Draft Solid Waste Management Plan Update

Crawford County
SOLID WASTE MANAGEMENT

Crawford County
Solid Waste Management District

2023-2037

March 29, 2022

Prepared by:

GT ENVIRONMENTAL

CRAWFORD COUNTY SOLID WASTE MANAGEMENT DISTRICT

2020-2034 DRAFT PLAN UPDATE

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I. Introduction

A. Plan Approval Date, Counties in District, and Planning Period Length

1. Under current approved plan:

Date of Ohio EPA approval or order to implement:	August 16, 2016
Counties within district:	Crawford
Years in planning period:	15

2. Plan to be implemented with approval of this document:

Counties within District:	Crawford
Years in planning period:	15
Year 1 of the planning period:	2023

B. Reason for Plan Submittal

Mandatory five-year plan update.

C. Process to Determine Material Change in Circumstances and Amend the Plan

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

- Change in Waste Generation
- Change in the Capacity Available for Disposal, Transfer and Composting
- Change in Strategies for Waste Reduction and/or Recycling
- Change in the Availability of Revenues for Plan Implementation
- Change in the Procedures to be followed for Plan Implementation
- Change in the Timetable for Implementation of Programs and/or Activities

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

A material change in circumstances shall be defined as a change that significantly interferes with the ability of the Board to assure waste disposal capacity during the planning period, maintain compliance with applicable waste reduction or access goals, or adequately finance implementation of the Plan Update. The Board shall make the determination of whether a material change in circumstances has occurred according to the following guidelines:

Reduction in Waste Disposal Capacity

The Crawford County Sanitary Landfill, by designation, receives all waste generated in the District. District staff will annually monitor the availability of solid waste disposal capacity at the Crawford County Sanitary Landfill and will provide information to the Board and Policy Committee when the remaining capacity falls below three years, except to the extent that ongoing negotiations of additional arrangements will cure any deficiency.

Compliance with Applicable Waste Reduction or Access Goals

Changes in strategies for or availability of waste reduction or recycling programs and facilities which result in the District not being in compliance with Goal #1 as required by this plan except a temporary reduction in recycling access that is in the processes of being remedied and will not be more than six months in duration. Additional programs, expansion of existing programs or adjustments in programs that do not reduce the available access to recycling shall not constitute a material change in circumstances.

Change in the Availability of Revenues for Plan Implementation

Inadequate funding to maintain the District programs required in this plan would be deemed a material change in circumstances if the lack of funding prohibits demonstration of State Plan Goals in this Plan Update. However, if the District is able to adjust budgets or implement contingency funding options listed in this *Plan Update* in Section VI from a change in revenues that would negatively affect the financial funding of this *Plan Update*, then a change in revenues would not be deemed a material change in circumstances.

Change in the Timetable for Implementation of Programs and/or Activities

Significant changes or delays in program implementation would be deemed a material change in circumstances if said changes resulted in non-compliance with required State Plan Goals or Table VI-5 in this *Plan Update*. However, if the District is able to implement new strategies within one year to ensure compliance with State Plan Goals, then a material change in circumstances would not have occurred.

1. Monitoring Process

The District will use its normal operational procedures to monitor plan implementation and determine whether and when a material change of circumstances has occurred in the District which requires a plan amendment. The District's Board meets at least quarterly. The Policy Committee meets at least annually, or as needed, to receive updates from District staff on District activities. The Policy Committee, with the assistance of District staff, performs an annual review of the implementation of the District Plan. The meeting schedules of the Policy Committee and the Board is frequent, and the meeting agendas are comprehensive enough to allow the Policy Committee and the Board to determine and respond to changing circumstances.

2. Timetable for Analyzing the Determination

Should any member of the Board believe that a material change of circumstances has occurred, the member will notify the President of the Board and place an item on the agenda for the next upcoming meeting or schedule a special meeting, as appropriate. The Board will review the changed circumstances and approve or disapprove a resolution to recommend the preparation of a plan amendment. Unless the time period is formally extended by the Board, the Board will make a determination on whether to request that a plan amendment be prepared by the Policy Committee within 90 days after the matter is first placed on its agenda.

3. Notification Procedure

The Board will provide press releases to newspapers of general circulation within the county, informing public of its decision. The Board will also notify the Ohio Environmental Protection Agency. If a recommendation for a plan amendment is adopted, the Policy Committee will prepare the plan amendment to address the material change of circumstances. The schedule for development of the plan amendment, approval, ratification, and implementation, will be established by the Policy Committee, depending upon the extent of the amendment required to address the

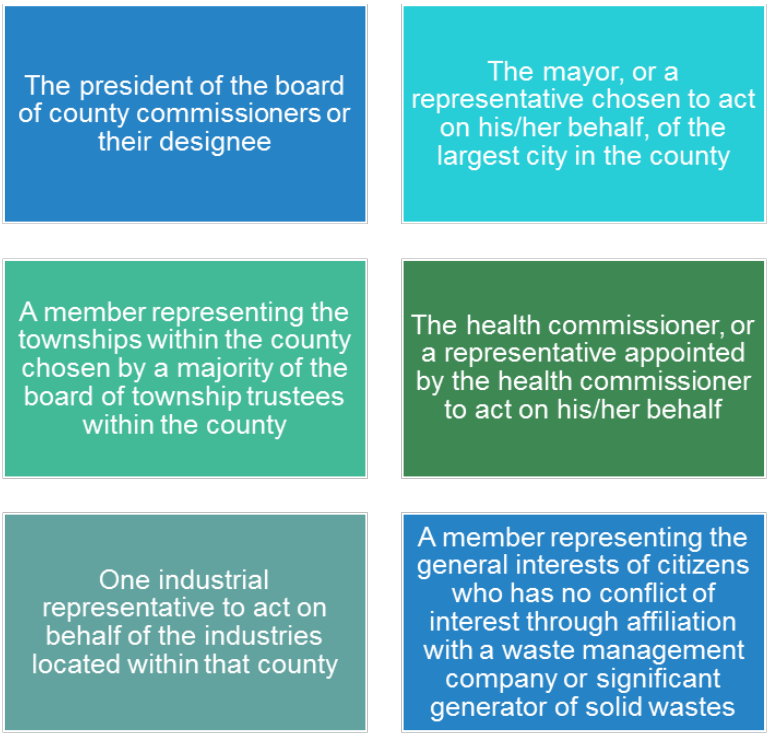
change in circumstances.

D. District Formation and Certification Statement

Appendix A contains the resolution that formed the District. All public notices in local newspapers publicizing hearings and comments on this *Plan Update* are included in Appendix B. A certification statement signed by members of the Board asserting that the contents of the *Plan Update* are true and accurate is included in Appendix C. The certification statement was signed by a majority of the Board members for both the draft amended *Plan Update* and the ratified draft amended *Plan Update*. Appendix C also includes resolutions by the Board adopting the *Plan Update* prior to ratification and certifying that the *Plan Update* has been properly ratified. A list of all political jurisdictions in the District which voted on the *Plan Update* ratification, their populations, and the percentage of the population represented by the political jurisdictions which ratified the *Plan Update* is included in Appendix C.

E. Policy Committee Members

The Policy Committee for the District is comprised of seven members from Crawford County. These members will include:



The following committee members are listed in accordance with the political jurisdictions and constituencies they represent:

Policy Committee Members	Representing	Term
Doug Weisenauer	County Commissioner	Unlimited
Jeff Reser	City of Bucyrus Representative	Unlimited
Jason Long	Township Representative	2 year
Kate Seifert	Health Department Representative	Unlimited
Doug Leuthold	Industrial Representative	2 year
Mike Hall	Public Member	2 year
Tom O'Leery	Public Member	2 year

F. Board of County Commissioners

The following board members are listed:

Directors
Doug Weisenauer
Tim Ley
Larry Schmidt

G. District Address and Phone Number

Crawford County Solid Waste Management District
5128 Lincoln Highway E
Bucyrus, OH 44820

Contact: Brian Rockwell
District Coordinator

Phone: 419-562-4169

Email: crawfordswmd@midohio.twcbc.com

H. Technical Advisory Council and Other Subcommittees

The District did utilize a Technical Advisory Committee (TAC) for the preparation of the *Plan Update*.

I. Policy Committee Review of Plan Update

The Policy Committee shall annually review implementation of the *Plan Update* under section 3734.55 of the Ohio Revised Code and report its findings and recommendations regarding implementation of the plan to the Board of County Commissioners of the District.

II. Executive Summary

The Crawford County Waste Management District (District) is required by Section 3734.54 of the Ohio Revised Code (ORC) to periodically update its solid waste management plan (*Plan Update*). This *Plan Update* will cover a planning period beginning in 2023 and ending in 2037. This *Plan Update* includes a description of District programs and projections for solid waste generation, recycling, and disposal. This *Plan Update* identifies the District's strategies for managing the District's facilities and programs and provides an assessment on achieving statewide recycling and waste reduction goals. This *Plan Update* follows Ohio EPA's format version 3.0. The format requires specific narrative information and data tables. There are nine major sections of the solid waste plan based on the Plan Format.

Section I

- **Basic information about the District and an important section on determining when material changes would require an amendment to the *Plan Update*.**

Section II

- **An Executive Summary and includes brief narrative descriptions of each section in the *Plan Update*.**

Section III

- **An inventory of facilities, activities, and haulers used by the District in the reference year (2015).**

Section IV

- **The reference year statistics for the *Plan Update* including population data, waste generation and waste reduction estimates for the residential/commercial sector and the industrial sector.**

Section V

- **Projections of population, waste generation and waste reduction for each year of the planning period.**

Section VI

- **The District's management of facilities and programs to be used by the District throughout the planning period.**

Section VII

- **Prresentation of how the District meets the state waste reduction and recycling goals.**

Section VIII

- **A presentation of the financial resources of the District necessary to implement this Plan.**

Section IX

- **District rules proposed, approved and authorized for adoption are presented by the District.**

This Executive Summary provides an overview of each section of the *Plan Update*.

A. Section I. Introduction

On March 16, 1989, the Board of Commissioners of Crawford County formed the Crawford County Solid Waste Management District (Appendix A). The District includes all incorporated and unincorporated territory in Crawford County as well as the portion of Crestline Village located in Richland County.

The Board of County Commissioners of Crawford County governs the District in their capacity as the Board of Commissioners of the Crawford County Solid Waste Management District (hereinafter referred to as the "Board").

The current Plan was approved by Ohio EPA on August 16, 2016 and includes a fifteen-year planning period. This *Plan Update* begins with the planning year 2023 and includes a fifteen-year planning period.

1. Policy Committee Members

The Policy Committee prepares the solid waste management plan, monitors implementation of the Plan, and adjusts the District generation fees as appropriate. The current Policy Committee members are listed in the following table.

Policy Committee Member	Representing
Doug Weisenauer	County Commissioner
Jeff Reser	City of Bucyrus Representative
Jason Long	Township Representative
Kate Seifert	Health Department Representative
Doug Leuthold	Industrial Representative
Mike Hall	Public Member
Tom O'Leery	Public Member

2. Board of County Commissioners of the District

The Board is responsible for implementing the solid waste plan developed by the Policy Committee. The current Board members are listed in the following table.

Board Member	Role
Doug Weisenauer	County Commissioner – Chairperson
Tim Ley	County Commissioner
Larry Schmidt	County Commissioner

3. Process to Determine Material Change in Circumstances and Amend the Plan

Section I of the *Plan Update* outlines the process which will be used by the District to determine when a material change in circumstance has occurred. If a material

change in circumstances occurs, a plan amendment is required by Ohio law (ORC Section 3734.56 (D)). The District plan must be updated "…when the Board of County Commissioners…determines that circumstances materially changed from those addressed in the approved initial or amended plan of the district…"

A material change in circumstances is defined by Ohio EPA as changes in any of the following which would be judged to significantly interfere with District achievement of *Plan Update* goals in the context of statutory requirements.

Circumstance which may interfere with goal achievement:
Reduction in Available Capacity
Increase in Waste Generation
Delay in Program Implementation
Discontinuance of Essential Waste Reduction or Recycling Activities
Decrease in Waste Generation
Adequately finance implementation of the Plan

In accordance with ORC 3734.56(D), the *Plan Update* must be revised if the Board has determined that "circumstances materially changed from those addressed in the approved initial or amended plan of the district." A material change in circumstances shall be defined as a change that adversely affects the ability of the Board to: (1) assure waste disposal capacity during the planning period; (2) maintain compliance with applicable waste reduction or access goals; or (3) adequately finance implementation of the *Plan Update*. This process is described in detail in Section I of this *Plan Update*.

B. Section III. Inventories

Section III provides an inventory of facilities, programs, and activities during the reference year (2019) of the *Plan Update*.

Inventories include the following:
Landfills
Incinerators and Waste-to-Energy Facilities
Transfer Facilities
Recycling Programs
Composting Facilities and Programs
Out-of-District Facilities
Open Dumps and Waste Tire Dumps
Ash, Slag and Foundry Sand Disposal Sites
Solid Waste Haulers

C. Section IV. Reference Year Population, Waste Generation and Waste Reduction

1. Reference Year Population

The District's 2019 reference year population of 41,512 was determined by using the 2019 Ohio Department of Development's 2019 Population Estimates for Counties, Cities, Villages and Townships. This information was obtained from the Ohio Department of Development, Office of Strategic Research.

2. Waste Generation

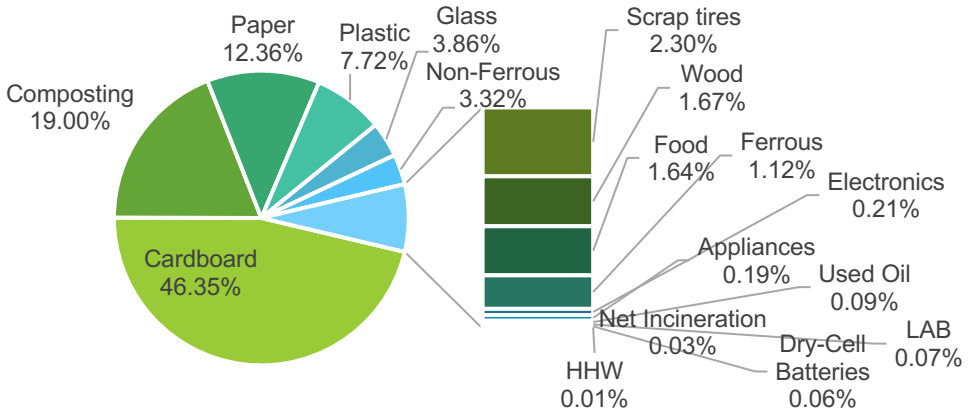
Residential and commercial waste generation was 41,321 tons including 25,499 tons landfilled (see Table III-1) and 15,822 tons recycled, including composting (see Table IV-5). Based on the District population, this is 5.45 pounds generated per person per day of residential/commercial waste generation.

Industrial waste generation was 58,481 tons. This includes 11,935 tons landfilled (see Table III-1) and 46,546 tons recycled (see Table IV-6). Based on the District population, this is 7.72 pounds of industrial waste generated per person per day.

3. Reference Year Waste Reduction

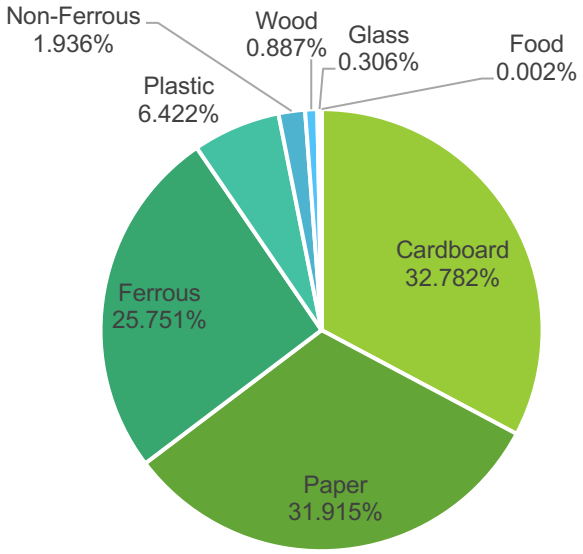
Residential/commercial waste reduction that occurred in the District during the reference year is summarized in Table IV-5. Residential/commercial waste reduction activities include drop-off recycling; Crawford County Recycling Center operation; District-sponsored special collection events such as household hazardous waste, batteries, appliances, used oil, and electronics collections; commercial recycling collected by the District and commercial entities operating within the District; and composting. The following graph depicts the residential and commercial waste reduction totals as a percentage for 2019.

Residential/Commercial Waste Reduction (2019)



Industrial waste reduction activities that occurred during the reference year are summarized in Table IV-6. The following graph depicts the industrial waste reduction totals as a percentage for 2019.

Industrial Waste Reduction (2019)



Section IV also provides specific details for the existing waste reduction/recycling activities for the residential/commercial and industrial sectors.

4. Existing Waste Reduction/Recycling Activities for Residential, Commercial and Industrial Sectors

In 2019, the following facilities/programs were implemented.

Residential/Commercial/Industrial Waste Reduction/Recycling and Education Strategies

CC-1: Curbside Recycling Technical Assistance
CC-2: Drop-Off Recycling
CC-3: Business Recycling Collection
CC-4: Crawford County Recycling Center
CC-5: Yard Waste Composting
CC-6: Special Waste Materials
CC-7: Education and Awareness
CC-8: Litter Clean-up
CC-9: Other Commercial Recycling
CC-10: Commercial Recycling Technical Assistance
CC-11: Buyback Recycling Facilities
CC-12: Emergency Disaster Debris Management
CC-13: Health District Partnership Program

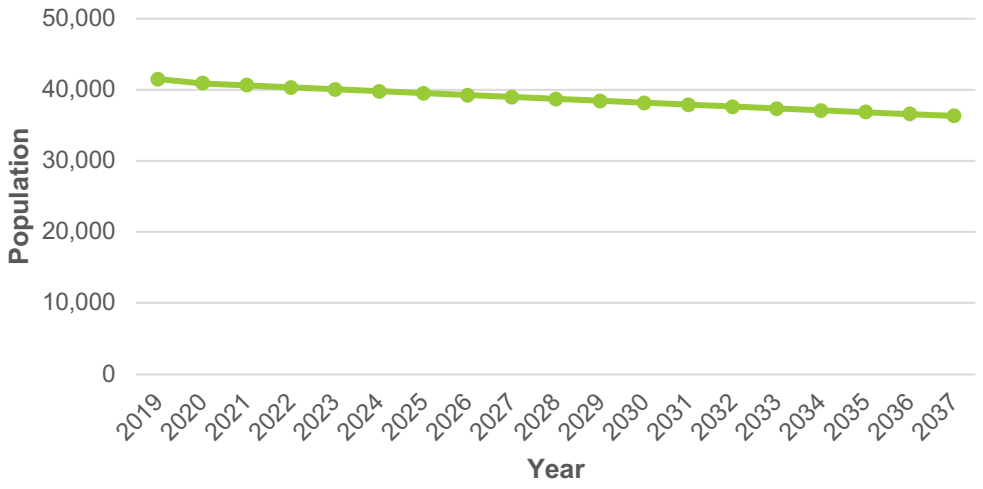
D. Section V. Planning Period Projections and Strategies

Section V includes a summary of projections of population, waste generation and recycling for the planning period (2023 to 2037). New programs and changes to existing programs are presented in this section.

1. Population Projections

The District anticipates population will decrease 9.27% over the planning period. Population projections were made using growth rates from Ohio Department of Development's Projected Percent Population Change 2010 to 2040 based on the growth rate of the county that each political subdivision or portion of a political subdivision is located. Projections were adjusted using 2015 and 2010 U.S. Census Bureau population data. The following graph depicts the population projections throughout the planning period.

District Population Estimate (2019 – 2037)



2. Waste Generation Projections

Residential/Commercial Sector

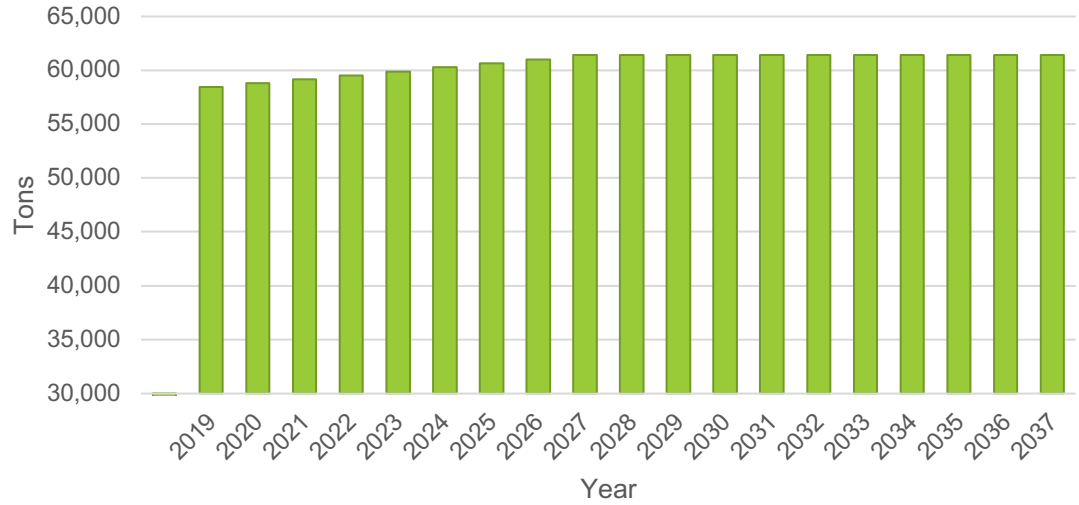
The total residential/commercial waste generation estimate for 2019 was 41,321 tons. Waste generation is projected to decrease throughout the planning period from 2023 – 2037. Beginning in 2023, the first year of the planning period, residential/commercial waste is projected to be 40,881 tons. This is expected to decrease to 40,390 tons in 2037, a 1.17% decrease during the planning period. The following graph depicts the residential/commercial waste generation projections throughout the planning period.

District Residential/Commercial Waste Generation (2019 – 2037)

Industrial Sector

Industrial waste generation is projected for SIC codes 20 and 22-39. Table V-3 presents the estimated and projected waste generation for each SIC code. The District projects industrial waste to increase from 48,263 tons in 2019 to 51,987 tons in 2027, then remain constant. The following figure presents the estimated industrial waste generation throughout the planning period.

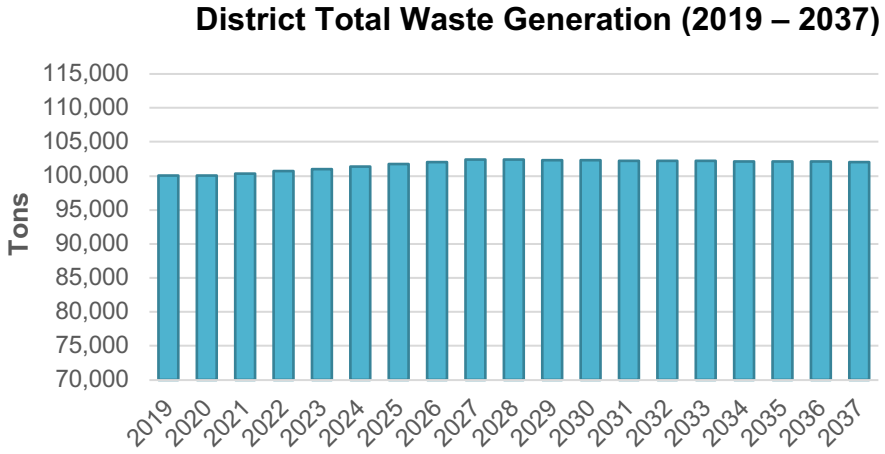
District Industrial Waste Generation (2019 – 2037)



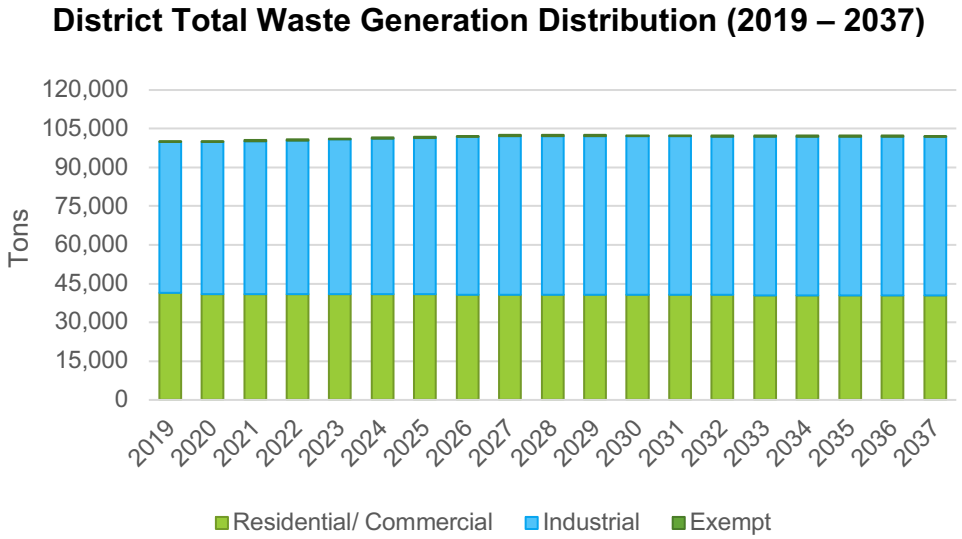
Total Waste Generation

Total waste generation projections for the District during the planning period are presented in Table V-4, “Total Waste Generation for the District during the Planning Period”. The total waste generation estimate for the 2019 reference year was 100,236 tons. This includes residential/commercial waste (41,321 tons),

industrial waste (58,481 tons), and exempt waste (434 tons).



The following graph depicts the waste generation per sector as a percentage of the total waste generation.



3. Waste Reduction and Recycling Strategies through the Planning Period

The District must continue to develop recycling and waste reduction strategies to meet the goals established in the 1995 State Plan and to pursue continuous improvement in meeting the 1995 State Plan goals. The following table summarizes the program, initiatives, and strategies for the planning period, and which goals each program meets.

District Strategies by State Plan Goal

Program	Program #	1995 State Plan Goals						
		#1	#2	#3	#4	#5	#6	#7
Curbside Recycling Technical Assistance	CC-01			✓	✓			
Drop-Off Recycling	CC-02	✓	✓					
Business Recycling Collection	CC-03		✓					
Crawford County Recycling Center	CC-04		✓			✓		
Yard Waste Composting	CC-05		✓			✓		
Special Waste Materials	CC-06		✓			✓		
Education and Awareness	CC-07			✓	✓			✓
Litter Clean-Up	CC-08							
Other Commercial and Industrial Recycling	CC-09		✓				✓	
Commercial and Industrial Recycling Technical Assistance	CC-10			✓	✓			
Buyback Recycling Facilities	CC-11		✓					✓
Emergency Disaster Debris Management	CC-12							
Health District Partnership Program	CC-13							
Number of Strategies Per Goal		**1**	**7**	**3**	**3**	**3**	**1**	**2**

Details for each program listed above including changes, update and new programs are included in Section V.

E. Section VI. Methods of Management: Facilities and Programs to be Used

Section VI presents the District's methods for managing solid waste. It includes management methods, a siting strategy, and a demonstration of capacity for the planning period 2023 to 2037.

1. District Methods for Management of Solid Waste

The net tons that were managed by the District in 2019 are calculated to be 100,236 tons. The landfill total in Table VI-1 is calculated by subtracting recycling, yard waste composting, and net incineration tonnage from the net tons to be managed. The District projects 101,215 tons of solid waste will need to be managed in 2023, and by the end of the planning period in 2037, the District will need to manage 102,239 tons.

2. Demonstration of Access to Capacity

During the reference year, 6 landfills managed 37,869 tons of solid waste

generated by District residents, businesses, and industries.

Regional Capacity Analysis

The District's assessment of regional landfill capacity demonstrates there is sufficient permitted capacity available to manage the District's waste until December 31, 2037. The 6 landfills utilized by the District either directly or indirectly through transfer stations have permitted capacity to manage the District's solid waste through 2037.

3. Identification and Designation of Facilities

The District continues to support an open market for the collection, transport, and disposal of solid waste. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, the District is identifying all Ohio licensed and permitted solid waste landfill, transfer, and resource recovery facilities and all licensed and permitted out-of-state landfill, transfer, and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Section III Inventories.

The following facility has been designated by the District to manage solid waste: Crawford County Sanitary Landfill.

The Board is authorized to establish facility designations in accordance with Section 343.013 and 343.014 of the Ohio Revised Code. In addition, facility designations, if adopted, will be supported by applicable District rules.

4. Siting Strategy for Facilities

The District's siting strategy, which includes the Submission of Plans and Specifications and Board Review, is detailed in Section 6.

5. Contingencies for Capacity Assurance and District Program Implementation

The District will implement the contingency plan outlined in Section VI of the *Plan Update* if landfills or transfer facilities that service the District are required to close operations for a period of time that would be detrimental to the health and safety of District residents.

F. Section VII. Measurement of Progress Toward Waste Reduction Goals

The District annually conducts a comprehensive survey that has consistently provided high quality waste reduction data over the last several years. This data, coupled with District waste generation, has resulted in the District achieving a 38% waste reduction rate in the reference year in the residential/commercial sector and

an 96% waste reduction rate in the industrial sector. Based on this data and past historical performance, the District has demonstrated compliance with Goal #2 of the 1995 State Solid Waste Management Plan. Goal #2 requires solid waste districts to:

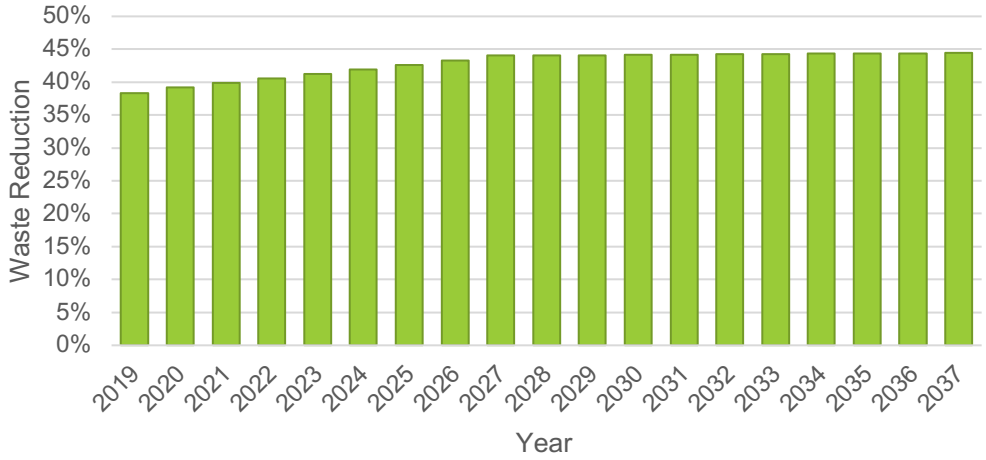
- Reduce or recycle at least 25% of the residential/commercial waste generated; and

- Reduce or recycle at least 50% of the industrial waste generated.

1. Compliance with Goal #2

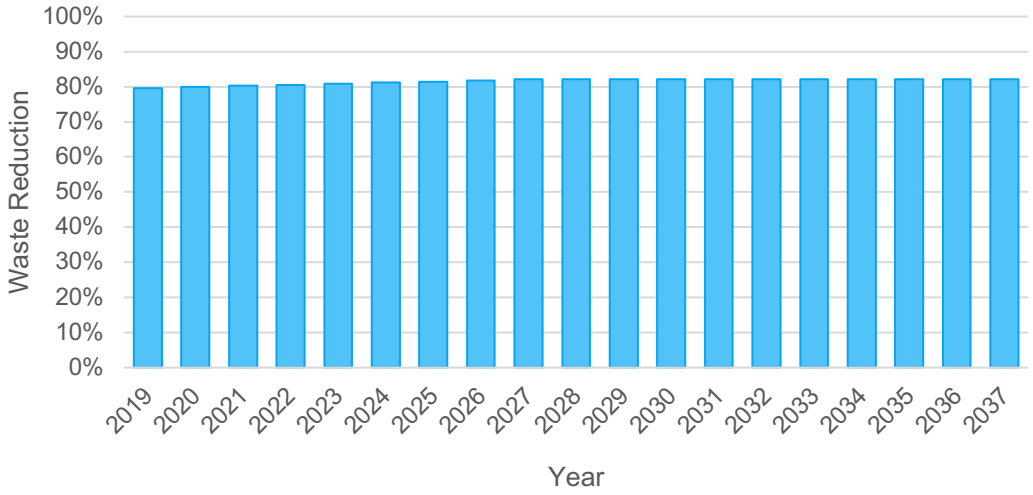
In the 2019 reference year, approximately 38% of the District's residential/commercial waste stream was reduced. This percentage reflects tonnage that was diverted from landfill disposal by recycling and composting. The residential/commercial waste reduction percentage rate is expected to gradually increase to about 44% by the end of the planning period as depicted by the following chart.

Residential/Commercial Waste Reduction Percentage (2019 – 2037)



The industrial sector had a waste reduction rate of approximately 80% in 2019 and will increase to 82% by the end of the planning period as indicated by the following chart.

Industrial Waste Reduction Percentage (2019 – 2037)



The District's annual waste reduction rate for the reference year was 62%. The District projects the total waste reduction rate will increase to 67% by the end of the planning period (2037). The following figure depicts the District's projected waste reduction rate over the planning period for the residential/commercial and industrial sectors combined.

