (proxy) ✓			
Shane Smith Representing Townships				
Tom Woltz Representing Industrial Generators				
Sam Brady Representing the Public				
Greg Ervin Representing Citizen				

Members	Yes	No	Abstain	Not present
JACKSON COUNTY:				
Paul Haller Representing County Commissioners				
Randy Evans Representing the Largest City				
Kevin Aston Representing the Health Department				
Shane Smith Representing Townships	✓			
Tom Woltz Representing Industrial Generators				
Sam Brady Representing the Public				
Greg Ervin Representing Citizen				

Members	Yes	No	Abstain	Not present
MEIGS COUNTY:				
Tim Ihle Representing County Commissioners	YES			
Fred Hoffman Representing the Largest City				✓
Steve Swatzel Representing the Health Department				
Marilyn Anderson Representing Townships				✓
Tom Anderson Representing Industrial Generators				✓
Jon Jacobs Representing the Public				✓
John Musser Representing Citizen				✓

Members	Yes	No	Abstain	Not present
JACKSON COUNTY:				
Paul Haller Representing County Commissioners				
Randy Evans Representing the Largest City				
Kevin Aston Representing the Health Department				
Shane Smith Representing Townships				
Tom Woltz Representing Industrial Generators				
Sam Brady Representing the Public				
Greg Ervin Representing Citizen				

Members	Yes	No	Abstain	Not present
MEIGS COUNTY:				
Tim Ihle Representing County Commissioners				
Fred Hoffman Representing the Largest City				
Steve Swatzel Representing the Health Department	✓			
Marilyn Anderson Representing Townships				
Tom Anderson Representing Industrial Generators				
Jon Jacobs Representing the Public				
John Musser Representing Citizen				

Members	Yes	No	Abstain	Not present
VINTON COUNTY:				
Tim Eberts Representing County Commissioners				
Steven Hammond Representing the Largest City				
Janelle McManis Representing the Health Department	X			
Craig Case Representing Townships				
Gerald (LJ) Stewart Representing Industrial Generators				
Vicki Maxwell Representing the Public				
Rex Phillips Representing Citizen				

Total votes FOR the resolution: _____ Total votes AGAINST the resolution: _____

ATTEST:

_____ Date: _____

Cindy Saltsman
Director,
Gallia Jackson Meigs Vinton Solid Waste Management District

Members	Yes	No	Abstain	Not present
VINTON COUNTY:				
Tim Eberts Representing County Commissioners	✓			
Steven Hammond Representing the Largest City				✓
Janelle McManis Representing the Health Department				
Craig Case Representing Townships				✓
Gerald (LJ) Stewart Representing Industrial Generators				✓
Vicki Maxwell Representing the Public	✓			
Heidi M[c]Intire Representing Citizen	✓			

Total votes FOR the resolution: 15 Total votes AGAINST the resolution: -0-

ATTEST:

Cindy Saltsman

Director,
Gallia Jackson Meigs Vinton Solid Waste Management District

Date: 1/28/21

APPENDIX U RATIFICATION RESULTS

[To be completed after plan is ratified]