

DEPARTMENT OF PUBLIC WORKS
Legislative Summary

THE SOLID WASTE MANAGEMENT PLAN FOR THE
CUYAHOGA COUNTY SOLID WASTE MANAGEMENT
DISTRICT

DEPARTMENT: Public Works

ORD NO: 327-2019

PROJECT DESCRIPTION: This legislation will authorize the Director of Public Works to authorize the City of Cleveland to approve or disapprove the Solid Waste Management Plan for the Cuyahoga County Solid Waste Management District, during the 90-day ratification period which takes place through April 11, 2019.

LEGISLATIVE PURPOSE: Passage of this legislation will allow the City of Cleveland, Department of Public Works to update the Solid Waste Management Plan for ratification and in accordance with Ohio Revised Code Sections 3734.53 3734.54 and 3734.55 by the deadline.

The development of the solid waste plan is a requirement of Ohio law. Every solid waste management district in Ohio must periodically revise and update their solid waste management plan and submit it to each political subdivision to be ratified. Ratification occurs when communities representing 60% of a district's population vote to approve the plan, including its largest city.

TERM: N/A

FUNDING: N/A

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i: SOLID WASTE MANAGEMENT DISTRICT INFORMATION

Table i-1 Solid Waste Management District Information

SWMD	Cuyahoga County Solid Waste Management District
Member Counties	Cuyahoga County
District Coordinator	Diane T. Bickett
Job Title	Executive Director
Street Address	4750 East 131 Street
City, State, Zip Code	Garfield Heights, OH 44105
Phone	216-443-3749
E-mail	dbickett@cuyahogacounty.us
Web Site	www.CuyahogaRecycles.org

Table i-2 Members of the Solid Waste Policy Committee

Pamela Bobst	Mayor, City of Rocky River	Westshore Region Representative
Shontel Brown	Cuyahoga County Council District 9	County Representative
Michael Byrne	Mayor, City of Parma Heights	Southcentral Region Representative
Freddy Collier	Planning Director, City of Cleveland	Cleveland Region Representative
John DeMuth	Retired, County Planning Commission	Public Representative
Anthony DiCicco	Mayor, City of Mayfield Heights	Hillcrest Region Representative
Cyril Kleem	Mayor, City of Berea	Southwest Region Representative
Cary Mathias	ArcelorMittal	Business/Industry Representative
Michael Procuik	Mayor, City of Brooklyn Heights	Cuyahoga Region Representative
Bradley Sellers	Mayor, City of Warrensville Heights	Chagrin/Southeast Region Representative
Sunny Simon	Cuyahoga County Council District 11	County Representative
Kenneth Surratt	Deputy Director, Housing & Community Development	County Representative
Michael Dylan Brennan	Mayor, City of University Heights	Heights Region Representative

Table i-3 Chair of the Solid Waste Policy Committee

Name	Kenneth Surratt
Street Address	2079 East Ninth Street
City, State, Zip Code	Cleveland, Ohio 44115
Phone	216-698-2092
E-mail address	ksurratt@cuyahogacounty.us

Table i-4 District Board of Directors

Chair	Sunny Simon, Cuyahoga County Council
Vice Chair	Mike Foley, Cuyahoga County Office of Sustainability
Secretary	Michael Dever, Cuyahoga County Office of Public Works

Technical Advisory Committee

The District did not utilize a Technical Advisory Committee (TAC) for the development of this Plan Update.

Plan Consultants

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CHAPTER 1: INTRODUCTION

A. Brief Introduction to Solid Waste Planning in Ohio

In the 1980's, Ohio faced a combination of solid waste management problems. These included rapidly declining landfill capacity, increasing amounts of waste being produced, a lack of environmental controls at existing landfills and an influx of solid waste being brought 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 in 1988.

H.B 592 dramatically revised Ohio's solid waste regulatory program and established a comprehensive solid waste planning process intended to ensure that Ohio has adequate, protective capacity at landfills to dispose of its waste while reducing Ohio's overall reliance on landfill disposal by increasing waste reduction and recycling statewide.

B. Requirements of County and Joint Solid Waste Management Districts

1. Solid Waste District Formation

As a result of H.B. 592, Ohio's counties or groups of counties were required to form a solid waste management district for the purpose of preparing and implementing a solid waste management plan. Ohio currently has 52 solid waste districts. Of these, 37 are single-county districts and 15 are multi-county districts. The Cuyahoga County Solid Waste District was formed as a single county district on August 29, 1988 by the Board of Commissioners of Cuyahoga County.

2. Solid Waste District Governance

Solid waste districts are governed by two bodies – a board of directors and a policy committee. The policy committee is responsible for developing the solid waste management plan while the board of directors is responsible for implementing the plan. The Cuyahoga County Solid Waste District Board of Directors and Policy Committee are uniquely structured.

The Cuyahoga County Solid Waste Policy Committee consists of the 11-member Cuyahoga County Planning Commission plus two public representatives. This structure differs from that specified in Ohio Revised Code Section 3734.54 due to a waiver granted by Ohio EPA that provides more municipal input into the solid waste planning process.

The Cuyahoga County Solid Waste District Board of Directors differs from other districts that are governed by county commissioners. When Cuyahoga County became a charter county in 2011, its county commissioner governance structure was replaced with that of a county executive and county council. As a result the Solid Waste District Board was changed to include the county executive, a county council member and the county public works director.

3. Solid Waste Management Plans

Once solid waste management districts were formed, each was required to prepare an initial solid waste management plan and then update the plan every five years. Solid waste management plans must be prepared according to an Ohio EPA format and contain the

information and data prescribed in Ohio Revised Code (ORC) 3734.53 and Ohio Administrative Code (OAC) Rule 3745-27-90. Among other things, plans must demonstrate that the district will have access to at least 10 years of landfill capacity to manage all of its waste, how the district will meet the waste reduction and recycling goals established in the State of Ohio Solid Waste Management Plan and how it will fund the implementation of the plan.

Once the district and its policy committee prepares a draft of its solid waste management plan, it is sent to the Ohio EPA for its review and comments. After revising the draft to address Ohio EPA's comments, the district makes the plan available to the public for comment, holds a public hearing and revises the plan as necessary.

Next, the plan must be ratified which requires communities to vote to approve or disapprove. The plan is ratified when communities representing 60% of the population of the district including the largest city, vote to approve the plan. It is then sent to the Director of the Ohio EPA and the district receives its final findings and orders and can begin to implementation. If the plan is not approved, the Ohio EPA will prepare a plan for the district and order it to be implemented. From start to finish, preparing a solid waste management plan can take up to 33 months. An approved solid waste management plan covers a planning period of 15 years and must be updated every five years.

Cuyahoga County's initial Solid Waste Management Plan was approved by the Director of the Ohio Environmental Protection Agency on July 8, 1994. Subsequent Plan Updates were approved on October 6, 2000, November 8, 2006 and May 1, 2013. This plan update is the fourth.

C. Cuyahoga County Solid Waste District Overview

The Cuyahoga County Solid Waste District (CCSWD) is responsible for implementing the solid waste management plan through programs and services offered to the public. The District is funded by a "generation fee" which is a fee of \$1.50 levied on each ton of waste produced in Cuyahoga County and landfilled in Ohio. The generation fee is approved by communities each time it ratifies the plan. Cuyahoga County's fee is one of the lowest in Ohio and was only increased one time since the district was created. That was in 2007 when the fee was increased from \$1.00 per ton to \$1.50 which is still \$3.00 less than the state average of \$4.50.

The CCSWD strives to operate efficiently so it may keep its fee low while still funding all plan elements. It benefits from having a large infrastructure of private solid waste management and recycling service providers. This means that the District can focus on providing technical assistance and educational services and only become a service provider in cases where there is no private sector company offering the service such as with its household hazardous waste collection.

The CCSWD employs a staff of six. Our vision is for Cuyahoga County to be a national leader in the movement toward a world without waste and our mission is to educate, empower and enable people across Cuyahoga County to reduce, reuse and recycle. We practice the following core values daily.

<i>Responsibility</i>	We advocate for policies and legislation that reduce waste and support best practices in solid waste management.
<i>Integrity</i>	We act in an honest, ethical, professional, and respectful manner with each other and our community, taking personal responsibility and being accountable for achieving results.

<i>Financial Stewardship</i>	We strive to be wise and responsible caretakers of the financial resources entrusted to us.
<i>Collaboration</i>	We work in partnership with individuals, communities, businesses and institutions to develop and implement effective waste management practices.
<i>Education</i>	We continually educate ourselves and our community regarding sustainability, recycling and best practices regarding sustainable waste management.

D. Waste Reduction and Recycling Goals

Solid waste districts must achieve the following nine goals established in the *2009 State Solid Waste Management Plan*. See **Chapter 5** and **Appendix I** for descriptions of the programs the District will use to achieve the goals.

Goal #1

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

Goal #2

- The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector and at least 66 percent of the solid waste generated by the industrial sector.

Goal #3

- The SWMD shall provide the following required programs: a Web site; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.

Goal #4

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

Goal #5

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

Goal #6

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

Goal #7

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

Goal #8

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

Goal #9

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

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CHAPTER 2: DISTRICT PROFILE

Chapter Purpose

This chapter provides context for Cuyahoga County's solid waste management plan by providing an overview of general characteristics of the county including:

- its communities and political jurisdictions;
- its population and population trends;
- its commercial businesses and institutional entities;
- its industrial businesses; and
- any other unique characteristics that may affect waste management within the county.

Understanding these characteristics helps the District make decisions about the types of programs that will most effectively address the needs of its residents, businesses and other waste generators. For instance, population distribution, density and trends affect the types of recycling opportunities that make sense for a particular community and for the county as a whole.

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

Unique circumstances, such as having high numbers of multi-family properties or hosting a large university, sport venue or health care institution can impact waste generation and present opportunities or challenges for implementing waste reduction and recycling programs.

The District 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 Cuyahoga County Solid Waste District is a single-county district established on August 29, 1988 by the Board of Commissioners of Cuyahoga County. The Cuyahoga County Solid Waste Management District (referred to herein as the "District" or "Cuyahoga County") includes all incorporated and unincorporated territory in Cuyahoga County and a small portion of neighboring Geauga County (Village of Hunting Valley).

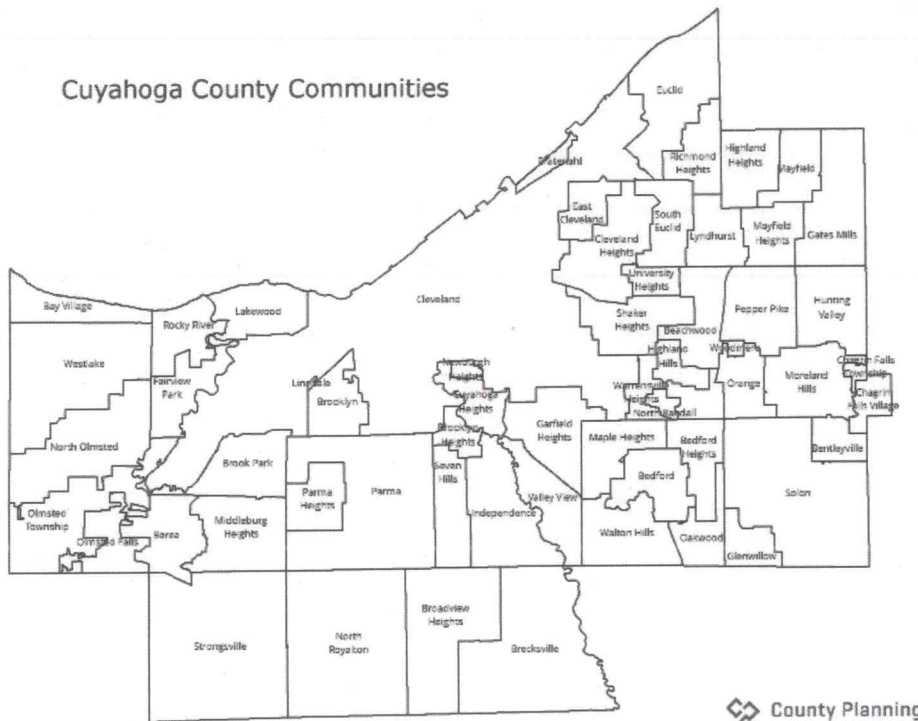


Cuyahoga County is an urban county in Northeast Ohio encompassing 458.3 square miles with 77.78% of its land area currently covered with high intensity and low intensity development according to the Ohio DSA, Office of Research.