Total District Waste Reduction Percentage (2019 – 2037)

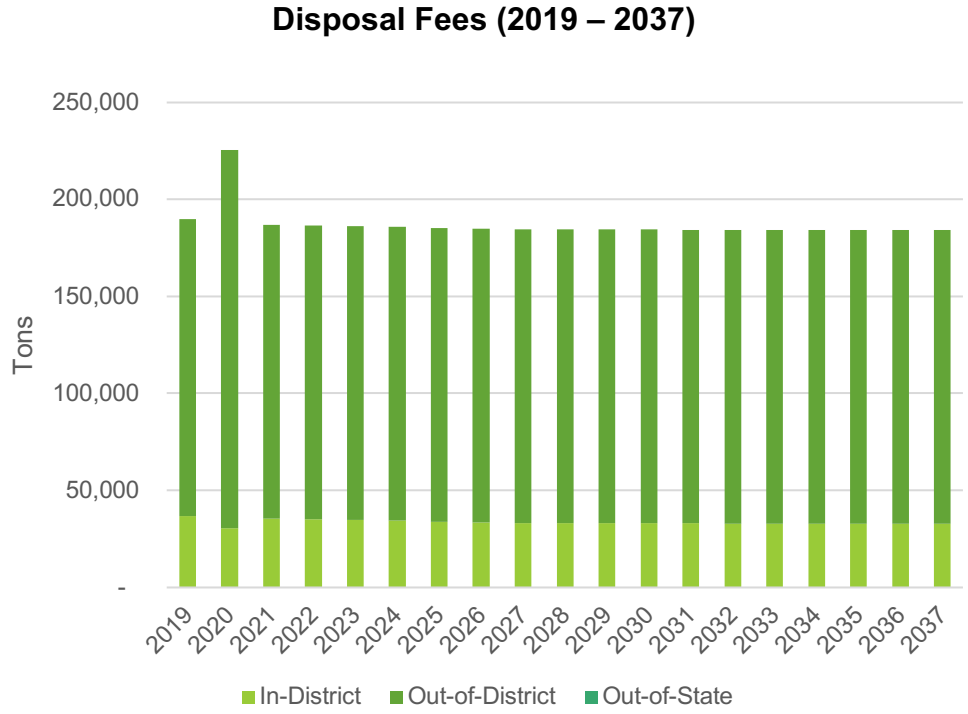
G. Section VIII. Cost of Financing Plan Implementation

1. Funding Mechanisms

District Disposal Fees

The District's in-district solid waste disposal fee is $2.00 per ton. The District's out-of-district solid waste disposal fee is $4.00 per ton. Out-of-state waste is charged at $1.00 per ton. The following graph depicts the actual and projected gdisposal

fee revenue for this *Plan Update*:



Generation Fee

In accordance with Section 3734.573 of the Ohio Revised Code and under the District's current solid waste management plan, the District instituted a $3 per ton generation fee. The generation fee is set to increase to $4 per ton in 2021 and to $4.50 in 2026. This generation fee schedule will be ratified with this 2023 Plan. The generation fee will continue to be collected by the receiving transfer stations, landfills, or any other applicable solid waste facility for each ton of solid waste originating within the District and disposed in the State of Ohio. These monies will be forwarded to the District pursuant to Section 3745-28-03 of the Ohio Administrative Code.

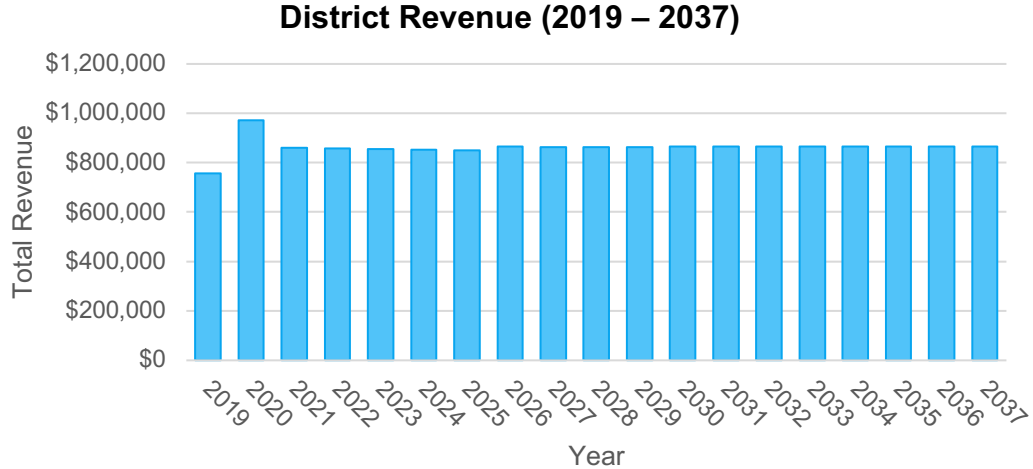
The following graph depicts the actual and projected generation fee revenue for this *Plan Update*:

Recycling Revenue

The District receives annual recycling revenue from the sale of recyclables, fees for certain recycling services (user fees), and other similar recycling revenue sources. Due to the recycling markets being much lower than in the past, the District projects that recycling revenue will remain at the low levels such as in 2019-2020. However, the District is projecting a slight increase of 1% annually from additional effort put into programming every year.

Estimated revenues include disposal fees, generation fees, and recycling revenue.

The following graph depicts the District's total actual and projected revenue from 2019 – 2037 and includes all anticipated revenue sources identified above.



2. Cost of Plan Implementation

Section VIII includes the strategies, facilities, activities, and programs that the District will use to implement the *Plan Update*.

The District is projecting to spend $600,118 in 2023, the first year of the planning period and $1,020,953 in 2037, the final year of the planning period. The following chart summarizes the District's actual and projected expenses throughout the planning period.

District Expenses (2019 – 2037)

The District's budget falls into three categories: preparation and monitoring of plan implementation, implementation of the approved plan, and financial assistance to boards of health for solid waste enforcement.

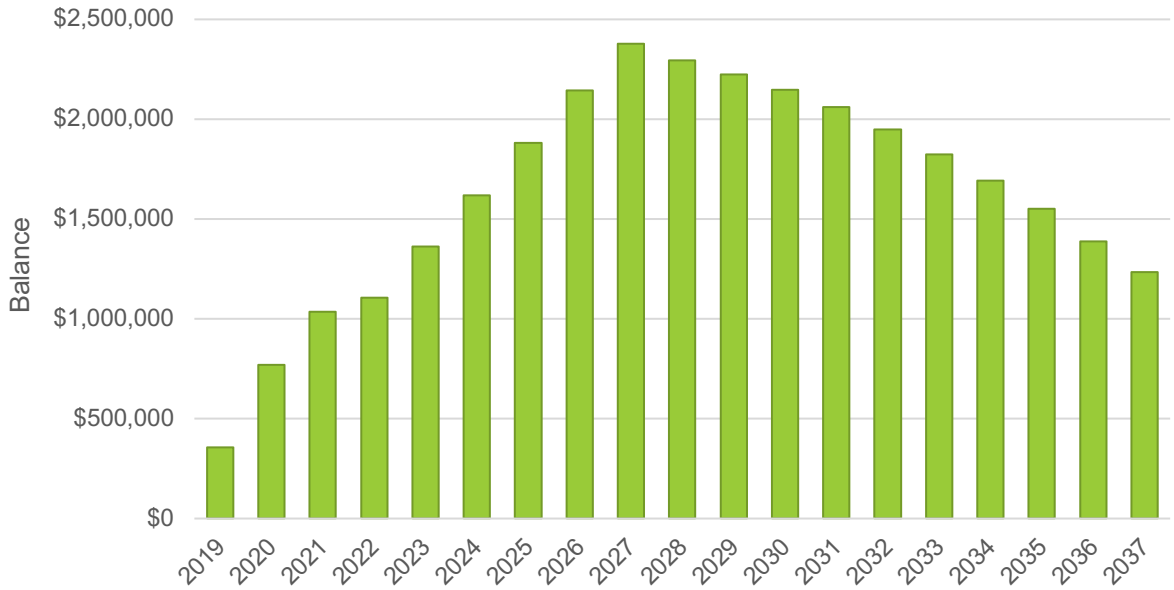
3. Contingent Funding

The Policy Committee does not consider funding to be an issue of concern during the planning period. The District reserves the right to further increase generation and/or disposal fees in the future if expenses become an issue of concern. The District also reserves the right to implement a designation contract fee which would be collected from facilities designated to receive solid waste generated within the District.

4. Summary of Costs and Revenues

A summary of District revenues and expenditures for each year of the planning period is included in Table VIII-8. At the end of the planning period in 2037, the District projects a carryover of approximately $1,232,726. The following figure presents the District's year-end cash flow from 2019 through 2037.

District Fund Balance (2019 – 2037)



H. Section IX. District Rules (ORC Section 3734.53(C))

1. Existing Rules

The District maintains the authority to adopt rules consistent with the solid waste management plan adopted by the District in accordance and pursuant to Section 3734.53 (C)(1) through (C)(4) of the Revised Code. The District does not have any existing rules. There are no current plans to adopt new rules at the time of developing this *Plan Update*.

Table ES-1
General Information

District Name: Crawford County Solid Waste District		
District ID #	Reference Year 2019	Planning Period: 2023-2037
(for OEPA use only)		
Plan Status (underline one)		
D RD DR Approved (date) / / OI (date) / / DA		Reason for Plan Submittal: Mandatory five year update

Abbreviations: D=draft; RD=ratified draft, DR=draft revised, OI=ordered to be implemented, DA=draft amended

Table ES-2
District/Coordinator/Office

Name:	Brian Rockwell, Executive Director		
Address:	5128 Lincoln Highway E		
City:	Bucyrus	State: Ohio	Zip: 44820
Phone:	(419) 562-4169	Fax: N/A	

Table ES-3
Plan Data Summary

Plan Data		Reference Year 2019	2023 (year 1)	2027 (year 5)	2032 (year 10)	2037 (year 15)
Population		**41,512**	**40,352**	**39,248**	**37,897**	**36,595**
Generation	Industrial	58,481	59,537	61,028	61,415	61,415
	Res/Comm	41,321	40,912	40,782	40,606	40,432
	Exempt	434	434	434	434	434
Total Generation (tons)		**100,236**	**100,883**	**102,243**	**102,455**	**102,282**
Waste Reduction	Industrial Source Reduction	0	0	0	0	0
	Industrial Recycling	46,546	47,956	49,903	50,402	50,402
	Res/Comm Source Reduction	0	0	0	0	0
	Res/Comm Recycling	12,810	13,579	14,654	14,934	14,934
	Yard Waste Composting	3,007	3,007	3,007	3,007	3,007
	MSW Composting	0	0	0	0	0
	Incineration	5	0	0	0	0
Total Waste Reduction (tons)		**62,367**	**64,541**	**67,564**	**68,343**	**68,343**
Disposal	In-District Landfills	0	0	0	0	0
	Out-of-District Landfills	37,869	36,342	34,679	34,112	33,897
Total Landfill (tons)		**37,869**	**36,342**	**34,679**	**34,112**	**33,897**
Waste Reduction Rate	Industrial	**79.6%**	**80.5%**	**81.8%**	**82.1%**	**82.1%**
	Residential/Commercial	**38.3%**	**40.5%**	**43.3%**	**44.2%**	**44.4%**

Source(s) of information: Tables IV-1, IV-5, IV-6, V-2, V-3, V-4 , V-6, and VI-4A

Table ES-4
Existing Disposal Facilities

Name	County	District Tons	Total Tons	Years Left
In-District Landfills				
Crawford County Sanitary Landfill	Crawford, OH	36,958	4,668,664	22
Out-of-District Landfills				
Hancock County Landfill	Hancock, OH	86	4,389,603	28
Carbon Limestone Landfill LLC	Mahoning, OH	16	67,747,767	23
Noble Road Landfill	Richland, OH	27	20,949,247	20
Evergreen Recycling & Disposal	Wood, OH	5	5,626,327	38
County Environmental Landfill of Wyandot	Wyandot, OH	2	18,831,076	113
Out-of-State Landfills				
None				
Total/Average		**37,093**	**117,544,020**	**44.40**

Source(s) of information: 2019 Ohio Facility Data Report Tables, Table III-1, and Table VI-4A

III. Inventories
[ORC Section 3734-53(A)(1)-(4)]

This section of the plan update describes how solid waste was collected, reduced, recycled, disposed, incinerated, and ultimately managed in the Crawford County Solid Waste Management District during 2019.

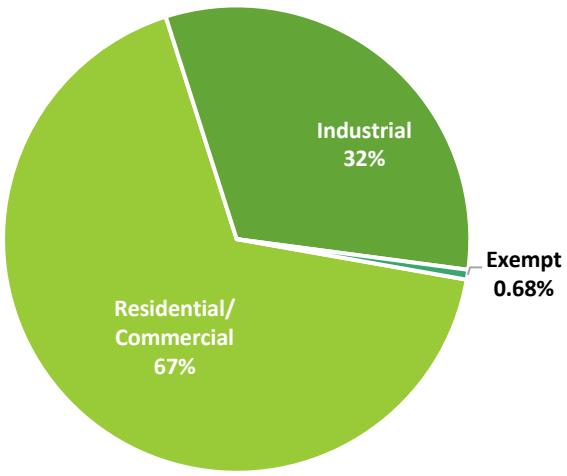
A. The Reference Year

The District will use calendar year 2019 as a reference year for all subsequent projections in the Plan.

B. Existing Solid Waste Landfills

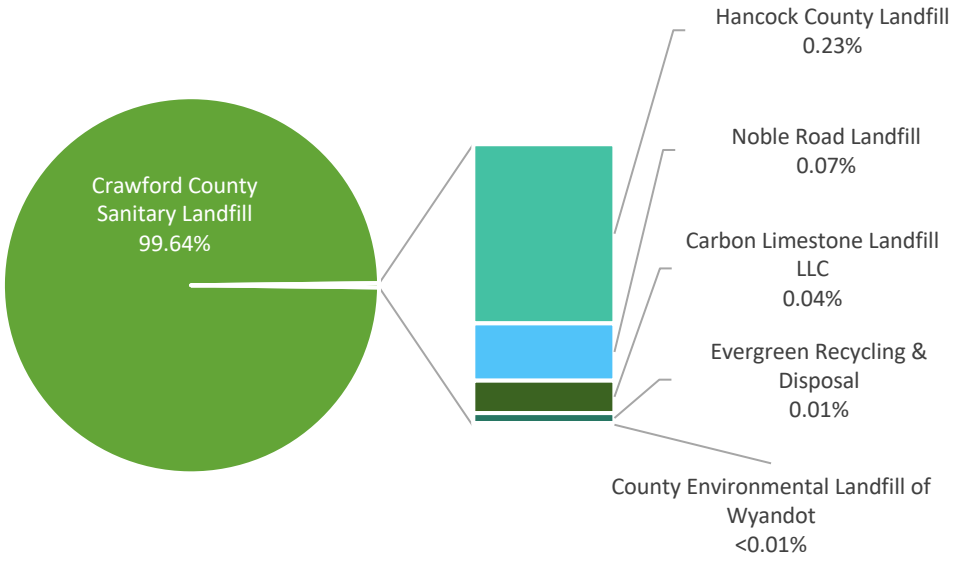
Table III-1, "Landfills Used by the District" presents a list of the landfills that received directly hauled solid waste from the District. The District requires that all solid waste generated in the District be delivered to the Crawford County Landfill unless a waiver is obtained. There is currently 1 operating MSW landfill located in the District. District-generated solid waste that was directly hauled (versus transferred) was managed at the one in-district landfill, five out-of-District landfills, and zero out-of-state landfills. Approximately 37,278 tons of solid and exempt waste were directly hauled to landfills for disposal in 2019. The residential/commercial sector generated 67% of the waste that was directly hauled, and the industrial sector generated 32% of all directly hauled waste. Exempt waste represented approximately 0.68% of the waste that was directly hauled. Exempt waste can include earth or materials from construction, mining, or demolition operations, non-toxic fly ash, non-toxic bottom ash, or slag. The following figure presents the percent of directly hauled solid waste generated by each sector in 2019.

2019 Percentage of Directly Hauled Solid Waste Generated by Sector



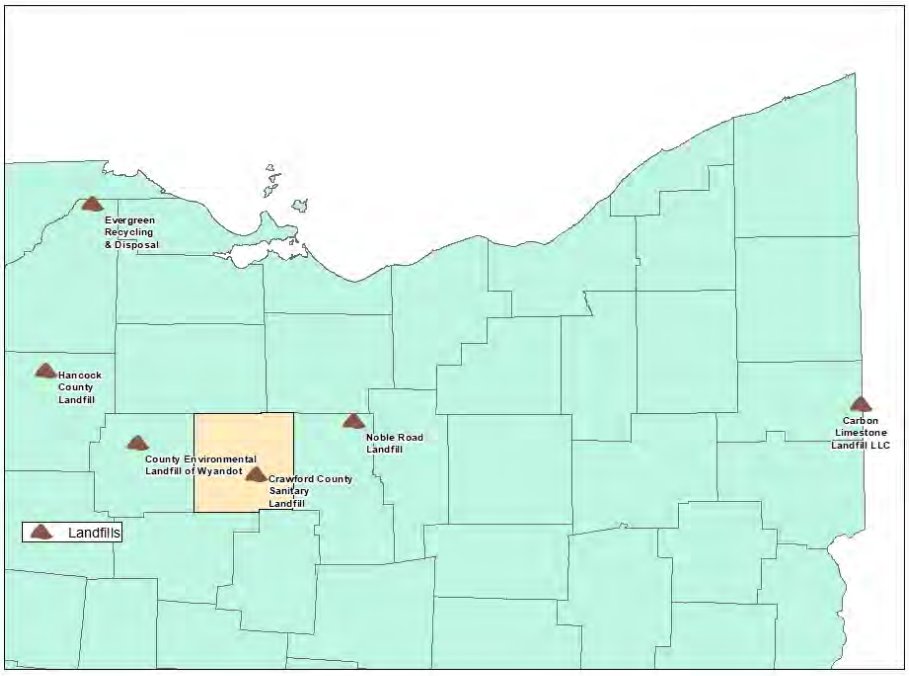
The Crawford County Sanitary Landfill managed approximately 99.6% (37,143 tons) of the District's solid waste. Hancock County Landfill, Noble Road Landfill, Carbon Limestone Landfill, Evergreen Recycling & Disposal, and County Environmental Landfill of Wyandot received the remaining portion of the District's solid waste. The following chart depicts the landfills used by the District for direct hauled solid and exempt waste in 2019.

2019 Direct Haul Landfills Receiving District Solid/Exempt Waste



The following map presents the location of these facilities in relation to Crawford County.

2019 Landfills that Accepted Directly Hauled Solid Waste

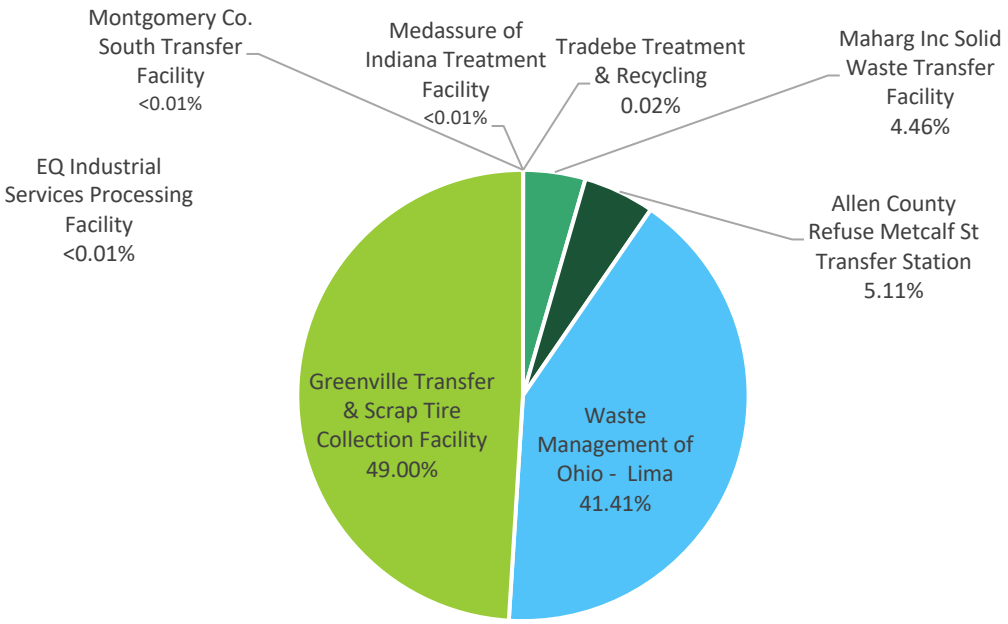


C. Existing Incinerators and Waste-to-Energy Facilities

There were two incinerator/other processing facilities used by the District in 2019 (see Table III-2). One out-of-state facility took a total of 0.14 tons from the District, and one in-District facility managed 6.79 tons of material.

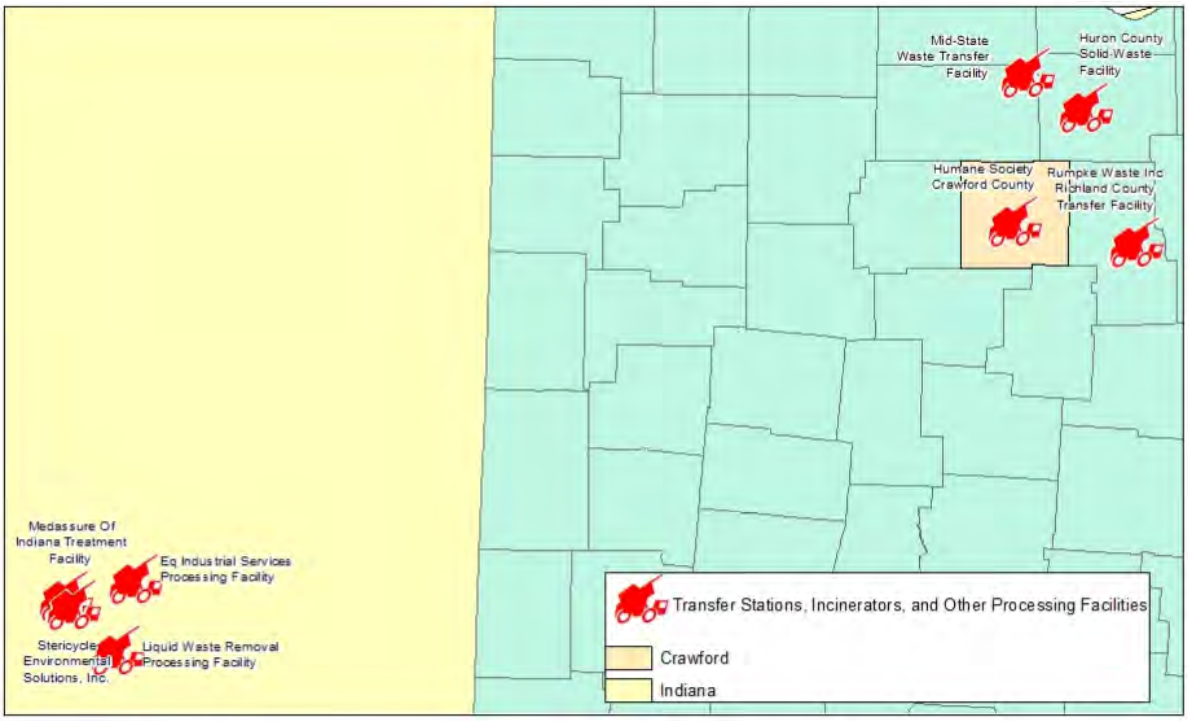
D. Existing Transfer Facilities

Table III-3 presents transfer facilities used by the District. Three out-of-district transfer stations were used by the District in 2019: Huron County Solid Waste Facility, Mid-State Waste Transfer Facility, and Rumpke Waste Inc Richland County Transfer Facility. Mid-State Waste accepted 582 tons, Rumpke accepted 5 tons, and Huron County accepted 2 tons. Additionally, one resource recovery system and two solidification facilities located in Indiana accepted a cumulative 0.87 tons from the District in 2019. The following chart depicts the break out by transfer facility:



The following figure presents the transfer stations in relation to Crawford County.

2019 Transfer Stations Used by the District

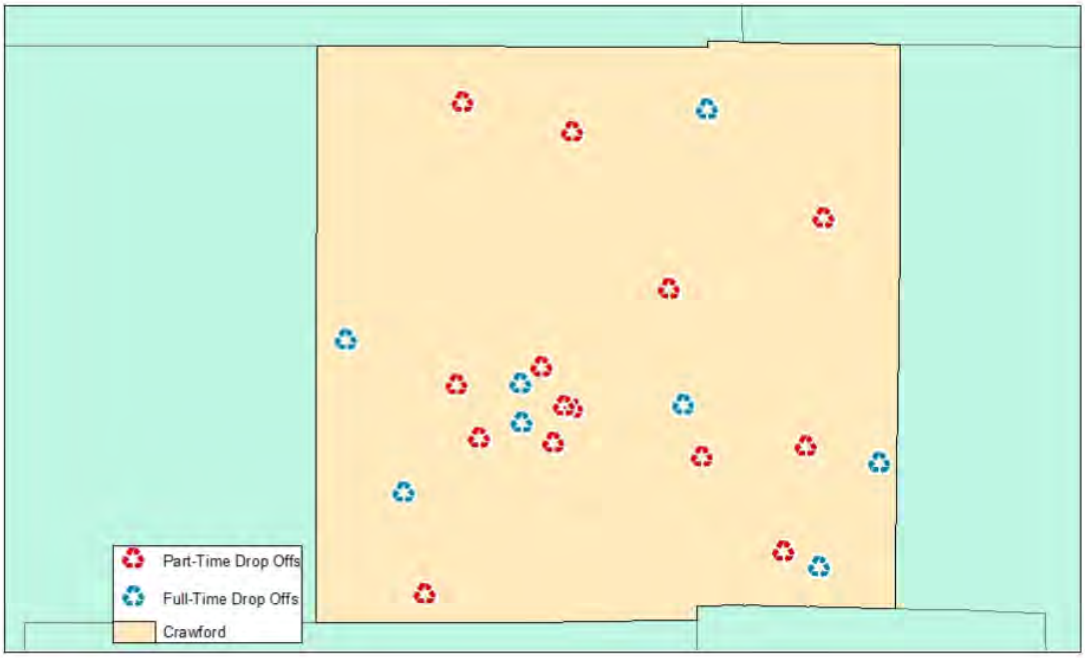


E. Existing Recycling and Household Hazardous Waste Collection Activities

There are zero communities in the district that provide curbside recycling services. Table III-4, "Residential Curbside Recycling Activities," has been included in this plan to indicate this.

Table III-5, "Drop-offs, Buybacks, Hauler Collection, Other Recycling Activities, and HHW Collection Used by the District," lists 24 in-District drop-off facilities available for public use in 2019 that accept, at a minimum, 5 materials defined as highly amenable to recycling for the residential sector. These materials include aluminum and bi-metal cans, glass, plastic, and newspaper. Nine of the drop-off recycling centers are full-time, meaning they are available at least 40 hours per week. Additionally, 16 drop-off locations were available to residents in 2019 part-time and accept the same materials as the full-time drop-offs. However, two of these part-time drop-offs ended in 2019. All Crawford County residents have access to these public drop-off sites. The following figure presents the locations of the drop-off recycling centers, as well as public buy-back centers, and curbside recycling programs. A total of 645 tons of recyclables were collected at the full and part-time drop-off sites in 2019.

2019 Drop-Off Recycling Facilities



The Crawford County Recycling Center operates as a drop-off facility and is included in the discussion above. The center and accepts aluminum

containers, steel cans, cardboard, glass, newsprint, other paper, plastics (#1 and #2), and plastic grocery bags. The center also accepts scrap metal, appliances (with and without Freon), household batteries, antifreeze, electronics, used oil, used cooking oil, latex paint hardener, TVs and monitors, tires, and lead acid batteries.

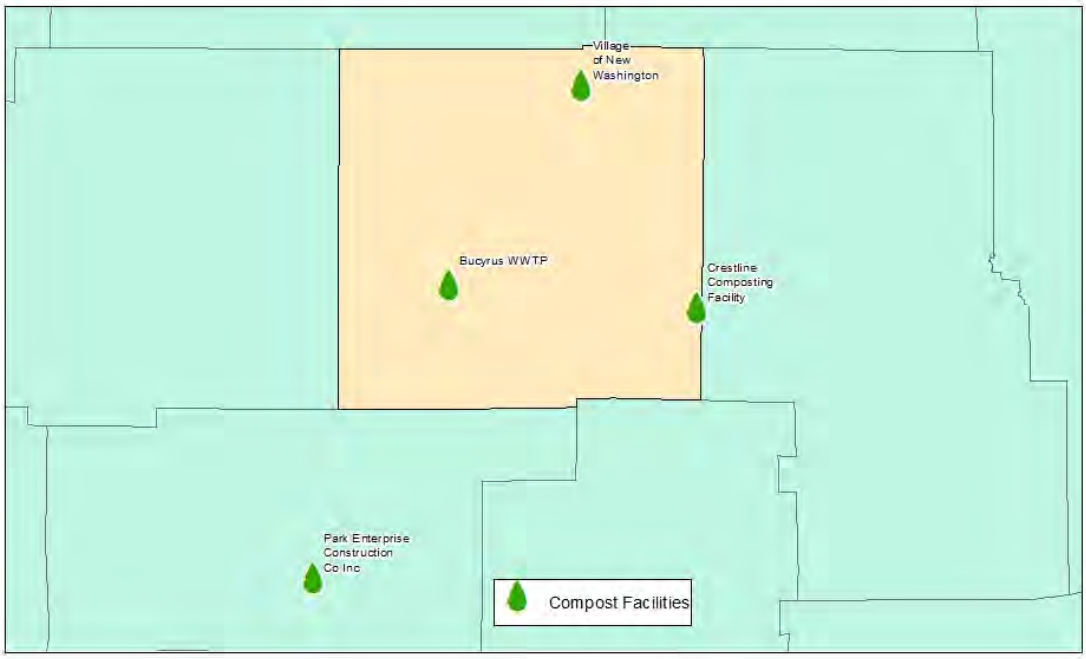
Table III-5 also lists private use drop-off facilities, drop-off recycling sites that accept less than the minimum 5 materials, brokers, and special collection programs operating in the District.

F. Existing Composting/Yard Waste Management Facilities

Compost facilities that are located within the District are presented in Table III-6, "Composting/Yard Waste Management Activities Used by the District." There were three Class IV compost facilities operating in Crawford County during 2019 that managed 1,408 tons of yard waste, and one Class IV compost facility located in Marion County that processes 673 tons of Crawford County yard waste. Additionally, 131 tons of food waste were processed by haulers and grocers in the District. The overall organics composted by the District totaled 2,213 tons.

The following map presents the locations of registered composting facilities used to manage organics generated in the District, as well as the community leaf collection activities throughout the District.

2019 Yard Waste Facilities



G. Facilities Used by the District Which are Located Outside Ohio

Table III-7 presents four facilities that are located outside of Ohio that received District waste.

H. Existing Open Dumps and Waste Tire Dumps

Table III-8 identifies no open dumps in the Crawford County Solid Waste Management District. There are no identified waste tire dumps.

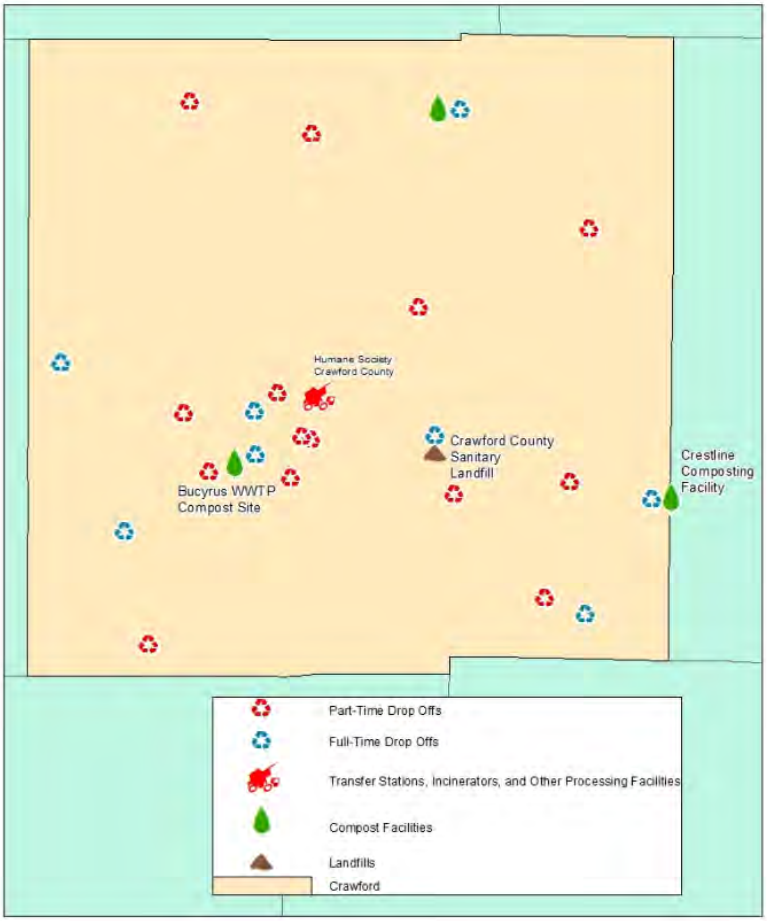
I. Ash, Foundry Sand, and Slag Disposal Sites

Table III-9 identifies no ash, foundry sand and slag disposal sites located in the Crawford County Solid Waste Management District.

J. Map of Facilities and Sites

Figure III-7 displays a map of the District's facilities. A full-size version of this map is included in Appendix E.

2019 District Facilities and Sites (District View)



2019 District Facilities and Sites (Full View)

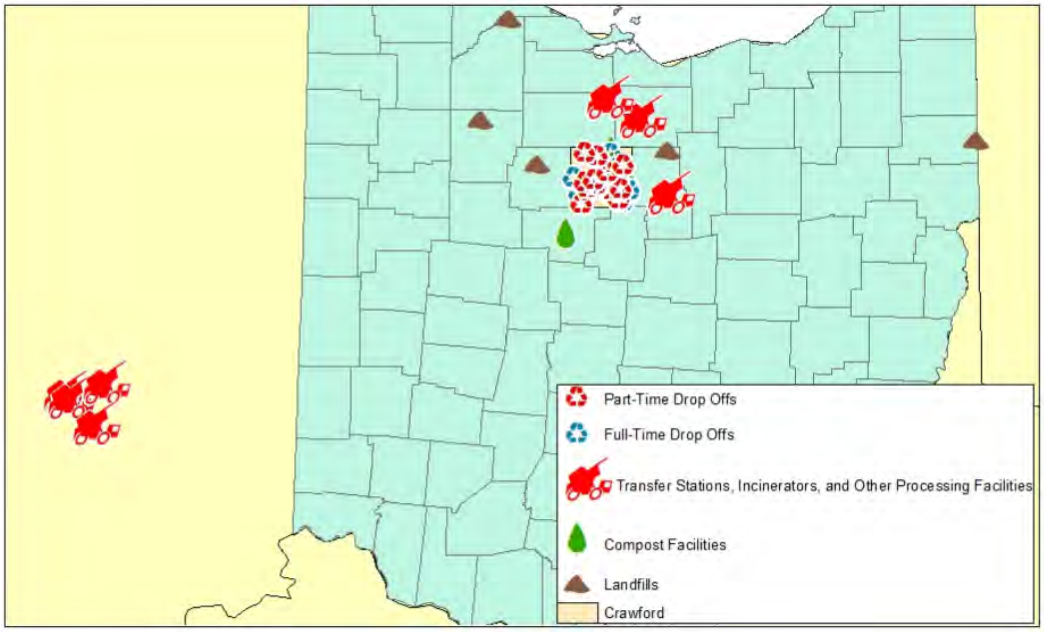


Table III-10, "Solid Waste Haulers Operating in the District," contains the public and private sector waste haulers providing service to waste generators in the District.