2. County Overview

Cuyahoga County is divided into 59 communities - 38 municipalities, 19 villages and 2 townships. The largest (by population) is the City of Cleveland, followed by the cities of Parma, Lakewood, Euclid and Cleveland Heights. There are a total of 619,000 housing units county-wide. 59.3% are owner occupied, 40% are renter occupied and 13.7% are vacant according to the Ohio DSA.

Figure 2-1: Cuyahoga County Communities



B. Population

1. Population (2016)

The population of Cuyahoga County in the Plan reference year of 2016 was 1,235,936 (after adjusting upwards to include the 122 residents in the Geauga County portion of Hunting Valley).

2. Population Distribution

Table 2-2 shows how Cuyahoga County's population is distributed, with 96% of the population located in its 38 cities, 3% located in its 19 villages and 1% located in its two townships.

Table 2-2: Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Cuyahoga	96%	3%	1%

3. **Population Change**

Cuyahoga County's population is declining. It peaked around 1970 at 1.7 million residents. Recent population change shows that the county's population declined by approximately 30,770 residents or 2.4% between 2010 and 2016. It is projected to decrease by an additional 75,604 residents or 6.2% during the 2019-2033 planning period – ranging from approximately 3,486 - 6,566 residents annually or 0.4% per year.

4. **Implications for Solid Waste Management**

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

C. Profile of Commercial and Institutional Sector

There are approximately 47,000 commercial businesses and institutions in Cuyahoga County. The top employers include the health care, insurance and financial industries, along with universities and the public sector. **Table 2.3** lists the largest employers in the commercial and institutional sector.

Healthcare is the largest employer in Cuyahoga County with more than 120,000 healthcare professionals. Greater Cleveland is home to more than 60 hospitals including Cleveland Clinic, University Hospitals, MetroHealth Medical Center and Sisters of Charity Health System.

Table 2.3: Largest Commercial and Institutional employers

Company Name	Employees
Cleveland Clinic Health Care System	31,668
University Hospitals Health	16,595
Progressive Corp	8,765
Cleveland Metropolitan School District	7,558
Cuyahoga County	7,498
City of Cleveland	6,608
The Metro Health System	6,381
Key Corporation	4,612
Case Western Reserve University	4,455
US Postal Service	3,599

Source: U.S. Business Database. Rep. Reference USA. Web. 3 Nov. 20

Table 2.4 shows the number of commercial/institutional establishments within each North American Industry Classification System (NAICS) category.

Table 2-4: Commercial/Institutional Establishments

NAICS Description	Number of Commercial/ Institutional Establishments
Wholesale Trade	1,723
Retail Trade	6,179
Transportation and Warehousing	848
Information	823
Finance and Insurance	3,470
Real Estate and Rental and Leasing	2,323
Professional, Scientific, and Technical Services	5,428
Management of Companies and Enterprises	52
Administrative and Support and Waste Management and Remediation Services	1,637
Educational Services	1,270
Health Care and Social Assistance	12,240
Arts, Entertainment, and Recreation	837
Accommodation/Food Service	3,365
Other Services	5,622
Public Administration	1,141

Source: U.S. Business Database. Rep. Reference USA. Web. 3 Nov. 20

D. Profile of Industrial (Manufacturing) Sector

Northeast Ohio is a leading center for steel and metals production and accounts for 10% of overall U.S. output, with integrated mills and mini-mills producing sheet, bar and tubing, as well as more than 3,000 fabricated metal product and machinery manufacturing companies.

There are approximately 2,900 industrial businesses operating in Cuyahoga County. 55% of these have a median employment of 10 or more individuals. Only a small percent of industrial businesses (7%) employ more than 100 employees. However, there are more than 200 such businesses. Some of the largest manufacturing businesses include American Greetings, ArcelorMittal USA, Eaton Corp, Ford Motor Co, General Motors, Lincoln Electric, Moen, Nestle USA, PPG, Parker-Hannifin Corp Rockwell Automation, Sherwin Williams Co. and Swagelok.

Table 2-5 shows the number of industrial business within each North American Industry Classification System (NAICS) code, as well as the median staff employed by each industrial business for each NAICS code.

Table 2-5: 2016 Cuyahoga County Industrial Statistics

NAICS Code	NAICS Description	Number of Industrial Businesses	Median Number of Employees per Establishment
311	Food	160	5
312	Beverage and Tobacco	28	62
313	Textile Mills	11	7
314	Textile Products	35	5
315	Apparel	14	10
316	Leather and Allied Products	4	9
321	Wood Products	26	13
322	Paper	44	28
323	Printing	209	5
324	Petroleum and Coal	13	8
325	Chemical Manufacturing	96	19
326	Plastic and Rubber	73	15
327	Non-Metallic Mineral Products	66	8
331	Primary Metals	87	22
332	Fabricated Metals	560	10
333	Machinery	313	12
334	Computer and Electronic Products	108	15
335	Electrical Equipment, Appliances and Components	641	8
336	Transportation Equipment	69	11
337	Furniture and Related Products	77	6
339	Miscellaneous Manufacturing	289	10

Source: U.S. Business Database. Rep. Reference USA. Web. 3 Nov. 20

E. Other Characteristics

Cuyahoga County is enjoying a resurgence in national attention with its new convention center, renowned arts and culture scene and its sports teams. It is home to many colleges and universities and is a center for healthcare services and innovation. It is also an advanced manufacturing hub and a center for transportation, distribution and logistics. This vital commercial activity results in a significant waste generation. This waste is managed by a complex and well established infrastructure of collection, transfer, disposal, recycling and composting services. This infrastructure is documented in Chapter 4 and further detailed in **Appendices B and H**.

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CHAPTER 3: WASTE GENERATION

Chapter Purpose

This chapter summarizes Cuyahoga County's historical and projected solid waste generation. Understanding waste generation is an important first step in making solid waste management decisions. Thus, the District analyzed the amounts and types of wastes that were generated within Cuyahoga County in the past and projected those that could be generated in the future.

The District calculated waste generation for two sectors: Residential/Commercial and Industrial. Residential/Commercial solid waste is municipal solid waste that is generated by and within a typical community. This includes waste generated by residents, schools, institutions and commercial establishments like restaurants, retail stores and offices. Industrial solid waste is generated by manufacturing operations.

The District calculated how much waste each sector generated by combining the quantities of solid waste disposed in landfills with the quantities of materials that were recycled or composted.

The District obtained recycling data by surveying communities, commercial and industrial businesses and recycling and composting facilities. Since responding to a survey is voluntary, the District relies on an entity's ability and willingness to provide recycling data. When entities do not respond to surveys, the District only sees a partial picture of recycling activity. The amount of survey data that is obtained each year has a direct effect on the District's recycling and waste generation rates.

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

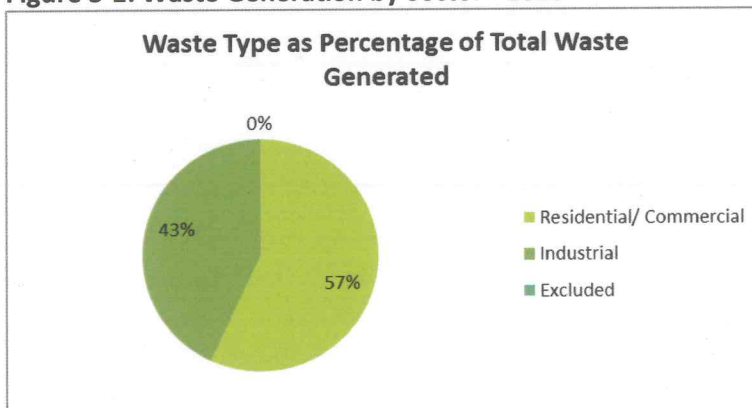
The District analyzed historic quantities of waste generated in order to project future waste generation. The details of this analysis are presented in Appendix G. The District then used the projections to make decisions on how best to manage Cuyahoga County's waste and ensure there will be adequate waste management capacity through landfills, compost facilities and recycling facilities.

A. Solid Waste Generated in Reference Year (2016)

Table 3-1 and Figure 3-1 present Cuyahoga County's waste generation for the reference year.

Table 3-1: Total Solid Waste Generated in the Reference Year

Type of Waste	Tons Generated
Residential/ Commercial	1,528,229
Industrial	1,156,316
Excluded	0
Total	2,684,545

Figure 3-1: Waste Generation by Sector - 2016**1. Residential/Commercial (R/C) Waste Generated in Reference Year**

In 2016, 1,528,229 total tons of solid waste was generated from residential and commercial sources in Cuyahoga County. Waste generation is the sum of tons landfilled, tons recycled, and tons composted. This amounts to a residential/commercial waste generation rate of 6.78 pounds per person per day which is slightly higher than the statewide average of 6.09 PPD. Solid waste generated from this sector accounts for 57% of all waste produced in Cuyahoga County.

2. Industrial Waste Generated in Reference Year

In 2016, 1,156,316 total tons of waste was generated from industrial sources in Cuyahoga County. Solid waste generated from this sector accounts for 43% of all waste produced in Cuyahoga County.

3. Excluded Waste Generated in Reference Year

Excluded waste includes materials that are excluded from the definition of solid waste in ORC 3734.01(E). This includes slag, uncontaminated earth, non-toxic fly ash, spent non-toxic foundry sand, and materials from mining operations. In 2016, excluded waste represented less than 10% of all waste generated therefore the District did not have to account for this in its solid waste plan according to Ohio EPA's Plan Format.

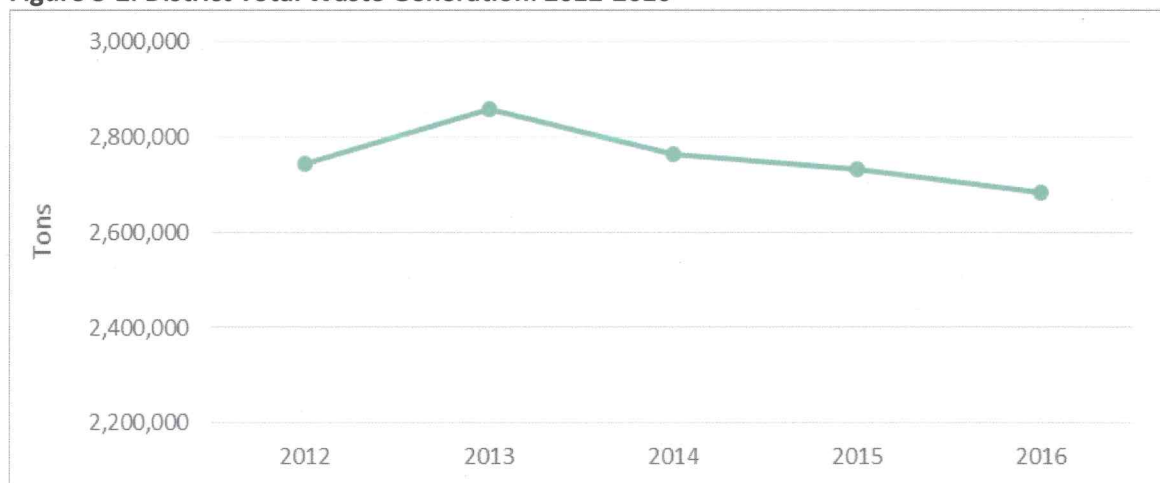
B. Historical Solid Waste Generated (2012-2016)

The overall waste generation for Cuyahoga County from all sectors from 2012 through 2016 is shown in **Table 3-1** and **Figure 3-2**. These show an overall reduction in generation. The District attributes this downward trend to a population decline of 29,175 people during this period.

Table 3-2. Reference Year and Historical Waste Generated

Year	Pop.	Residential/Commercial (R/C) Waste				Industrial Waste			Total	Annual % Change	
		Disposed	Recycled	Generated	Per Capita (PPD)	Disposed	Recycled	Generated		R/C	Industrial
2012	1,265,111	1,115,280	476,201	1,591,482	6.89	260,749	892,702	1,153,451	2,744,933	-	
2013	1,263,154	1,076,361	454,865	1,531,226	6.64	272,487	1,054,040	1,326,527	2,857,753	-4%	15%
2014	1,259,828	1,093,975	473,625	1,567,600	6.82	232,735	963,341	1,196,076	2,763,677	2%	-10%
2015	1,255,921	1,093,450	444,793	1,538,243	6.71	291,142	902,351	1,193,493	2,731,736	-2%	0%
2016	1,235,936	1,064,234	463,995	1,528,229	6.78	300,704	855,612	1,156,316	2,684,545	-1%	-3%

Figure 3-2. District Total Waste Generation: 2012-2016



1. Historical Residential/Commercial Waste Generated

Overall, waste generation in the residential/commercial sector has remained fairly constant over the five year period from 2012 through 2016. **Figure 3-3** shows the breakout of waste recycled (including composted) and waste landfilled which combined, equal generation. **Figure 3-4** shows the per capita waste generation rate for the residential/commercial sector. While the figure shows some fluctuation, the average per capita waste generation in this period was 6.78 pounds per person per day and slightly higher than the state average of 6.09 per person per day. This may be attributable to a higher level of commercial activity in Cuyahoga County as compared to other parts of Ohio.

Figure 3-3: Residential/Commercial Waste Generation Breakout

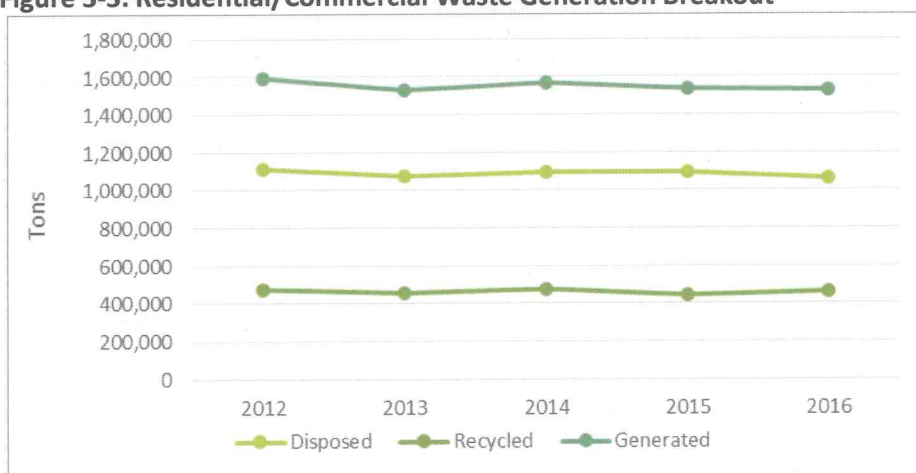


Figure 3-4: Residential/ Commercial Waste Generation Per Capita

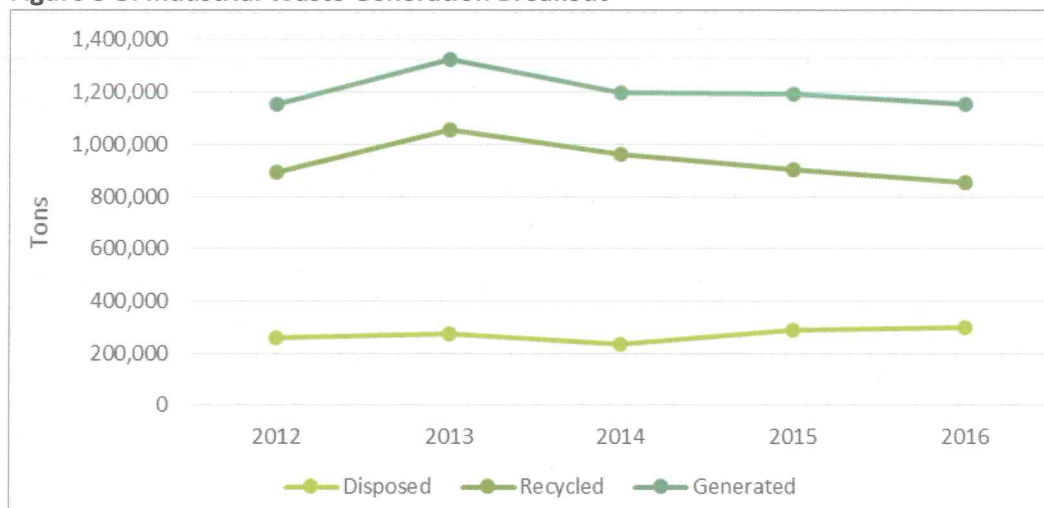


2. Historical Industrial Waste Generated

Industrial waste generation overall did not see much change over the five-year period with the 2013 as an outlier (see **Appendix G, Figure G-1**). In 2013, the total amount disposed had increased along with increased recycling reported by industrial survey respondents for which there was also an increase in the number of industrial survey respondents. Both disposal and recycling tonnages had decreased significantly in 2014. Explanations for the drop were provided

by the District to Ohio EPA in the 2014 Annual District Report. The decline in recycling was due mostly to an industrial survey respondent that had reported a business model change which significantly reduced its cardboard recycling. Another survey respondent was unable to explain a large drop in wood recycled and suspected that there may have been an error in 2013 reporting. When removing 2013 as the outlier, the trend over the period was that when the tons recycled increased, the tons disposed decreased and vice versa.

Figure 3-5: Industrial Waste Generation Breakout

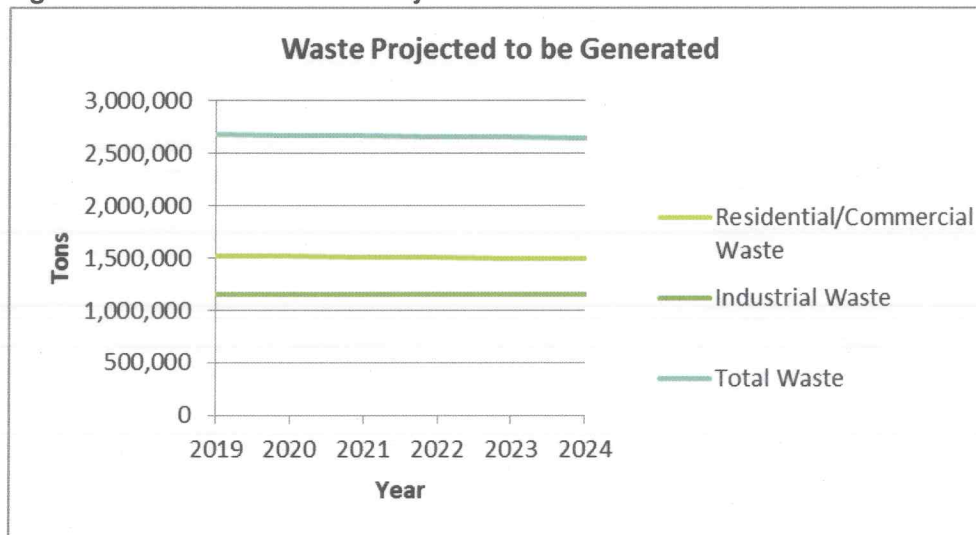


C. Waste Generation Projections

Table 3-3 and **Figure 3-6**, present projections for the amount of waste to be generated for the first six years of the planning period 2019 – 2024. In general, residential/commercial sector generation is projected to decrease modestly and industrial sector generation is projected to remain flat. Generation projections were based on projections for disposal and recycling contained in **Appendices D, E and F**. An explanation of the methodologies can be found in those appendices.

Table 3-2: Waste Generation Projections

Year	Residential/ Commercial Waste	Industrial Waste	Total
2019	1,518,759	1,156,316	2,675,075
2020	1,512,595	1,156,316	2,668,911
2021	1,506,832	1,156,316	2,663,147
2022	1,501,055	1,156,316	2,657,371
2023	1,495,278	1,156,316	2,651,594
2024	1,489,501	1,156,316	2,645,817

Figure 3-6: Waste Generation Projections

1. Residential/Commercial Waste Projections

Residential/commercial sector disposal tonnages are projected to decline throughout the planning period based on the District's population projections, which are discussed in **Appendix C**. To project the total tons of residential/commercial sector disposal from 2017 to 2033, the average per capita disposal rate from 2012 to 2016 (4.75 PPD) was multiplied by 365 days/year and the annual estimated population from **Table C-2**, then divided by 2,000 to convert from pounds to tons. **Table D-6** in **Appendix D** presents the residential/commercial waste disposal projections.

Residential/commercial sector recycling is projected to decrease from 464,584 tons in 2019 to 457,810 tons in 2033, or 1.4% over the planning period. While overall tonnage is anticipated to decrease over the planning period, per capita recycling rates are anticipated to increase from 2.09 pounds per person per day (PPD) in 2019 to 2.20 PPD in 2033. **Figure E-3** in **Appendix E** presents the residential/commercial sector recycling statistics and projections from 2016 to 2033.

Multiple methodologies were used to project the District's residential/commercial sector recycling, which were based on the assumptions made after the completion of a historical analysis for different programs and data sources. With the exception of residential curbside and drop-off recycling programs, historical averages were used to determine the projected tonnages in 2017. The averages taken from past commercial recycling surveys and data from other recycling facilities were used to project that there will be a 1% decrease every five years throughout the planning period for commercial sector recycling. Averages were also used when projecting organics and scrap tire recycling, although tonnages for both remained flat since there were no identifiable trends or anticipated program changes that would impact tonnages for either. Electronics and household hazardous waste collection programs are projected to decrease throughout the planning period based on population projections. Despite the District's population decline, residential recycling has increased annually. It is assumed that through continuing the District's education campaign to help communities improve their recycling and

implementing a curbside recycling program in the last of the District's 59 communities beginning in 2020, this would slightly boost the residential curbside and drop-off program tonnages which would have otherwise have been projected to remain flat throughout the planning period. It is also the only area that is anticipated to see an increase during the planning period.

2. Industrial Waste Projections

The Ohio Department of Job and Family Services' *2024 Job Outlook for the Cleveland-Elyria-Mentor Metropolitan Statistical Area* projects employment in the industrial sector will decrease 4.1% from 2014 to 2024. Employment projections from previous Job Outlook publications were compared to actual changes in disposal data, and a direct correlation could not be identified.

Industrial sector disposal was stable during the five-year period ranging from 2012 to 2016, with a low of 232,735 tons and a high of 300,704 tons. The District is not aware of any major changes to the industrial landscape, such as new industries beginning operations or existing industries ceasing operations. Therefore, disposal tonnage is projected as a constant rate for the remainder of the planning period based on 2016 tonnage.

According to Ohio EPA's Plan Format v4.0, if recycling tonnage identified through surveys in the reference year was similar to quantities identified historically, then the quantity attributed to surveys should be held constant at the reference year quantity. All of the District's industrial sector recycling data is derived from generator survey data.

With the exception of 2013, which was an outlier, industrial sector recycling tonnage remained stable over the five-year period from 2012 to 2016. Totals during this period, with the exception of 2013, ranged from a low of 892,702 to 963,341 tons. There were no significant changes to the quantities recycled on an annual basis. There have not been any announcements made about industries planning to begin operations in Cuyahoga County, nor is there any information available about industries planning to cease operations in the District that could impact recycling totals in the near future. Therefore, tonnage is projected as a constant rate for the remainder of the planning period based on 2016 tonnage. **Table F-7 in Appendix F** presents the industrial sector recovery statistics and projections from 2016 to 2033.

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CHAPTER 4: WASTE MANAGEMENT

Chapter Purpose

This chapter summarizes the District's strategy for managing that solid waste that Cuyahoga County is estimated to generate during the planning period - approximately 2.6 million tons per year. This is based on current and estimated waste generation summarized in Chapter 3 and detailed in Appendix G.