There were fourteen known private sector haulers (not counting Scrap Tire Haulers) and one public sector hauler that provided collection services within the District. The list of haulers was taken from the 2019 ADR survey results and online research; haulers were researched to identify whether they were still in business and/or still providing hauling services in the District.

Table III-1
Landfills Used by the District

Facility Name	Type	Location		Waste Received from the SWMD (TPY)			
		County	State	Residential/ Commercial	Industrial	Exempt	Total
In-District Landfills							
Crawford County Sanitary Landfill	PA, GO	Crawford	OH	25,032.5	11,930.0	180.6	37,143
Out-of-District Landfills							
Hancock County Landfill	PA, GO	Hancock	OH	29.8		56.0	86
Carbon Limestone Landfill LLC	PA, PO	Mahoning	OH			15.5	16
Noble Road Landfill	PA, PO	Richland	OH	27.4			27
Evergreen Recycling & Disposal	PA, PO	Wood	OH		4.7		5
County Environmental Landfill of Wyandot	PA, PO	Wyandot	OH	0.8		0.9	2
Out-of-State Landfills							
None							0
Landfill Total				**25,091**	**11,935**	**253**	**37,278**
Incinerator Facilities				0.04	0	0	0
Transfer Stations				409	0	181	590
Total Disposal				**25,499**	**11,935**	**434**	**37,869**

PA = publicly available, PO = privately-operated, GO = government-operated, N/A = not applicable

Table III-2
Solid Waste Incinerators, Waste-to-Energy, and Processing Facilities Used by the District

Facility Name	Type	Location		Waste Received from the SWMD (TPY)					Total Ash Produced (TPY)
		County	State	Residential/ Commercial	Industrial	Exempt	Total	Volume Reduction (TPY)	
In-District Facilities									
Crawford County Humane Society	INP	Crawford	OH	6.79			6.79	4.75	2.04
Out-of-District Facilities									
None.							0.00		
Out-of-State Facilities									
Medassure Of Indiana Treatment Facility	MWP	Marion	IN	0.14			0.14	0.10	0.04
Totals				**6.93**	**0.00**	**0.00**	**6.93**	**4.85**	**2.08**

MWP = medical waste processor, INP = Incinerator, RRS = Resource Recovery System, SF = Solidification Facility

Table III-3
Solid Waste Transfer Facilities Used by the District

Facility Name	Type	Location		Waste Received from the SWMD (TPY)				Recyclables Processed	
		County	State	Residential/ Commercial	Industrial	Exempt	Total	Recovered from Waste	Total
In-District Facilities									
None							0.00	0.00	0.00
Out-of-District Facilities									
Huron County Solid Waste Facility	PA, GO	Huron	OH	2.36			2.36	0.00	2.36
Mid-State Waste Transfer Facility	PA, PO	Morrow	OH	401.23		181.06			582.29
Rumpke Waste Inc Richland County Transfer Facility	PA, PO	Richland	OH	4.91					4.91
Out-of-State Facilities									
Stericycle Environmental Solutions, Inc.	RRS	Marion	IN		0.01		0.01	0.00	0.01
Eq Industrial Services Processing Facility	SF	Marion	IN		0.48		0.48	0.00	0.48
Liquid Waste Removal Processing Facility	SF	Johnson	IN	0.38			0.38	0.00	0.38
Totals				**408.88**	**0.49**	**181.06**	**3.23**	**0.00**	**590.43**

PA = publicly available, PO = privately-operated, GO = government-operated, PFO = Processing Facility - Other

Source(s) of information: Ohio EPA, 2019 Annual District Review Form, Indiana Department of Environmental Management, 2019 Complete Solid Waste Quarterly Report Database

Table III-4
Residential Curbside Recycling Activities Used by the District

Community	Type	Population Served	Collection Frequency	Types of Materials Accepted							Tons Processed from SWMD
				AC	GL	PL	ONP	OCC	SC	MxP	
Non-Subscription Curbside Recycling											
None											
2019 Non-Subscription Curbside Recycling Total											**0**
Subscription Curbside Recycling											
None											0
2019 Subscription Curbside Recycling Total											**0**
2017 Total Curbside Recycling Total											**0**

NS = non-subscription curbside recycling; S = subscription curbside recycling

AC = aluminum containers; GL = glass containers; PL = plastic containers; ONP = newspaper; OCC = cardboard; SC = steel containers; MxP = mixed paper; AS = aseptic containers

Source(s) of information: 2019 Annual District Report. Population: Ohio Development Services Agency Office of Research, 2019 Population Estimates: Cities, Villages, and Townships by County

Table III-5
Drop-offs, Buybacks, Hauler Collection, Other Recycling Activities and HHW Collection Used by the District

Facility/Activity Name, Address, Phone	Type	Types of Materials Accepted															Service Area			Hours Available to Public	Tons of Recyclables from SWMD	% of Tons by Sector
		FM	GL	PL	ONP	OCC	NFM	MAG	OffP	MxP	LAB	ST	WG	OM	W	Oth	County	Twp / City	Population Served			
Full Time Drop-Off Recycling Centers																						
Bucyrus City Hall 500 S Sandusky Ave Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus	11,764	24 Hours 7 days/week	245.10	100% R
Camp Michael 1741 Shupp Rd Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus Township	799	24 Hours 7 days/week	6.69	100% R
Lowe Volk Nature Center 2401 OH-598 Crestline, OH 44827	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Jefferson Township	1,442	24 Hours 7 days/week	7.98	100% R
Todd Township Hall 413 High St Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Tod Township	651	24 Hours 7 days/week	5.98	100% R
East Park East Walnut Street Galion, OH 44833	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Galion	9,982	24 Hours 7 days/week	158.20	100% R
Crestline Village Hall 100 North Seltzer Street Crestline, Ohio 44827	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Crestline	4,425	24 Hours 7 days/week	108.50	100% R
Quality Inn 1515 N Sandusky Ave Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus	11,764	24 Hours 7 days/week	4.65	100% R
New Washington City Hall 119 E Mansfield St New Washington, OH 44854	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	New Washington	920	25 Hours 7 days/week	9.40	100% R
Recycling Center 5128 Lincoln Hwy East Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Crawford	Whetstone Township	1,837	M-F 8am-4pm	Included in Recycling Center Total	50% R 45% C 5% I
Part-Time Drop-Off Recycling Centers																						
Friends of the Park District 2401 ST. Rte. 598 Crestline, OH 44827	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Jefferson Township	1,442	2nd Saturday of Every Month	15.11	100% R
Woodlawn United Methodist Church 1675 Hopley Ave Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus	11,764	3rd Saturday of Every Month	0.00	100% R
Chatfield Township Firehouse Parking Lot 3550 Chatfield Center Road Bloomville, OH 44818	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Chatfield	178	4th Saturday of Every Month	5.03	100% R
Lowe Volk Park 2401 OH-598 Crestline, OH 44827	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Jefferson Township	1,442	2nd Saturday of Every Month	15.40	100% R
Colonel Crawford Schools 5444 Crestline Road Crestline, OH 44827	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Jefferson Township	1,442	1st Saturday of Every Month	1.43	100% R
Dallas Township Firehouse Lot 1491 OH-294 Monnett, Ohio 43302	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Dallas Township	457	2nd Saturday of Every Month	3.21	100% R
Liberty Township Firehouse Lot 4628 Liberty St Sulphur Springs, Ohio 44881	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Liberty Township	1,295	3rd Saturday of Every Month	3.96	100% R
United Methodist Church 202 Sherman St Tiro, OH 44887	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Tiro	262	5th Saturday of Month (if applicable)	0.00	100% R
Lykens Township Firehouse Parking Lot 2016 New Washington Rd Bloomville, OH 44818	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Lykens Township	621	1st Tuesday of Every Month	2.61	100% R
Precision Tech 200 Crossroads Blvd Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus	11,764	4th Wednesday of Every Month	0.12	100% R
Timken Company 2325 E Mansfield St Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Whetstone Township	1,837	2nd full week of Every Month	3.45	100% R
Wayside Christian School 2345 Kerstetter Rd Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus Township	799	3rd Tuesday of every month	2.75	
Galion Middle School 474 Portland Way N Galion, OH 44833	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Galion	9,982	2nd Thursday of every month	13.17	
Galion Elementary School 478 Portland Way N Galion, OH 44833	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Galion	9,982	4th Thursday of every month	13.17	
Wynford High School 3288 Holmes Center Rd Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Holmes Township	1,256	4th Saturday of every month	16.04	
Seventh Day Adventist Church 1980 Stetzer Rd Bucyrus, OH 44820	PA, DO	x	x	x	x	x	x	x	x	x							Crawford	Bucyrus	11,764	3rd full week of Every Month	3.09	100% R

Table III-5
Drop-offs, Buybacks, Hauler Collection, Other Recycling Activities and HHW Collection Used by the District

Facility/Activity Name, Address, Phone	Type	Types of Materials Accepted															Service Area			Hours Available to Public	Tons of Recyclables from SWMD	% of Tons by Sector
		FM	GL	PL	ONP	OCC	NFM	MAG	OffP	MxP	LAB	ST	WG	OM	W	Oth	County	Twp./ City	Population Served			
Innovative Recycling 725 W. Main St. Crestline, OH 44824 419-683-2988	PA, DO, BB, SY										x						Crawford	District	41,494	9am-4:30pm M-F 9am-12pm Sat	0.98	100% R
Innovative Recycling 352 S. South St. Galion, OH 44833 419-468-2988	PA, DO, BB, SY										x						Crawford	District	41,494	DNR	DNR	DNR
Milliron Recycling 2384 St. Rt. 39 NW Mansfield, OH 44903 419-747-6522	PA, DO, BB, SY	x					x						x				Crawford	District	41,494	8am-5pm M-F 8am-12pm Sat	11.76	100% R
Advanced Fiber Technology 100 Crossroads Blvd. Bucyrus, OH 44820 419-562-1337	PA, DO, BB				x	x		x									Crawford	District	41,494	7am-3:30pm M-F	8.79	100% R
Campbell Technological Resources, Inc. 220 Lincoln Ave Crestline, OH 44827	PA, DO, BB, SY	x					x										Crawford	District	41,494	DNR	DNR	DNR
Carrolls Truck Wrecking 2064 Nazor Rd. Galion, OH 44833 419-683-2448	PA, DO, BB, SY	x					x										Crawford	District	41,494	DNR	DNR	DNR
Central Ohio Recycling & Salvage, LLC 668 Woodlawn Ave. Bucyrus, OH 44820 419-562-0087	PA, DO, BB, SY	x					x										Crawford	District	41,494	DNR	DNR	DNR
Knecht's Auto Recycling 1644 Lincoln Hwy Bucyrus, OH 44820 419-562-9932	PA, DO, BB, SY	x					x										Crawford	District	41,494	DNR	DNR	DNR
Willies Recycling LLC 1825 E Mansfield St. Rear Bucyrus, OH 44820 419-562-9258	PA, DO, BB, SY	x					x										Crawford	District	41,494	DNR	DNR	DNR

Table III-5
Drop-offs, Buybacks, Hauler Collection, Other Recycling Activities and HHW Collection Used by the District

Facility/Activity Name, Address, Phone	Type	Types of Materials Accepted															Service Area			Hours Available to Public	Tons of Recyclables from SWMD	% of Tons by Sector
		FM	GL	PL	ONP	OCC	NFM	MAG	OffP	MxP	LAB	ST	WG	OM	W	Oth	County	Twp./ City	Population Served			
Harris and Associates	ST											x					Crawford	District	41,512	Business Hours	4.09	DNR
Kelbley Tire Recycle	ST											x					Crawford	District	41,512	Business Hours	60.04	DNR
Liberty Tire Service of Ohio	ST											x					Crawford	District	41,512	Business Hours	142.11	DNR
Lightner Tire Copmany	ST											x					Crawford	District	41,512	Business Hours	56.93	DNR
R Willig Tire Distributors Inc	ST											x					Crawford	District	41,512	Business Hours	47.11	DNR
Rumpke Transportation Company, Inc.	ST											x					Crawford	District	41,512	Business Hours	53.73	DNR
Wal-Mart	CB			x		x	x			x						x	Crawford	District	N/A	Business Hours	325.25	100% C
Dollar General	CB					x				x							Crawford	District	N/A	Business Hours	125.73	100% C
Kroger	CB			x		x										x	Crawford	District	N/A	Business Hours	184.98	100% C
USPS	CB			x		x				x							Crawford	District	N/A	Business Hours	136.59	100% C
Material Recovery Facilities																						
Richland County Recycling and Transfer Facility	MRF					x										x	Crawford	District	N/A	Business Hours	221.87	100% C
Crawford County Recycling Center	MRF	x	x	x	x	x	x	x	x	x	x	x	x	x		x	Crawford	District	41,494	Business Hours	1,393.39	35% C/I 65% R/C
Special District Collections																						
HHW Collection Event every 5 years	PA															x	Crawford	District	41,494	Varies	0.00	100% R
Totals																					3,396.85	

R = residential; C = commercial; I = industrial; PA = publicly available; PUO = private-use only; A = automotive service store; DO = drop-off; BR = broker; MRF = material recovery facility; CB = commercial box store chain; PR = processor; SC = special collection; ST = scrap tire transporter; SY = scrap yard; N/A = not applicable/not available; DNR = did not report

FM = ferrous metals; GL = glass; PL = plastic; OCC = corrugated cardboard; NF = non-ferrous metal; LAB = lead-acid batteries; MxP = mixed paper; ST = scrap tires; WG = white goods/appliances; OM = other metals; Oth = other (household batteries, used oil, wood, etc.)

Source(s) of information: 2019 Annual District Report

Table III-6
Composting/Yard Waste Management Activities Used by the District

Facility Name or Activity	Class	County	Waste Received from the SWMD		
			Address/Phone	Food Waste Tons	Yard Waste Tons
In-District Registered Compost Facilities					
Crestline Composting Facility	4	Crawford	E Bucyrus & St Rte 181 Crestline, OH 44827	0	279
Bucyrus WWTP	4	Crawford	1500 W Southern Ave, Bucyrus, OH 44820	0	1,058
Village of New Washington	4	Crawford	Cemetery Drive New Washington, OH 44854	0	71
Subtotal				**0**	**1,408**
Out-of-District Registered Compost Facilities					
Park Enterprise Construction Co Inc	4	Marion	560 Barks Road West Marion, OH 43302	0	673
Subtotal				**0**	**673**
Other Activities					
Hauler and grocer food waste data	N/A	N/A	N/A	131	0
Subtotal				**131**	**0**
Grand Total				**131**	**2081**

NA = not applicable, YW = yard waste

Source(s) of information: Ohio EPA, 2019 Compost Facility Planning Report

Table III-7
Facilities Used by the District Which are Located Outside Ohio: Additional Data

Facility Name	Facility Mailing Address	Facility Owner	Facility Operator	2019 Tons Received	Operating Days/Year
Eq Industrial Services Processing Facility	2650 N Shadeland Ave Indianapolis, IN 46219	EQ Industrial Services 2650 N Shadeland Ave Indianapolis, IN 46219	EQ Industrial Services 2650 N Shadeland Ave Indianapolis, IN 46219	0.48	260
Liquid Waste Removal Processing Facility	500 S Polk St Ste 100 Greenwood, IN 46143	Liquid Waste Removal 500 S Polk St Ste 100 Greenwood, IN 46143	Liquid Waste Removal 500 S Polk St Ste 100 Greenwood, IN 46143	0.38	260
Medassure Of Indiana Treatment Facility	1013 S Girls School Rd Indianapolis, IN 46231	Medassure Of Indiana Treatment Facility 1013 S Girls School Rd Indianapolis, IN 46231	Medassure Of Indiana 1013 S Girls School Rd Indianapolis, IN 46231	0.14	260
Stericycle Environmental Solutions, Inc.	2670 Executive Dr Indianapolis, IN 46241	Stericycle Environmental Solutions, Inc. 2670 Executive Dr Indianapolis, IN 46241	Stericycle Environmental Solutions, Inc. 2670 Executive Dr Indianapolis, IN 46241	0.01	260

Source(s) of information: Indiana Department of Environmental Management, 2019 Authorized Operating Solid Waste Facilities

Table III-8
Open Dumps and Waste Tire Dumps Located in the District

Site Location (description)	Land Owner Contact Information	Description of Materials Dumped	Approximate Size of Site	Time Period Site has Existed	Update
Open Dump Sites					
None.					
Waste Tire Dump Sites					
None.					

N/A=Not available

Source(s) of information: Crawford County Health Department

Table III-9
Ash, Foundry Sand, and Slag Disposal Sites Used by the District

Site Location (describe briefly)	Land Owner Contact Information	Description of Materials Dumped	Approximate Size of Site	Time Period Site has Existed
None.				

Source(s) of information: Crawford County Health Department

Table III-10
Solid Waste Haulers Operating in the District

Hauler	Mailing Address	Service Area	Materials Collected	Trash Collected	Recyclables Collected	Name of Facility Used by Hauler
Aspen Refuse	1050 Lavina Bucyrus, OH 44820 419-562-9004	Bucyrus	R/C	DNR	DNR	DNR
B's Sanitation	8665 SR 19 Galion,OH 44833 419-468-2450	Galion	R/C	DNR	DNR	DNR
City of Bucyrus	1175 Isaac Beal Rd Bucyrus, OH 44820 419-562-2771	Bucyrus	R/C	DNR	DNR	DNR
Damarus Quentin Enterprises LLC	509 E. Mansfield St., Ste D Bucyrus,OH 44820 419-544-1983	Bucyrus	R/C	DNR	DNR	DNR
DAR-BI Sanitation	PO Box 85 Galion,OH 44833 419-462-2019	Galion	R/C	DNR	DNR	DNR
Galion Sanitation	4709 State Route 309 Galion ,OH 44833 419-468-7715	District	R/C/I	DNR	DNR	DNR
Kurtzman Sanitation	P. O. Box 365 Crestline, OH 44827 419-683-3921	Crestline	R/C/I	DNR	DNR	DNR
Milliron Industries	1700 N. Main St Mansfield, OH 44903 419-747-6565	Mansfield	R/C/I	DNR	DNR	DNR
Monn's Trash Removal	4017 Settlement Shelby, OH 44875 419-347-1871	Shelby	R	DNR	DNR	DNR
Rumpke Transportation Co	2175 Stiving Rd Mansfield, OH 44903 419-747-6900	District	R	DNR	DNR	DNR
S & R Refuse, Inc.	3823 Bethel Rd Bucyrus, OH 44820 419-562-3588	District	R/C	DNR	DNR	DNR
Shuster's Sanitation	4382 Lyons Road Caledonia, OH 43314 419-845-3118	Caldonia	R	DNR	DNR	DNR
Sweet Pea's Sanitation	212 S. Ayres St Nevada, OH 44849 740-482-1178	Nevada	R	DNR	DNR	DNR
Tiger Sanitation	P.O. Box 191 Galion, OH 44833 419-468-4603	Galion	R	DNR	DNR	DNR
Vanderkooi Rubbish	P.O. Box 880 Galion, OH 44833 (419) 468-1758	District	R/C	DNR	DNR	DNR
Total				**N/A**	**N/A**	

SW = solid waste, R = recyclables, FW = food waste

IV. Reference Year Population, Waste Generation and Waste Reduction [ORC Section 3734.53(A)(5)-(6)]

This section of the Plan Update presents information regarding the District's population, waste generation, and waste reduction estimates for the reference year.

A. Reference Year Population and Residential/Commercial Waste Generation

Table IV-1, "Reference Year Population and Residential/Commercial Generation," presents an estimate of the District's population and projected residential/commercial waste generation for 2019. The District's base population was 41,494. This population estimate was then adjusted for political subdivisions located in more than one solid waste District.

Population Adjustments

In accordance with Ohio law, the entire population of political subdivisions located in more than one solid waste District was credited to the District containing the largest portion of the jurisdiction's population.

Crestline Village is also located in Richland County, and 18 residents live in Crestline Village in Richland County. Galion is also located in Richland and Morrow Counties, and 0 residents in Galion live in either of those counties.

The District's total adjusted 2019 population was 41,512 residents.

B. Residential/Commercial Waste Generation

The 2019 residential/commercial waste generation rate was projected using historical data, which is summarized in the following table:

Year	Waste + Recycling	Population	Per Capita Gen Rate (lbs./person/day)	Average Rate of Change for Per Capita Gen Rate
2015	40,710	42,342	5.27	
2016	39,624	42,101	5.16	-2.16%
2017	43,635	41,764	5.72	9.92%
2018	38,704	41,568	5.10	-12.21%
2019	41,321	41,512	5.03	-1.51%
Average				**-1.49%**

The reference year residential/commercial total generation was projected by increasing the per capita generation rate reported in 2018 (5.1 PPD) by the average annual rate of change in per capita residential/commercial

waste generation from 2015 through 2018 (-1.48%) based upon the generation rates reported on the Annual District Reports.

The 2019 per capita residential/commercial waste generation projection was 5.03 pounds per person per day. Table IV-1 shows the formula used for estimating the residential/commercial waste generation. This methodology calculated the District's residential/commercial waste generation to be 38,079 tons in 2019. For further discussion on reconciling the waste generation values, see Section IV.H of this *Plan Update*.

C. Industrial Waste Generation

The District conducts annual solid waste and recycling surveys of its local industries. Detailed results from the industrial survey are included in Appendix F and copies of the commercial and industrial survey forms are included in Appendix G. Due to limited reporting from industrial entities, brokers and processors are surveyed for materials collected from the industrial sector. Table IV-2 presents the summarized results of the District's 2019 industrial survey, as well as the estimated total for the District's entire industrial sector. A total of 63 industries in SIC codes 20 and 22-39 were identified throughout the District. Nine industries and several brokers and processors of the District's industrial sector responded to the survey.

Approximately 46,546 tons of recycled materials (mostly from recyclable material brokers and processors) were identified in 2019.

To estimate total industrial waste generated, a list was compiled that contained all industrial sector businesses located in the District and the total number of employees by SIC code. The District determined the quantity of industries and employees that were not represented in the survey responses. Average per capita generation rates by SIC code from Appendix JJ of the Ohio EPA Plan format were used to project the total tons generated by industries that did not respond to the District's survey. Using this projection methodology, a total of 15,003 tons of industrial waste was generated in the District from non-responding industries. The resulting total is 61,549 tons generated by both responding and non-responding industries.

D. Exempt Waste

Exempt waste is material that is not defined as solid waste, such as earth or materials from construction, mining, or demolition operations, nontoxic fly ash, nontoxic bottom ash, or slag. Exempt wastes can be managed in landfills that have different and often less stringent environmental control requirements. Table IV-3 shows that the total exempt waste generated by

the District was 434 tons in 2019. This includes the exempt waste reported by the landfills and transfer stations receiving the District's waste in Table III-1. The generation rate was 0.06 pounds per person per day (PPD).

Exempt waste does not have a direct correlation to changes in population. It may be related to factors such as changes in construction employment.

E. Total Waste Generation (based on national statistics and projections)

Table IV-4, "Reference Year Total Waste Generation for the District," presents the total waste generated using District data and statewide projections. Using these sources of information, the District estimated that approximately 100,061 tons of waste were generated in 2019. The total generation rate was projected to be 13.21 pounds per person per day. This included 38,079 tons (Table IV-1) of residential/commercial waste, 61,549 tons (Table IV-2) of industrial waste, and 434 tons (Table IV-3) of exempt waste. The total waste generation listed in Table IV-4 is 175 tons less than the total in Table IV-8 (100,236 tons) as calculated using disposal facility data and reported recycling and waste reduction, including exempt waste. For further discussion on reconciling the waste generation values, see Section IV.H.

F. Reference Year Waste Reduction

The District obtained data from service providers, scrap yards, Ohio EPA, and program contractors to obtain data on residential, commercial, institutional, and industrial recycling for 2019. Residential/commercial waste reduction data reported in Table IV-5 and industrial waste reduction data reported in Table IV-6 was obtained from these data collection activities.

The District was careful to eliminate double counting as described in the sections below.

Residential Data

Most residential sector recycling is collected from drop-off recycling sites and special material collection drives held by the District at the Recycling Center. The District ensured that there was no double counting by subtracting the recycled tons accounted for at the Recycling Center from the tons reported by the recycling processor, broker, or hauler for materials.

Commercial/Institutional Data

A survey of commercial businesses and institutions was completed by the District in the spring of 2020 to gather 2019 recycling and disposal data. The District sent a cover letter, survey, and postage paid return envelope

via the U.S. Postal Service to each commercial business and institution (SIC 42-45, 47-65, 67, 70, 73, 78-84, 86, 87, 91-95) located in the District. The letter explained the purpose of the inquiry and requested that recipients complete the enclosed survey and return it using the provided envelope. The results of these individual surveys were used to compile recycling by commercial businesses and institutions. Brokers, haulers, and MRFs (material recovery facilities) were also surveyed. These surveys requested only tonnage that was generated within the District.

Data from businesses was not blended with data from brokers, haulers, or MRFs when calculating the total tons for the majority of materials. The District typically used the greatest total tons reported by either business, brokers, haulers, or MRFs but not a combination of totals to avoid double counting.

Industrial Data

A survey of industries was completed by the District in the spring of 2020 to gather 2019 recycling and disposal data. In 2019, the District compiled surveys from haulers, brokers, or MRFs and the largest industries in the District. The results of these individual surveys were used to compile industrial sector recycling. The District analyzed where the materials were sent to in order to avoid double counting.

The District annually surveys industries. Responses from recipients that submitted a completed survey previously were compared to identify possible errors. In cases where current survey responses showed a significant increase or decrease in tonnage or omitting materials that were reported on a previous survey, follow up calls and e-mails were placed to confirm data.

Residential/Commercial Waste Reduction

Table IV-5, “Reference Year Residential/Commercial Waste Reduction in the District,” shows that the District’s residential and commercial sectors diverted 15,821.7 tons of materials from landfills in 2019 by recycling, composting, and reducing waste via incineration.

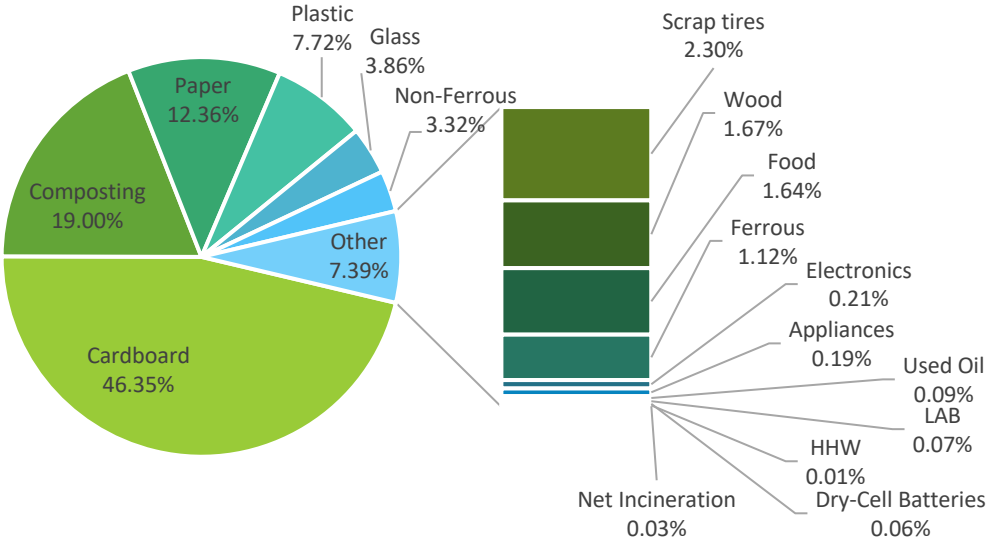
Cardboard represented the most diverted material based on weight (7,333.6 tons), followed by yard waste (3,006.5 tons), paper (1,955.3 tons), plastic (1,221.3 tons), and glass (610.8 tons). High recovery of cardboard is mainly attributed to the availability of drop-offs and commercial collection both provided by the District. The following table summarizes the residential and commercial recycling totals by commodity.

2019 Residential/Commercial Sector Recycling by Commodity

Material Recycled	Tons
Cardboard	7,334
Paper	1,955
Scrap tires	364
Glass	611
Wood	264
Plastic	1,221
Food	259
Other	0
Ferrous	177
Appliances	30
Non-Ferrous	525
Commingled	0
HHW	2
Used Oil	15
Electronics	33
LAB	10
Dry-Cell Batteries	10
Composting	3,006.5
Net Incineration	4.9
Total	**15,822**

The following figure depicts the waste reduction percentages for the residential/commercial sector.

2019 District Residential/Commercial Waste Reduction



Industrial Waste Reduction

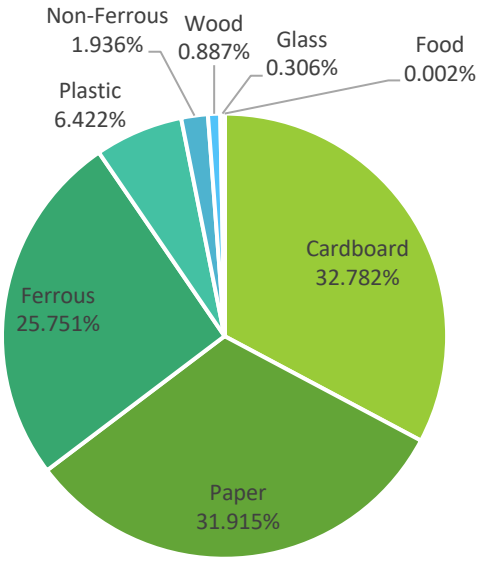
Table IV-6, "Reference Year Industrial Waste Reduction in the District" shows that industries located in the District reduced 46,545.7 tons of materials in 2019. Cardboard represented approximately 32.78% of the industrial sector recycling; paper represented approximately 31.91%; and ferrous metals represented approximately 25.75%. The following table summarizes the industrial recycling totals by commodity.

2019 Industrial Sector Recycling Tonnage by Commodity

Material Recycled	Tons
Ferrous	11,986
Food	1
Non-Ferrous	901
Cardboard	15,258
Plastic	2,989
Wood	413
Other	-
Paper	14,855
Commingled	-
Rubber	-
Glass	142
Net Incineration	-
Total	**46,546**

The following figure is a graphical representation of the commodities recycled by the industrial sector in 2019.

2019 Industrial Waste Reduction in the District



G. Existing Waste Reduction/Recycling Activities for the Residential, Commercial and Industrial Sectors

The following section summarizes the reference year residential/commercial programs and District initiatives. This section reflects the District's commitment to reducing solid waste from being disposed at landfills. The following table is an inventory of the District's programs during the reference year.

Program
Curbside Recycling Technical Assistance
Drop-Off Recycling
Business Recycling Collection
Crawford County Recycling Center
Yard Waste Composting
Special Waste Materials
Education and Awareness
Litter Clean-Up
Other Commercial and Industrial Recycling
Commercial and Industrial Recycling Technical Assistance
Buyback Recycling Facilities
Emergency Disaster Debris Management
Health District Partnership Program

An analysis on strengths and weaknesses was used to evaluate each of the District's existing programs. The results of the analysis are discussed

following each program in this section and will guide the District's planning efforts, which is reflected in Section V.

Residential/Commercial Recycling Programs

1. Curbside Recycling Technical Assistance

There are not currently any curbside recycling programs operating in the District. However, the District continues to informally discuss curbside programs with communities when applicable. The District has offered assistance to communities to begin curbside programs as well. The District is available to both communities and commercial businesses to prepare bid packages for solid waste and recycling curbside collection programs to maximize tonnages collected in the 9recycling sector. In the past, the District has also analyzed the potential for communities or the District to partner with the private sector to maximize the use of the District's recycling center as a processing location for any curbside recyclables collected by private sector haulers.

The following table summarizes the program details.

Curbside Recycling Technical Assistance Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	None
2019 Recycled Tonnage	0
2019 Annual Program Costs	$0
Program Operator/Contractor	District

Strengths of the program include:

- The District is available to assist communities when requested.
- There is some interest in starting a curbside program in Bucyrus

Challenges of the program include:

- No communities currently operate or contract for a curbside recycling program.
- The cost of implementing a curbside recycling program is too high currently due to markets and lack of options for processing, collection, and interest in some communities.

2. Drop-Off Recycling Program

The District provided 9 full-time drop-off locations and 16 part-time drop-off locations that collected 439.4 tons of recycling in 2019. Each drop-off collected at least 4 target materials that are recognized by Ohio EPA as highly amenable materials for recovery via trailers that are transported back to the District recycling center. The District has identified aluminum/bimetal cans, glass, plastic, and newspaper as highly amenable materials to recover for the residential/commercial sector. One of the full-time drop-offs is located at the District recycling center.

The following table summarizes the drop-off recycling locations that accepted at least 4 highly amenable materials for recovery in 2019.

2019 Drop-Off Locations

Location	Hours
Bucyrus City Hall 500 S Sandusky Ave Bucyrus, OH 44820	24 Hours 7 days/week
Camp Michael 1741 Shupp Rd Bucyrus, OH 44820	24 Hours 7 days/week
Lowe Volk Nature Center 2401 OH-598 Crestline, OH 44827	24 Hours 7 days/week
Todd Township Hall 413 High St Bucyrus, OH 44820	24 Hours 7 days/week
East Park East Walnut Street Galion, OH 44833	24 Hours 7 days/week
Crestline Village Hall 100 North Seltzer Street Crestline, Ohio 44827	24 Hours 7 days/week
Quality Inn 1515 N Sandusky Ave Bucyrus, OH 44820	24 Hours 7 days/week
New Washington City Hall 119 E Mansfield St New Washington, OH 44854	25 Hours 7 days/week
Recycling Center 5128 Lincoln Hwy East Bucyrus, OH 44820	M-F 8am-4pm
Friends of the Park District	2nd Saturday of Every Month

Location	Hours
2401 ST. Rte. 598 Crestline, OH 44827	
Woodlawn United Methodist Church* 1675 Hopley Ave Bucyrus, OH 44820	3rd Saturday of Every Month
Chatfield Township Firehouse Parking Lot 3550 Chatfield Center Road Bloomville, OH 44818	4th Saturday of Every Month
Lowe Volk Park 2401 OH-598 Crestline, OH 44827	2nd Saturday of Every Month
Colonel Crawford Schools 5444 Crestline Road Crestline, OH 44827	1st Saturday of Every Month
Dallas Township Firehouse Lot 1491 OH-294 Monnett, Ohio 43302	2nd Saturday of Every Month
Liberty Township Firehouse Lot 4628 Liberty St Sulphur Springs, Ohio 44881	3rd Saturday of Every Month
United Methodist Church* 202 Sherman St Tiro, OH 44887	5th Saturday of Month (if applicable)
Lykens Township Firehouse Parking Lot 2016 New Washington Rd Bloomville, OH 44818	1st Tuesday of Every Month
Precision Tech 200 Crossroads Blvd Bucyrus, OH 44820	4th Wednesday of Every Month
Timken Company 2325 E Mansfield St Bucyrus, OH 44820	2nd full week of Every Month
Wayside Christian School 2345 Kerstetter Rd Bucyrus, OH 44820	3rd Tuesday of every month
Galion Middle School 474 Portland Way N Galion, OH 44833	2nd Thursday of every month
Galion Elementary School	4th Thursday of every month

Location	Hours
478 Portland Way N Galion, OH 44833	
Wynford High School 3288 Holmes Center Rd Bucyrus, OH 44820	4th Saturday of every month
Seventh Day Adventist Church 1980 Stetzer Rd Bucyrus, OH 44820	3rd full week of Every Month

*Ended in 2019.