This waste can be managed by various facilities including landfills, transfer facilities, compost facilities and recycling facilities. A solid waste management district is not required to own or operate these facilities. In fact, most solid waste facilities in Ohio are owned and operated by private companies. Furthermore, facilities can be located within and outside the District.

This solid waste management plan identifies the public and private facilities that are available to accept Cuyahoga County's trash, compostables and recyclables.

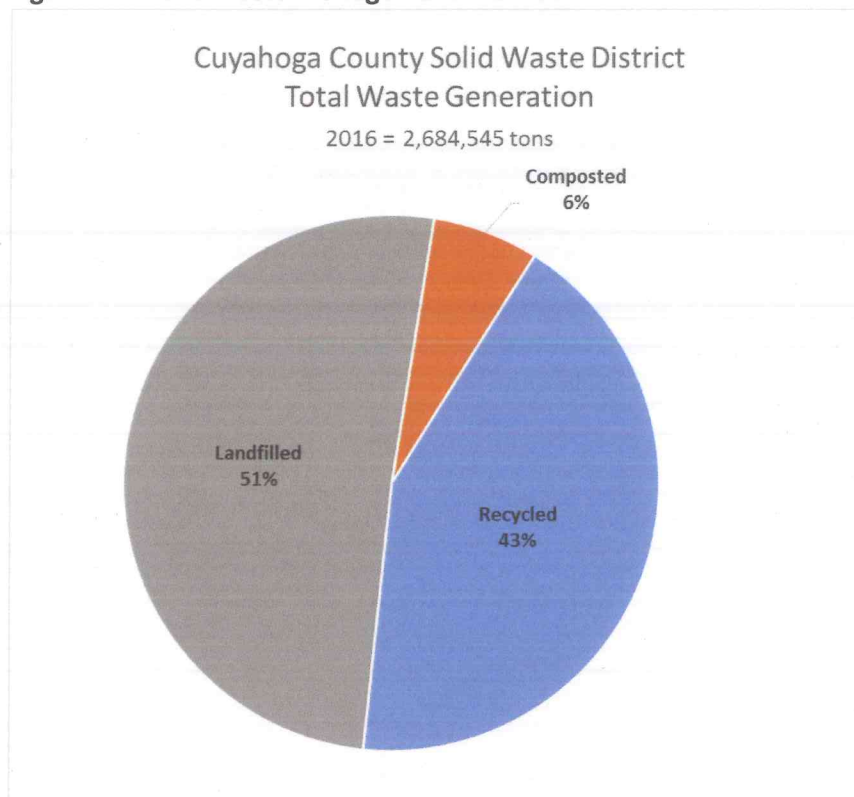
A solid waste management plan must ensure that the number and capacity of the facilities is adequate to manage all of the District's solid waste, particularly landfilled waste. The District must demonstrate that there will be access to enough landfill capacity for all of the waste that will need to be disposed.

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

Finally, solid waste management districts have the ability to control which landfill and transfer facilities can and cannot accept waste generated. This is accomplished through designation and flow control explained in more detail later in this chapter.

A. Waste Management Overview

In 2016, Cuyahoga County generated 2,684,545 total tons of solid waste. Of this amount, nearly half of the waste (49%) was diverted from landfills through recycling and composting. **Figure 4-1** shows how Cuyahoga County's waste was managed during the reference year.

Figure 4-1: 2016 Waste Management Methods**B. Profile of Waste Management Infrastructure Including Reference Year Facilities**

Cuyahoga County benefits from an ample solid waste management infrastructure that provides many opportunities to manage waste cost-effectively and efficiently including many opportunities to recycle and compost. The following describes this infrastructure, the facilities used and their role in the overall solid waste management system.

1. Facilities Used in the Reference Year**a. Landfill Facilities**

Landfills are the last stop for any waste that is not diverted through waste reduction, recycling and composting. While Cuyahoga County's communities and businesses are effective at recycling, landfills still manage approximately one-half of all its waste – over 1.2 million tons annually. All this waste must be exported to other counties in Ohio for disposal because no operating solid waste landfills remain in Cuyahoga County.

In 2016, waste was exported to eleven landfills located in nine other Ohio counties for disposal. These landfills are identified in **Figure 4-2**.

Figure 4-2: Landfills Receiving Cuyahoga County Waste in the Reference Year

The top five landfills receiving Cuyahoga County's waste are identified in **Table 4-1**. These facilities disposed 99 percent of all landfilled waste and have ample disposal capacity – an average of 43 years based on current permitted capacity. All landfills used are owned and operated by private sector companies.

Table 4-1: Top 5 Landfills Receiving Cuyahoga County Waste (2016)

Facility	Location	% of Waste Disposed	Years of Remaining Capacity
Lorain County Landfill – Republic Services	Lorain County, Ohio	57%	10.5
Noble Road Landfill – Rumpke Waste	Richland County	20%	8.5
American Landfill - Waste Management	Stark County, Ohio	14%	85.6
Kimble Landfill – Kimble Companies	Tuscarawas County, Ohio	8%	32.05
Countywide Landfill – Republic Services	Stark County, Ohio	1%	77.2

b. Transfer Facilities

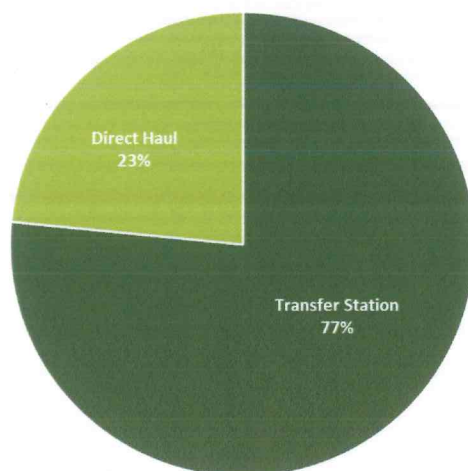
Solid waste transfer facilities are used to consolidate trash before being trucked to distant landfills for disposal to save money on trucking costs. Transfer stations are an important part of the solid waste management infrastructure in Cuyahoga County because there is only one landfill close enough to direct haul waste - the Lorain County Landfill in Oberlin. The other landfills are located at least 80 miles from Cleveland and are too far to directly haul trash. As a result, approximately 77% of Cuyahoga County's waste is taken to a transfer station before being taken to a landfill.

Table 4-2 identifies the thirteen transfer stations used in the reference year. These managed 952,852 tons of waste. Five are owned by municipalities, the remaining are privately-owned. **Figure 4-3** illustrates the percentage of waste that was shipped through transfer stations versus the percentage hauled directly to landfills.

Table 4-2: Transfer Facilities Receiving Cuyahoga County's Waste (2016)

Cuyahoga County Transfer Facilities	City	County
BFI Glenwillow Transfer Station (Republic Waste)	Glenwillow	Cuyahoga
Broadview Heights Recycling Center (Rumpke Waste)	Broadview Heights	Cuyahoga
Cleveland Heights Transfer Station (City of Cleveland Hts.)	Cleveland Heights	Cuyahoga
Cleveland - Ridge Rd Transfer Station (City of Cleveland)	Cleveland	Cuyahoga
Cleveland Transfer /Recycling (Waste Management Inc.)	Oakwood Village	Cuyahoga
Harvard Road Transfer Station (Rumpke Waste)	Newburgh Heights	Cuyahoga
Strongsville Transfer Station (City of Strongsville)	Strongsville	Cuyahoga
Shaker Heights Transfer Station (City of Shaker Heights)	Shaker Heights	Cuyahoga
Rocky River Transfer Station (City of Rocky River)	Rocky River	Cuyahoga
Outside County Transfer Facilities	City	County
Kimble Transfer & Recycling (Kimble Co.)	Twinsburg	Summit
Kimble Transfer & Recycling Facility (Kimble Co.)	Canton	Tuscarawas
Republic Waste Recovery (Republic Waste)	Akron	Summit
Universal Disposal Inc. (Universal Disposal)	Chardon	Geauga

Figure 4-3 Transfer versus Direct Haul



c. Compost Facilities

Composting facilities are used to manage organic waste such as leaves and brush from municipalities, tree trimmings and grass from landscapers and food waste from restaurants and institutions. Composting is the most cost-effective and environmentally beneficial way to manage organic waste because it eliminates landfill disposal fees and produces a soil amendment that benefits gardens and landscapes. It also reduces greenhouse gas emissions. Organic waste disposed in landfills produces methane a potent greenhouse gas. Especially promising is the opportunity to compost food waste as the local infrastructure to collect and compost this material expands.

Approximately 6% of Cuyahoga County's waste was managed through composting in the reference year. **Table 4-3** identifies the 26 Ohio EPA registered compost facilities that managed the material. Some facilities managed organic waste they generated themselves and some processed material for customers such as municipalities and landscapers.

Table 4-3: Compost Facilities Receiving Cuyahoga County's Waste (2016)

Cuyahoga County Compost Facilities	City	County
Cloverleaf Composting Facility	Independence	Cuyahoga
Cleveland Metroparks Compost	Cleveland	Cuyahoga
Solon Rd Midwest Recycled Landscape Materials	Bedford Heights	Cuyahoga
City of Westlake, Compost Facility	Westlake	Cuyahoga
City of Brooklyn Compost Facility	Brooklyn	Cuyahoga
Solon Compost Facility	Solon	Cuyahoga
Orange Village Compost	Orange Village	Cuyahoga
Mayfield Village Compost	Mayfield Village	Cuyahoga
Boyas Excavating Inc.	Valley View	Cuyahoga
Utilities Equipment & Supply Co	South Euclid	Cuyahoga
Kurtz Bros Inc.	Valley View	Cuyahoga
Full Cycle Organics LLC	Cleveland	Cuyahoga
Savarino Brothers	Oakwood Village	Cuyahoga
Rid-All Green Partnership	Cleveland	Cuyahoga
Outside County Compost facilities	City	County
Barnes Nursery	Huron	Erie
Abate Landscaping	Chesterland	Geauga
Green Vision Materials	Auburn	Lake
T&K Kuhnle Co	Auburn	Geauga
City of Lorain Composting Facility	Lorain	Lorain
City of Wickliffe Composting Facility	Wickliffe	Lake
Avon Miller Rd Compost Facility - Kurtz Bros Inc.	Avon Lake	Lorain
#1 Landscape	Medina	Medina
Smith Bros Inc.	Medina	Medina
Sagamore Soils	Hudson	Summit
Sagamore Soils Twinsburg Rd Compost Facility	Macedonia	Summit
Pro Tree & Landscape Co	Peninsula	Summit

d. Recycling Processing Facilities

Processing facilities refer to facilities that receive and process recyclables such as scrap metal, cans, paper, cardboard, glass, plastics, electronics, organics and more. These facilities typically sort and bale recyclable materials for shipment to various companies that recycle them into new products. **Table 4.4** identifies 66 processors that handled 449,299 tons of recyclable materials from Cuyahoga County residential, commercial and industrial generators during the reference year. More details can be found in **Appendix B**.

Table 4-4: Processing Facilities Receiving Cuyahoga County Recyclables (2016)

Processor Name	County
Able Alloy	Cuyahoga
Aetna Metal Recycling	Cuyahoga
All Ohio Secure Shred	Summit
All Scrap Salvage	Cuyahoga
Alloy Exchange	Kent
American Metal Recycling	Cuyahoga
American Scrap Mart	Cuyahoga
Associated Paper Stock	Mahoning
Bedford Metal Recycling	Cuyahoga
Berea Metals & Recycling	Cuyahoga
Blue Ocean Plastics, LLC	Cuyahoga
Broadway Scrap Metals, Inc.	Cuyahoga
Buckeye Industries, Cleveland	Cuyahoga
Bulldog Battery	Lake
Caraustar Recycling	Cuyahoga
Container Compliance Corporation	Cuyahoga
Crown & Kornell Corp.	Cuyahoga
Extreme Green Recycling	Lake
Ferrous Processing & Trading	Cuyahoga
Full Cycle Organics	Cuyahoga
Gateway Products Recycling, Inc.	Cuyahoga
Goodwill Industries of Greater Cleveland & East Central Ohio	Stark
Greater Cleveland Habitat for Humanity	Cuyahoga
Horwitz & Pintis Co.	Lucas
I. Schuman Co.	Cuyahoga
IFCO	Medina
Infoshred.net	Cuyahoga
JBI Scrap Processors	Cuyahoga
Keep It Green Recycling	Cuyahoga
Kimble Transfer & Recycling	Summit
KJ Plastics	Montgomery
Kurtz Bros. - Bridgeview Composting Facility	Cuyahoga
Lakeside Metals Inc.	Cuyahoga
Lakeside Scrap Metals, Inc.	Cuyahoga
Medina Paper Recycling, Inc.	Medina
Metallic Resources	Summit
Middlefield Pallet Inc.	Geauga
Mondo Polymer Technologies	Washington
Niles Iron & Metal	Trumbull

Processor Name	County
Northcoast Inc. Recycling Specialists	Lake
Painesville Recycling	Lake
PEL America	Cuyahoga
Planet Aid Cleveland	Cuyahoga
PSC Metals	Cuyahoga
Quasar Energy Group	Cuyahoga
Recycle-it LLC	Cuyahoga
Republic Services of Cleveland, Inc.	Cuyahoga
Republic Services - Lorain County Resource Recovery Complex	Lorain
River Valley Paper	Summit
Royal Oak Recycling	Cuyahoga
RSR Partners, LLC dba Regency Technology	Summit
Rust Belt Riders	Cuyahoga
S. Slesnick Co, Inc.	Stark
Salvation Army	Cuyahoga
Shipmasters Recycling	Cuyahoga
Simple Recycling	Cuyahoga
Southeast Metals	Cuyahoga
Strategic Materials	Cuyahoga
The City Mission	Cuyahoga
Tyroler Scrap Metals, Inc.	Cuyahoga
Victor Metals	Lake
Waste Parchment	Holmes
Waste Management- Akron MRF	Cuyahoga
Westside Metals	Cuyahoga
Wilkoff & Sons Co.	Cuyahoga

Among the processing facilities are Material Recovery Facilities known as MRF's that process commingled recyclables collected through community curbside and drop-off recycling programs. These privately owned and operated facilities contract with 58 communities to process cans, cartons, glass, paper and cardboard and plastic collected from residents.

Figure 4-4: Material Recovery Facilities Receiving Cuyahoga County's Recyclables



C Use of Solid Waste Facilities During the Planning Period

The District is not expecting and major changes in the management of waste through the planning period. Following historical trends, waste is expected to be managed as shown in **Figure 4-5** which shows the reference year and the first five years of the planning period.

Table 4-5: Waste Management Methods

Year	Generate	Recycle and Compost	Transfer	Landfill
2016	2,703,121	1,319,607	952,892	430,622
2019	2,675,075	1,320,196	927,430	427,449
2020	2,668,911	1,319,723	923,535	425,653
2021	2,663,147	1,319,250	919,913	423,984
2022	2,657,371	1,318,764	916,292	422,315
2023	2,651,594	1,318,278	912,670	420,646

1. Landfills

Landfills will continue to be the primary waste management method used to manage solid waste after recycling and composting. This amounts to approximately 1 million tons of residential and commercial waste and 300,000 tons of industrial waste during the planning period for a total of approximately 1.3 million tons annually. The District has determined that the primary landfills relied upon to manage Cuyahoga County's waste have ample disposal capacity – an average of 43 years under current permits and will adequately meet the District's needs, see **Table 4-1**.

2. Transfer Facilities

The thirteen transfer stations identified in **Table 4-2** are expected to continue to operate during the planning period to consolidate solid wastes before being trucked to distant landfills.

3. Composting Facilities

The twenty-six composting facilities identified in **Table 4-3** are expected to continue to operate during the planning period, offering a less expensive and beneficial alternative to landfill disposal. In addition, there is increasing private sector interest in expanding composting opportunities for organics including food waste will help to increase the level of composting within Cuyahoga County from the current 6%.

4. Recycling Processing Facilities

The recycling processors identified in **Table 4-4** are expected to continue to operate during the planning period, offering residents and businesses ample opportunities to recycle household recyclables, office paper, scrap metal, electronics and more. However, recent China restrictions on recyclable material imports may impact certain recyclers, particularly Material Recovery Facilities since the material they process is not source separated and tends to have high levels of contamination. The District is working to combat contamination through its county-wide public education program in order to provide clean materials to the four MRF's that serve Cuyahoga County. The District does not anticipate the closure of any MRF's but the market changes may have an impact on the pricing. Other recyclers including scrap metal recyclers and office paper recyclers may be impacted less by the China import restrictions due to the availability of domestic markets.

5. Other Waste Management Facilities

The District is not aware of any new waste management methods being proposed that may bring waste to energy or waste conversion technologies to Cuyahoga County during the planning period. The District is not proposing any such facility at this time but is open to reviewing the applicability of alternative technologies to recover more materials and reduce landfilling.

D Siting Strategy

The solid waste management plan must demonstrate that the District will have access to enough capacity at landfill facilities to accept all of the waste it will need to dispose during the planning period. If existing facilities cannot provide that capacity, then the District and its solid waste policy committee must develop a plan for obtaining additional disposal capacity. In the event that would require constructing a solid waste landfill facility to secure disposal capacity, Ohio law would require the policy committee to develop a siting strategy for identifying a suitable location per Ohio Revised Code Section 3734.53(A)(8).

Since the District has concluded that ample landfill disposal capacity exists, it has not developed a siting strategy for the construction of a new landfill within Cuyahoga County. Furthermore, the area of undeveloped land needed to develop a new landfill does not exist within Cuyahoga County any longer.

While no new landfills are expected to be constructed within Cuyahoga County, there is the potential for other solid waste facilities such as a waste to energy facility to be proposed or existing solid waste facilities to be modified. In these instances, there is the potential need for a siting strategy for projects that would negatively impact a community or the District.

The Board of Directors of the Cuyahoga County Solid Waste Management District is authorized by Revised Code section 343.01(G)(2) to adopt a rule requiring the submission of general plans and specifications to the Board for a determination by the Board that any proposed new solid waste facility or major existing facility modification complies with the District Plan. This Plan Update authorizes the Board to adopt the rule authorized Revised Code section 343.01(G)(2). In the event that the Board adopts a rule to implement the Siting Strategy, that strategy is presented in full in **Appendix S**.

E Designation

The Board of Directors of the Cuyahoga County Solid Waste Management District is authorized to establish facility designations in accordance with Section 343.014 of the Ohio Revised Code after its solid waste plan has been approved by the Ohio Environmental Protection Agency. This authority is referred to as flow control and is typically used to direct waste to public facilities in order to retire debt.

Since the District supports an open market for the collection, transport and disposal of solid waste and currently has no facilities with public debt, it does not currently designate facilities that are authorized to receive Cuyahoga County waste.

The District is not designating any facilities in this Plan Update and is therefore identifying all Ohio licensed and permitted solid waste landfill, transfer and resource recovery facilities as well as permitted out-of-state landfill, transfer and resource recovery facilities to receive solid waste generated within the District.

The District does reserve the right to designate one or more solid waste facilities to receive solid waste generated within the District in the future if deemed necessary by its Board of Directors. If designation were to occur, the facility designation will be established and governed by applicable District rules and the designation process outlined in Ohio Revised Code and **Appendix P** herein.

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CHAPTER 5: WASTE REDUCTION AND RECYCLING

Chapter Purpose

This chapter identifies the District's priorities for the upcoming planning period and the programs and it will offer. As was explained in Chapter 1, solid waste management districts must provide programs and services to achieve the waste reduction and recycling goals established in the state solid waste management plan and ensures that there are programs and services available to meet local needs. A solid waste district may provide some of these programs and services directly or rely on private sector and non-profit service providers.

Between achieving the goals of the state plan and meeting local needs, the Cuyahoga County Solid Waste District (District) must help ensure 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 District's strategy for furthering reduction and recycling.

Before deciding upon the programs and services to offer within this Plan Update, the District performed a strategic analysis of all its existing programs and services, operations and finances and an analysis of existing waste management and recycling infrastructure and recovery rates. This review consisted of a series of 14 analyses that allowed the District and the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the District adequately serving all sectors – residential, commercial and industrial?
- Are high volume wastes like organic wastes and cardboard effectively being recycled?
- Are available recycling opportunities being fully used? Is recycling performing?
- What is the District's overall financial situation and ability to fund its programs?

Using what it learned, the District drew conclusions from the strengths, challenges and opportunities identified in its strategic analysis. It then compiled a list of actions it could take, programs it could implement and other things it could do address its conclusions. The District and the Policy Committee used that list to make decisions about the programs and services that will be available during the planning period, make recycling projections and prepare the plan budget.

A. Solid Waste Management District's Priorities

In order to determine its solid waste management priorities for the planning period, the District hired consultants to complete Appendix H which was a comprehensive analysis of the District's existing recycling infrastructure and all of its programs and services. The analysis covered fourteen topics and identified strengths, challenges and opportunities for each.

The analysis revealed that the District has a well-established and mature recycling infrastructure that is already serving the county well. This features county-wide curbside recycling and multiple drop-off opportunities, a robust network of recycling and reuse facilities, long standing and well utilized District programs for special wastes and model recycling education and outreach programs. Detailed findings can be found in **Appendix H**.

With this in mind, the District's priority for the planning period is to build on this recycling framework. The programs and services to be implemented by the District and/or available in the planning period are designed to improve efficiency, maximize staff resources, increase landfill diversion, address infrastructure gaps and reduce costs. They are organized into the following program areas and presented in this chapter. Additional details can be found in **Appendix I**.

- Residential Waste Reduction and Recycling Programs (curbside, drop-off and multi-family)
- Commercial, Institutional and Industrial Waste Reduction and Recycling Programs
- Restricted and Difficult to Manage Wastes (HHW, scrap tires, and e-waste)
- Programs for Organic Wastes and Hard to Recycle Wastes
- Economic Incentives (Grants and PAYT)
- Special Program Needs (health department funding, illegal dumping and litter collection)
- Market Development Programs and Actions
- Data Collection Programs and Actions
- Education and Outreach Programs and Actions

B. Program Descriptions

The descriptions that follow summarize the programs and services the District will offer during the planning period or that will be available during the planning period if offered by other service providers.

1. Residential Recycling Programs

Curbside Recycling

Curbside Recycling Services

Curbside recycling will continue to be offered by communities during the planning period and provide collection of cans, cartons, glass, paper and cardboard, and plastic containers. Curbside recycling is now available to residents in all but one community. The District plans to work with the remaining community to encourage the implementation of a program. See **Table 5-3** at the conclusion of this chapter for a list of programs.

Curbside Recycling Technical Assistance and Contracting Services

The District will continue to provide communities with technical assistance to help with contracting for solid waste and recycling services and to implement best practices for collection. The District has helped many communities contract for curbside recycling and switch to cart-based collection which has increased recycling and reduced costs. These services will continue with emphasis on

encouraging the switch from recycling collection using blue bags to recycling collection using carts as well as increasing recycling participation and reducing contamination.

Municipal Contracting Consortiums

The District will continue to manage two municipal contracting consortiums – solid waste transfer and disposal consortium (8 members) and recycling processing consortium (11 members). These consortiums have helped the participating cities, who collect their own waste and recyclables, obtain favorable and competitive pricing for solid waste services.

Special Assistance for Low Performing Communities

The District will provide special assistance to communities with curbside recycling rates lower than the national average of 300 pounds per household per year. The assistance may include conducting focus groups to identify reasons for the low recycling rate, focusing education in those communities and additional resources intended to help the community improve.

Drop-Off Recycling

Recycling Drop-offs

Drop-off recycling opportunities will continue to be offered by many communities during the planning period. Currently, multi-material drop-offs are offered by 15 communities and accept cans, glass, plastic containers, mixed paper and cardboard. In addition, limited-material drop-offs are offered by 23 communities and typically accept cans, paper and cardboard. See **Table 5-4** at the conclusion of this chapter for a list of multi-material, drop-off programs.