All drop-off stations collected at a minimum the following materials:

- Aluminum and bimetal cans
- Glass containers
- Plastic #1 and #2
- Newspaper

Drop-Off Recycling Center at the Crawford County Recycling Center

The District operated a drop-off in 2019 at the Crawford County Recycling Center and accepts glass, steel cans, aluminum cans, newspapers, magazines, mixed paper, paperboard and cardboard, #1 and #2 plastics, and plastic grocery bags. These materials are accepted at all District drop off locations.

The drop-off at the recycling center also accepts hard-to-recycle items such as scrap metal, appliances, batteries, electronics, used oil, antifreeze, fluorescent lamps, and tires if the resident walks into the building to drop it off.

Part-Time Recycling Drop Offs Operated by Volunteers

The District's part-time recycling drop offs are supervised sites that operate on a scheduled day or week each month. The District works with community groups to ensure that locations are well-distributed throughout the county and are supervised during drop off hours. The groups are economically incentivized to volunteer as their group receives on a monthly basis 100% of the price-adjusted payment per pound of recycling revenue from any recyclables dropped off during open hours at their site. Groups include schools, churches, businesses, councils, clubs, etc. including the following in 2019:

- Bucyrus Precision Tech-United Way - $3.38
- Camp Michael - $281.03
- Chatfield Blue Ribbons 4-H Club - $159.48
- Christian Action Council - $56.87
- Crawford County Junior Fair Board - $1.41

- Dallas Township VFD - $134.65
- Friends of the Crawford Park District - $204.80
- Galion City School Campus - $293.71
- Girl Scout Troop #1537 - $42.30
- Lykens Champions 4-H Club - $108.99
- Most Pure Heart of Mary Church - $402.39
- NR St. Paul's Cub Scout Pack #106 - $46.84
- New Washington Methodist Church - $200.00
- North Auburn Hustlers 4-H Club - $151.06
- Sacred Heart School - $18.37
- Seventh Day Adventist Church - $67.69
- St. Bernard's School - $206.94
- Sulphur Springs Star Farmers 4-H Club - $151.63
- Wayside Christian School - $73.82
- Woodlawn United Methodist Church - $151.42
- Wynford Schools - $344.69

The above payments are reflected in the 2019 and 2020 budget line item as the only expense. The rest of the operating expenses for this program are included in the Crawford County Recycling Center budget line item.

Locations of recycling drives and limited material drop-off recycling centers are listed in Table III-5. The following map depicts the approximate location of each drop-off location that accepts the 4 minimum designated materials.

2019 District Drop-Off Recycling Locations

In June 2020, the part-time drop-offs and two full-time drop-offs were temporarily suspended due to COVID-19. The District used this time to re-evaluate its previous drop-off program.

All materials collected from this program were delivered to the Crawford County Recycling Center for processing.

The following table summarizes the program details.

Drop-Off Recycling Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Aluminum and bimetal cans, glass containers, plastics #1 and #2, and newspaper
2019 Recycled Tonnage	439.4
2019 Annual Program Costs	$2,757.15*
Program Operator/Contractor	District, municipalities, private sector, and non-profit operators

*This expense is related to the revenue sharing with community groups only. The rest of the operating budget for this program is included in the Crawford County Recycling Center budget.

Strengths of the program include:

- The program provides recycling opportunities to residents in rural settings, single-family and multi-family dwellings, and small businesses.
- The District provides revenue to groups who volunteer at part-time sites to ensure opportunity to recycle and little contamination
- The District accepts more types of materials than the minimum required by the OEPA
- The recycling center's full-time site is used frequently

Challenges of the program include:

- Some areas of the District are abused
- The current program of collecting and processing is inefficient, takes too much time, and is costly with trailers and small compactors
- The current recycling trailers become overfilled due to inefficiencies in collection and filled with contamination
- Some part-time sites have limited schedules and availability for people to recycle
- Part-time drop-offs become overloaded due to the short period of collection
- The recycling center's full-time site's access to the location is not preferred by residents due to roadways and being adjacent to landfill

3. Business Recycling Collection

The District offers cardboard and paper recycling collection to all Crawford County commercial, institutional, and industrial businesses. The District is continually seeking businesses and other locations that generate quantities of paper that can be recycled. The District keeps a list of these businesses and other locations and has established a weekly schedule for the pickup of these recyclables Monday-Friday. Businesses pay $20 per month per container while collection is free.

The District has cardboard dumpsters available for businesses, and sizes include 1, 2, 3, 4, 6, and 8 cubic yards. The District serviced approximately 77 rear-load dumpsters for companies in 2019. The District also offers 35 and 95-gallon carts for mixed recycling collection. The District serviced approximately 126 carts for companies in 2019. The District collects these carts via a box truck that replaces the full carts for new, empty carts.

All materials collected from this program were delivered to the Crawford County Recycling Center for processing.

Business Recycling Collection Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Paper and cardboard
2019 Recycled Tonnage	490.4
2019 Annual Program Costs	$0*
Program Operator/Contractor	District

* The operating budget for this program is included in the Crawford County Recycling Center budget.

Strengths of the program include:

- The District collects from many businesses throughout the county on a weekly basis.
- The District is fulfilling a need in the county where the private sector is not available
- This service is popular and well-liked by businesses

Challenges of the program include:

- None.

4. Crawford County Recycling Center

The District-owned Crawford County Recycling Center has been in operation since 1989. The purpose of the facility is to collect and process recyclables and to arrange for the sale or transfer of recyclables from Crawford County to materials markets.

The Recycling Center encompasses 7,500 square feet and consists of an office trailer and a handling and storage building which is equipped to handle and process recyclables. Two employees operate the center and 3 drivers from the center work daily. Over the years, the District has invested in important equipment and supplies needed to collect and process recyclables from various collection points in the county and to transport the recyclables to the center. The recycling center equipment includes:

- 2 horizontal balers (1 auto, 1 manual)
- Glass crusher crushes by color
- Can densifier

The center's accepted materials include materials from drop-offs as well as hard-to-manage materials, and residents and businesses are able to walk in during business hours to drop off these materials. In 2019, 1,393.4 tons of material were brought into the center from all programs for processing, storing, and/or baling. There were 463.6 tons of materials that were dropped off directly from generators inside of the center.

The following table summarizes the program details.

Crawford County Recycling Center Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Glass, #1-#2 plastic, plastic bags, metal cans, paper and cardboard, scrap metal, appliances, batteries, electronics, used oil, antifreeze, fluorescent lamps, and tires
2019 Recycled Tonnage	463.6
2019 Annual Program Costs	$95,539.16*
Program Operator/Contractor	District

*This expense is related to the operation of the recycling center and recycling drop-off and business program.

Strengths of the program include:

- Recyclables collected are processed for materials markets.

Challenges of the program include:

- The health and safety of employees are being compromised during the processing of materials
- The facility cannot be expanded, and therefore, the processing capacity is limited
- The hours are limited due to landfill rules

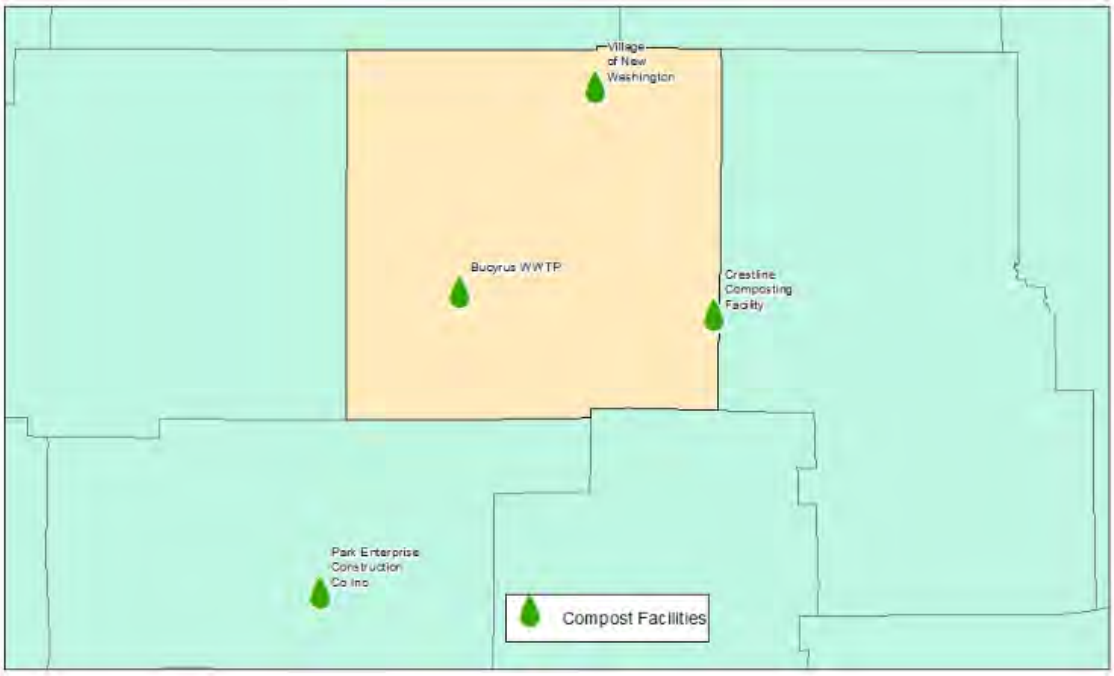
5. Yard Waste Composting

In 2019, there were 4 registered Class IV yard waste composting facilities in the District. Three of these facilities and a facility in Marion County recycled 2,081.31 tons of materials. Additionally, 924.63 tons were reported as composted on District annual surveys. Composting represents approximately 19% of residential/commercial waste reduction in the District.

Private and public sector compost operations were responsible for their own program or facility. The private sector operations provide service to the entire District. The public sector facilities were typically limited in service area to their respective communities.

The District continues to monitor the availability of yard waste recycling and processing facilities. Capacity shortages would be documented to aid the District in managing yard waste volumes. The following map presents yard waste management activities in the District during 2019.

2019 District Yard Waste Activities



The following table summarizes the program details:

Yard Waste Management Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District, political subdivisions, and private sector compost facilities
Service Area for Program	District
Materials Reduced/Recycled	Yard waste, brush, leaves, grass, and wood
2019 Recycled Tonnage	3,006.54
2019 Annual Program Costs	$0
Program Operator/Contractor	Political subdivisions and private sector compost facilities

Strengths of the program include:

- Other organizations besides the District adequately service the yard waste management needs of the District
- Over 3,000 tons of material were diverted through composting in 2019 while costing $0 to the District

Challenges of the program include:

- None

6. Special Waste Management

Household Hazardous Waste

The District accepted Freon-containing and non-Freon appliances, household and lead-acid batteries, antifreeze, used oil, used cooking oil, and fluorescent lamps year-round at the recycling center. All of these are accepted free of charge, except appliances with Freon cost $15 per item and latex paint hardener costs $1 per item. The recycling center also sells latex paint hardener for $1 for residents to use.

Additionally, the District hosts an HHW collection event every five years at the county fairgrounds to collect mercury, oil-based paints, and other HHW not collected at the recycling center year-round. The most recent collection was organized in 2014, and there was an HHW collection hosted in July 2020.

Batteries

The disposal of lead-acid batteries (LAB) in solid waste landfills was prohibited by law on April 25, 2008. The drop-off at the Crawford County Recycling Center accepts LABs for no cost to residents. The recycling center also allowed residents to drop off household batteries as well. Residents can drop off batteries at the center for proper management Monday through Friday 8:00AM to 4:00PM. Wholesalers and retailers of lead-acid batteries are required by law to accept spent LABs from their customers at the time of purchase. Locating an outlet to properly dispose of batteries and LABs has become significantly easier for residents since the 2008 legislation went into effect. In 2019, the District recycled 2.23 tons of lead acid and household batteries at the recycling center.

Electronics

Many electronics contain heavy metals and toxic constituents. The availability of proper recycling outlets is important for maintaining drinking water safety and environmental health. The District accepted computer monitors, TVs, and other electronics at the Crawford County Recycling Center. TVs cost $5, $10, $15, or $20 per item depending on size, monitors cost $3 each, and other electronics are accepted free of charge. In 2019, 4.65 tons of electronics were recycled at the center.

Appliances

The Crawford County Recycling Center accepts appliances with and without Freon year-round. Appliances without Freon can be dropped off free of charge during open hours, and appliances with Freon cost $15 each per

item. In 2019, the District collected 3.65 tons of appliances at the center for recycling.

Used Oil and Antifreeze

The District allows residents to drop off used motor oil and used cooking oil at the recycling center for free. Residents are also allowed to drop off antifreeze at no cost. In 2019, 1.01 tons of used oil were collected at the recycling center.

Scrap Tires

Effective management of scrap tires is important to public health and can minimize costs for scrap tire abatement programs at local and state levels. Illegally dumped tires are not only unsightlly, they hold stagnant water, and provide a breeding ground for mosquitos, carriers of the West Nile Virus.

The District accepts passenger tires, tractor tires, and semi-truck tires year-round for a reasonable fee. In 2019, over 169.25 tons of tires were collected and recycled at the recycling center. The following table summarizes the fees charged in 2019 for the acceptance of scrap tires.

Crawford County Recycling Center Scrap Tire Prices	
Type	**Price/tire**
Passenger tires (no rims)	$3
Tractor or larger tires (no rims)	$25
Semi tires (no rims)	$7
+ Additional charge if on rim	$5

Additionally, the District hosts a tire collection event every other year, usually in odd years, for one month where residents may drop off tires for free.

The following table summarizes the program details:

Special Materials Recycling Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Freon-containing and non-Freon appliances, used motor oil, antifreeze, batteries, fluorescent lamps, computers, electronics, appliances with and without Freon, lead acid batteries, household batteries, used oil, antifreeze, scrap Tires

Special Materials Recycling Program Summary	
Description	**Details**
2019 Recycled Tonnage	269.02
2019 Annual Program Costs	$12,456.23
Program Operator/Contractor	District

Strengths of the program include:

- These materials are collected year-round and provides a convenient opportunity for residents to responsibly dispose of these materials

Challenges of the program include:

- The District hosts an HHW collection event only every five years to collect materials not usually accepted at the Recycling Center.

Education and Awareness Programs

7. Education and Awareness Program

The District utilizes a variety of efforts to provide education and awareness to all sectors in Crawford County for youth and adult audiences, small and large businesses, and institutions.

The following section summarizes the District's education and awareness initiatives for 2019.

District Website

The District maintained a web site in 2019 located at the following address: https://www.crawfordcountysolidwaste.com. The District also has a Facebook page that keeps residents and businesses up to date on current events, news, and other communications. The Facebook page had nine posts and 1,233 views in 2019.

The web page contains the following:

- Contact information and operating hours
- 10 ways to go green
- Explanation of importance of recycling
- Educational information for schools such as resources available from the District, recycling classroom activities, and field trip information
- Drop-off recycling sites' locations and hours
- Explanation and pictures of items accepted at drop-off sites

- Recycling center hours
- Recycling center accepted materials and applicable fees
- Special events such as Earth Day Poster Contest, HHW collections, and Recycle Ohio Month

School and Youth Presentations and Educational Materials

The District shares a dedicated education specialist with the Crawford County Soil and Water District. The District provides educational opportunities and resources for schools and other groups in the District. The District regularly provides presentations to school groups that focus on recycling, litter prevention and solid waste management. Presentations may include videos, puppet shows, and fun hands-on activities such as papermaking, plastic making, or arts and crafts projects and demonstrations with worms. A full list of presentation topics is found online and in the District's educational brochure.

Similar presentations are available for youth and adult groups outside of the classroom that are also prepared by the District educational specialist. In total, the educational specialist gave 43 youth presentations in 2019 to 1,477 attendees and 1 presentation to an adult group with 32 attendees.

The District's Mascot "Recyclesaurus Rex" is available to perform during school presentations and school assembly programs. The District also has a lending library of books, videos, and other materials available for use by teachers, students, and community leaders. A free 20-page resource guide is also available for use that includes more information on presentations and educational material about recycling, litter prevention, and other environmental issues.

The District prepares and distributes information about recycling education materials in the form of a brochure at special events.

Earth Day Sculpture and Poster Contests

Students and adults are welcomed to participate in the District's art sculpture and poster contests in collaboration with Crawford County Earth Day Celebration each year. Sculptures may be made with recycled materials or trash. Posters should have themes around recycling, composting, and buying recycled. Awards are given out in seven different age groups.

The District also promotes the statewide Sandusky River Clean Sweep poster contest.

Tours

Tours are available at the Crawford County Landfill and the Crawford County Recycling Center for all school grade levels, youth groups, scouts, 4H groups, church groups, and adult civic groups during the spring, summer, and fall. Tours are tailored to the audience age level, and stationed activities are included as a part of the tour for an interactive experience. In 2019, 4 tours were given to different groups, three of which were children and one group of adults.

District Annual Report

The District prepares a report annually targeted to the public to summarize recycling activities, highlights, and programs implemented in the previous year. The District Annual Report is dispensed at the public libraries, courthouse, and solid waste District office.

Special Event Booths

The District sets up a booth at all special events in the county such as Earth Day, Bratwurst Festival, and the Crawford County Fair. Contact information, accepted recycling materials, recycling collection providers, special events, educational resources, and other information is available at these events.

The following table summarizes the program details.

Education and Awareness Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2019 Recycled Tonnage	N/A
2019 Annual Program Costs	$8,750
Program Operator/Contractor	District

Strengths of the program include:

- The District interacts with many sectors of the public including children, adults, and businesses through many diverse channels of communication.

- The District passed out approximately 3,000 pieces of information in 2019.

Challenges of the program include:

- None

8. Litter Clean-Up

The District hosts an annual litter clean-up event called Clean Up Crawford County – Plant Pride NOT Litter during April, May, and June. The District partners with the Crawford County Park District and River Clean-Up Group. Waste materials are taken to Rumpke, and the District will take recyclables, tires, and other materials usually accepted at the recycling center.

Litter Clean-Up Collection Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2019 Recycled Tonnage	N/A
2019 Annual Program Costs	$1,234.48
Program Operator/Contractor	District

Strengths of the program include:

- Communities participate in this event every year.
- The program keeps the community clean
- The District works with other partners from throughout the county

Challenges of the program include:

- None

Commercial and Industrial Programs

9. Other Commercial and Industrial Recycling

There are a number of private sector haulers that operate in the District (see Table III-10), and many of these haulers also provide recycling collection for commercial and industrial businesses. The District surveys these companies and the haulers annually to determine the extent of waste reduction by the commercial and industrial sectors in the county. In 2019, 11,026.44 tons of recycling was reported from commercial/institutional businesses through surveys, and 46,545.69 tons of recycling was reported

from industrial businesses through surveys. However, the survey is not mandatory, and not every entity that recycles responds to the surveys.

Other Commercial and Industrial Recycling Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Various
2019 Recycled Tonnage	57,572.13
2019 Annual Program Costs	$0*
Program Operator/Contractor	District, private haulers, commercial and industrial businesses

*This expense is covered in the Admin District budget.

Strengths of the program include:

- The annual survey provides an opportunity for the District to connect with commercial and industrial businesses annually
- Private haulers and recyclers provide a service to businesses in the county to complement the District's business recycling collection program
- The District recycling data collection system has allowed the District to exceed Ohio EPA recycling goals consistently.

Challenges of the program include:

- None

10. Commercial and Industrial Recycling Technical Assistance

The District offers assistance to businesses in the commercial and industrial sectors by promoting the availability of the District's recycling center through public education. Events such as the District's Earth Day celebration, Clean Up Crawford County, and the Bratwurst Festival help to communicate this message and the importance of recycling at work. The District also communicates the opportunity to start a recycling collection service at new businesses. The District also offers assistance through phone calls or may offer waste audits if requested.

Other opportunities that the District assists commercial and industrial businesses with includes:

- Communicating recycling opportunities and service providers
- Assisting local businesses in identifying opportunities for grants and other sources of funding to fund recycling
- Providing guidelines and methodologies for performing waste audits and communicating the opportunity for this type of assistance

Commercial and Industrial Technical Assistance Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Various
2019 Recycled Tonnage	N/A
2019 Annual Program Costs	$0*
Program Operator/Contractor	District, private haulers, commercial and industrial businesses

*This expense is covered in the Admin District budget.

Strengths of the program include:

- The District has educational material available for businesses interested in beginning or improving recycling programs
- Free business recycling education may bring in more customers for the business recycling collection program
- The District's business recycling program is a great success

Challenges of the program include:

- None

Other Programs

11. Buyback Recycling Facilities

Private sector materials recovery businesses in Crawford County handle a wide range of materials including scrap iron, other ferrous and non-ferrous metals, various grades of paper, lead acid batteries, corrugated paper, glass, and plastic. These companies act as buy back centers by paying for materials of value (such as aluminum) brought to them by the public. The District frequently interacts with the 4 main buyback facilities in the county (Innovative Recycling (2), Milliron, and Advanced Fiber Technology), and the District encourages recycling and reuse and specifically promotes

these activities to residents. Marketing strategies of these private sector buy-back centers may affect volumes received at the Crawford County facility. However, the District encourages recycling at all facilities to the benefit of all Crawford County residents.

Private Sector Buyback Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Various
2019 Recycled Tonnage	21.53
2019 Annual Program Costs	$0
Program Operator/Contractor	District, private buyback recycling businesses

Strengths of the program include:

- The District has a working relationship with the four main buyback centers in the county and promotes them when applicable
- The buyback centers provide additional opportunities for residents and businesses to drop off material for recycling for a profit

Challenges of the program include:

- None

12. Emergency Disaster Debris Management

Responding to natural disasters, such as flood events, tornados, and severe storms, requires a great deal of coordination and time. The District is committed to assisting the Emergency Management Agency during a disaster event and has a disaster debris plan. The District Coordinator will serve as the debris manager during a debris-generating event. There were no disaster events in 2019.

Emergency Disaster Debris Management Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2019 Recycled Tonnage	N/A
2019 Annual Program Costs	$0*
Program Operator/Contractor	District

*This expense is covered in the Admin District budget.

Strengths of the program include:

- Having a disaster debris plan benefits the District by having a plan for future disasters and for receiving funding if necessary

Challenges of the program include:

- None

13. Health District Partnership Program

The District contracts with the Crawford County General Health District for conducting quarterly inspections of the Crawford County Sanitary Landfill, annual inspections of Class IV composting facilities, and for other duties associated with the Ohio EPA code enforcement program. The District also partners with the Crawford County General Health District to publish information about the proper disposal of expired/outdated medicines on the solid waste section of their environmental programs.

Health District Partnership Program Summary	
Description	**Details**
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2019 Recycled Tonnage	N/A
2019 Annual Program Costs	$6,000
Program Operator/Contractor	District, Health District

Strengths of the program include:

- The District has the resources to partner with other county departments

- The Health District provides a service to residents to safely dispose of medications at the sheriff's office

- The Health District helps to keep the solid waste District and infrastructure in the District in compliance with the Ohio EPA

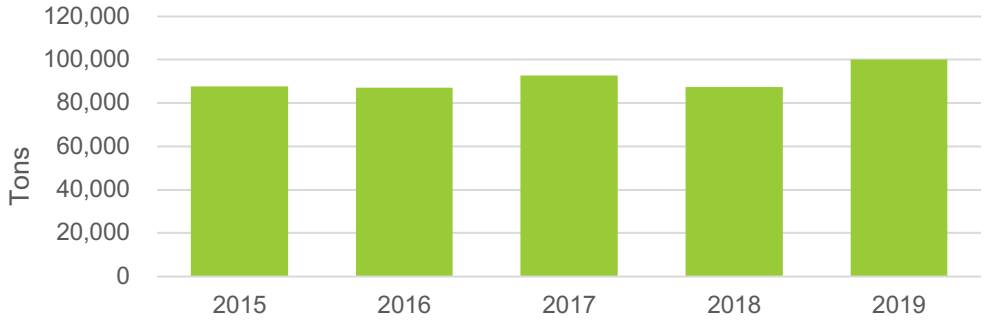
Challenges of the program include:

- None

H. Total Waste Generation: Historical Trends Plus Waste Reduction

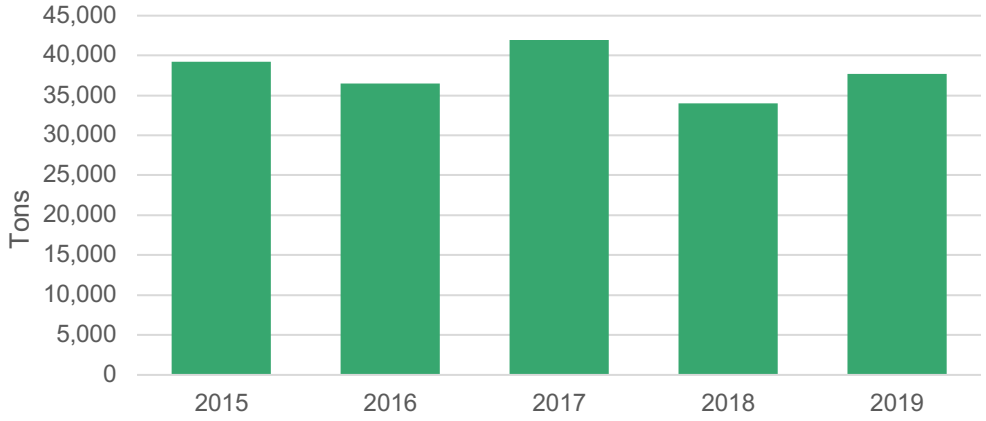
Table IV-7, "Total Waste Generation Based Upon Disposal Plus Waste Reduction", presents total waste generation based upon disposal plus waste reduction. In 2019, the District generated 100,051 tons of solid waste based on landfill disposal, yard waste composting, and recycling. Historically, the District generated a high of 100,051 tons in 2019 and a low of 87,139 in 2016. The following graph presents the fluctuations in District waste generation over the past five years. The upward trend in 2019 is due to a high response rate for industrial recycling surveys and information gathered. Tonnage has been increasing since 2015.

District Historical Total Generation



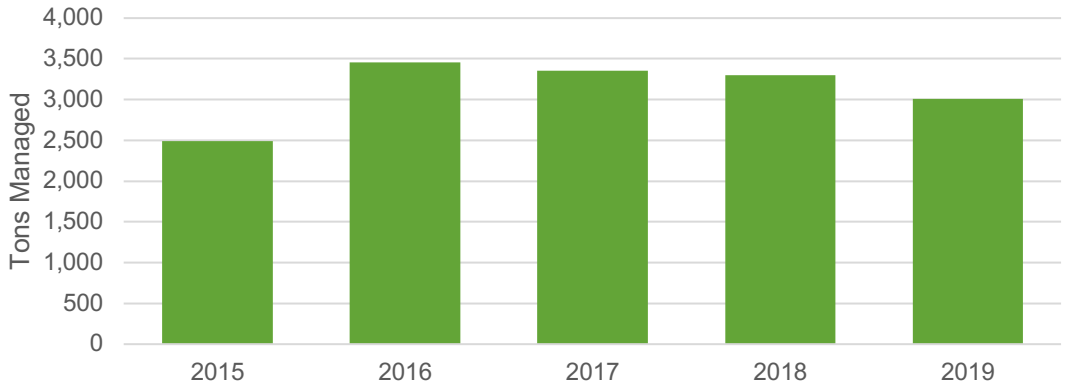
Landfilled waste tonnage fluctuated between 34,000 and 42,000 from 2015 to 2019 and tended to fluctuate up and down. Landfilled waste has ranged from a high of 41,983 in 2017 to a low of 34,017 in 2018. The following graph depicts the historical landfill totals which include residential, commercial, industry, and exempt waste from 2015-2019.

District Historical Landfill Disposal



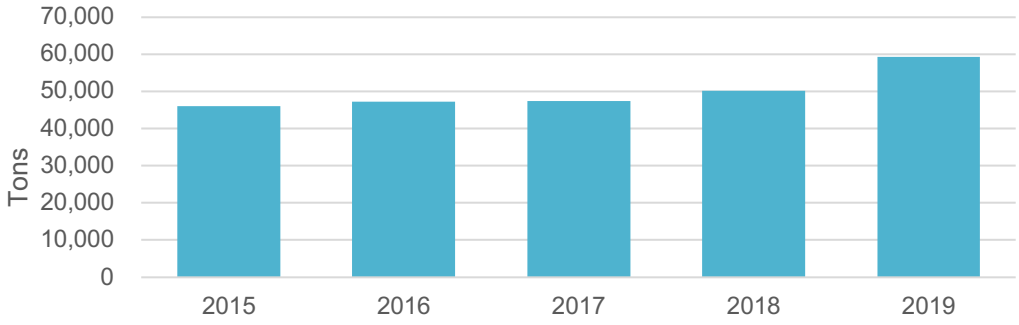
Yard waste has remained relatively constant from 2015-2019. Yard waste has ranged from a low in 2015 of 2,494 tons to a high of 3,457 tons in 2016. The following graph depicts the historical yard waste totals from 2015-2019.

District Historical Yard Waste Management



Waste reduction has been increasing since 2015. Waste reduction has ranged from a low in 2015 of 46,127 tons to a high of 59,361 in 2019. The drastic difference mainly comes from data collected from the industrial sector and scrap yards. The following graph depicts the historical waste reduction totals from 2015-2019.

District Historical Waste Reduction



I. Reconciliation of Waste Generation (based on reported recycling and disposal)

Table IV-8, "Adjusted Reference Year Total Waste Generation for the District", presents adjusted reference year total waste generation for the District. This is based on actual reported recycling and disposal.

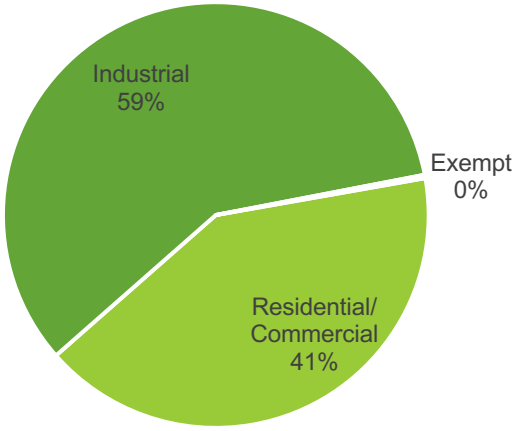
The District calculated waste generation using two methods. The first method outlined in Part E of this Section (see page IV-4) uses statewide generation estimates to determine industrial waste generation projections.

Residential/commercial generation was determined based upon the rate of change in generation rate observed within the District during the past several years. Finally, exempt waste was obtained from actual landfill and transfer station operating reports. Using this methodology, the District estimated 99,881 tons of solid waste generated in 2019. The resulting total generation rate was 13.18 pounds per person per day (Table IV-4).

The second method used to calculate solid waste generation is based on actual reported recycling and disposal in the District during the reference year (Table IV-8). In 2019, District residents, businesses, and industry generated 100,051 tons. The total generation rate was 13.21 pounds per person per day (Table IV-8), which includes recycling and waste disposal from all sectors. The residential/commercial sector generated 41,321 tons or 5.45 pounds per person per day, which includes recycling and yard waste composting. Industrial generation was calculated to be 48,263 tons or approximately 6.37 pounds per person per day. Exempt waste generation was 253 tons or approximately 0.03 pounds per person per day.

The District selected the second method as the most accurate method of projecting waste generation because waste at the landfills and transfer stations is weighed. This method of collecting solid waste data has been fairly consistent for several years. The first method of projecting waste generation is based on surveys, projections, and secondary data sources, which are generally not as accurate as actually weighing the materials. The following figure depicts the reference year waste generation by sector based upon using the second method of waste generation estimation.

2019 Adjusted Waste Generation by Sector

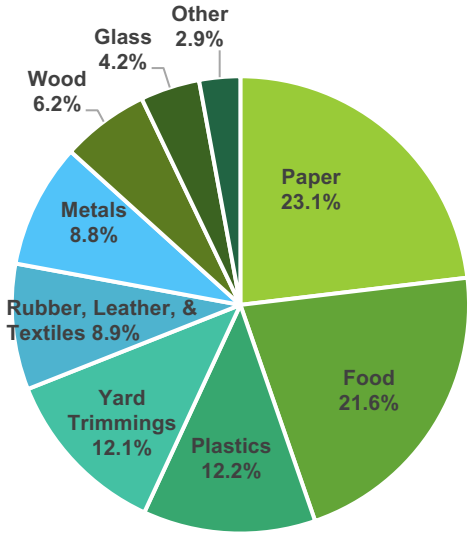


J. Waste Composition

The District estimated the residential/commercial waste stream composition in Table IV-9, “Estimated Residential/Commercial Waste Stream

Composition for the District for the Reference Year", using the national averages from US EPA for 2018. The largest component of the residential/commercial waste stream is projected to be paper and paperboard at 23.1% (9,545 tons), followed by food scraps at 21.6% (8,925 tons), and plastic at 12.2% (5,041 tons). The following figure depicts the residential/commercial waste composition for the reference year.

2019 Residential/Commercial Waste Stream Composition (in TPY and Percent of Waste Stream)



The industrial waste composition included in Table IV-10, "Estimated Industrial Waste Composition for the Reference Year in the District", was estimated based on the amount of industrial waste disposed and recycled. Non-hazardous waste, concrete, ash, and sludge were eliminated from the acceptable waste materials for recycling calculations only. All recycled materials are provided as actual totals. The remainder of material disposed in the landfill is categorized as general solid waste.