The District may obtain data on drop-off site users by surveying participants at certain community drop-off sites to ascertain why they use the site, how they learned about the site, how far they traveled and other recycling habits. This information could be used to help develop the fiber drop-off program described below or help with education to reduce contamination and illegal dumping.

Multi-Family Recycling

Technical Assistance to Support Multi-Family Housing Recycling Programs and Consortiums

The District will continue to offer technical assistance to property owners and managers to establish recycling in apartment buildings. Residents living in multi-family housing typically have limited recycling opportunities. The District's Business Recycling Specialist has assisted many properties identify recycling opportunity, potential cost savings, and assists with program implementation, troubleshooting and tenant education.

Multi-Family Housing Recycling Guide

Part of this assistance will be the development of a Multi-Family Housing Recycling Guide that offers instructions, best practices and case studies for multi-family housing recycling programs.

Investigate Public-Private Partnership to Establish Fiber Drop-Offs in High Multi-Family Communities

To increase recycling opportunities for residents living in apartment buildings, the District will investigate opportunities to partner with a local paper recycler to site recycling drop-offs for paper and cardboard. These could be placed in communities with limited or no drop-off recycling infrastructure or those with a high percent of multi-family housing. Collecting just paper and cardboard would reduce the illegal dumping problems associated with multi-material drop-offs but still capture the largest component of the residential waste stream. The containers would be staged at municipal locations.

Model Ordinance for Multi-Family Housing Recycling

The District will prepare a model ordinance that communities may adopt to require space to be dedicated for recycling in all new multi-family building projects.

2. Commercial/Institutional and Industrial Sector Reduction and Recycling Programs*Waste Audits*

The District will continue to offer waste assessments for commercial businesses, institutions, schools and manufacturing facilities as requested to identify opportunities for waste reduction, recycling and education. This assistance will be provided by the Businesses Recycling Specialist.

Technical Assistance, Presentations and Zero Waste Planning Services

The District will provide technical assistance and offer presentations for commercial businesses, institutions, schools and manufacturing facilities to facilitate waste reduction and recycling program implementation, improvements and employee education. The District will also assist with contracting for recycling services and developing zero waste plans upon request.

Recycling Sense for Your Business Workshops

The District will host periodic workshops for business and industry to focus on program implementation, contracting for recycling services and employee education.

Targeted Assistance for High Waste Generators.

In addition, to help maximize its assistance efforts, the District will target companies with the greatest opportunity to recycle such as large companies, institutions or public venues or high fiber generators such as retail establishments.

Contracting Assistance

The District will help commercial businesses, institutions, schools and manufacturing facilities procure solid waste collection and recycling services as needed and will review existing solid waste contracts to identify opportunities for savings that could be used to help pay for recycling services.

Collaborations with Local Economic Development Partners

The District will work with local economic development directors and commercial trade associations to promote waste reduction and recycling and District Services.

The District will also partner with local industrial retention organizations to learn more about the industrial sector and its waste reduction and recycling needs. Support programs will be developed from that information. These organizations include WIRE-NET, MAGNET and CIRI (The Cleveland Industrial Retention Initiative)

Promote The Ohio Materials Marketplace

The District will work with Ohio EPA to promote the exchange of used materials through The Ohio Materials Marketplace. The District will promote the marketplace on its website, arrange speaking opportunities for Ohio EPA and distribute information to its businesses and manufacturers.

Target Small Industries

The District will focus on providing assistance to small manufacturing facilities such as creating green teams, developing waste stream recommendations and educating employees. Smaller industries are

more likely not to have an existing waste reduction program in place and may be more in need of the District's assistance.

3. Restricted/Difficult to Manage Wastes

Household Hazardous Waste

Year-Round HHW Collection Program

The District will continue to operate its year-round HHW collection program at its Special Waste Convenience Center that allows communities to dispose of the HHW they collect from their residents. The District will pay for all costs associated with HHW management once it is delivered by the communities. This program manages approximately 500,000 pounds of HHW annually and is the District's signature service.

Education to Promote HHW Reuse, Reduction and Green Alternatives

The District will work to educate residents about ways it can minimize the creation of HHW through an education campaign using social media and community outreach. The campaign will focus on green cleaning and buying and using household products smartly to reduce waste and save money.

Obtain HHW Participation Data

The District may work with communities to survey participants to better understand how and why they use the HHW program and to educate residents about HHW reuse and reduction.

Evaluate Feasibility of Offering a Conditionally Exempt Small Quantity Generator (CESQG) and Universal Waste Program

The District may conduct a market assessment to determine the regulatory and operational aspects of developing a CESQG and/or Universal Waste Collection program for small businesses, institutions, and governments generating hazardous waste and universal waste.

Scrap Tires

Education of Residents – Proper Tire Disposal

The District will promote the proper disposal of scrap tires to residents by encouraging them to dispose of scrap tires at the point of purchase. The goal is to reduce the number of tires that communities and the District must pay to manage.

Outreach to Scrap Tire Generators

The District will develop a list of tire retailers, dealers and repair shops that generate scrap tires for the purpose of communicating information about Ohio scrap tire laws and placing information in stores about tire disposal.

Scrap Tire Round Up and Scrap Tire Disposal Consortium

The District will conduct its annual Scrap Tire Round-Up while it works to reduce reliance on the program through the education initiatives described above. This program may be gradually phased out if the District determines it is no longer necessary to subsidize scrap tire disposal. If the program is phased out, the District will develop a municipal scrap tire disposal consortium among communities, if needed, for those communities that will still collect tires from residents.

Evaluate the Need for a Regional Scrap Tire Transfer Facility

The District may conduct a feasibility study to assess the need for a scrap tire transfer station to provide a local drop-off option for scrap tires.

Computers/E-Waste*Computer Round-Up Events*

The District will continue to promote local Recycle Your Computer Round-Ups held by communities as well as other e-waste recycling opportunities offered by local e-waste recyclers and retail stores. Communities in the District currently conduct Recycle Your Computer Month events in April and August while many offer year-round collections.

Other Wastes*Promote Local Pharmaceutical Collections*

The District will promote existing pharmaceutical collections offered by the Cuyahoga County Sheriff and the Northeast Ohio Regional Sewer District.

Promote Battery Recycling Locations

The District will continue to promote proper disposal of rechargeable batteries using the retail drop-offs participating in the Call 2 Recycle program. Lead-acid batteries will continue to be accepted in the District's HHW program.

4. Programs for Organic Wastes and Hard to Recycle Wastes**Organics - Yard Waste and Food Waste***Evaluate Feasibility of Municipal Yard Waste Contracting Consortium*

Evaluate whether there is interest in establishing municipal yard waste contracting consortium to help communities manage leaves and brush and obtain longer contracts and stable pricing. If communities express interest, the District would facilitate the development of the consortium and handle the bid in the same way it developed its disposal and recycling consortiums. Part of the evaluation would include a capacity analysis of existing compost facilities to determine if there are gaps or threats to the composting infrastructure.

Compost Bin Sales and Composting Workshops

The District will continue to offer backyard composting bins and food waste digesters for sale to the public at its office and through composting seminars.

Engage Stakeholders to Expand Food Rescue Programs and Local Composting Infrastructure

The District will continue to engage stakeholders to increase food rescue and food waste composting infrastructure.

Hard to Recycle Wastes*Hard To Recycle Material Drop-Off*

The District will continue to provide a public drop-off for hard to recycle materials at its Special Waste Convenience Center. Items currently accepted include election signs, small appliances, small electronics, and certain Terra Cycle programs for cereal bags and cosmetic containers. This list is subject to change due to market availability.

5. Economic Incentives - GRANTS*Community Recycling Awareness Grant*

The District will continue to offer its annual Community Recycling Awareness Grant to assist communities with producing recycling awareness materials, conducting shredding events and purchasing public space recycling containers. The District may also offer additional funding for select communities with low curbside recycling rates to help those communities improve.

Recycling Container Grant

The District will continue to offer its annual Recycling Container Grant to help schools and not-for-profit organizations purchase recycling containers and expand its recycling efforts.

PAYT Opportunities

The District will identify communities that could benefit from a Pay As You Throw billing system for waste collection and provide assistance if any communities express interest.

6. Special Program Needs – Code Enforcement, Open Dumping and Litter Collection*Health Department Funding*

The District will continue to provide an annual subsidy to the Cuyahoga County Board of Health and the Cleveland Department of Public Health to inspect solid waste facilities, inspect tire generators, respond to nuisance complaints and participate on the Environmental Crimes Task Force.

Facilitate Environmental Crimes Task Force

The District will continue to facilitate the Cleveland-Cuyahoga County Environmental Crimes Task Force which investigates and prosecutes open dumping and other environmental crimes cases. Partners include the Cuyahoga County Prosecutor, Sheriff, Cleveland Police and Law departments and local health departments. The Task Force investigates an average of 600 cases annually.

Evaluate Options to Establish Open Dump Remediation Fund

The District may evaluate options to establish an Open Dump Remediation Fund to be used to clean-up open dumps. Funding could come from the payment of illegal dumping fines resulting from the work of the Environmental Crimes Task Force and supplemented with grants, a portion of the District's cash reserve or liens on properties.

Pursue Legislative Changes to Open Dumping statutes and Create Local Environmental Court

The District will continue to work with its Environmental Crimes Task Force partners to seek legislative changes that would facilitate the creation a City of Cleveland environmental court, similar to Franklin County and change the open dumping penalty statute to give judges more leeway in sentencing.

Litter Collection Program

The District will expand its litter collection program provided through Court Community Service as part of this Plan Update. The program will include two full time litter crews to clean up roadways and public areas throughout Cuyahoga County. This program serves 55 participating communities and provides over 98,000 man hours of services annually.

7. Market Development Programs

Ohio EPA Market Development Support and Administration

The District will assist local recyclers by applying for grant funding through the Ohio EPA Market Development Grant to expand local processing capacity and markets for materials. Assist with the development of the application and the application process. Administer the grant upon award and track progress.

Recycling and Sustainable Business Assistance

The District will continue to work with local recycling and reuse companies to develop local markets, expand local recycling infrastructure and increase local manufacture of recycled products.

8. Education and Outreach Programs

Outreach - General Public and Residents

Web Site – CuyahogaRecycles.org

The District's will continue to use its new website as a key means of providing recycling information to the public. CuyahogaRecycles.org is a comprehensive resource for residents, businesses, communities, educators, elected officials and the general public. The website lists recycling information for each community in Cuyahoga County, contains a "What Do I Do With" search engine where people can learn how to recycle or dispose over 100 items, provides information about the District's programs and services and has numerous resources for educators.

Comprehensive Resource Guides

The District will continue to offer various ways that residents can find recycling locations and reuse opportunities in Cuyahoga County. This includes calling the District's office and speaking with staff or using the following resources:

- "What Do I Do With" search feature on CuyahogaRecycles.org
- Pass It On: A Resource-Full Guide To Donating Usable Stuff
- Business Recycling Directory (search feature on CuyahogaRecycles.org)

Speakers and Presenters

The District will continue to conduct recycling presentations for all audiences through its Education Specialist, Business Recycling Specialist and other staff as needed as described below.

- Youth presentations – classroom, library, camp, scouts and other group activities and lessons
- Adult presentations – public officials, trade and civic groups, clubs, colleges, community events
- Backyard composting seminars
- Business recycling seminars - and presentations, staff lunch and learns

Residential Recycling Outreach

The District will continue its comprehensive program to conduct outreach to its 1.2 million residents to help them understand how to recycle more and how to recycle better. This includes the elements listed below. All are components of an intensive marketing education campaign launched by the District in 2016 to help residents understand how to recycle properly. The campaign rebranded the District as Cuyahoga Recycles. Its Recycle More, Recycle Better campaign established the foundation for the District's expanded outreach efforts to teach people how to properly recycle across Cuyahoga County and to increase participation and reduce contamination. The District will use the

following tools conduct residential recycling outreach during the planning period: See **Appendix L** for detailed descriptions.