The largest component of the industrial waste stream was cardboard, comprising 33% of the total waste composition. Paper (32%) followed by ferrous metals (26%) and plastic (6%) were the next three largest components of the industrial waste stream. The following figure depicts the industrial waste composition for the reference year.

2019 Industrial Waste Composition by Percent and Tonnage

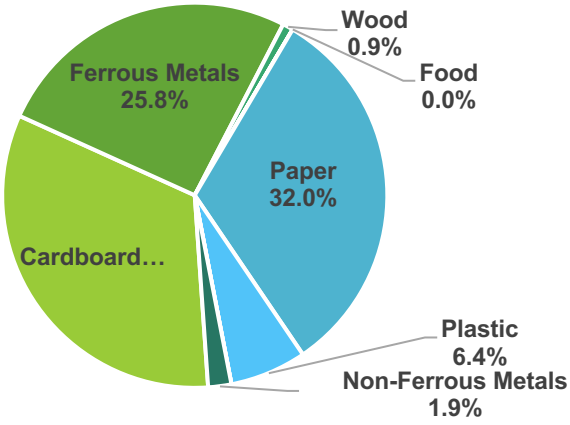


Table IV-1
Reference Year Population and Residential/Commercial Generation

County/Community Name	2019 Population		2019 Generation Rate (lbs/person/day)	2019 District Residential/Commercial Generation (Tons)
	Before Adjustment	After Adjustment		
Crawford County	41,494	41,494	5.03	**38,079**
Crestline Village		18		
Total		**41,512**		

Source(s) of information:
Population - Ohio Development Services Agency Office of Research, "2019 Population Estimates by County, City, Village, and Township", May 2020

Adjustments:

Example calculations:

Total Res/Com Generation = $\frac{\text{Population x Generation Rate (lbs/person/day) x 365 (days/year)}}{\text{2,000 (lb/ton)}}$

38,079 tons $\frac{41,512 \times 5.03 \times 365}{2,000}$

Table IV-2
Industrial Waste Generation Survey Respondents vs. Unreported

Standard Industrial Classification (SIC) Code	Survey Respondents				Amounts Based Upon Secondary Data (Unreported)				Total Industrial Waste Generated
	# of Industries	# of Employees	Tons of Waste Generated	Generation Rate (T/employee)	# of Industries	# of Employees	Generation Rate (T/employee)	Tons of Waste Generated	
20	1	18	1	0.06	4	34	13.92	473	474
22			0	0	0	0	9.99	0	0
23			0	0	1	11	2.80	31	31
24			0	0	0	0	51.62	0	0
25			0	0	1	60	1.79	107	107
26			0	0	1	9	17.50	158	158
27	5	96	352	3.67	6	52	6.70	348	701
28			0	0	0	0	12.43	0	0
29			0	0	1	10	7.33	73	73
30	1	37	0.5	0.01	3	67	7.29	488	489
31			0	0	0	0	3.41	0	0
32			0	0	2	34	10.55	359	359
33			0	0	1	25	36.93	923	923
34			0	0	3	113	11.16	1,261	1,261
35			0	0	16	1,144	5.72	6,544	6,544
36			0	0	1	28	2.98	83	83
37	1	30	2	0.08	2	500	3.21	1,605	1,607
38			0	0	1	15	1.74	26	26
39	1	42	78	1.87	11	546	4.62	2,523	2,601
Industrial Totals from Brokers and Processors Surveyed			46,111	N/A	N/A	N/A	N/A	N/A	N/A
Total	**9**	**223**	**46,546**	**208.73**	**54**	**2,648**	**N/A**	**15,003**	**61,549**

Source(s) of information:
2017 District Industrial survey responses
Total number of industries and employees as obtained from the Reference USA online database.
Appendix JJ-2 from the Ohio EPA Plan Format 3.0 was used to calculate the unreported data for the Generation Rate (T/employee).

Example calculations (SIC 20):

Survey Respondents:

$$\text{Generation Rate} = \frac{\text{Waste Generated}}{\text{\# of Employees}}$$

$$\frac{.06 \text{ lbs/person/day}}{} \quad \frac{1 \text{ tons}}{18 \text{ employees}}$$

Non-Respondents:

Generation Rate x Number of Employees (Unreported) = Tons of Waste Generation (Unreported)

13.92 x 34 = 473.28 tons

Table IV-3
Exempt Waste Generated in the District and Disposed in Publicly Available Landfills

Type of Waste Stream	Generation Rate (lb/person/day)	Total Exempt Waste Generation (TPY)
Exempt	0.06	434
Total	0.06	**434**

Source(s) of information: Table III-1

$$\text{Generation Rate (lbs/person/day)} = \frac{\text{Total Exempt Waste (tons/yr) x 2,000 (lb/ton)}}{\text{Population x 365 days/yr}}$$

Example calculation:

$$0.06 = \frac{434 \times 2{,}000}{41{,}512 \times 365}$$

Table IV-4
Reference Year Total Waste Generation for the District

Type of Waste	Generation Rate (lbs/person/day)	Tons/Year
Residential/Commercial	5.03	38,079
Industrial	8.12	61,549
Exempt	0.06	434
Total Waste Generation	**13.21**	**100,061**

Source(s) of information: (175)
Residential/Commercial - Table IV-1
Exempt - Table IV-3
Industrial - Table IV-2

Example calculation (Industrial):

$$\text{Generation Rate (lbs/person/day)} = \frac{\text{Total Industrial Waste (tons/yr) x 2,000 (lb/ton)}}{\text{Population x 365 days/yr}}$$

$$8.12 = \frac{61{,}549 \times 2{,}000}{41{,}512 \times 365}$$

Table IV-5
Reference Year Residential/Commercial Waste Reduction in the District

Type of Waste Source Reduced	TPY	Type of Waste Recycled	TPY	ı, Composting, Resource Recovery		
				Total Waste Received	Residual Landfilled	Net Waste Reduced
None	0	Cardboard	7,333.6	Incineration	Ash	Net Incineration
		Paper	1,955.3	6.9	2.1	4.9
		Scrap tires	364.0	Composting	Residuals	Net Compost
		Glass	610.8	3,006.5		3,006.5
		Wood	264.0	Resource Recovery	Ash	Net Resource
		Plastic	1,221.3			0
		Food	259.4			
		Other				
		Ferrous	177.1			
		Appliances	29.9			
		Non-Ferrous	525.3			
		Commingled				
		HHW	2.3			
		Used Oil	14.6			
		Electronics	32.8			
		LAB	10.5			
		Dry-Cell Batteries	9.9			
Subtotal	**0**		**12,810.3**	**3,013.5**	**2**	**3,011.4**
Grand Total						**15,821.7**

Source(s) of information:
2019 District Annual Report and Residential/Commercial Surveys

Table IV-6
Reference Year Industrial Waste Reduction in the District

Source Reduction	TPY	Type of Waste Recycled	TPY	Incineration, Composting, Resource Recovery		
				Total Waste Received	Residual Landfilled	Net Waste Reduced
None	0	Ferrous	11,985.8	Incineration	Ash	Net Incineration
		Food	0.9	0	0	0
		Non-Ferrous	901.3	Resource Recovery	Ash	Net Resource
		Cardboard	15,258.5			
		Plastic	2,989.4	Composting	Residuals	Net Composted
		Wood	412.7			
		Other				
		Paper	14,855.0			
		Commingled				
		Rubber				
		Glass	142.4			
Subtotal	**0**		**46,545.7**	**0**	**0**	**0**
Grand Total						**46,545.7**

Source(s) of information:
2019 District Annual Report and Industrial Surveys
Net Incineration - Table III-2

Table IV-7
Total Waste Generation Based Upon Disposal Plus Waste Reduction

Year	Management Method Used (TPY)								Total Waste Generation
	Source Reduction & Recycling			Yard Waste Composting	Landfill Disposal				
	Res/Com	Industrial	Total		Res/Com	Industrial	Exempt	Total	
2015	10,167	35,960	46,127	2,494	28,050	2,783	8,416	39,249	87,869
2016	10,796	36,422	47,218	3,457	25,371	2,001	9,092	36,464	87,139
2017	11,170	36,280	47,450	3,356	29,109	1,601	11,273	41,983	92,789
2018	11,736	38,407	50,143	3,299	23,670	2,201	8,146	34,017	87,459
2019	12,815	46,546	59,361	3,007	25,499	11,931	253	37,683	100,051

Source(s) of information:
District Annual Reports and Ohio EPA Facility Data Reports.

Sample calculation (2019):
Total waste generation = Total source reduction & recycling + yard waste composting + total landfill disposal

100,051 tons = 59,361 tons + 3,007 tons + 37,683 tons

Table IV-8
Adjusted Reference Year Total Waste Generation for the District

Type of Waste	Generation Rate (lbs/person/day)	Tons/Year
Residential/ Commercial	5.45	41,321
Industrial	7.72	58,481
Exempt	0.06	434
Total Waste Generation	**13.23**	**100,236**

Source(s) of information:
Exempt -Table IV-3
Residential/Commercial and Industrial - Tables III-1, IV-5 and Table IV-6

Example Calculation:

$$\text{Generation Rate (lbs/person/day)} = \frac{\text{Total Waste (tons/yr) x 2,000 (lb/ton)}}{\text{Population x 365 days/yr}}$$

$$13.23 = \frac{100{,}236 \times 2{,}000}{41{,}512 \times 365}$$

Table IV-9
Estimated Residential/Commercial Waste Stream Composition for the District for the Reference Year

Waste Stream Type	Percentage of the Waste Stream	Tons
Paper	23.1%	9,545
Food	21.6%	8,925
Plastics	12.2%	5,041
Yard Trimmings	12.1%	5,000
Rubber, Leather, & Textiles	8.9%	3,678
Metals	8.8%	3,636
Wood	6.2%	2,562
Glass	4.2%	1,736
Other	2.9%	1,198
Totals	**100.0%**	**41,321**

Source(s) of information:
Total tons - Table IV-8

US EPA Advancing Sustainable Materials Management: 2018 Fact Sheet, November 2020.

Table IV-10
Estimated Industrial Waste Composition for the Reference Year in the District

Waste Stream Type	TPY	Waste Stream Type	TPY	Waste Stream Type	TPY
Cardboard	19,171	Paper	18,664	Misc.	0
Ferrous Metals	15,059	Plastic	3,756	Rubber	0.00
Wood	518	Commingled	0	Non-Ferrous Metals	1,132
Food	1	Glass	178.85		
Subtotal	34,750	**Subtotal**	22,599	**Subtotal**	1,132.35
Grand Total					**58,481**

Source(s) of information:
Tons generated - Appendix F
Each industrial waste component was projected using the adjustment factor to account for non-respondent industries.

Example Calculation:

$$\text{Adjustment Factor} = \frac{\text{Total Industrial Waste Generated (Table IV-8)}}{\text{Total Industrial Waste Generated (Table IV-2 - Survey)}}$$

Adjustment Factor = 1.2564 = 58,481 tons ÷ 46,546 tons

Type of Industrial Waste Generated (tons) = Type of Industrial Waste Generated (Appendix F) x Adjustment Factor

19,171 (tons of cardboard) = 15,258.45 (tons of cardboard from Appendix F) x 1.2564

V. Planning Period Projections and Strategies [ORC Section 3734.53(A)(5)-(6)]

This Section of the *Plan Update* includes population projections for the District. Projections and estimates are also provided for solid waste generation and recycling for the planning period. Existing District programs and activities that will continue are presented. Most of the detailed descriptions for existing programs refer the reader back to Section IV for details. The details for new programs and activities are described in this section of the *Plan Update*.

A. Planning Period

Solid waste management plans must provide projections for population, waste generation, and waste reduction for a planning period covering a minimum of ten years. Plans must also provide strategies to manage the District's current and foreseen waste management needs of the residents, businesses, and institutions. This *Plan Update* is based on a fifteen-year planning period. The planning period for this *Plan Update* is January 1, 2023 to December 31, 2037. The projections and tables in this *Plan Update* include the years 2019 through 2037.

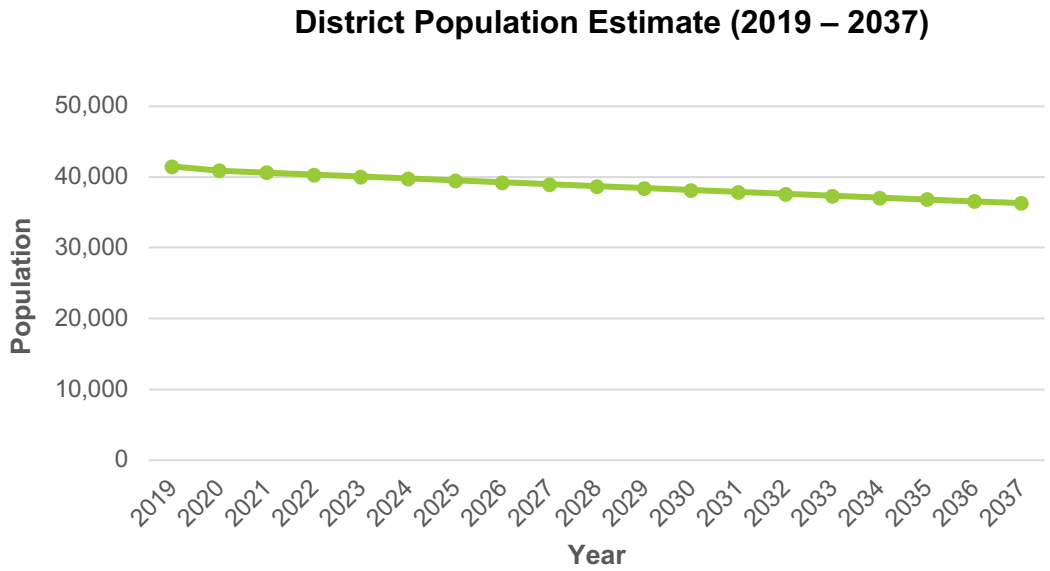
B. Population Projections

The District's population projections from the reference year (2019) through the end of the planning period are presented in Table V-1. The Ohio Development Services Agency's (ODSA) 2019 population estimates by county, city, village, and township were used to calculate a base population for the District. Using a second ODSA publication which presents population projections by county in 10-year intervals from 2010 to 2040, District population projections were interpolated for intermediate years using a straight-line average.

Ohio Law requires that the population of a political subdivision that lies within two or more solid waste management districts shall be credited to the district where the majority of the population resides. The District's reference year population was adjusted from Crawford County's base population of 41,494 to 41,512 because the majority of Crestline's residents live within Crawford County, and therefore, 18 was added.

Population is expected to decrease throughout the planning period. Population is expected to decrease by 3,757 residents or 9.3% throughout the planning period. The District is projected to start the planning period in 2023 with a population of 40,074 and end in 2037 with a total population of 36,333. The following figure presents the estimated District population from the reference year to the end of the planning period.

The following graph depicts the estimated total District population throughout the planning period.



C. Waste Generation Projections

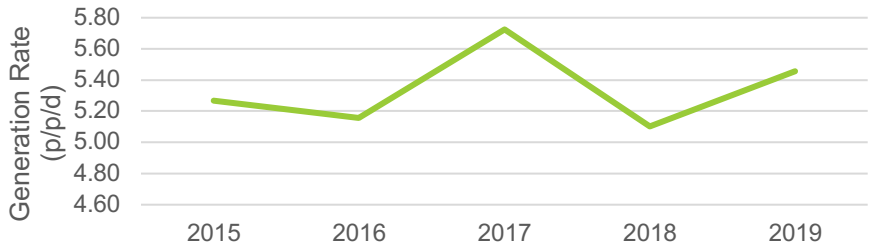
1. Residential/Commercial Sector

The District's residential/commercial waste generation projections are presented in Table V-2, "District Residential/Commercial Waste Generation (TPY)." Waste generation is presented for the 2019 reference year and each subsequent year through 2037. In 2019, the District calculated the per capita generation rate based on Ohio EPA's Facility Data Reports for disposal and from the District's 2019 Annual District Report for recycling (with adjustments). The following data was used for this calculation:

2019 Disposal tonnage:	25,499 tons
2019 Recycling tonnage:	15,822 tons
2019 Total generation:	41,321 tons
2019 Residential/commercial per capita generation rate per day:	5.45 pounds

Historic generation rates among the residential/commercial sector have increased from 2015 to 2019. In 2015, the residential/commercial sector generated 40,710 tons, and in 2019, the residential/commercial sector generated 41,321 tons. This is a 2% increase from 2015.

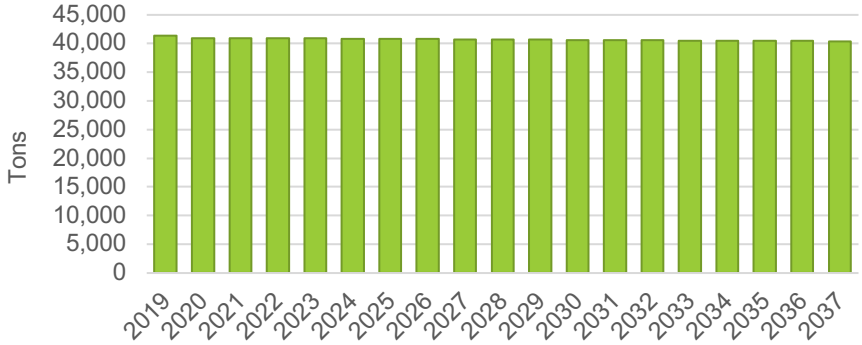
2015-2019 District Residential/Commercial Per Capita Daily Generation Rates



Per capita generation rates have increased, on average, by 1.23% annually from 2015-2019.

Table V-2 presents the residential and commercial sector waste generation projections for the reference year through the end of the planning period. This table includes the actual generation amounts for 2019. In order to be conservative, the District has applied an annual increase of 0.62% per year (half of the average historical rate of change) to the 2019 per capita generation rate to calculate the generation rate for years 2020 through 2037.

District Residential/Commercial Waste Generation (2019 – 2037)



2. Industrial Sector

The District's industrial waste generation projections are presented in Table V-3. Industrial waste generation is presented by Standard Industrial Classification (SIC) code for the 2019 reference year through 2037.

The industrial waste generated by each SIC code in 2019 is based on the ratio of waste reported by industries in industrial SIC codes in Table IV-2. The totals have been adjusted to correspond to the total industrial waste generation in Table IV-8, which is based on

volumes recorded by landfills and transfer stations, plus recycling and composting.

Industrial waste generation projections are based on historical data trends. The following table presents the District's historic generation totals for the industrial sector. In 2019, industrial disposal tonnages increased dramatically while exempt disposal tonnages decreased dramatically. This is most likely due to material that had historically been categorized as exempt was changed and correctly categorized as industrial starting in 2019.

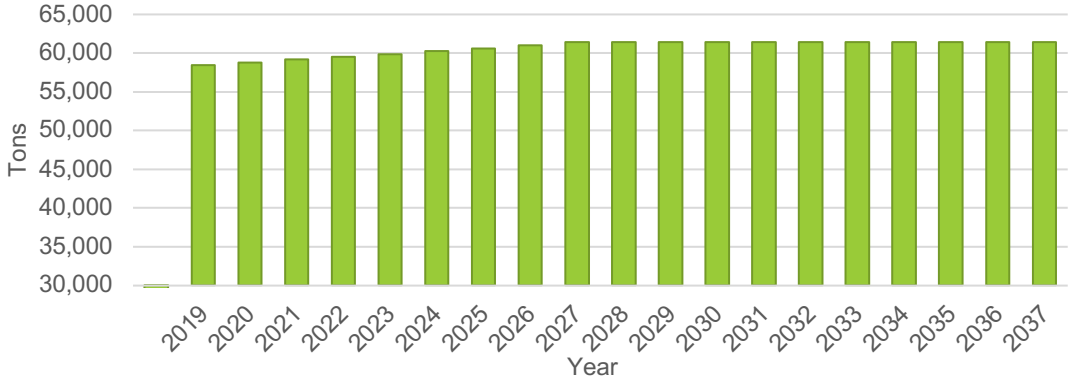
2015-2019 Historic District Industrial Generation in Tons

Year	Recycling	Disposal	Total Generation
2015	35,960	2,783	38,743
2016	36,422	2,001	38,423
2017	36,280	1,601	37,881
2018	38,407	2,201	40,608
2019	46,546	11,935	58,481
Average	***38,723***	***4,103***	***42,826***

Generation and recycling tonnages are projected to increase from 2020 to 2037 while disposal is projected to continue to decrease. Tonnages in 2020 through 2027 are projected by increasing recycling by 1% and decreasing disposal by 1% annually, which is more conservative than the 7% average annual increase in recycling and the 8.1% average annual decrease in disposal. Generation is projected to increase from 2020 through 2027 then remain constant through the end of the planning period.

The District projects industrial waste to increase from 58,481 tons in 2019 to 59,901 tons in 2023 to 61,415 tons in 2037. The following figure presents the estimated industrial waste generation throughout the planning period.

Industrial Generation (2019 – 2037)

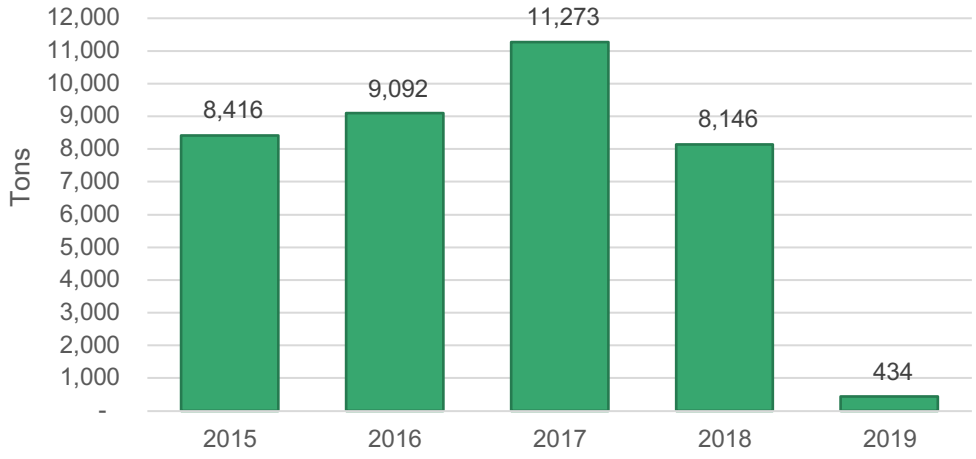


3. Total Waste Generation

Total waste generation projections for the District during the planning period are presented in Table V-4. In 2019, the District generated a total of 100,236 tons. This includes residential/commercial waste at 41,321 tons, industrial waste at 58,481 tons, and exempt waste at 434 tons.

Exempt waste does not have a direct correlation to population or market/economic factors. Exempt waste is a term used to describe construction and demolition debris, nontoxic fly ash and bottom ash, spent nontoxic foundry sand, slag, and other materials excluded from the definition of solid waste in the Ohio Revised Code (ORC) § 3734.01(E). The figure below presents the District's exempt waste generation totals from 2015 to 2019. As mentioned before, material that had historically been categorized as exempt most likely was correctly recategorized as industrial in 2019.

2015-2019 District Exempt Waste Generation



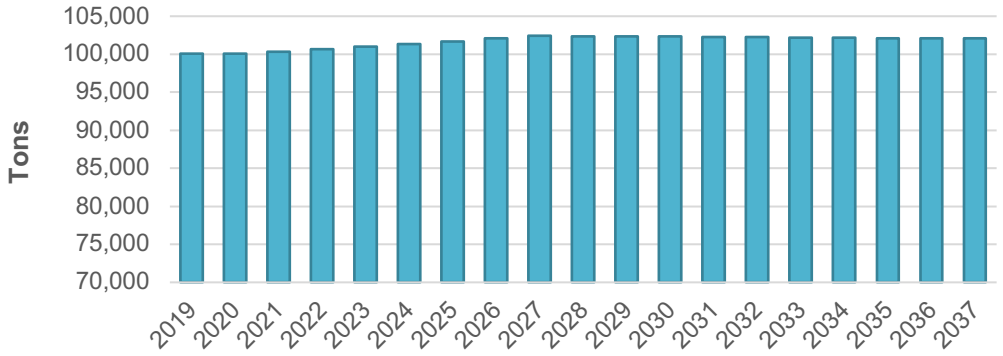
Exempt waste generation patterns fluctuated from 2015 to 2018 and then decreased dramatically in 2019. Exempt waste is projected to remain steady using the corrected 2019 tonnages throughout the planning period.

The overall generation rate which includes residential/commercial, industrial, and exempt waste generation in pounds per person per day (PPD) for the reference year is 13.23. The projected per capita generation rate will increase slightly to 15.42 PPD in the final year of the planning period. Total waste generation is projected to increase from 101,215 tons in the first year of the planning period

(2023) to 102,239 tons in the last year of the planning period (2037), which is an increase of 1,024 tons or 1%.

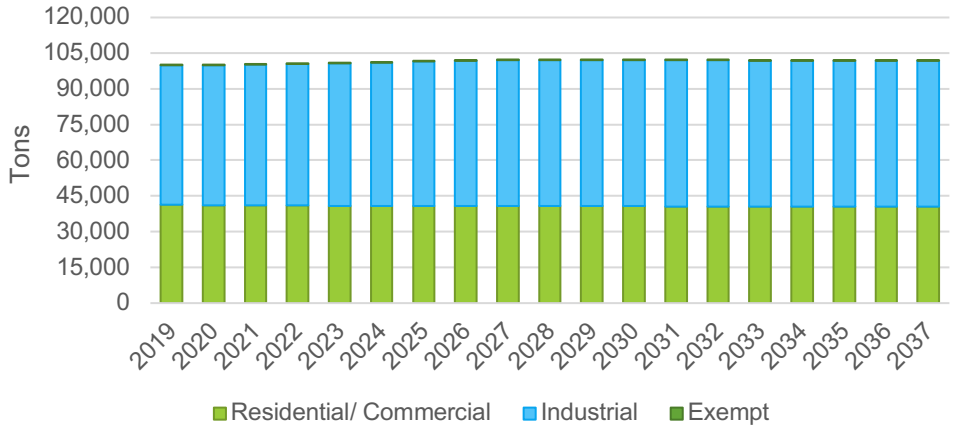
The following figure presents the District's total waste generation projections throughout the planning period.

Total District Waste Generation Projections (2019 – 2037)



The following figure presents waste generation by sector as a percentage of the District's total waste generation.

District Total Waste Generation Distribution (2019 – 2037)



D. Projections for Waste Stream Composition

The District does not anticipate any major changes in the composition of the waste stream during the planning period. However, a change in economic conditions or the closure of a plant could greatly impact the industrial as well as residential/commercial projections.

Responses to the District's annual survey should alert the District to any major changes in generation or waste stream composition. Any significant changes will be noted in the Annual Report.

E. Waste Reduction and Recycling Strategies through the Planning Period

The District must continue to develop recycling and waste reduction strategies to meet the goals established in the *1995 State Plan.* The goals include:

Goal #1 **Access to Alternate Waste Management Opportunities**

- The District shall provide access to recycling and waste minimization opportunities for municipal solid waste to its residents and businesses. At a minimum, the District must provide access to recycling opportunities to 90% of its residential population.

Goal #2 **Waste Reduction and Recycling Rates**

- The District shall reduce and/or recycle at least 25% of the solid waste generated in the residential/commercial sector and at least 50% of the solid waste generated in the industrial sector.

Goal #3 **Source Reduction**

- Provide informational and technical assistance on source reduction.

Goal #4 **Technical and Informational Assistance**

- Provide informational and technical assistance on recycling, reuse and composting opportunities.

Goal #5 **Restricted Wastes and Household Hazardous Waste**

- Develop strategies for managing scrap tires, yard waste, lead acid batteries and household hazardous waste (HHW).

Goal #6 **Annual Reporting of Plan Implementation**

- Districts are required to submit an annual report to Ohio EPA.

Goal #7 **Market Development Strategy (Optional)**

- The following table summarizes all of the District strategies for meeting the 1995 State Plan Goals:

District Strategies for Meeting 1995 State Plan Goals

Program	Program #	1995 State Plan Goals						
		#1	#2	#3	#4	#5	#6	#7
Curbside Recycling Technical Assistance	CC-01			✓	✓			
Drop-Off Recycling	CC-02	✓	✓					
Business Recycling Collection	CC-03		✓					
Crawford County Recycling Center	CC-04		✓			✓		
Yard Waste Composting	CC-05		✓			✓		
Special Waste Materials	CC-06		✓			✓		
Education and Awareness	CC-07			✓	✓			✓
Litter Clean-Up	CC-08							
Other Commercial and Industrial Recycling	CC-09		✓				✓	
Commercial and Industrial Recycling Technical Assistance	CC-10			✓	✓			
Buyback Recycling Facilities	CC-11		✓					✓
Emergency Disaster Debris Management	CC-12							
Health District Partnership Program	CC-13							
Number of Strategies Per Goal		1	7	3	3	3	1	2

Residential/Commercial Waste Reduction/Recycling and Education Strategies

The District's residential/commercial waste reduction strategies are presented in Table V-5. The drop-off recycling program tonnage is projected to change on an escalating basis by 1% per year from 2019 through 2037. Additionally, the business recycling collection and Recycling Center collections are projected to increase by 1% annually. The special waste materials collections are projected to increase at 0.5% annually through the end of the planning period.

All other programs are projected to remain constant. The District projects a slight increase in residential/commercial recycling from 15,822 tons in 2019 to 17,940 tons by 2037. Overall, the residential/commercial recycling rate is projected to increase by 6.5% through the planning period.

RESIDENTIAL/COMMERCIAL RECYCLING AND COLLECTION PROGRAMS

The District's primary strategy for this *Plan Update* is to **continue** with the successful core programs detailed in Section IV with a few modifications and new initiatives. The District is **committed to implementing** these programs and to continue their success throughout the planning period.

The District evaluated each of the programs in Section IV for their strengths and challenges. In some cases, no challenges were identified which would result in continuing the successful program without major changes. The results of this analysis assisted the District with the improvements of the programs contained in this section where challenges were identified.

The following section details the specific new initiatives by program that will be implemented during the planning period. Unless a program is new or a change is being initiated, this section does not provide the details of how each program operates, as that information is contained in Section IV.

1. CC-1 – Curbside Recycling Technical Assistance

(State Plan Goals #3 and #4)

This program **will continue** (see program description in Section IV).

The District has continued to discuss curbside recycling informally with municipal governments. In an effort to promote curbside recycling, the District will continue to offer technical assistance to communities interested in beginning curbside programs. The District is available to assist communities, as well as commercial businesses, in preparing bidding packages for solid waste and recycling collection services to maximize the tonnages collected through the residential program.

The challenges of this program presented in Section IV include:

- No communities currently operate or contract for a curbside recycling program.

- The cost of implementing a curbside recycling program is too high currently due to markets and lack of options for processing, collection, and interest in some communities.

To address these challenges, the following initiatives have been developed.

Initiative CC-1.1: Third Party Group Curbside Analysis

In late 2020, a third-party group (independent of District) began evaluating curbside options. The Crawford County Chamber of Commerce conducted a rudimentary evaluation of curbside recycling options for various communities in the District. No formal report was generated by the Chamber of Commerce. The results of the analysis were as follows:

- Lack of service providers prohibit the offering of curbside services
- The cost of providing curbside recycling is excessive and not achievable in the District

The District is amenable to any assistance from third parties to evaluate, promote and create curbside recycling programs in the District at any point in the planning period. The District's only stipulation is that any proposed program must be cost effective, welcomed by the community and implementable by a third party as the District resources and staffing are limited.

2. CC-2 – Drop-off Recycling Program
(State Plan Goals #1 and #2)

This program **will continue** (see program description in Section IV).

The challenges of this program presented in Section IV include:

- Some areas of the District are abused
- The current program of collecting and processing is inefficient, takes too much time, and is costly with trailers and small compactors
- The current recycling trailers become overfilled due to inefficiencies in collection and filled with contamination
- Some part-time sites have limited schedules and availability for people to recycle
- Part-time drop-offs become overloaded due to the short period of collection

- The recycling center's full-time site's access to the location is not preferred by residents due to roadways and being adjacent to landfill

To address these challenges, the following initiatives have been developed.

Initiative CC-2.1: Streamline Drop-Off Program Operations

The District has analyzed the inefficiencies between the different sites and has determined that the part-time drop-off sites cause illegal dumping, abuse, overflow, and high costs for the District to collect the material. Therefore, the District eliminated the part-time drop-off sites in 2020. This termination of part time drop-off sites in ongoing.

The District will continue to monitor the success and efficiency of the full-time drop-off sites going forward to determine if any additional sites need to be removed, changed, or added.

Implementation Schedule: Ongoing-2037

The District may consider a change in the operator of the drop-off program at any point in the planning period. Regardless of who operates the program, the same level of service will be offered as is currently (all full-time sites) and could include additional sites as well.

If the above process incurs expenses that are significantly more expensive than the budget included in this Plan Update, the District will update the budget tables as required in the Ohio Revised Code process.

3. CC-3 – Business Recycling Collection
(State Plan Goals #1 and #2)

This program **will continue** (see program description in Section IV).

The District will continue to operate as a local recycling hauler for commercial, institutional, and industrial businesses. No meaningful challenges were addressed in Section IV.

Because the District is considering a change in operator for Program CC-2, this program could also be included in any potential change in operator. Regardless of who operates the program, the same level of service will be offered as is currently (all current business sites) and could include additional sites as well.

If the above process incurs expenses that are significantly more expensive

than the budget included in this Plan Update, the District will update the budget tables as required in the Ohio Revised Code process.

4. CC-4 – Crawford County Recycling Center
(State Plan Goals #2 and #5)

This program **will continue** (see program description in Section IV).

The challenges of this program presented in Section IV include:

- The health and safety of employees are being compromised during the processing of materials
- The facility cannot be expanded, and therefore, the processing capacity is limited
- The hours are limited due to landfill rules

To address these challenges, the following initiatives have been developed.

Initiative CC-4.1: Evaluate Recycling Center Operator or Expansion

The Crawford County Recycling Center has limited capacity due to physical and location constraints. This has caused the District to consider a change in the operator of the recycling facility. The operator change would include what was already discussed in Programs CC-2 and CC-3. Regardless of who operates the facility, the same level of processing will be offered as is currently. This operator change potential would occur prior to the next scheduled Plan Update process.

Implementation Schedule: 2022-2027

If an operator change does not occur prior to the next Plan Update process, the District has included expense projections (2028 and beyond) for expansion and or relocation of the recycling center. Since this may occur in the next Plan Update, the District has accounted for the expense but would update that expense at the time of the Plan Update process.

Implementation Schedule: 2028 and beyond

If the above processes incur expenses that are significantly more expensive than the budget included in this Plan Update, the District will update the budget tables as required in the Ohio Revised Code process.

Initiative CC-4.2: Add Shredding Program to Recycling Center

In order to service businesses and residents that request confidential document destruction at the Recycling Center, the District is planning to incorporate a shredding program. The District plans to apply for a grant for partial funding of the equipment and will match grant funds if awarded. The shred program will increase recycling tons as well as revenue at the Recycling Center.

Implementation Schedule: 2022-2023

5. CC-5 – Yard Waste Composting
(State Plan Goals #2 and #5)

This program **will continue** (see Section IV for program details). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

6. CC-6 – Special Waste Management
(State Plan Goals #2 and #5)

This program **will continue** (see program description in Section IV).

The challenges of this program presented in Section IV include:

- The District hosts an HHW collection event only every five years to collect materials not usually accepted at the Recycling Center.

To address these challenges, the following initiatives have been developed.

Initiative CC-6.1: Host HHW Event Every Four Years

In order to increase the availability of collecting household hazardous waste (HHW), the District will begin hosting an HHW collection events every four years instead of every five years. Because the most recent event occurred in 2020, the next event will occur in 2024.

Implementation Schedule: 2024-2037

RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL EDUCATION AND AWARENESS PROGRAMS

7. CC-7 – Education and Awareness Program
(State Plan Goals #3 and #4 for Residential/Commercial and Industrial Sectors)

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

The District may conduct different program promotions and initiatives than those listed in Section IV based on current events, programs, and policies of the District in the new planning period. The District acknowledges the challenge of limited staffing and funding and may evaluate this program at any point in the planning period based on available funds and District resource availability.

8. CC-8 – Litter Clean Up

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is and will monitor any significant changes that would require District intervention.

COMMERCIAL, INSTITUTIONAL, AND INDUSTRIAL SECTOR PROGRAMS

The District's industrial waste reduction strategies are presented in Table V-6, "Industrial Waste Reduction Strategies". The District projects aa increase in industrial recycling from 46,456 tons in 2019 to 50,402 tons by 2037.

9. CC-9 – Other Commercial and Industrial Recycling
(State Plan Goals #2 and #6)

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

10. CC-10 – Commercial and Industrial Recycling Technical Assistance
(State Plan Goals #3 and #4)

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

OTHER PROGRAMS/INITIATIVES

11. CC-11 – Buyback Recycling Facilities
(State Plan Goals #2 and #7)

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

12. CC-12 – Emergency Disaster Debris Management

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

13. CC-13 – Health District Partnership Program

This program **will continue** (see program description in Section IV). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is.

Table V-1
District Population Projections

Year	Crawford County Population	Population Adjustments	Total District Population
		None	
2019	41,494	18	41,512
2020	40,890	18	40,908
2021	40,612	18	40,630
2022	40,334	18	40,352
2023	40,056	18	40,074
2024	39,778	18	39,796
2025	39,500	18	39,518
2026	39,230	18	39,248
2027	38,960	17	38,977
2028	38,690	17	38,707
2029	38,420	17	38,437
2030	38,150	17	38,167
2031	37,880	17	37,897
2032	37,610	17	37,627
2033	37,340	17	37,357
2034	37,070	17	37,087
2035	36,840	17	36,857
2036	36,578	17	36,595
2037	36,316	17	36,333

Source(s) of information:
Population - Ohio Development Services Agency Office of Research, "2019 Population Estimates by County, City, Village, and Township", May 2020.
Population projections 2000-2040 - Ohio Development Services Agency, Ohio County Profiles.

Sample calculation (2019):

2019 Total District Population = Henry County Population + Village

41,512 residents = 41,494 residents + 18 residents

Table V-2
District Residential/Commercial Waste Generation (TPY)

Year	District Population	Per Capita Generation Rate	Total Residential/Commercial Waste Generation (TPY)
2019	41,512	5.45	41,321
2020	40,908	5.49	40,970
2021	40,630	5.52	40,942
2022	40,352	5.56	40,912
2023	40,074	5.59	40,881
2024	39,796	5.62	40,847
2025	39,518	5.66	40,811
2026	39,248	5.69	40,782
2027	38,977	5.73	40,750
2028	38,707	5.76	40,717
2029	38,437	5.80	40,682
2030	38,167	5.84	40,645
2031	37,897	5.87	40,606
2032	37,627	5.91	40,564
2033	37,357	5.94	40,521
2034	37,087	5.98	40,476
2035	36,857	6.02	40,472
2036	36,595	6.05	40,432
2037	36,333	6.09	40,390

Source(s) of information:
District Population - Table V-1
2019 Per Capita Generation Rate - Table IV-8
2019 Per Capita Generation Rate - 2019 Facility Data Report and Annual District Report

Per Capita Generation Rate projected to increase throughout the planning period using a linear projection, ending in 2037 with a per capita generation rate equal to the 2015-2019 average.

Sample calculation (2019):

District population x per capita generation rate (lb/person/day) x 365 days/year x 1 ton/2,000 lbs = Total Residential/Commercial Generation (tons)

41,512 residents x 5 ppd x 365 days ÷ 2,000 pounds/ton = 41,321 tons

Table V-3
Projected Industrial Waste Generation

SIC Code	Year																		
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
20	451	453	456	459	462	465	467	470	473	473	473	473	473	473	473	473	473	473	473
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	29	29	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	102	103	103	104	105	105	106	106	107	107	107	107	107	107	107	107	107	107	107
26	150	151	151	152	153	154	155	156	157	157	157	157	157	157	157	157	157	157	157
27	666	670	674	678	682	686	690	695	699	699	699	699	699	699	699	699	699	699	699
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	70	70	70	71	71	72	72	73	73	73	73	73	73	73	73	73	73	73	73
30	465	467	470	473	476	479	482	485	488	488	488	488	488	488	488	488	488	488	488
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	341	343	345	347	349	351	353	356	358	358	358	358	358	358	358	358	358	358	358
33	877	882	888	893	899	904	910	915	921	921	921	921	921	921	921	921	921	921	921
34	1,198	1,205	1,213	1,220	1,227	1,235	1,243	1,250	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258
35	6,218	6,254	6,292	6,330	6,368	6,408	6,448	6,488	6,530	6,530	6,530	6,530	6,530	6,530	6,530	6,530	6,530	6,530	6,530
36	79	80	80	81	81	82	82	83	83	83	83	83	83	83	83	83	83	83	83
37	1,527	1,536	1,545	1,555	1,564	1,574	1,584	1,594	1,604	1,604	1,604	1,604	1,604	1,604	1,604	1,604	1,604	1,604	1,604
38	25	25	25	25	25	26	26	26	26	26	26	26	26	26	26	26	26	26	26
39	2,471	2,486	2,501	2,516	2,531	2,547	2,563	2,579	2,595	2,595	2,595	2,595	2,595	2,595	2,595	2,595	2,595	2,595	2,595
Industrial Generation Reported from Brokers and Processors Surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Totals	**58,481**	**58,827**	**59,179**	**59,537**	**59,901**	**60,270**	**60,646**	**61,028**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**	**61,415**

Source(s) of information:
2019 Generation by SIC Code - Table IV-2 (adjusted to correspond to total industrial waste on Table IV-8)

Sample calculation (2019):

SIC Code 20: 2020 Generation = (2019 SIC 20 generation ÷ 2019 total generation) x 2020 total generation
453 tons = (451 tons ÷ 58,481 tons) x 58,827 tons

Table V-4
Total Waste Generation for the District During the Planning Period

Year	Residential/ Commercial	Industrial	Exempt	Total Waste	Generation Rate (lbs/person/day)
2019	41,321	58,481	434	100,236	13.23
2020	40,970	58,827	434	100,231	13.43
2021	40,942	59,179	434	100,555	13.56
2022	40,912	59,537	434	100,883	13.70
2023	40,881	59,901	434	101,215	13.84
2024	40,847	60,270	434	101,551	13.98
2025	40,811	60,646	434	101,891	14.13
2026	40,782	61,028	434	102,243	14.27
2027	40,750	61,415	434	102,600	14.42
2028	40,717	61,415	434	102,567	14.52
2029	40,682	61,415	434	102,531	14.62
2030	40,645	61,415	434	102,494	14.71
2031	40,606	61,415	434	102,455	14.81
2032	40,564	61,415	434	102,414	14.91
2033	40,521	61,415	434	102,371	15.02
2034	40,476	61,415	434	102,325	15.12
2035	40,472	61,415	434	102,322	15.21
2036	40,432	61,415	434	102,282	15.31
2037	40,390	61,415	434	102,239	15.42

Source(s) of information:
Residential/Commercial Table V-2
Industrial Table V-3

Sample calculation (2019):

Total Waste = Residential/Commercial + Industrial + Exempt
100,236 tons = 41,321 tons + 58,481 tons + 434 tons

$$\text{Generation Rate (lb/person/day)} = \frac{\text{Total Waste Generated (tons)} \times 2{,}000 \text{ pounds/ton}}{\text{Population} \times 365 \text{ days/year}}$$

$$13.23 = \frac{100{,}236.\text{ tons} \times 2{,}000}{41{,}512 \times 365}$$

Table V-5
Residential/Commercial Waste Reduction Strategies

Strategy	Program #	Type of Material Reduced or Recycled	Tons of Waste Reduction																		
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Residential/Commercial Recycling and Collection Programs																					
Curbside Recycling Technical Assistance	CC-01	AC, GL, PL, ONP, MxP, SC, OCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drop-Off Recycling	CC-02	AC, GL, PL, ONP, MxP, SC, OCC	645	545	551	556	562	567	573	579	585	590	596	602	608	614	620	627	633	639	646
Business Recycling Collection	CC-03	AC, GL, PL, ONP, MxP, SC, OCC	490	495	500	505	510	515	521	526	531	536	542	547	553	558	564	569	575	581	587
Crawford County Recycling Center	CC-04	AC, GL, PL, ONP, MxP, SC, OCC	76	77	78	78	79	80	81	82	82	83	84	85	86	87	87	88	89	90	91
Yard Waste Composting	CC-05	YW	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007
Special Waste Materials	CC-06	HHW, EW, ST, WG, UO, LAB	182	183	184	185	186	187	187	188	189	190	191	192	193	194	195	196	197	198	199
Education and Awareness	CC-07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Litter Clean-Up	CC-08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Commercial - Programs																					
Other Commercial Recycling	CC-09	AC, GL, PL, ONP, MxP, SC, OCC, HHW, EW, ST, WG, UO, LAB	11,400	11,744	11,986	12,233	12,483	12,737	12,996	13,258	13,525	13,512	13,499	13,486	13,472	13,459	13,446	13,432	13,418	13,404	13,390
Commercial Recycling Technical Assistance	CC-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other Programs																					
Buyback Recycling Facilities	CC-11	Oth	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Emergency Disaster Debris Management	CC-12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Health District Partnership Program	CC-13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Total	15,822	16,072	16,327	16,585	16,848	17,114	17,385	17,661	17,940	17,940	17,940	17,940	17,940	17,940	17,940	17,940	17,940	17,940	17,940

AC = aluminum containers, GL = glass, PL = plastic, OCC = corrugated cardboard, SC = steel containers, PBd = paperboard, MxP = mixed paper, AsC = aseptic containers, YW = yard waste, HHW = hazardous household waste, UO = used oil, EW = electronic waste, LAB = lead-acid batteries, ST = scrap tires, FW = food waste, WG = White Goods, n/a = not applicable

Source(s) of information:
2019 District Annual Report and Surveys

62,367

Table V-6
Industrial Waste Reduction Strategies

Strategy	Program #	Type of Material Reduced/Recycled	Tons of Source Reduction/Recycling															
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Industrial Sector Technical Assistance and Education Programs: Recycling																				
Industrial Recycling	N/A		46,546	47,011	47,481	47,956	48,436	48,920	49,409	49,903	50,402	50,402	50,402	50,402	50,402	50,402	50,402	50,402	50,402	50,402
		Total	**46,546**	**47,011**	**47,481**	**47,956**	**48,436**	**48,920**	**49,409**	**49,903**	**50,402**	**50,402**	**50,402**	**50,402**	**50,402**	**50,402**	**50,402**	**50,402**	**50,402**	**50,402**

AL = aluminum; FM = ferrous metals; NFM = non-ferrous metals; PL = plastic; OCC = corrugated cardboard; MxP = mixed paper, W = wood, OTH = other

Source(s) of information:
2019 tons - Table IV-6

VI. Methods of Management: Facilities and Programs to be Used [ORC Section 3734.53(A)(7)-(12)]

This section of the *Plan Update* demonstrates that the District has capacity through facilities and its programs to manage the waste generated for the planning period. A regional capacity analysis provides information to demonstrate the District meets or exceeds capacity requirements under Ohio law. The District will continue to exercise flow control provisions (to direct waste to appropriate facilities). The designation of facilities is a power granted to SWMDs under Ohio law allowing the District to designate where solid waste generated within or transported into the District shall be taken for disposal, transfer, resource recovery, or recycling.

Additionally, this section of the *Plan Update* includes a detailed siting strategy for new proposed facilities.

A. District Methods for Management of Solid Waste

Table VI-1 presents the waste management methods used and capacity needed for each year of the planning period. The District managed approximately 100,236 net tons of solid waste in 2019. Approximately 101,215 net tons of solid waste will need to be managed in 2023 (the first year of the planning period) and 102,239 net tons will need to be managed by 2037 (the final year of the planning period).

The District will manage the projected waste through recycling, yard waste composting, incineration, the use of transfer stations, and landfilling. In Table VI-1, the total tons landfilled in 2019 (37,869 tons) was calculated by subtracting recycling, yard waste composting, and the volume of waste reduced by incineration. The District projects a need of 35,932 tons of landfill capacity in 2023 and 33,897 tons in 2037.

The following figure shows the projected total net tons to be managed by the District throughout the planning period.

Net Tons to be Managed by the District (2019 – 2037)

The following figure shows the projected tons to be landfilled throughout the planning period. The rate of change of tons to be landfilled decreases in later years of the planning period because recycling and yard waste composting projections were held constant starting in 2027. Later sections of this Plan Update show a more conservative landfill projection.

Total Landfill Tons to be Managed by the District (2017 – 2034)

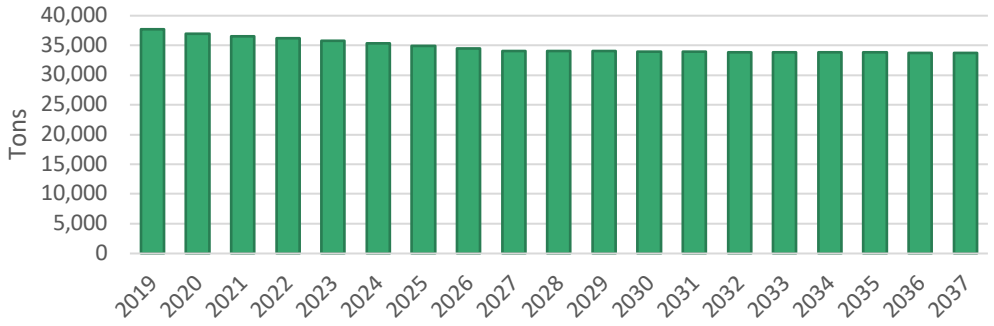


Table VI-2 presents a summary of waste management methods for residential/commercial solid waste generated by the District: recycling, yard waste composting, transferring, incineration, and landfilling. In 2019, the residential/commercial sector generated a total of 41,321 tons. This sector is projected to generate 40,881 tons of solid waste at the beginning of the planning period and 40,390 tons of solid waste by the end of the planning period. The following figure presents the management methods used to manage residential/commercial waste generation throughout the planning period.

Residential/Commercial Sector
Waste Management Methods (2019 – 2037)

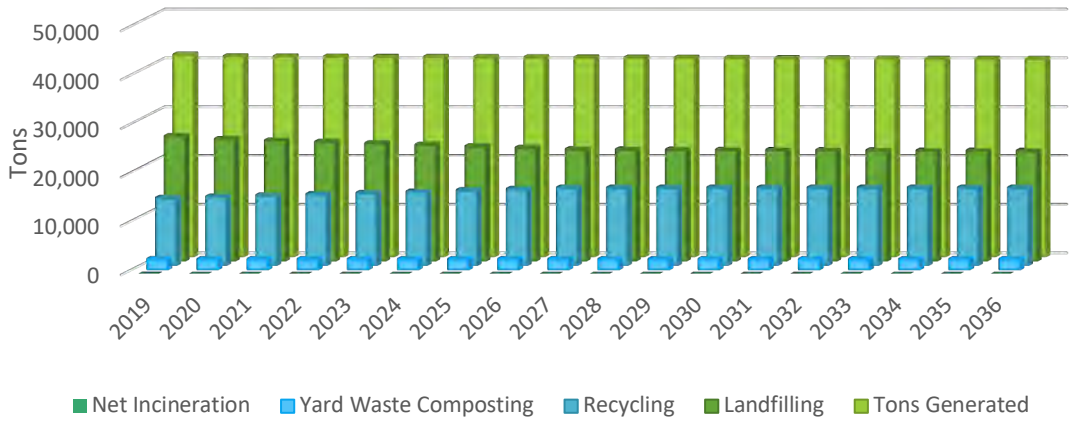


Table VI-3 presents a summary of waste management methods for industrial solid waste generated by the District. This sector's waste was managed by recycling, transferring, incineration, and landfilling. In 2019, the industrial sector generated a total of 58,481 tons. The industrial sector is projected to generate 59,901 tons of solid waste at the beginning of the planning period and 61,415 tons of solid waste by the end of the planning period. Total annual waste generation will increase 1,515 tons or 2.5% from 2023 to 2037.

The following figure presents the management methods used to manage industrial waste generation throughout the planning period.

Industrial Sector Waste Management Methods (2019 – 2037)

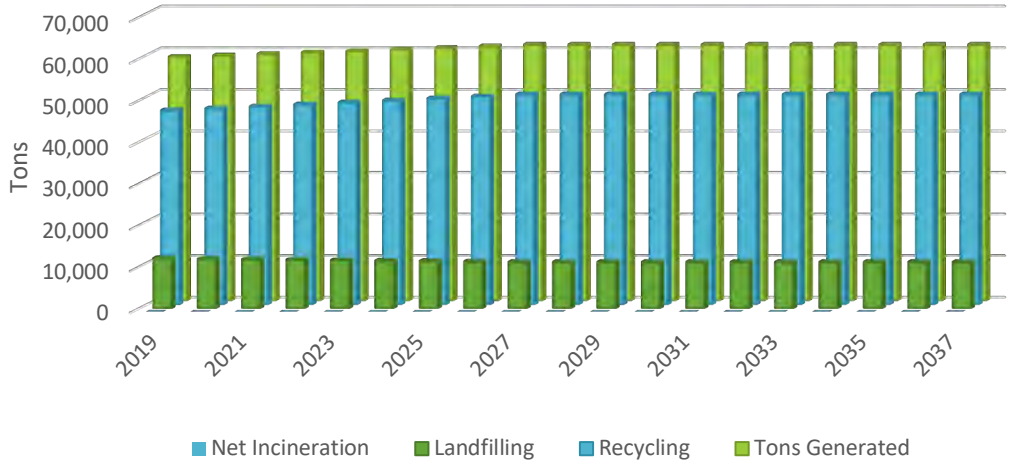


Table VI-4A, "Waste Management Method: Landfill," presents the reference year landfill capacity utilization and anticipated landfill capacity needs throughout the planning period. The projections in Table VI-4A present the landfill capacity demands from 2019 to 2037. Total tons landfilled includes waste that was directly hauled to landfills, transferred waste, and ash produced through incineration.

Six landfills received waste generated in the District during the reference year, including waste that was first accepted at incinerators or transfer stations. For the purposes of the analysis in Table VI-4A and future year projections on landfill capacity, the District assumes that each facility that managed District waste during the reference year will manage the same percent of total tons as during the reference year unless a landfill ceases operation or runs out of permitted airspace before the end of the planning period.

There is one in-District landfill. Five of the landfills were located in Ohio and outside of the District. All six of the landfills have sufficient remaining airspace to manage 100% of the District's landfilling needs throughout the planning period.

Table VI-4B "Waste Management Method: Incineration, Waste-to-Energy, and Processing Facilities" presents the total tons projected to be managed by incineration or other forms of processing throughout the planning period. The District used two of these facilities: one incinerator in the District and one medical waste processor in Indiana in the reference year to manage 6.9 tons of waste. The total tons of waste managed by incineration are projected to change at the same rate as population. The overall tonnage managed by incineration annually from 2023 to 2037 is projected to decrease by only 0.8 tons.

Table VI-4C, "Waste Management Method: Transfer," the District projects transferred waste will manage the same percent of total tons as during the reference year throughout the planning period. In 2023, the first year of the planning period, the District projects approximately 571 tons of solid waste will be managed by transfer facilities. This decreases slightly to 546 tons in 2037, the final year of the planning period.

Table VI-4D, Waste Management Method: Recycling," presents the total tons projected to be managed by recycling. The District is projected to recycle an average of 64,823 tons of material annually throughout the planning period.

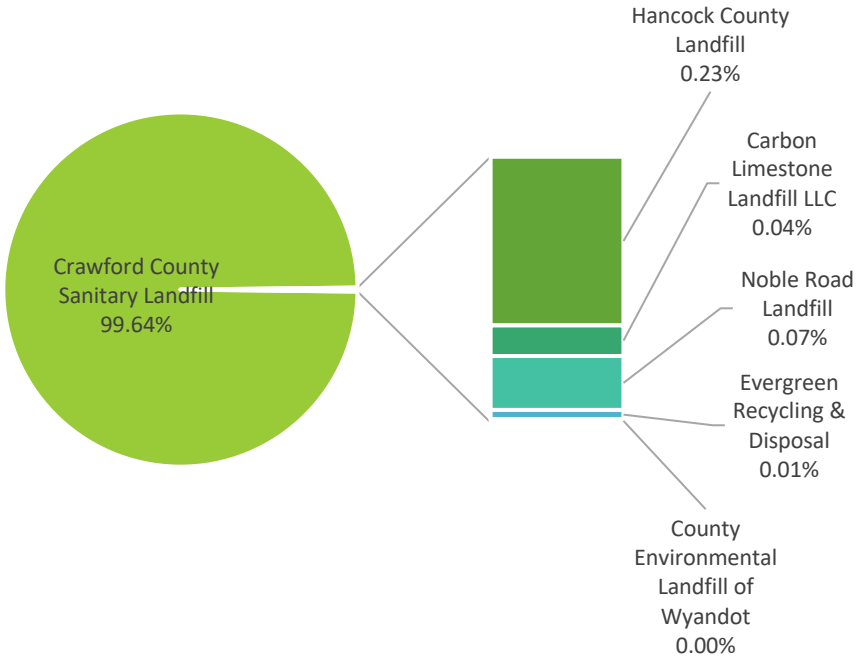
Table VI-4E, "Waste Management Method: Composting," presents the total tons projected to be managed by composting. Composting was projected as the same percent of total tons as during the reference year throughout the planning period. The District does not anticipate any major changes to facilities or programs operating during the reference year.

B. Demonstration of Access to Capacity

During 2019, six out-of-District landfills managed 37,869 tons of solid waste generated by District residents, businesses, and industries.

The following figure presents the landfills used by the District in 2019, and the percentage of District-generated waste landfilled at each facility.

Landfills Used by District (2019)



Regional Capacity Analysis

The purpose for the regional capacity analysis is to evaluate and demonstrate that the District has access to adequate disposal capacity during the planning period. The District's assessment of regional landfill capacity demonstrates there is sufficient permitted capacity available to manage the District's solid waste until December 31, 2037.

The District projects an average need of approximately 34,567 tons or 51,850 cubic yards of landfill capacity annually throughout the planning period. The District will dispose of approximately 518,501 tons or 1.5 million cubic yards of solid waste. Using a 3:1 conversion factor for cubic yards to tons and applying an average 2:1 compaction ratio for landfilled solid waste, the District will need approximately 777,751cubic yards of airspace capacity over the fifteen-year planning period.

The landfills used by the District in 2019 had sufficient permitted airspace to dispose the district's solid waste. The Crawford County Sanitary Landfill, which currently manages the majority of the District's waste, has enough permitted capacity to manage the entirety of the waste generated within the District from the reference year to the end of the planning period. Overall, the landfills used by the District in 2019 had an average remaining lifespan of more than 40 years.

C. Schedule for Facilities and Programs: New, Expansions, Closures, Continuations

Table VI-5, Implementation Schedule for Facilities, Strategies, Programs and Activities: Dates and Description, presents descriptions and dates of operation for each facility, program or activity presented in the *Plan Update*.

Programs for residential/commercial sector recycling and composting, financial incentive programs, commercial/industrial sector recycling programs, education and awareness, technical assistance, and other programs are presented in Table VI-5. These programs are discussed in detail in Sections IV and V.

D. Identification and Designation of Facilities

Table VI-6 includes the solid waste facilities identified and current designations. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, the District is identifying all Ohio licensed and permitted solid waste landfill, transfer, and resource recovery facilities and all licensed and permitted out-of-state landfill, transfer, and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Section III Inventories.

The District does not plan on designating any additional facilities in this *Plan Update*. The District currently has in place following facility designation.

Designated Facilities	
Facility	**Solid Waste Management District**
Crawford County Landfill	Crawford County Solid Waste Management District

The District reserves the right to designate one or more additional facilities and recycling activities to receive solid waste and recyclable materials during the planning period.

E. Authorization Statement to Designate

The Board is authorized to establish facility designations in accordance with Section 343.013 and 343.014 of the Ohio Revised Code. In addition, facility designation will be established and governed by applicable District rules.

F. Waiver Process for the Use of Undesignated Facilities

The District is authorized to designate solid waste management facilities. If the Board elects to designate additional facilities, the following waiver process may be followed by any person, municipal corporation, township,

or other entity that wishes to deliver waste to a solid waste facility not designated by the District.

In the event that any person, municipal corporation, township or other entity requests permission to use a facility, other than a designated facility, for the disposal of solid waste generated within the District, the entity must submit a written request for a waiver of designation to the Board. The request must contain the following information;

1. Identification of the persons, municipal corporation, township, or other entity requesting the waiver;

2. Identification of the generators(s) of the solid waste for which the waiver is requested;

3. Identification of the type and quantity (in tons per year) of solid waste for which the waiver is requested;

4. Identification of the time period(s) for which the waiver is requested;

5. Identification of the disposal facility(s) to be used if the waiver is granted;

6. If the solid waste is to be disposed in an Ohio landfill, a letter from the solid waste management district where the solid waste will be disposed, acknowledging that the activity is consistent with that District's current plan;

7. An estimate of the financial impact to the District that would occur with issuance of the requested waiver; and

8. An explanation of the reason(s) for requesting the waiver.

Upon receipt of the written request containing all of the information listed above, the District staff will review it and may request additional information necessary to conduct its review. The Board shall act on a waiver request within ninety days following receipt of the request. The Board may grant the request for a waiver only if the Board determines that:

1. Issuance of the waiver is not inconsistent with projections contained in the District's approved *Plan Update* under Section 3734.53 (A)(6) and (A)(7) of the Ohio Revised Code;

2. Issuance of the waiver will not adversely affect implementation and financing of the District's approved *Plan Update*; and

3. The entity is willing to enter into an agreement requiring the payment of a waiver fee to the District.

G. Siting Strategy for Facilities

Districts are required to develop a detailed strategy for identification of sites for new and expanded solid waste management facilities identified under Section VI-C above. This requirement applies to District facilities as well as designated facilities to be owned and operated by the private sector or individual communities within the District. Ohio EPA recommends the siting strategy include a preliminary site survey, a ranking scheme, and a procedure for resolving site impasses through mediation. A sample ranking scheme can be found in Appendix K.

Although the Crawford County Solid Waste Management District does not anticipate any new facilities as part of this amended Plan, a facility siting process is described herein in case such a process is required in connection with the siting of a solid waste facility in the future.

The siting strategy shall be implemented by the Crawford County Commissioners. The District, if and when the need arises, will establish a Facilities Siting Committee to undertake the site survey and ranking scheme reviews in connection with the siting of facilities. The County will develop a Site Review Investigation Process to be followed in the siting of new solid waste management facilities. The process will incorporate the site survey, ranking scheme, and procedure for resolving site impasses through meditation. The siting committee will also develop a schedule for completing the siting process.

The District will develop the baseline information needed in undertaking the site review investigations. The objective of this work will be to gather and assemble in one place all of the background information on the physical features, land use, ordinances affecting land use, socioeconomic, environmental, and other relevant data on the District, as well as the existing Ohio EPA regulations and siting criteria and other requirements related to facilities siting. This information will be used in the site review and ranking scheme process and will be presented in a suitable technical format such as GIS (geographic information system) mapping. The District has developed a set of preliminary exclusionary siting criteria based mainly on Ohio EPA's siting restrictions.

A preliminary ranking scheme has been devised. The following factors will be considered when reviewing potential sites.

- Population density
- Access to site

- Soil conditions
- Ground water wells in the vicinity
- Availability of public utilities
- Site visibility
- Land use and zoning
- Archaeological, historical, cultural, and recreational significance

Each factor will be analyzed quantitatively and depending on the type of facility will receive a certain number of points.

The Facilities Siting Committee will be established with the objective of having as broad a public representation on the Committee as possible. After the Site Review Investigation Process has been developed, the District will hold a public information meeting to explain the process and review the site survey and ranking scheme. The Policy Committee and Facilities Siting Committee will seek public input in the review process for the siting of individual facilities. This process will include at least one public information meeting following the ranking of sites for consideration for a particular facility.

The Facilities Siting Committee will develop a dispute resolution process to be used when necessary in siting solid waste facilities. A mediator will be used in cases where a controversy develops among the parties involved in siting a solid waste facility, such as between the facility operator and neighbors, the District, or the landowners.

H. Contingencies for Capacity Assurance and District Program Implementation

The District does not anticipate any capacity assurance or program implementation problems during this planning period. There are 6 landfills used by the District that have ample capacity available throughout the planning period. There are also several landfills in northwest Ohio and eastern Indiana with the capability to provide capacity if an emergency arose with the landfills used by the District.

If there is an emergency impacting the District, the Board will meet on an emergency basis and determine the appropriate actions to take to ensure compliance with this *Plan Update*. The following section defines the District's specific contingencies:

Disposal Capacity

District disposal capacity is assured for the duration of the planning period.

The District is prepared, if necessary and determined by the Board, to explore the following options if landfill capacity, solid waste management, or the cost of solid waste collection, transportation, and disposal deteriorates to unacceptable levels:

1. The District may develop a waste disposal cooperative for the purchase or reservation of solid waste disposal capacity for solid waste generated within the District in one or more permitted and licensed landfills outside the District.

2. The District may enter into joint use agreements with other solid waste districts to either obtain new capacity or to secure better disposal options for District generators.

Transfer Capacity

The District monitors the management of solid waste and governmental contracts to evaluate the cost of the transfer of solid waste out of the District. The District may also study individual facilities' roles relative to ultimate disposal destinations, potential disposal cooperative development, as well as other alternatives which may be explored during the planning period.

While it is likely that the private and public sectors will continue to serve the transfer capacity needs of the District, the District reserves the right to respond to changes in the solid waste market and/or management conditions without seeking a full amendment (see material change in circumstances) of the adopted *Plan Update*.

Recycling Capacity

Recycling in the District remains strong with ample infrastructure to handle the District's current and future needs from within and outside the District. In the unlikely event that future District residential recycling needs are not met by the private sector, the District will evaluate necessary changes.

While it is highly likely that the current systems will continue to serve the recyclable materials processing needs of the District, the District reserves the right to respond in a timely fashion to changing market and/or management conditions without seeking a full amendment of the adopted *Plan Update*.