- Marketing, media relations and advertising
- Talking Trash e-newsletter
- Printed materials – brochures, etc.
- Presentations and tabling events
- Recycling hotline

Outreach - Children, Educators and Schools

Children's Education Program

The District will continue to have an education specialist dedicated to student outreach. Programs include classroom presentations and activities, contests, summer camp and scout programs. In addition, the District will continue to produce its *Mission Recycle* student newspaper for grades K-4.

Educator Resources and Workshops

The District will continue to provide various tools and resources for educators including lesson plans, creative ideas, activities and downloadable worksheets. It will also distribute a bi-monthly e-newsletter - Recycling Education Resources which has 900 subscribers.

School Administrators and Support Staff

The District will use LinkedIn to reach school administrators with programming about starting a recycling program at school and will offer waste audits and assistance with implementing a recycling or composting program. Schools can also apply for the District's Recycling Container Grant to purchase recycling containers.

Outreach - Commercial/Institutional Sector Outreach and Education

The District will continue to have a Business Recycling Specialist dedicated to providing waste reduction and recycling assistance to the commercial and institutional sectors. This includes nonprofit organizations, institutions and government offices; commercial business and multi-family property owners; non-residential quarters; special event/sports venues, and transportation centers. Programming includes presentations, workshops, marketing, LinkedIn page and blog.

Outreach – Public Officials and Municipalities

The District will continue its outreach to local officials and city service departments through its Annual Report, Residential Recycling Report Trash Talk Lunch seminars and Trash Heap newsletter. In addition, the District may conduct solid waste facility tours such as MRF's and landfill tours.

C. Waste Reduction and Recycling Rates

In this Plan Update, the District demonstrates compliance with Goal 2 of the State Solid Waste Management Plan, which states that 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.

Through the implementation of waste reduction and recycling programs and conducting annual surveying to gather waste generation data, the District has been able to demonstrate that it has consistently exceeded the 25% residential/commercial and 66% industrial waste reduction and recycling rates and will continue to achieve Goal 2 throughout the 2019-2033 planning period.

1. Residential/Commercial Recycling Rates

During the reference year (2016), approximately 30 percent of Cuyahoga County's residential and commercial sector waste stream was either recycled or composted. This exceeded the state goal of 25%.

Residential recycling consists of materials collected through curbside, drop-off and special waste programs and yard waste programs in Cuyahoga County. This recycling amounted to 36 percent of all residential waste generated in the reference year (2016) and approximately 57 percent of all residential/commercial recycling.

Commercial recycling consists of materials collected through recycling and composting programs in businesses, schools, hospitals and other commercial establishments in Cuyahoga County. This recycling amounted to 25 percent of all commercial waste generated in the reference year (2016) and 43 percent of all residential/commercial recycling.

Projections presented in **Table 5-1** show that the District anticipates continuing to exceed Ohio's 25% recycling goal throughout the planning period. The programs and activities presented in this Chapter and in **Appendix I** outline how the District will continue to achieve the state goal throughout the planning period.

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

Year	Projected Tons Recycled	Residential/ Commercial WRR ¹
2019	464,584	30.59%
2020	464,111	30.68%
2021	463,638	30.77%
2022	463,152	30.86%
2023	462,666	30.94%
2024	462,180	31.03%

¹WRR = Waste Reduction and Recycling Rate

2. Industrial Recycling Rates

During the reference year (2016), 74% of Cuyahoga County's industrial sector waste stream was either recycled or composted. This exceeded the state goal of 66%.

Industrial recycling consist of materials collected through recycling and composting programs in Cuyahoga County's manufacturing facilities.

Projections presented in **Table 5-2** show that the District anticipates continuing to exceed Ohio's 66% industrial recycling goal throughout the planning period. The programs and activities presented in this Chapter and in **Appendix I** outline how the District will continue to achieve the industrial goal throughout the planning period. Note that the rate is projected as a constant rate for the first six years of the planning period. According to Ohio EPA's Plan Format v4.0, if a solid waste district met the industrial reduction/recycling goal of 66% during the reference year, it is acceptable to project a constant quantity of industrial material to be recovered at the reference year quantity throughout the planning period.

Table 5-2: Industrial Waste Reduction and Recycling Rate Projections

Year	Projected Tons Recycled	Industrial WRR ¹
2019	855,612	74%
2020	855,612	74%
2021	855,612	74%
2022	855,612	74%
2023	855,612	74%
2024	855,612	74%

¹WRR = Waste Reduction and Recycling Rate

Table 5-3 Curbside Recycling Services

The following table lists the 58 existing curbside recycling programs within Cuyahoga County

ID #	Curbside Program	Current Service Provider	Ongoing Service
NSC1	City of Bay Village	Republic	Y
NSC2	City of Beachwood	City Service Department	Y
NSC3	City of Bedford	Kimble	Y
NSC4	City of Bedford Heights	Kimble	Y
NSC5	Village of Bentleyville	Waste Management	Y
NSC6	City of Berea	Republic	Y
NSC7	Village of Bratenahl	Republic	Y

ID #	Curbside Program	Current Service Provider	Ongoing Service
NSC8	City of Brecksville	City Service Department	Y
NSC9	City of Broadview Heights	Rumpke	Y
NSC10	City of Brook Park	City Service Department	Y
NSC11	City of Brooklyn	City Service Department	Y
NSC12	Village of Brooklyn Heights	Kimble	Y
NSC13	Chagrin Falls Township	Kimble	Y
NSC14	Village of Chagrin Falls	Kimble	Y
NSC15	City of Cleveland	City Service Department	Y
NSC16	City of Cleveland Heights	City Service Department	Y
NSC17	Village of Cuyahoga Heights	Village Service Department	Y
NSC18	City of East Cleveland	Rumpke	Y
NSC19	City of Euclid	Kimble	Y
NSC20	City of Fairview Park	Republic	Y
NSC21	City of Garfield Heights	Kimble	Y
NSC22	City of Gates Mills	Rumpke	Y
NSC23	Village of Glenwillow	Republic	Y
NSC24	City of Highland Heights	Kimble	Y
NSC25	Village of Highland Hills	Village Service Department	Y
NSC26	Village of Hunting Valley	Waste Management	Y
NSC27	City of Independence	City Service Department	Y
NSC28	City of Lakewood	City Service Department	Y
NSC29	Village of Linndale	Rumpke	Y
NSC30	City of Lyndhurst	City Service Department	Y
**	City of Maple Heights	Waste Management	Y
NSC31	Village of Mayfield	Kimble	Y
NSC32	City of Mayfield Heights	Kimble	Y
NSC33	City of Middleburg Heights	Republic	Y
NSC34	Village of Moreland Hills	Village Service Department	Y

ID #	Curbside Program	Current Service Provider	Ongoing Service
NSC35	Village of Newburgh Heights	Kimble	Y
NSC36	City of North Olmsted	Republic	Y
NSC37	City of North Royalton	Rumpke	Y
NSC38	Village of Oakwood	Waste Management	Y
NSC39	City of Olmsted Falls	Republic	Y
NSC40	Olmsted Township	Republic	Y
NSC41	Village of Orange	Kimble	Y
NSC42	City of Parma	Republic	Y
NSC43	City of Parma Heights	Republic	Y
NSC44	City of Pepper Pike	City Service Department	Y
NSC45	City of Richmond Heights	City Service Department	Y
NSC46	City of Rocky River	City Service Department	Y
NSC47	City of Seven Hills	Waste Management	Y
NSC48	City of Shaker Heights	City Service Department	Y
NSC49	City of Solon	City Service Department	Y
NSC50	City of South Euclid	Kimble	Y
NSC51	City of Strongsville	Republic	Y
NSC52	City of University Heights	City Service Department	Y
NSC53	Village of Valley View	Village Service Department	Y
NSC54	Village of Walton Hills	Kimble	Y
NSC55	City of Warrensville Heights	Kimble	Y
NSC56	City of Westlake	Rumpke	Y
NSC57	Village of Woodmere	Village Service Department	Y
**new program implemented after the reference year.			

Table 5-3 Multi-Material Drop-off Recycling Locations

The following table lists existing multi-material drop-off locations in Cuyahoga County. The limited material drop-offs have not been included in this table but are listed in **Appendix B**.

ID#	Drop-off Site	Service Provider	Ongoing
FTU1	Beachwood Community Center 25225 Fairmount Blvd., Beachwood	City of Beachwood	Y
PTU1	Brecksville Service Garage 9023 Brecksville Rd., Brecksville	City of Brecksville	Y
FTU82	Cleveland Ridge Road Transfer Station 3727 Ridge Road Cleveland	City of Cleveland	Y
FTR1	Highland Hills Shaker House Complex 3700 Northfield Rd., Highland Hills	Kimble	Y
FTU90	Lakewood Service Department 12920 Berea Rd., Lakewood	City of Lakewood	Y
FTU91	Mayfield Heights Service Department 6154 Mayfield Rd., Mayfield Heights	Kimble	Y
FTU92	North Olmsted Service Garage 5200 Dover Center Rd., North Olmsted	Republic	Y
PTU2	North Royalton Service Garage 10789 Royalton Rd., North Royalton	City of North Royalton	Y
FTU93	North Royalton Heasley Fields 5100 Wallings Rd., North Royalton	City of North Royalton	Y
FTU94	North Royalton Memorial Park 14600 State Rd., North Royalton	City of North Royalton	Y
PTU3	Olmsted Township Service Garage 7900 Fitch Rd., Olmsted Twp.	Republic	Y
FTR2	Orange Village Park Lander Rd., Orange	Orange Village	Y
FTU95	Pepper Pike City Hall 28000 Shaker Blvd., Pepper Pike	City of Pepper Pike	Y
FTU96	Richmond Heights Service Department 26260 Chardonview Dr., Richmond Heights	Waste Management	Y
PTU4	Rocky River Transfer Station 22401 Lake Rd., Rocky River	City of Rocky River	Y
PTU5	Shaker Heights Service Department 15600 Chagrin Blvd., Shaker Heights	City of Shaker Heights	Y
FTU97	Solon Service Department 6600 Cochran Rd., Solon	City of Solon	Y
FTU98	Strongsville Food Bank 13259 Pearl Rd., Strongsville	Republic	Y

ID#	Drop-off Site	Service Provider	Ongoing
FTU99	University Heights Service Department 2300 Warrensville Center Rd., University Hts.	City of University Heights	Y
FTU100	Westlake Police Station 27300 Hilliard Blvd., Westlake	Rumpke	Y
FTU101	Westlake Meadowood Golf Course 29800 Center Ridge Rd., Westlake	Rumpke	Y
FTU102	Westlake Crossings Village Apartments 1630 Crossings Parkway, Westlake	Rumpke	Y
FTU103	Westlake Clague Playhouse 1371 Clague Rd., Westlake	Rumpke	Y
FTU104	Westlake Sturbridge Square Apartments 1500 Westford Circle, Westlake	Rumpke	Y
FTU105	Westlake Village in the Park Apartments 27433 Detroit Rd., Westlake	Rumpke	Y

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CHAPTER 6: BUDGET

Chapter Purpose

This chapter provides an overview of the District's budget for implementing this solid waste management plan. Detailed information about the budget is provided in **Appendix O**.