Table VI-1

Waste Management Methods Used and Processing Capacity Needed for Each Year of the Planning Period

Year	Tons of SW Generated	Tons Source Reduced	Net Tons to be Managed	Management Method Used and Processing Capacity Required in TPY					
				Recycling	Transfer	Yard Waste Composting	Gross Incineration	Waste Reduced by Incineration	Landfilling
2019	100,236	0	100,236	59,356	590	3,007	7	5	37,869
2020	100,231	0	100,231	60,077	590	3,007	0	0	37,148
2021	100,555	0	100,555	60,801	581	3,007	0	0	36,747
2022	100,883	0	100,883	61,535	576	3,007	0	0	36,342
2023	101,215	0	101,215	62,277	571	3,007	0	0	35,932
2024	101,551	0	101,551	63,028	567	3,007	0	0	35,517
2025	101,891	0	101,891	63,788	562	3,007	0	0	35,096
2026	102,243	0	102,243	64,557	557	3,007	0	0	34,679
2027	102,600	0	102,600	65,336	552	3,007	0	0	34,257
2028	102,567	0	102,567	65,336	551	3,007	0	0	34,224
2029	102,531	0	102,531	65,336	551	3,007	0	0	34,189
2030	102,494	0	102,494	65,336	550	3,007	0	0	34,152
2031	102,455	0	102,455	65,336	549	3,007	0	0	34,112
2032	102,414	0	102,414	65,336	549	3,007	0	0	34,071
2033	102,371	0	102,371	65,336	548	3,007	0	0	34,028
2034	102,325	0	102,325	65,336	547	3,007	0	0	33,983
2035	102,322	0	102,322	65,336	547	3,007	0	0	33,979
2036	102,282	0	102,282	65,336	546	3,007	0	0	33,939
2037	102,239	0	102,239	65,336	546	3,007	0	0	33,897

Source(s) of information:

Tons of SW Generated - Table V-4
Tons Recycling and Yard Waste Composting - Tables V-5 and V-6
Tons Transferred - Table VI-2 and VI-3

Sample calculations:

2019 Net tons to be managed by SWMD = Tons of SW generated - tons source reduced
100,236 tons = 100,236 tons - . tons

2019 Landfilling = Net tons to be managed by SWMD - (recycling + yard waste composting)
37,869 tons = 100,236 tons - (59,355.99 tons + 3,006.54 tons)

Table VI-2
Summary for Residential/Commercial Waste Management Methods

Year	Tons Generated	Management Method in TPY					
		Recycling	Yard Waste Composting	Gross Incineration	Net Incineration	Transfer	Landfilling
2019	41,321	12,810	3,007	7	5	409	25,499
2020	40,970	13,066	3,007	0	0	409	24,898
2021	40,942	13,320	3,007	0	0	399	24,616
2022	40,912	13,579	3,007	0	0	395	24,327
2023	40,881	13,841	3,007	0	0	390	24,033
2024	40,847	14,108	3,007	0	0	385	23,732
2025	40,811	14,379	3,007	0	0	380	23,426
2026	40,782	14,654	3,007	0	0	375	23,121
2027	40,750	14,934	3,007	0	0	370	22,810
2028	40,717	14,934	3,007	0	0	370	22,777
2029	40,682	14,934	3,007	0	0	369	22,742
2030	40,645	14,934	3,007	0	0	368	22,704
2031	40,606	14,934	3,007	0	0	368	22,665
2032	40,564	14,934	3,007	0	0	367	22,624
2033	40,521	14,934	3,007	0	0	366	22,581
2034	40,476	14,934	3,007	0	0	366	22,536
2035	40,472	14,934	3,007	0	0	366	22,532
2036	40,432	14,934	3,007	0	0	365	22,492
2037	40,390	14,934	3,007	0	0	364	22,449

Source(s) of information:
Tons Generated - Table V-2
Recycling and Yard Waste Composting - Table V-5
Transfer - Table III-3

Sample calculations (2019):

Landfilling = Tons Generated - (Recycling + Yard Waste Composting)

25,499 tons = 41,321 tons - (12,810.3 tons + 3,006.54 tons)

Table VI-3
Summary for Industrial Waste Management Methods

Year	Tons Generated	Management Method in TPY				
		Recycling	Gross Incineration	Net Incineration	Transfer	Landfilling
2019	58,481	46,541	7	5	0	11,935
2020	58,827	47,011	0	0	0	11,816
2021	59,179	47,481	0	0	0	11,698
2022	59,537	47,956	0	0	0	11,581
2023	59,901	48,436	0	0	0	11,465
2024	60,270	48,920	0	0	0	11,350
2025	60,646	49,409	0	0	0	11,237
2026	61,028	49,903	0	0	0	11,124
2027	61,415	50,402	0	0	0	11,013
2028	61,415	50,402	0	0	0	11,013
2029	61,415	50,402	0	0	0	11,013
2030	61,415	50,402	0	0	0	11,013
2031	61,415	50,402	0	0	0	11,013
2032	61,415	50,402	0	0	0	11,013
2033	61,415	50,402	0	0	0	11,013
2034	61,415	50,402	0	0	0	11,013
2035	61,415	50,402	0	0	0	11,013
2036	61,415	50,402	0	0	0	11,013
2037	61,415	50,402	0	0	0	11,013

Source(s) of information:
Tons Generated - Table V-4
Tons Source Reduction & Recycling - Table V-6
Tons Transferred - Table III-3

Sample calculations (2019):

Landfilling = Tons Generated - Source Reduction & Recycling

11,935 tons = 58,481 tons - 46,540.84 tons

Table VI-4A
Waste Management Method: Landfill

Facilities Used by District	County	Average Daily Waste (Tons)	Remaining Capacity		Airspace		Tons of District SW Managed																		
			Years	Data Source	Gross (YD^3)	Net (tons)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Crawford County Sanitary Landfill	Crawford, OH	795	22	OEPA	8,171,512	4,668,664	37,143	36,436	36,043	35,646	35,243	34,836	34,424	34,015	33,601	33,568	33,534	33,497	33,459	33,419	33,376	33,332	33,328	33,289	33,247
Hancock County Landfill	Hancock, OH	553	28	OEPA	6,650,914	4,389,603	86	84	83	82	81	80	80	79	78	78	77	77	77	77	77	77	77	77	77
Carbon Limestone Landfill LLC	Mahoning, OH	11,000	23	OEPA	64,038,722	67,747,767	16	15	15	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14
Noble Road Landfill	Richland, OH	4,019	20	OEPA	22,056,458	20,949,247	27	27	27	26	26	26	25	25	25	25	25	25	25	25	25	25	25	25	25
Evergreen Recycling & Disposal	Wood, OH	564	38	OEPA	8,037,610	5,626,327	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
County Environmental Landfill of Wyandot	Wyandot, OH	603	113	OEPA	20,674,487	18,831,076	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					121,458,191	117,544,020	37,869	37,148	36,747	36,342	35,932	35,517	35,096	34,679	34,257	34,224	34,189	34,152	34,112	34,071	34,028	33,983	33,979	33,939	33,897

Source(s) of information:

2019 tons - Tables III-1 - III-3
2019 - 2037 tons - Table VI-1
Projected value for each landfill is calculated as a ratio based on the 2019 distribution.
2019 Ohio Facility Data Report Tables

Sample calculation:

$$\text{2020 Hancock County Landfill} = \frac{\text{Hancock County Landfill 2019}}{\text{Total 2019}} \times \text{Total 2020}$$

$$84 \text{ tons} = \frac{86 \text{ tons}}{37{,}869 \text{ tons}} \times 37{,}148 \text{ tons}$$

Table VI-4B
Waste Management Method: Incinerator

Facilities Used by District	County	Tons of District SW Managed																			
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Crawford County Humane Society	Crawford, OH	6.79	6.8	6.7	6.7	6.6	6.6	6.5	6.5	6.5	6.4	6.4	6.3	6.3	6.2	6.2	6.1	6.1	6.1	6.1
Medassure Of Indiana Treatment Facility	Marion, IN	0.14	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals		**6.9**	**6.9**	**6.8**	**6.8**	**6.7**	**6.7**	**6.6**	**6.6**	**6.5**	**6.5**	**6.4**	**6.4**	**6.3**	**6.3**	**6.2**	**6.2**	**6.1**	**6.1**	**6.1**

N/A=Not Available

Table VI-4C

Waste Management Method: Transfer

Facilities Used by District	County	Tons of District SW Managed																			
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Huron County Solid Waste Facility	Huron, OH	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mid-State Waste Transfer Facility	Johnson, IN	582	582	573	568	564	559	554	549	544	543	543	542	542	541	540	540	540	539	538
Rumpke Waste Inc Richland County Transfer Facility	Richland, OH	4.91	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Stericycle Environmental Solutions, Inc.	Marion, IN	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eq Industrial Services Processing Facility	Marion, IN	0.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquid Waste Removal Processing Facility	Marion, IN	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		590	590	681	576	571	567	562	557	552	551	551	550	549	549	548	547	547	546	546

Source(s) of information:

2019 Tons by Facility - Table III-3

Total Tons - Table VI-1

Table VI-4D
Waste Management Method: Recycling

Facilities Used by District	Area Served	Tons of District SW Managed																		
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Bucyrus City Hall 500 S Sandusky Ave Bucyrus, OH 44820	Crawford	245	253	259	262	266	269	272	275	279	279	279	279	279	279	279	279	279	279	279
Camp Michael 1741 Shupp Rd Bucyrus, OH 44820	Crawford	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lowe Volk Nature Center 2401 OH-598 Crestline, OH 44827	Crawford	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9
Todd Township Hall 413 High St Bucyrus, OH 44820	Crawford	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
East Park East Walnut Street Galion, OH 44833	Crawford	158	160	162	164	166	168	170	172	174	174	174	174	174	174	174	174	174	174	174
Crestline Village Hall 100 North Seltzer Street Crestline, Ohio 44827	Crawford	109	110	111	112	114	115	117	118	119	119	119	119	119	119	119	119	119	119	119
Quality Inn 1515 N Sandusky Ave Bucyrus, OH 44820	Crawford	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
New Washington City Hall 119 E Mansfield St New Washington, OH 44854	Crawford	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Recycling Center 5128 Lincoln Hwy East Bucyrus, OH 44820	Crawford	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total	Included in Recycling Center Total
Friends of the Park District 2401 ST. Rte. 598 Crestline, OH 44827	Crawford	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodlawn United Methodist Church 1675 Hopley Ave Bucyrus, OH 44820	Crawford	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatfield Township Firehouse Parking Lot 3550 Chatfield Center Road Bloomville, OH 44818	Crawford	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lowe Volk Park 2401 OH-598 Crestline, OH 44827	Crawford	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colonel Crawford Schools 5444 Crestline Road Crestline, OH 44827	Crawford	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dallas Township Firehouse Lot 1491 OH-294 Monnett, Ohio 43302	Crawford	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liberty Township Firehouse Lot 4628 Liberty St Sulphur Springs, Ohio 44881	Crawford	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Methodist Church 202 Sherman St Tiro, OH 44887	Crawford	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lykens Township Firehouse Parking Lot 2016 New Washington Rd Bloomville, OH 44818	Crawford	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Precision Tech 200 Crossroads Blvd Bucyrus, OH 44820	Crawford	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Timken Company 2325 E Mansfield St Bucyrus, OH 44820	Crawford	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wayside Christian School 2345 Kerstetter Rd Bucyrus, OH 44820	Crawford	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galion Middle School 474 Portland Way N Galion, OH 44833	Crawford	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galion Elementary School 478 Portland Way N Galion, OH 44833	Crawford	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wynford High School 3288 Holmes Center Rd Bucyrus, OH 44820	Crawford	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seventh Day Adventist Church 1980 Sletzer Rd Bucyrus, OH 44820	Crawford	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Innovative Recycling 725 W. Main St. Crestline, OH 44824 419-683-2988	Crawford	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Innovative Recycling 352 S. South St. Galion, OH 44833 419-468-2988	Crawford	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Milliron Recycling 2384 St. Rt. 39 NW Mansfield, OH 44903 419-747-6522	Crawford	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13
Advanced Fiber Technology 100 Crossroads Blvd. Bucyrus, OH 44820 419-562-1337	Crawford	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10
Campbell Technological Resources, Inc. 220 Lincoln Ave Crestline, OH 44827	Crawford	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Carrolls Truck Wrecking 2064 Nazor Rd. Galion, OH 44833 419-683-2448	Crawford	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Central Ohio Recycling & Salvage, LLC 668 Woodlawn Ave. Bucyrus, OH 44820 419-562-0087	Crawford	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Knecht's Auto Recycling 1644 Lincoln Hwy Bucyrus, OH 44820 419-562-9932	Crawford	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Willies Recycling LLC 1825 E Mansfield St. Rear Bucyrus, OH 44820 419-562-9258	Crawford	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Harris and Associates	Crawford	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5
Kelbley Tire Recycle	Crawford	60	61	62	62	63	64	65	65	66	66	66	66	66	66	66	66	66	66	66
Liberty Tire Service of Ohio	Crawford	142	144	146	147	149	151	153	155	156	156	156	156	156	156	156	156	156	156	156
Lightner Tire Copmany	Crawford	57	58	58	59	60	60	61	62	63	63	63	63	63	63	63	63	63	63	63
R Willig Tire Distributors Inc	Crawford	47	48	48	49	49	50	51	51	52	52	52	52	52	52	52	52	52	52	52
Rumpke Transportation Company, Inc.	Crawford	54	54	55	56	56	57	58	58	59	59	59	59	59	59	59	59	59	59	59
Wal-Mart	Crawford	325	329	333	337	341	345	350	354	358	358	358	358	358	358	358	358	358	358	358
Dollar General	Crawford	126	127	129	130	132	134	135	137	138	138	138	138	138	138	138	138	138	138	138
Kroger	Crawford	185	187	189	192	194	196	199	201	204	204	204	204	204	204	204	204	204	204	204
USPS	Crawford	137	138	140	142	143	145	147	149	150	150	150	150	150	150	150	150	150	150	150
Richland County Recycling and Transfer Facility	Crawford	222	225	227	230	233	236	238	241	244	244	244	244	244	244	244	244	244	244	244
Crawford County Recycling Center - Other Programs	Crawford	748	757	767	776	785	795	804	814	824	824	824	824	824	824	824	824	824	824	824
HHW Collection Event every 5 years	Crawford	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other recycling facilities used by the residential/commercial sector	Crawford	10,037	10,159	10,281	10,405	10,531	10,658	10,786	10,916	11,048	11,048	11,048	11,048	11,048	11,048	11,048	11,048	11,048	11,048	11,048
Other recycling facilities used by the industrial sector	Crawford	46,546	47,111	47,679	48,254	48,836	49,425	50,021	50,625	51,235	51,235	51,235	51,235	51,235	51,235	51,235	51,235	51,235	51,235	51,235
Total		59,356	60,077	60,801	61,535	62,277	63,028	63,788	64,557	65,336	65,336	65,336	65,336	65,336	65,336	65,336	65,336	65,336	65,336	65,336

Source(s) of information:
The total recycled is from Table VI-1.
Projected value for each Recycling Facility is calculated as a ratio based on the 2019 distribution

Sample calculation:

$$\text{Innovative Recycling Recycling 2020} = \frac{\text{2019 Innovative Recycling}}{\text{2019 Total}} \times \text{Total 2020}$$

$$\text{1 tons} = \frac{\text{1 tons}}{\text{59,356 tons}} \times \text{60,077 tons}$$

Table VI-4E
Waste Management Method: Composting

Facilities Used by District	County	Tons of District S/W Managed															
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Crestline Composting Facility	Crawford	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279
Bucyrus WWTP	Crawford	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058	1,058
Village of New Washington	Crawford	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
Park Enterprise Construction Co Inc	Marion	673	673	673	673	673	673	673	673	673	673	673	673	673	673	673	673	673	673
Hauler and grocer food waste data	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007	3,007

Source(s) of information:
2019 tons - Table III-6
2019 tons - 2017 Annual District Report survey data
2019 - 2037 tons - Table VI-1

Table VI-5
Implementation Schedule for Facilities,
Strategies, Programs and Activities: Dates and Description

Program Name	ID #	Location	Description of Program/Facility	Duration	
				Begin	Cease
Curbside Recycling Technical Assistance	CC-01	District	The District continues to informally discuss curbside programs with communities when applicable. The District has offered assistance to communities to begin curbside programs as well. The District is available to both communities and commercial businesses to prepare bid packages for solid waste and recycling curbside collection programs to maximize tonnages collected in the 9recycling sector. In the past, the District has also analyzed the potential for communities or the District to partner with the private sector to maximize the use of the District's recycling center as a processing location for any curbside recyclables collected by private sector haulers.	Ongoing	Ongoing
Initiative CC-1.1: Third Party Group Curbside Analysis			In late 2020, a third-party group (independent of District) began evaluating curbside options. The District will assist this group in its evaluation and any resulting implementation of curbside programs as requested.	Ongoing	2037
Drop-Off Recycling	CC-02	District	Each drop-off collects at least 4 target materials that are recognized by Ohio EPA as highly amenable materials for recovery via trailers that are transported back to the District recycling center. The District has identified aluminum/bimetal cans, glass, plastic, and newspaper as highly amenable materials to recover for the residential/commercial sector. One of the full-time drop-offs is located at the District recycling center.	Ongoing	Ongoing
CC-2.1: Streamline Drop-Off Program Operations			The District has analyzed the inefficiencies between the different sites and has determined that the part-time drop-off sites cause illegal dumping, abuse, overflow, and high costs for the district to collect the material. Therefore, the District will eliminate the part-time drop-off sites going forward. The District will continue to monitor the success and efficiency of the drop-off sites going forward to determine if any additional sites need to be removed, changed, or added.	Ongoing	2037
Business Recycling Collection	CC-03	District	The District offers cardboard and paper recycling collection to all Crawford County commercial, institutional, and industrial businesses. The District is continually seeking businesses and other locations that generate quantities of paper that can be recycled. The District keeps a list of these businesses and other locations and has established a weekly schedule for the pickup of these recyclables. The District has cardboard dumpsters available for businesses.	Ongoing	Ongoing
Crawford County Recycling Center	CC-04	District	The purpose of the facility is to collect and process recyclables and to arrange for the sale or transfer of recyclables from Crawford County to materials markets. The center's accepted materials include materials from drop-offs as well as hard-to-manage materials, and residents and businesses are able to walk in during business hours to drop off these materials.	Ongoing	Ongoing
Yard Waste Composting	CC-05	District	Private and public sector compost operations were responsible for their own program or facility. The District continues to monitor the availability of yard waste recycling and processing facilities. Capacity shortages would be documented to aid the District in managing yard waste volumes.	Ongoing	Ongoing
Special Waste Materials	CC-06	District	The District will continue to accept HHW, batteries, electronics, appliances, used oil, antifreeze, and scrap tires at the Crawford County Recycling Center year round. Additionally, the District hosts an HHW collection event every five years at the county fairgrounds to collect mercury, oil-based paints, and other HHW not collected at the recycling center year-round.	Ongoing	Ongoing
Education and Awareness	CC-07	District	The District utilizes a variety of efforts to provide education and awareness to all sectors in Crawford County for youth and adult audiences, small and large businesses, and institutions including the District website, school and youth presentations and educational materials, Earth Day sculpture and poster contests, toures of the Recycling Center, the District Annual Report, and booths at special events.	Ongoing	Ongoing
Litter Clean-Up	CC-08	District	The District hosts an annual litter clean-up event called Clean Up Crawford County – Plant Pride NOT Litter during April, May, and June. The District partners with the Crawford County Park District and River Clean-Up Group. Waste materials are taken to Rumpke, and the District will take recyclables, tires, and other materials usually accepted at the recycling center.	Ongoing	Ongoing
Other Commercial and Industrial Recycling	CC-09	District	There are a number of private sector haulers that operate in the District and many of these haulers also provide recycling collection for commercial and industrial businesses. The District surveys these companies and the haulers annually to determine the extent of waste reduction by the commercial and industrial sectors in the county.	Ongoing	Ongoing
Commercial and Industrial Recycling Technical Assistance	CC-10	District	The District offers assistance to businesses in the commercial and industrial sectors by promoting the availability of the District's recycling center through public education. Events such as the District's Earth Day celebration, Clean Up Crawford County, and the Bratwurst Festival help to communicate this message and the importance of recycling at work. The District also communicates the opportunity to start a recycling collection service at new businesses. The District also offers assistance through phone calls or may offer waste audits if requested. Other opportunities that the District assists commercial and industrial businesses with includes: • Communicating recycling opportunities and service providers • Assisting local businesses in identifying opportunities for grants and other sources of funding to fund recycling • Providing guidelines and methodologies for performing waste audits and communicating the opportunity for this type of assistance	Ongoing	Ongoing
Buyback Recycling Facilities	CC-11	District	Private sector materials recovery businesses in Crawford County handle a wide range of materials. These companies act as buy back centers by paying for materials of value (such as aluminum) brought to them by the public. The District frequently interacts with the 4 main buyback facilities in the county.	Ongoing	Ongoing
Emergency Disaster Debris Management	CC-12	District	Responding to natural disasters, such as flood events, tornados, and severe storms, requires a great deal of coordination and time. The District is committed to assisting the Emergency Management Agency during a disaster event and has a disaster debris plan. The District Coordinator will serve as the debris manager during a debris-generating event.	Ongoing	Ongoing
Health District Partnership Program	CC-13	District	The District contracts with the Crawford County General Health District for conducting quarterly inspections of the Crawford County Sanitary Landfill, annual inspections of Class IV composting facilities, and for other duties associated with the Ohio EPA code enforcement program. The District also partners with the Crawford County General Health District to publish information about the proper disposal of expired/outdated medicines on the solid waste section of their environmental programs.	Ongoing	Ongoing

Table VI-6
Facilities Identified and Current Designations

Facilities Identified	
Name	**Location (SWMD)**
Landfills	
Ohio EPA permitted and licensed solid waste landfills	
Transfer Facilities	
Ohio EPA permitted and licensed solid waste transfer facilities	
Recycling Facilities	
Recycling Facilities presented in Section III of this Plan	
Designated Facilities	
Crawford County Sanitary Landfill	Crawford County Solid Waste Management District

VII. Measurement of Progress Toward Waste Reduction Goals

[ORC Section 3734.53(A)]

The Ohio EPA *2020 State Plan* establishes ten goals solid waste management districts (SWMDs) are required to achieve in their solid waste management plans. These goals are as follows.

Goal #	Description
#1	Ensure the availability of reduction, recycling and minimization alternatives for municipal solid waste by ensuring 90% of residents have access to curbside and drop-off programs. The District must also demonstrate that there are adequate opportunities for industrial businesses to recycle.
#2	Reduce and/or recycle at least 25% of the total waste generated by the residential/commercial sector and 50% of the total waste generated by the industrial sector.
#3	Provide the following minimum required educational programs: a Web site; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.
#4	Provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identified target audiences using best practices.
#5	Include a strategic initiative for the industrial sector consisting of a minimum of three programs the solid waste management district will make available to industrial generators.
#6	Provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste, and obsolete/end-of-life electronic devices.
#7	Explore how to incorporate economic incentives into source reduction and recycling programs.
#8	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.
#9	Provide programs to develop markets for recyclable materials and the use of recycled-content materials (optional).
#10	Report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

SWMDs are encouraged to meet Goal #1 and Goal #2 but are only required to demonstrate compliance with one goal or the other. Goal #9 is optional, and remaining goals are mandated goals to which SWMDs must demonstrate compliance. This section will cover the goal selected by the District, its progress toward achieving the goal, and plans to maintain compliance throughout the planning period.

A. Compliance with Goal #1

The District will comply with Goal #2 of the *2020 State Plan*, which states that the District will reduce and/or recycle at least 25% of the total waste generated by the residential/commercial sector and 50% of the total waste generated by the industrial sector.

B. Demonstration of Compliance with Goal #2

The District has demonstrated compliance with both Goal #1 and Goal #2 in previous plans, but due to changes in the district's drop-off program, the District has chosen to comply with Goal #2 going forward. The recycling and waste reduction data, as reported to Ohio EPA and ultimately to the Legislators of Ohio, documents compliance for Goal #2 for the past 10 years:

Year	Res/Com	Ind
2010	33.6%	96.3%
2011	34.3%	95.7%
2012	35.5%	95.3%
2013	32.1%	94.6%
2014	34.6%	93.7%
2015	31.1%	92.8%
2016	36.0%	94.8%
2017	33.3%	95.8%
2018	38.8%	94.6%
2019	38.3%	79.6%

The above precedence of reporting to OEPA based on survey data that was obtained by following the Version 3.0 Format requirements for solid waste generator sector differentiation is clear and shows that the District should continue as a Goal #2 District.

The average annual increase in waste diversion percentage from 2010 to 2019 was 1.2%. The District's projections for waste reduction percentage from 2019 to 2037 shows the rate going from 38% to 44% with an average annual increase of 0.71%. The District feels comfortable with the conservative projections that have led to the projections in this Plan Update.

In 2019, approximately 38% of the District's residential/commercial waste stream was recycled including yard waste (see Table VII-3). This equates in a pounds per person per day (PPD) rate of 2.09.

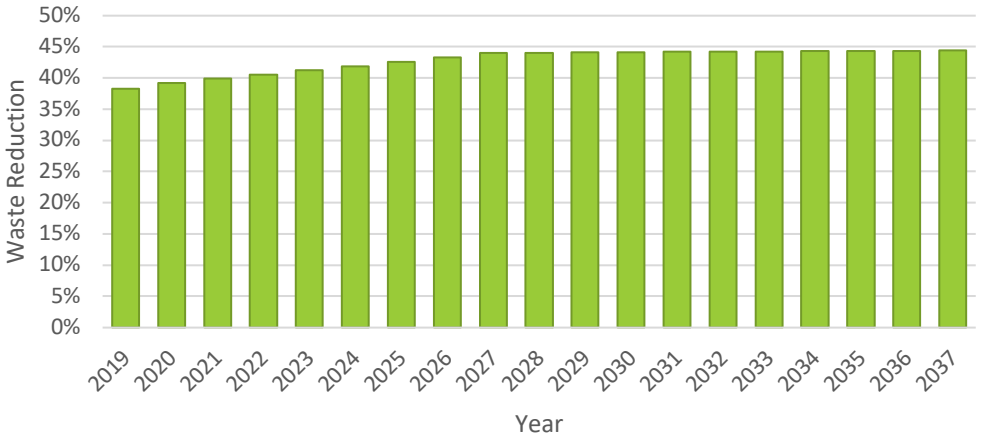
The District is committed to maintaining or exceeding the state goals for recycling and waste reduction. The programs presented in Section V and included in Table

VI-5 illustrate the District's plans to continue to maintain or increase the amount of recyclable materials that are recycled.

The District will continue to exceed the 25% waste reduction rate throughout the planning period based on the District's projections for successful recycling programs and waste generation within the District. Even though the District does not currently plan to continue operating part-time drop-off sites, these sites only generated approximately 100 tons per year for the residential/commercial sector out of approximately 16,000 tons of residential/commercial recycling. In 2037, the final year of the planning period, the District anticipates a 44% waste reduction rate for the residential/commercial section. This equates to a pounds per person per day (PPD) rate of 2.71.

The following graph depicts the residential/commercial sector waste reduction rate throughout the planning period.

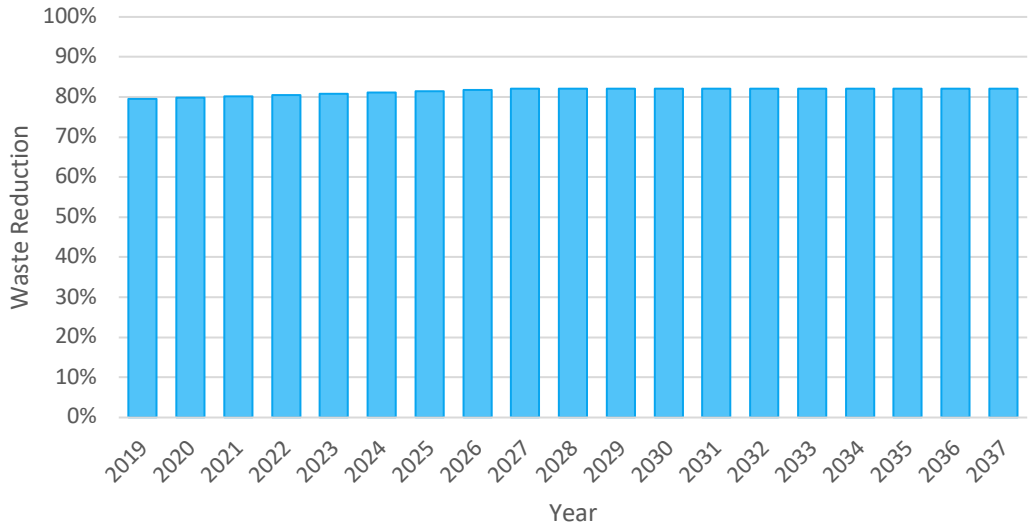
Residential/Commercial Waste Reduction Percentage (2019 – 2037)



In 2019, 80% of industrial solid waste was recycled (Table VII-4). This equates in a pounds per person per day (PPD) rate of 6.14. In 2037, the final year of the planning period, the District anticipates a waste reduction rate of 82% for the industrial sector. This equates in a pounds per person per day (PPD) rate of 7.6. This projection was made to stay conservative in the event of fluctuations in the industrial sector.

The following graph depicts the industrial sector waste reduction rate throughout the planning period.

Industrial Waste Reduction Percentage (2019 – 2037)



In 2019, the District's total waste reduction rate (residential/commercial plus industrial) was 62% (Table VII-5). This equates in a pounds per person per day (PPD) rate of 8.23. The District anticipates that the total waste reduction rate will increase to 67% by 2037, the final year of the planning period. This equates in a pounds per person per day (PPD) rate of 10.31. The projected increase is primarily based on the projected increases in waste generation from the both the residential/commercial and industrial sectors.

The following graph depicts all sectors waste reduction rate throughout the planning period.

Total District Waste Reduction Percentage (2019 – 2037)

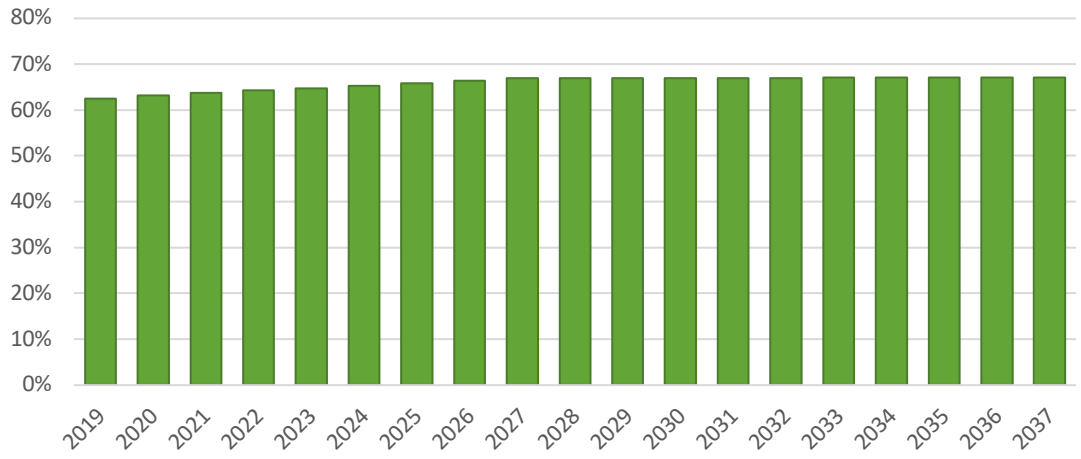


Table VII-3
Annual Rate of Waste Reduction: Residential/Commercial Waste

Year	Recycling	Composting	Gross Incineration	Waste Reduction via Incineration	Landfill	Total Waste Reduction	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (PPD)
2019	12,810	3,007	7	5	25,499	15,822	41,512	38%	2.09
2020	13,066	3,007	0	0	24,898	16,072	40,908	39%	2.15
2021	13,320	3,007	0	0	24,616	16,327	40,630	40%	2.20
2022	13,579	3,007	0	0	24,327	16,585	40,352	41%	2.25
2023	13,841	3,007	0	0	24,033	16,848	40,074	41%	2.30
2024	14,108	3,007	0	0	23,732	17,114	39,796	42%	2.36
2025	14,379	3,007	0	0	23,426	17,385	39,518	43%	2.41
2026	14,654	3,007	0	0	23,121	17,661	39,248	43%	2.47
2027	14,934	3,007	0	0	22,810	17,940	38,977	44%	2.52
2028	14,934	3,007	0	0	22,777	17,940	38,707	44%	2.54
2029	14,934	3,007	0	0	22,742	17,940	38,437	44%	2.56
2030	14,934	3,007	0	0	22,704	17,940	38,167	44%	2.58
2031	14,934	3,007	0	0	22,665	17,940	37,897	44%	2.59
2032	14,934	3,007	0	0	22,624	17,940	37,627	44%	2.61
2033	14,934	3,007	0	0	22,581	17,940	37,357	44%	2.63
2034	14,934	3,007	0	0	22,536	17,940	37,087	44%	2.65
2035	14,934	3,007	0	0	22,532	17,940	36,857	44%	2.67
2036	14,934	3,007	0	0	22,492	17,940	36,595	44%	2.69
2037	14,934	3,007	0	0	22,449	17,940	36,333	44%	2.71

Source(s) of information:
Recycling, composting, incineration, and landfill tonnage - Table VI-2
Gross incineration and waste reduction via incineration - Table VI-1
Population - Table V-1

Sample calculations (2019):

Recycling + composting = Total waste reduction
12,810 tons + 3,007 tons = 15,821.69 tons

Total waste reduction ÷ (total waste reduction + landfill) x 100 = Waste reduction rate
15,822 tons / (15,822 tons + 25,499.33 tons) x 100 = 38%

(Total waste reduction x 2,000 lbs) ÷ (District population x 365 days) = Per capita waste reduction rate
(15,822 tons x 2,000 pounds) / (41,512 x 365) = 2.09 lbs/day

Table VII-4
Annual Rate of Waste Reduction: Industrial Waste

Year	Recycling	Gross Incineration	Waste Reduction via Incineration	Landfill	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (PPD)
2019	46,541	7	5	11,935	41,512	80%	6.14
2020	47,011	0	0	11,816	40,908	80%	6.30
2021	47,481	0	0	11,698	40,630	80%	6.40
2022	47,956	0	0	11,581	40,352	81%	6.51
2023	48,436	0	0	11,465	40,074	81%	6.62
2024	48,920	0	0	11,350	39,796	81%	6.74
2025	49,409	0	0	11,237	39,518	81%	6.85
2026	49,903	0	0	11,124	39,248	82%	6.97
2027	50,402	0	0	11,013	38,977	82%	7.09
2028	50,402	0	0	11,013	38,707	82%	7.13
2029	50,402	0	0	11,013	38,437	82%	7.19
2030	50,402	0	0	11,013	38,167	82%	7.24
2031	50,402	0	0	11,013	37,897	82%	7.29
2032	50,402	0	0	11,013	37,627	82%	7.34
2033	50,402	0	0	11,013	37,357	82%	7.39
2034	50,402	0	0	11,013	37,087	82%	7.45
2035	50,402	0	0	11,013	36,857	82%	7.49
2036	50,402	0	0	11,013	36,595	82%	7.55
2037	50,402	0	0	11,013	36,333	82%	7.60

Source(s) of information:
Recycling and landfill data - Table VI-3
Population - Table V-1

Sample calculations (2019):

Recycling ÷ (recycling + landfill) x 100 = Waste reduction rate
46,541 tons / (46,541 tons + 11,935.23 tons) x 100 = 80%

Recycling x 2,000 pounds ÷ (district population x 365 days) = Per capita waste reduction rate
(46,541 tons x 2,000 pounds) / (41,512 x 365) = 6.14 lbs/day

Table VII-5
Annual Rate of Waste Reduction: Total District Solid Waste

Year	Recycling	Composting	Gross Incineration	Waste Reduction via Incineration	Landfill	Tons Waste Reduction	Population	Waste Reduction Rate	Per Capita Waste Reduction Rate (lb/person/day)
2019	59,351	3,007	14	10	37,435	62,358	41,512	62%	8.23
2020	60,077	3,007	0	0	36,714	63,083	40,908	63%	8.45
2021	60,801	3,007	0	0	36,313	63,808	40,630	64%	8.61
2022	61,535	3,007	0	0	35,908	64,541	40,352	64%	8.76
2023	62,277	3,007	0	0	35,498	65,283	40,074	65%	8.93
2024	63,028	3,007	0	0	35,083	66,034	39,796	65%	9.09
2025	63,788	3,007	0	0	34,662	66,795	39,518	66%	9.26
2026	64,557	3,007	0	0	34,245	67,564	39,248	66%	9.43
2027	65,336	3,007	0	0	33,823	68,343	38,977	67%	9.61
2028	65,336	3,007	0	0	33,790	68,343	38,707	67%	9.67
2029	65,336	3,007	0	0	33,755	68,343	38,437	67%	9.74
2030	65,336	3,007	0	0	33,718	68,343	38,167	67%	9.81
2031	65,336	3,007	0	0	33,678	68,343	37,897	67%	9.88
2032	65,336	3,007	0	0	33,637	68,343	37,627	67%	9.95
2033	65,336	3,007	0	0	33,594	68,343	37,357	67%	10.02
2034	65,336	3,007	0	0	33,549	68,343	37,087	67%	10.10
2035	65,336	3,007	0	0	33,545	68,343	36,857	67%	10.16
2036	65,336	3,007	0	0	33,505	68,343	36,595	67%	10.23
2037	65,336	3,007	0	0	33,462	68,343	36,333	67%	10.31

Note: Columns for incineration have not been included in this table since the District has not used this managament method for solid waste.