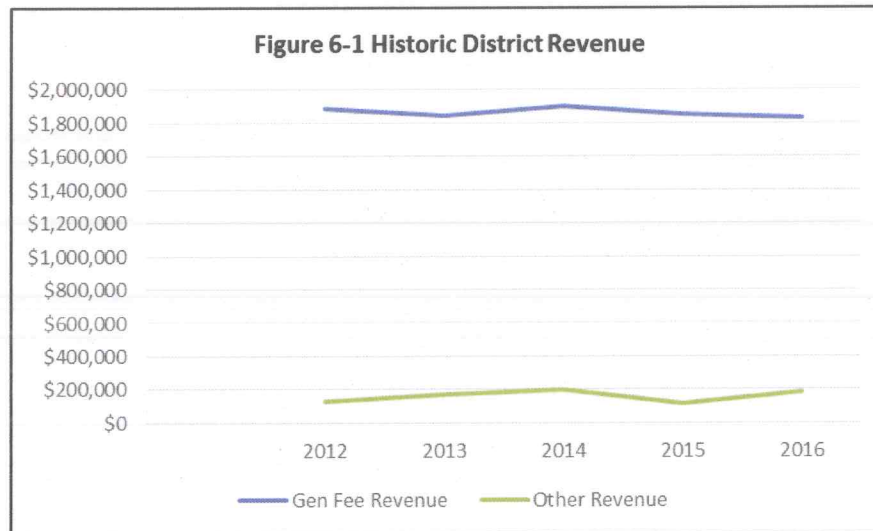
Background: Ohio Revised Code Section 3734.53(B) requires solid waste management plans to present a budget. This budget must account for how a solid waste district will obtain money to pay for its operations and programs and how it will spend that money. For revenue, the solid waste management plan identifies the sources of funding the solid waste 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. For expenses, the solid waste management plan identifies the programs the district intends to fund during the planning period and estimates how much will be spent on each program. The plan must also demonstrate that planned expenses will be 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 district 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.

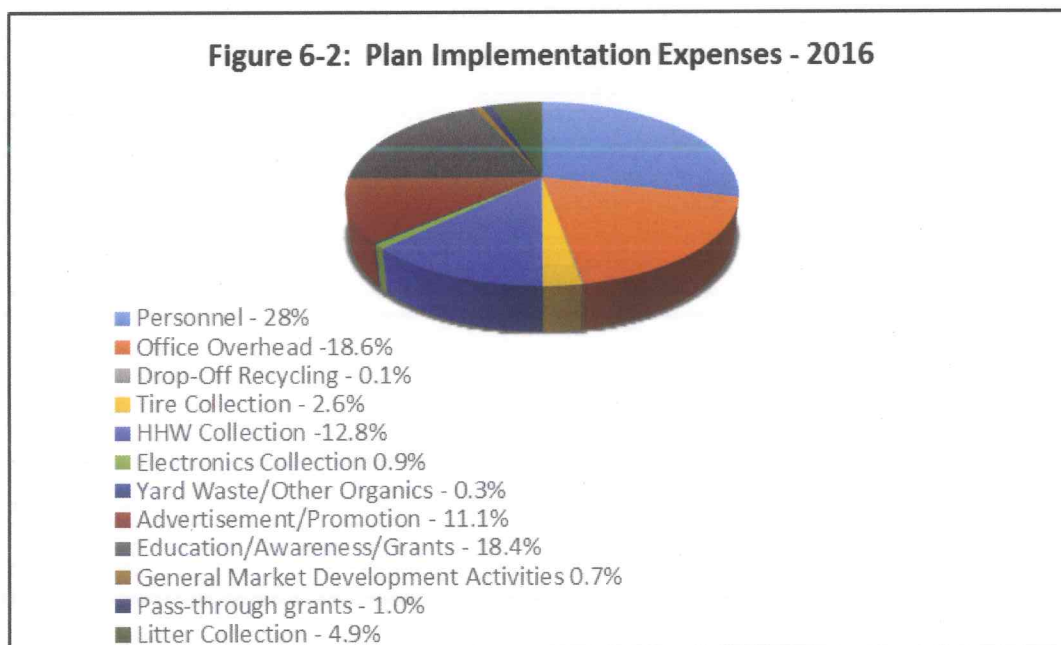
If projections show that the solid waste district will not have enough money to pay for all planned expenses or if the district has reason to believe that uncertain circumstances could change its future financial position, then the plan must demonstrate how the district will balance its budget. This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

A. Overview of the District's Budget

The Cuyahoga County Solid Waste District is self-funded primarily through its "generation fee". The District will continue to use this funding mechanism throughout the planning period. The fee is levied on each ton of solid waste generated within Cuyahoga County and disposed in a landfill located in Ohio. The District's generation fee is \$1.50 per ton and is among the lowest in the State of Ohio where the average generation fee is \$4.50 per ton. The District has not raised its fee since 2007 when it was increased from the original fee of \$1.00 per ton ratified in 1995. Since its inception, the District has strived to impose the lowest fee possible while still funding all plan elements. **Figure 6-1** shows historic generation fee revenue from 2012 through 2016. Revenues typically fluctuate but are declining over time due to population loss and increasing recycling. Additional revenue from grants, compost bins sales and other sources is also shown.



The majority of the District's expenditures are devoted to implementing the solid waste plan through programs and services provided to the general public, communities and businesses. **Figure 6-2** shows the plan implementation expenditures for the reference year – 2016. Other District expenditures not shown include funding for other allowable uses including health department code enforcement and open dumping law enforcement.



B. Revenue

1. Background

There are several mechanisms that solid waste management districts can use to raise the revenue necessary to finance the implementation of their solid waste management plans. The most common are disposal fees and generation fees. Before a generation or disposal fee can be collected, it must first be approved by local communities through the plan ratification process which allows communities to vote on the plan and the fee mechanism. The types of funding mechanisms include the following:

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

This funding mechanism is used by SWMD's that have solid waste landfills within their borders. Disposal fees are collected on each ton of solid waste that is disposed in landfills located within the levying SWMD.

Generation Fees (See Ohio Revised Code Section 3734.573)

Generation fees may be used by SWMD's that do not have solid waste landfills within their borders. 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.

Rates and Charges (see Ohio Revised Code Section 343.08)

Contract Fees (see Ohio Revised Code Sections 343.02 and 343.03)

Other Sources of Revenue

- *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);*
- *Interest earned on cash balances;*
- *Grants*

2. District Revenue for the Plan Period

The Cuyahoga County SWMD funds its operations and plan implementation using a generation fee. The generation fee is currently \$1.50 per ton and currently provides approx. \$1.8 million in annual revenue.

Supplemental revenue comes from five sources – grants, compost bin sales, illegal dumping fines, C&DD fees and other miscellaneous sources. Supplemental revenue will decline during the planning period because a major source of funding the District received from 2011 to 2017 will come to an end. This was \$1 million in funding from the Northeast Ohio Regional Sewer District.

The District plans to maintain its generation fee at the current \$1.50 per ton level until the end of 2022. Beginning in 2023, the generation fee will increase by \$0.50 per ton, bringing the fee to \$2.00 per ton. The District is able to maintain its generation fee at the current \$1.50 per ton level for the first four years of the planning period even though annual expenditures will exceed revenues by approximately \$300,000 - \$400,000 annually. This is due to having an existing fund balance from which it can draw upon for a period of time but will need to maintain a minimum reserve of \$1.5

million (180 days of operating expenses). The generation fee will increase in 2023 which is the year the fund balance is projected to fall below \$1.5 million. The District intends to ratify this generation fee increase as part of its Plan ratification and not through a separate ratification process.

This conservative increase will cost households in Cuyahoga County just \$0.44 more per household per year yet will allow the District to continue to provide all existing programs and services while providing additional resources for litter collection, grants and education which communities requested during the strategic planning process. **Table 6-1** provides a summary of projected generation fee and other revenue for the first seven years of the planning period.

Table 6-1 Summary of Projected Revenue

Year	Generation Fee Level	Generation Fee Revenue	Other Revenue	Projected Total Revenue
2019	\$1.50	\$1,836,519	\$105,500	\$1,942,019
2020	\$1.50	\$1,826,605	\$105,500	\$1,932,105
2021	\$1.50	\$1,817,388	\$30,500	\$1,847,888
2022	\$1.50	\$1,808,171	\$30,500	\$1,838,671
2023	\$2.00	\$2,398,605	\$30,500	\$2,429,105
2024	\$2.00	\$2,386,315	\$30,500	\$2,416,815
2025	\$2.00	\$2,374,026	\$30,500	\$2,404,526

C. Expenses

1. Allowable Expenditures for Solid Waste Management Districts

Ohio law authorizes solid waste management districts to spend revenue on ten allowable uses. All of the uses are directly related to managing solid waste or dealing with the effects of hosting a solid waste facility. The ten allowable uses are as follows:

1. Preparing, monitoring and reviewing implementation of a solid waste management plan.
2. Implementing the approved solid waste management plan (the majority of a district's budget).
3. Providing financial assistance to approved boards of health to enforce Ohio's solid waste laws and regulations.
4. Providing 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. Providing financial assistance to boards of health and local law enforcement agencies for enforcing Ohio's environmental laws and rules.
8. Providing financial assistance to approved boards of health for operator certification training.
9. Providing financial assistance to municipal corporations and townships for the added costs of hosting a solid waste facility that is not a landfill.
10. Providing 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.

2. District Expenses for the Plan Period

Throughout the planning period, the District projects expenses at approximately \$2.2 million per year during the first seven years of the planning period. **Table 6-2** summarizes expenses by program type. The complete detailed budget and budget explanation can be found in **Appendix O**.

The budget will remain relatively constant throughout this period with the exception of 2019 when the budget includes a one-time cash outlay towards the anticipated purchase of the District's current building which will reduce long term space costs. Other notable variations include a personnel increase in 2020 for an additional position to assist with the implementation of new initiatives identified in this Plan Update and a litter collection increase in 2020 to expand litter collection services for communities. Also, while the amount of funds budgeted for District grants is held constant, the District will likely increase grant funding for communities but will be reviewed annually and subject to approval by the District's Board.

Table 6-2. Summary of Expenses by Program

Program Category	2019	2020	2021	2022	2023	2024	2025
Plan Monitoring /Prep	10,600	20,750	20,903	21,059	21,218	21,381	21,546
District Administration							
Personnel	612,762	710,657	734,184	758,505	783,647	809,638	836,509
Overhead	205,264	284,282	211,031	214,377	217,819	221,366	225,017
Loan Payment	99,785	99,785	99,785	99,785	99,785	99,785	99,785
Other-building purchase	576,000						
Legal		20,000			20,000		
Programs							
Household Hazardous Waste Program	375,000	350,000	350,000	350,000	350,000	350,000	350,000
Scrap Tire Round-Up	58,000	45,000	45,000	45,000	45,000	45,000	45,000
Litter Collection Program	102,000	112,724	114,978	117,278	119,624	122,016	124,456
Organics / Special Wastes	3,000	3,020	16,040	3,061	3,082	16,104	3,126
District Grants	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Advertising / Marketing	100,000	90,000	90,000	90,000	90,000	90,000	90,000
Recycling Ed. / Awareness	30,250	28,300	28,606	28,918	29,236	29,561	29,892
Other Allowable Uses							
Health Dept. Funding	230,000	230,000	230,000	230,000	230,000	230,000	230,000
Environmental Crimes TF	28,700	25,000	25,000	25,000	25,000	25,000	25,000
Total Expenses	2,631,361	2,219,518	2,165,528	2,182,983	2,234,412	2,259,851	2,280,332

D. Budget Summary

Table 6-3 provides the District's overall budget for the reference year and the first seven years of the planning period. As described in this chapter, the District will spend down its fund balance until it falls below \$1.5 million (the minimum reserve needed to cover 180 days of operating expenses and contract encumbrances). The fund balance is predicted to fall below this level by the end of 2022. Therefore the District will increase revenue by raising its generation fee by \$0.50 per ton at the start of 2023, making the new fee \$2.00 per ton.

Table 6-3. Budget Summary				
Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2016	\$2,012,463	\$2,286,502	-\$274,038	\$3,117,495
Planning Period				
2019	\$1,942,019	\$2,631,361	(\$689,342)	\$2,184,014
2020	\$1,932,105	\$2,219,518	(\$287,414)	\$1,896,600
2021	\$1,847,888	\$2,165,528	(\$317,640)	\$1,578,960
2022	\$1,838,671	\$2,182,983	(\$344,312)	\$1,234,648
*2023	\$2,429,105	\$2,234,412	\$194,693	\$1,429,341
2024	\$2,416,815	\$2,259,851	\$156,964	\$1,586,305
2025	\$2,404,526	\$2,280,332	\$124,194	\$1,710,499

*Year of Generation Fee increase of \$0.50 per ton (effective, January, 2023)