Source(s) of information:
Recycling, composting, incineration, waste reduction via incineration, landfill, and population - Tables VII-3 and VII-4

Sample calculations (2019):

Recycling + composting + waste reduction via incineration = Tons waste reduction
59,351 tons + 3,007 tons = 62,357.68 tons

Total waste reduction ÷ (total waste reduction + landfill) x 100 = Waste reduction rate
62,358 tons / (62,358 tons + 37,434.56 tons) x 100 = 62%

(Total waste reduction x 2,000 lbs) ÷ (District population x 365 days) = Per capita waste reduction rate
(62,358 tons x 2,000 pounds) / (41,512 x 365) = 8.23 lbs/day

VIII. Cost of Financing Plan Implementation [ORC Section 3734.53(A)(9), (12) and (B)]

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1. District Disposal Fees

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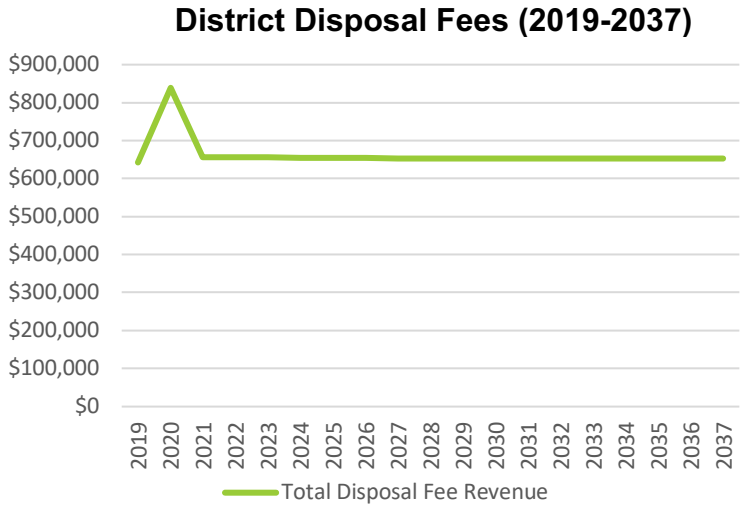

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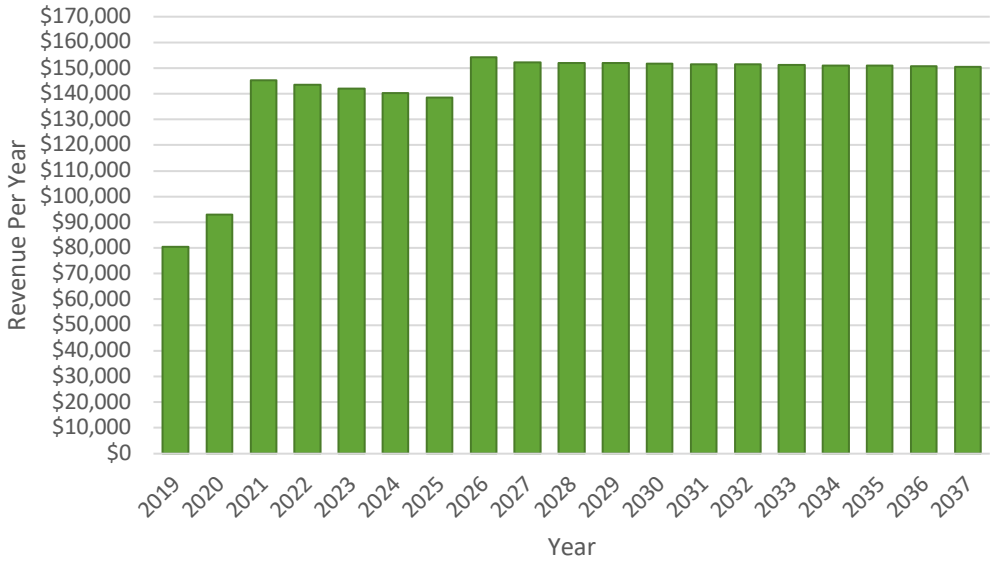
The District currently receives $3.00 per ton on all solid waste that is generated in the District. Table VIII-2, "Generation Fee Schedule and Revenues," presents the total generation fee revenue for the planning period. Generation fee revenue in 2019 was $80,473; in the final year of the planning period (2037), generation fee revenue is projected to be $150,581.

Table VIII-2 presents the generation fee schedule and revenues. Actual generation fee revenue matching the District's Quarterly Fee Reports was used for 2019 and 2020. Generation fee revenue for 2021 through 2037 is based on the projected tons of solid waste generated within the District from Table VI-1.

District Generation Fees (2019-2037)



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The District receives annual recycling revenue from the sale of recyclables, fees for certain recycling services, and other similar recycling revenue sources. Due to the recycling markets being much lower than in the past, the District projects that recycling revenue will remain at the low levels such as in 2019-2020. However, the District is projecting a slight increase of 1% annually from additional effort put into programming every year.

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The District reserves the right to adjust user fees as needed and determined by the Board of County Commissioners based on recommendations from the District Coordinator at any point in the planning period.

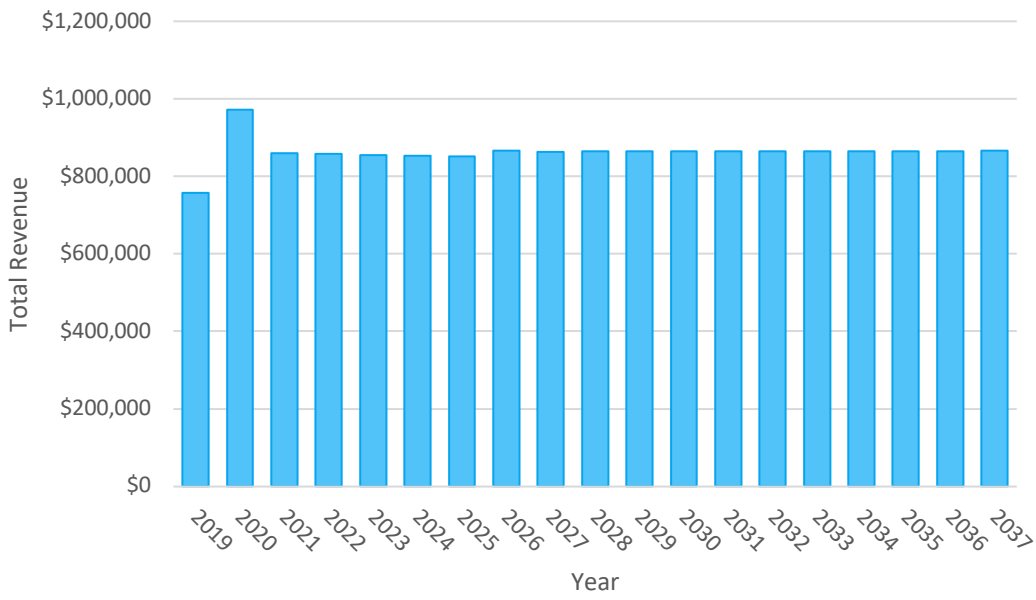
5. Summary of District Revenues

Table VIII-3, "Summary of Revenue Generated and Mechanisms Used," presents the District's actual revenues received by all funding mechanisms for 2019 and 2020. Following are descriptions of each funding mechanism used by the District throughout the planning period and the methodology used to project each amount:

Revenue Source	2023 Projected Revenue Total
Disposal Fees	**$675,285**
Disposal fees from solid waste disposed at the Crawford County Landfill from generators located in district and out of district.	
Generation Fees	**$141,991**
Generation fees from solid waste disposed at the Crawford County Landfill and other landfills outside of the district that are generated from within the district.	
Recycling Revenue	**$38,000**
Revenue from the sale of recyclables, fees for dumpster services, and other similar revenues from recyclable material.	

The following graph depicts the District's total actual and projected revenue from 2019 – 2037 and includes all anticipated revenue sources identified above.

District Revenue (2019 – 2037)



Total revenues are anticipated to increase from $855,276 in 2023, the first year of the planning period, to $865,554 in 2037, the final year of the planning period.

6. Other Funding Mechanisms

The District reserves the right to consider other funding mechanisms, including but not limited to contract fees, rates and charges including user fees, grants, and other mechanisms as identified to complement or add to the current revenue sources.

The District's Board of County Commissioners may choose to use the mechanisms listed above to supplement or replace the District's current sources of revenue.

B. Cost of Plan Implementation

Table VIII-4, "Anticipated Loans Secured by the District", indicates the District does not have any outstanding loans. The District reserves the right to assume debt for any purpose that is in the best interest of the District. Any new loans that may be incurred during the planning period will be evaluated to determine if a significant change in the projected expenses as it relates to projected revenues would require an amendment to the budget tables, which would require ratification, by the political subdivision of the District. An amendment to the budget tables would not be required if the changes are not significant and are consistent with this *Plan Update*.

Table VIII-5, "Estimated Cost for Plan Implementation," includes a detailed breakdown of administration, residential/commercial/industrial recycling and collection programs, residential/commercial education and awareness programs, market development support, health department funding and other programs.

Table VIII-5 presents projected budgets for the above listed categories for the entire planning period. The District understands that changes in revenues as well as expenses throughout the planning period may occur that have not been anticipated in these budgets.

The District will evaluate the funding priorities and may adjust the amount of funding that will be allocated to the various initiatives, strategies, and programs of the District. If the District concludes that a change in funding is warranted for a District initiative, strategy or program, the District shall evaluate whether the affected initiative, strategy or program constitutes a material change in circumstances that requires an update of the District Plan and/or a revised budget should be prepared and ratified. If the District concludes that the change in an essential program is not material, the District may adjust funding. The District Coordinator will explain the proposed changes in expenditures to the Board. Thereafter, the adjusted funding shall be in accordance with the District Plan and shall not constitute a basis to update the District Plan.

If the District concludes that adjusted funding for one or more initiatives, strategies or programs constitutes a material change in circumstances or is a significant budgetary revision, the changes in funding shall be implemented and the Board shall request the Policy Committee to prepare a revised or updated Plan incorporating the changes in funding or a revised budget in this section and ratify the changes per the ORC process.

The District Coordinator will allocate these funds with the approval of the Board of County Commissioners.

1. Administration

Administration costs include the payroll, payroll taxes and benefits, office expenses, equipment, professional services (includes plan preparation, attorney fees and other consulting), travel and other administrative expenses.

For 2023, the first year of the planning period, the following funding levels are projected for each administrative line item and include a brief description of each expense line item:

Program	Program #	2023 Budget	Annual Escalator
Personnel – Salaries	**Admin-01**	**$268,498**	**2%**
Salaries include the cost of employing District staff but does not include benefits.			
Personnel – Benefits	**Admin-1.2**	**$164,141**	**2%**
Benefits include the cost of health care, workers compensation, unemployment, Medicare and PERS retirement for the employees of the District.			
Office Overhead	**Admin-02**	**$37,624**	**1%**
Office overhead includes costs for supplies, equipment, and some contract service fees.			
Plan Prep and Monitoring	**Admin-03**	**$0**	**Varies**
Plan preparation and monitoring expenses include the costs to prepare the plan update every 5 years. Costs vary depending on when the plan is supposed to be updated.			

For 2023, the first year of the planning period, the District is projecting to spend $470,263 in administrative expenses.

2. Residential/Commercial/Industrial Programs

Residential/commercial/industrial programs include all the programs and services needed to implement this *Plan Update*. For 2023, the first year of the planning period, the following funding levels are projected for each program and include a brief description of each expense line item:

Program	Program #	2023 Budget	Annual Escalator
Curbside Recycling Technical Assistance	**CC-01**	**$0**	**N/A**
Expenses related to supporting curbside recycling in the District. The District does not incur a direct cost for this program unless technical assistance is requested.			
Drop-Off Recycling	**CC-02**	**$0**	**N/A**
Expenses related to supporting the full-time drop-off recycling locations with technical assistance, miscellaneous supplies, equipment, collection, and unanticipated expenses are included in the Crawford County Recycling Center program: CC-04 and in Personnel: Admin-01. In addition, expenses depicted in 2019 and 2020 for this program related only to money paid to entities that assisted the District with the management of the part time sites. This stipend was eliminated in 2021 and beyond. The District may consider a change in the operator of the drop-off program at any point in the planning period. Regardless of who operates the program, the same level of service will be offered as is currently (all full-time sites) and could include additional sites as well. If the above process incurs expenses that are significantly more expensive than the budget included in this Plan Update, the District will update the budget tables as required in the Ohio Revised Code process. The District has accounted for increased expenses, starting in 2028, that would include a portion of the potential improvements to this program as discussed in Section V.			

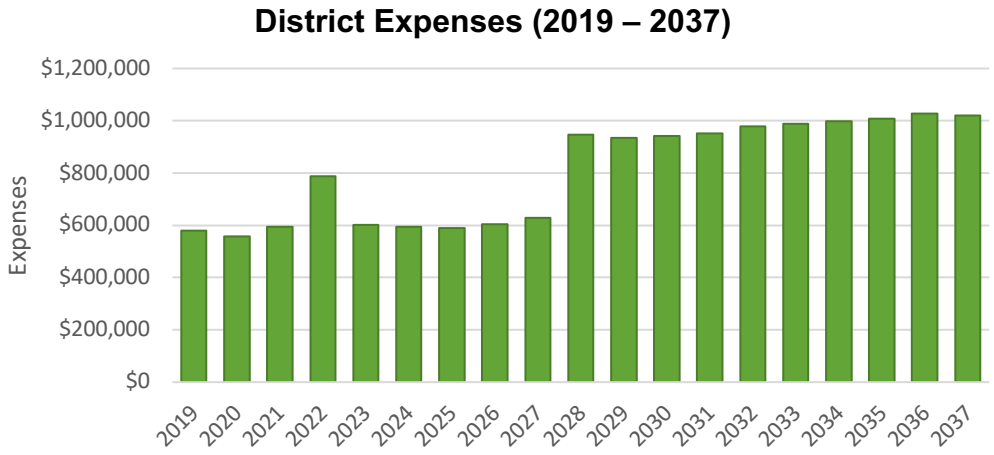
Program	Program #	2023 Budget	Annual Escalator
Business Recycling Collection	**CC-03**	**$0**	**N/A**
The cost of this program is included in CC-04 and in Personnel: Admin-01.			
Crawford County Recycling Center	**CC-04**	**$101,278**	**1%**
The expenses for this program include the costs for operating the facility, some equipment costs, business recycling collection costs, and litter clean-up. The Crawford County Recycling Center has limited capacity due to physical and location constraints. This has caused the District to consider a change in the operator of the recycling facility. The operator change would include what was already discussed in Programs CC-2 and CC-3. Regardless of who operates the facility, the same level of processing will be offered as is currently. This operator change potential would occur prior to the next scheduled Plan Update process. If an operator change does not occur prior to the next Plan Update process, the District has included expense projections (2028 and beyond) for expansion and or relocation of the recycling center. Since this may occur in the next Plan Update, the District has accounted for the expense but would update that expense at the time of the Plan Update process. The District has accounted for increased expenses, starting in 2028, that would include a portion of the potential improvements to this program as discussed in Section V.			
Yard Waste Composting	**CC-05**	**$0**	**N/A**
The District does not incur a direct cost for this program.			
Special Waste Materials	**CC-06**	**$13,828**	**1%**
The cost of operating the District's county-wide special waste management program. This program occurs at the Crawford County Recycling Center, and every four years, a special event occurs for additional collection of special materials. The District reserves the right to adjust the special collection event schedule at any point in the planning period.			
Education and Awareness	**CC-07**	**$8,750**	**Constant**
The contracted labor cost of operating the general recycling awareness and education program for the District. The District pays the same amount every year to the Crawford County Soil and Water District.			
Litter Clean-Up	**CC-08**	**$0**	**N/A**
The cost of this program is included in CC-04.			
Other Commercial Recycling	**CC-09**	**$0**	**N/A**
The District does not incur a direct cost for this program. Administrative expenses are included in Admin 1-3.			
Commercial Recycling Technical Assistance	**CC-10**	**$0**	**N/A**
The District does not incur a direct cost for this program. Administrative expenses are included in Admin 1-3.			
Buyback Recycling Facilities	**CC-11**	**$0**	**N/A**
The District does not incur a cost for this program.			
Emergency Disaster Debris Management	**CC-12**	**$0**	**N/A**
The District does not incur a cost for this program unless a disaster occurs. If a disaster occurs, the District will use funds from the remaining balance.			

Program	Program #	2023 Budget	Annual Escalator
Health District Partnership Program	**CC-13**	**$6,000**	**Constant**
The District contracts with and pays the Crawford County General Health District the same amount every year for inspections and other enforcement related to solid waste.			

For 2023, the first year of the planning period, the District is projecting to spend $129,856 in programmatic expenses.

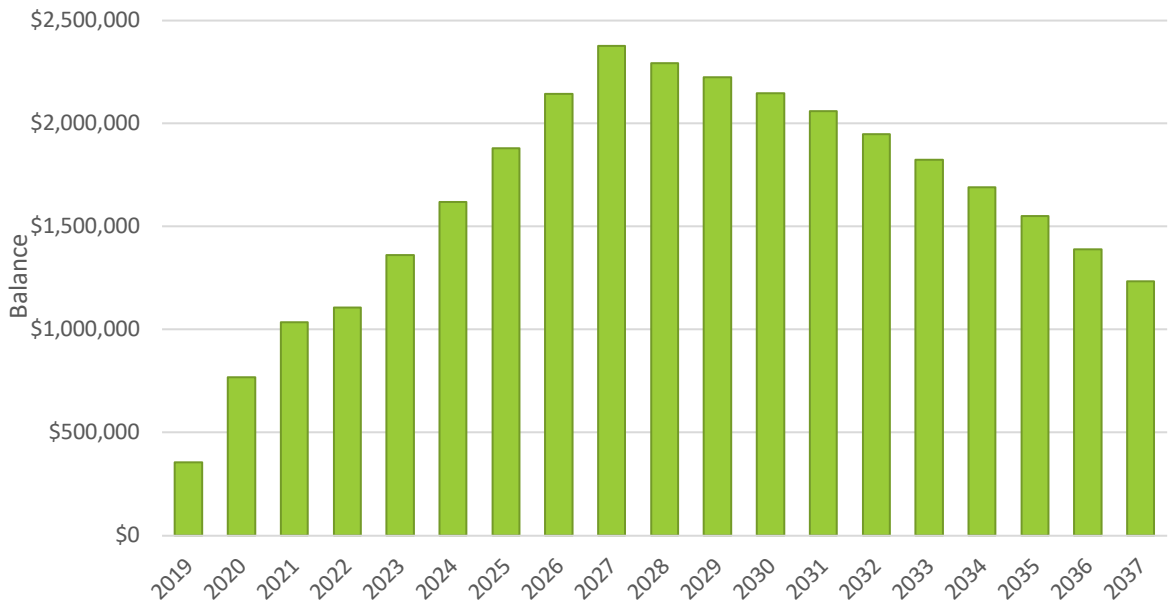
3. Expense Summary

The District is projecting to spend $600,257 in 2023, the first year of the planning period and $1,020,953 in 2037, the final year of the planning period. The following chart summarizes the District's actual and projected expenses throughout the planning period.



Based on the projected revenue and expenses detailed in Table VIII-8, the District's excess fund balance is expected to grow through 2027 at which time the expected expenses for the possible recycling center expansion/relocation and/or drop-off collection system enhancements start to draw down the balance. Through the next 10 years of the planning period, the fund balance is projected to decline. The Board of County Commissioners will decide what form of capital expense payment to use at the time (a loan or or withdrawal from the unencumbered balance). The following graph depicts the projected annual fund balance throughout the planning period:

District Fund Balance (2019 – 2037)



The District has designed a plan that meets the goals of the state of Ohio and is building a fund balance that can be utilized to develop potential new programing. The District would like to evaluate the needs of the District during the next planning cycle for available funds for expansion of programming.

C. Funds Allocated from ORC 3734.57(B), ORC 3734.572 and ORC 3734.573

Table VIII-6, "Revenues and Allocations in Accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573," presents the District's projected costs for the ten allowed uses. The District's budget falls into three categories: preparation and monitoring of plan implementation, implementation of the approved plan, and financial assistance to boards of health for solid waste enforcement.

The following graph depicts the District's annual expense to implement this *Plan Update* based on the expense distribution:

VIII. Cost of Financing Plan Implementation [ORC Section 3734.53(A)(9), (12) and (B)]

This section of the Plan provides information on the District's revenues and expenditures. The revenues and expenditures presented for 2019-2020 are based on actual revenues received and costs expended. The planning period includes cost projections based on these initial years.

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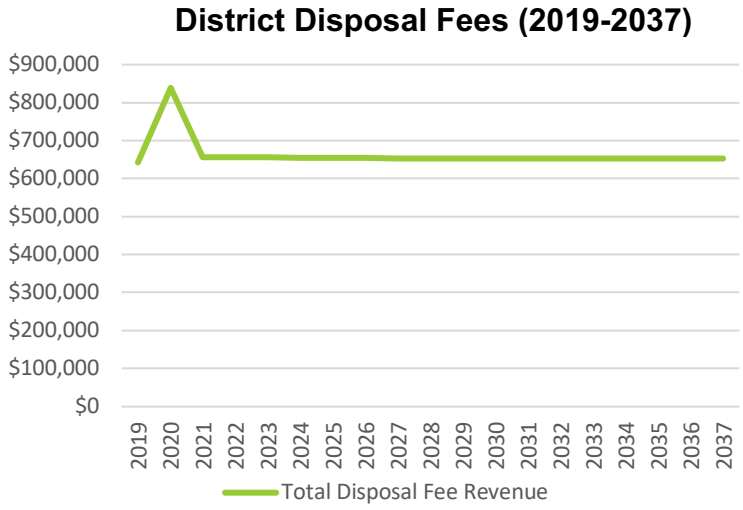

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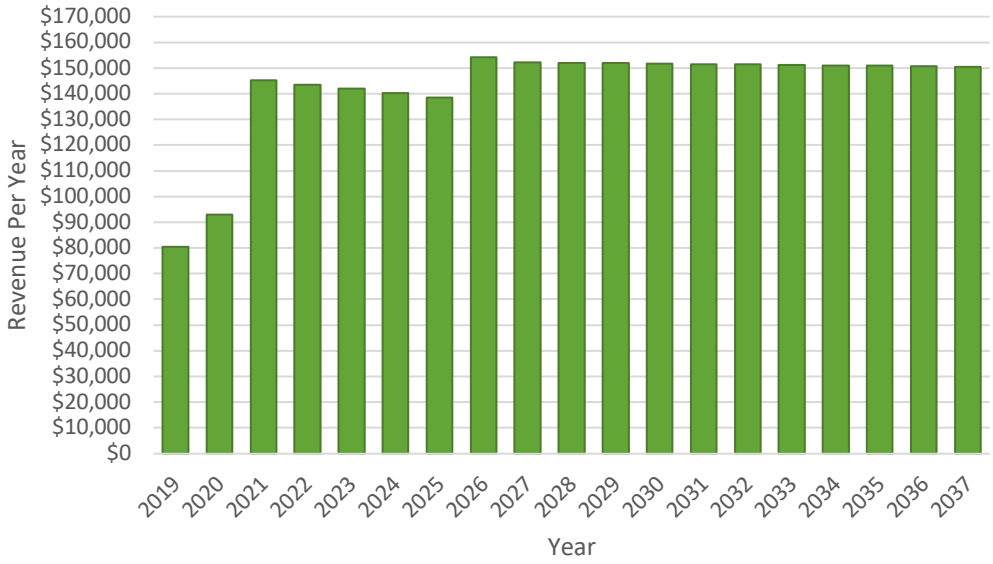

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Revenue from the sale of recyclables, fees for dumpster services, and other similar revenues from recyclable material.	

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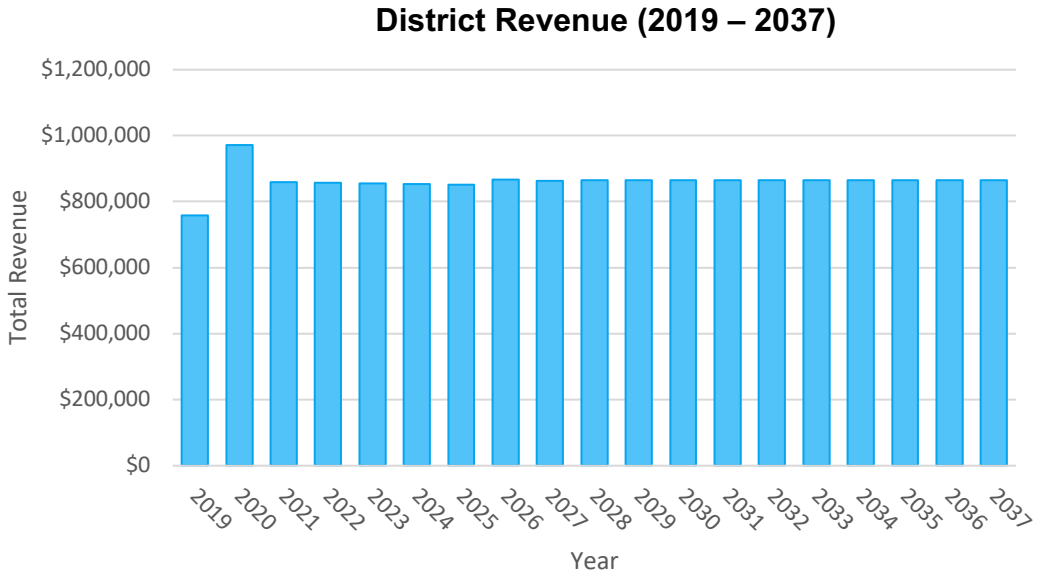

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The District's Board of County Commissioners may choose to use the mechanisms listed above to supplement or replace the District's current sources of revenue.

B. Cost of Plan Implementation

Table VIII-4, "Anticipated Loans Secured by the District", indicates the District does not have any outstanding loans. The District reserves the right to assume debt for any purpose that is in the best interest of the District. Any new loans that may be incurred during the planning period will be evaluated to determine if a significant change in the projected expenses as it relates to projected revenues would require an amendment to the budget tables, which would require ratification, by the political subdivision of the District. An amendment to the budget tables would not be required if the changes are not significant and are consistent with this *Plan Update*.

Table VIII-5, "Estimated Cost for Plan Implementation," includes a detailed breakdown of administration, residential/commercial/industrial recycling and collection programs, residential/commercial education and awareness programs, market development support, health department funding and other programs.

Table VIII-5 presents projected budgets for the above listed categories for the entire planning period. The District understands that changes in revenues as well as expenses throughout the planning period may occur that have not been anticipated in these budgets.

The District will evaluate the funding priorities and may adjust the amount of funding that will be allocated to the various initiatives, strategies, and programs of the District. If the District concludes that a change in funding is warranted for a District initiative, strategy or program, the District shall evaluate whether the affected initiative, strategy or program constitutes a material change in circumstances that requires an update of the District Plan and/or a revised budget should be prepared and ratified. If the District concludes that the change in an essential program is not material, the

District may adjust funding. The District Coordinator will explain the proposed changes in expenditures to the Board. Thereafter, the adjusted funding shall be in accordance with the District Plan and shall not constitute a basis to update the District Plan.

If the District concludes that adjusted funding for one or more initiatives, strategies or programs constitutes a material change in circumstances or is a significant budgetary revision, the changes in funding shall be implemented and the Board shall request the Policy Committee to prepare a revised or updated Plan incorporating the changes in funding or a revised budget in this section and ratify the changes per the ORC process.

The District Coordinator will allocate these funds with the approval of the Board of County Commissioners.

1. Administration

Administration costs include the payroll, payroll taxes and benefits, office expenses, equipment, professional services (includes plan preparation, attorney fees and other consulting), travel and other administrative expenses.

For 2023, the first year of the planning period, the following funding levels are projected for each administrative line item and include a brief description of each expense line item:

Program	Program #	2023 Budget	Annual Escalator
Personnel – Salaries	**Admin-01**	**$268,498**	**2%**
Salaries include the cost of employing District staff but does not include benefits.			
Personnel – Benefits	**Admin-1.2**	**$164,141**	**2%**
Benefits include the cost of health care, workers compensation, unemployment, Medicare and PERS retirement for the employees of the District.			
Office Overhead	**Admin-02**	**$37,624**	**1%**
Office overhead includes costs for supplies, equipment, and some contract service fees.			
Plan Prep and Monitoring	**Admin-03**	**$0**	**Varies**
Plan preparation and monitoring expenses include the costs to prepare the plan update every 5 years. Costs vary depending on when the plan is supposed to be updated.			

For 2023, the first year of the planning period, the District is projecting to spend $470,263 in administrative expenses.

2. Residential/Commercial/Industrial Programs

Residential/commercial/industrial programs include all the programs and services needed to implement this *Plan Update*. For 2023, the first year of

the planning period, the following funding levels are projected for each program and include a brief description of each expense line item:

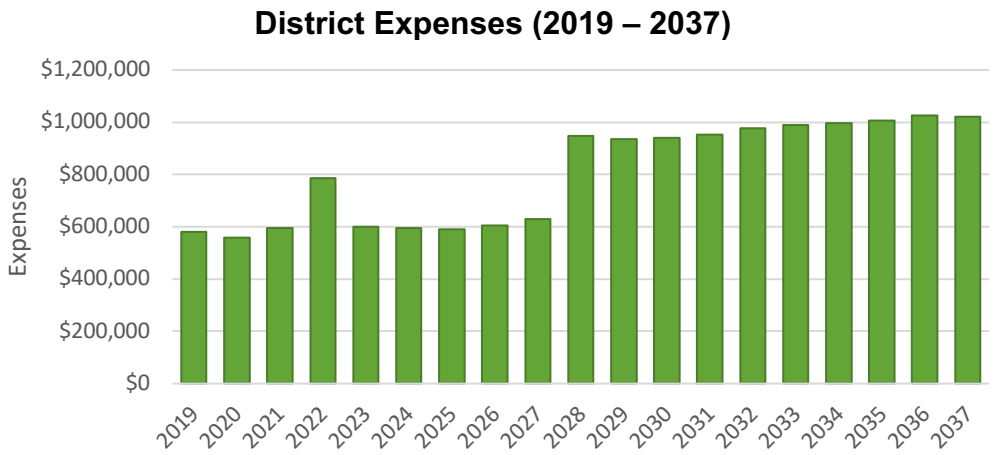
Program	Program #	2023 Budget	Annual Escalator
Curbside Recycling Technical Assistance	**CC-01**	**$0**	**N/A**
Expenses related to supporting curbside recycling in the District. The District does not incur a direct cost for this program unless technical assistance is requested.			
Drop-Off Recycling	**CC-02**	**$0**	**N/A**
Expenses related to supporting the full-time drop-off recycling locations with technical assistance, miscellaneous supplies, equipment, collection, and unanticipated expenses are included in the Crawford County Recycling Center program: CC-04 and in Personnel: Admin-01. In addition, expenses depicted in 2019 and 2020 for this program related only to money paid to entities that assisted the District with the management of the part time sites. This stipend was eliminated in 2021 and beyond. The District may consider a change in the operator of the drop-off program at any point in the planning period. Regardless of who operates the program, the same level of service will be offered as is currently (all full-time sites) and could include additional sites as well. If the above process incurs expenses that are significantly more expensive than the budget included in this Plan Update, the District will update the budget tables as required in the Ohio Revised Code process. The District has accounted for increased expenses, starting in 2028, that would include a portion of the potential improvements to this program as discussed in Section V.			
Business Recycling Collection	**CC-03**	**$0**	**N/A**
The cost of this program is included in CC-04 and in Personnel: Admin-01.			
Crawford County Recycling Center	**CC-04**	**$101,278**	**1%**
The expenses for this program include the costs for operating the facility, some equipment costs, business recycling collection costs, and litter clean-up. The Crawford County Recycling Center has limited capacity due to physical and location constraints. This has caused the District to consider a change in the operator of the recycling facility. The operator change would include what was already discussed in Programs CC-2 and CC-3. Regardless of who operates the facility, the same level of processing will be offered as is currently. This operator change potential would occur prior to the next scheduled Plan Update process. If an operator change does not occur prior to the next Plan Update process, the District has included expense projections (2028 and beyond) for expansion and or relocation of the recycling center. Since this may occur in the next Plan Update, the District has accounted for the expense but would update that expense at the time of the Plan Update process. The District has accounted for increased expenses, starting in 2028, that would include a portion of the potential improvements to this program as discussed in Section V.			
Yard Waste Composting	**CC-05**	**$0**	**N/A**
The District does not incur a direct cost for this program.			

Program	Program #	2023 Budget	Annual Escalator
Special Waste Materials	**CC-06**	**$13,828**	**1%**
The cost of operating the District's county-wide special waste management program. This program occurs at the Crawford County Recycling Center, and every four years, a special event occurs for additional collection of special materials. The District reserves the right to adjust the special collection event schedule at any point in the planning period.			
Education and Awareness	**CC-07**	**$8,750**	**Constant**
The contracted labor cost of operating the general recycling awareness and education program for the District. The District pays the same amount every year to the Crawford County Soil and Water District.			
Litter Clean-Up	**CC-08**	**$0**	**N/A**
The cost of this program is included in CC-04.			
Other Commercial Recycling	**CC-09**	**$0**	**N/A**
The District does not incur a direct cost for this program. Administrative expenses are included in Admin 1-3.			
Commercial Recycling Technical Assistance	**CC-10**	**$0**	**N/A**
The District does not incur a direct cost for this program. Administrative expenses are included in Admin 1-3.			
Buyback Recycling Facilities	**CC-11**	**$0**	**N/A**
The District does not incur a cost for this program.			
Emergency Disaster Debris Management	**CC-12**	**$0**	**N/A**
The District does not incur a cost for this program unless a disaster occurs. If a disaster occurs, the District will use funds from the remaining balance.			
Health District Partnership Program	**CC-13**	**$6,000**	**Constant**
The District contracts with and pays the Crawford County General Health District the same amount every year for inspections and other enforcement related to solid waste.			

For 2023, the first year of the planning period, the District is projecting to spend $129,856 in programmatic expenses.

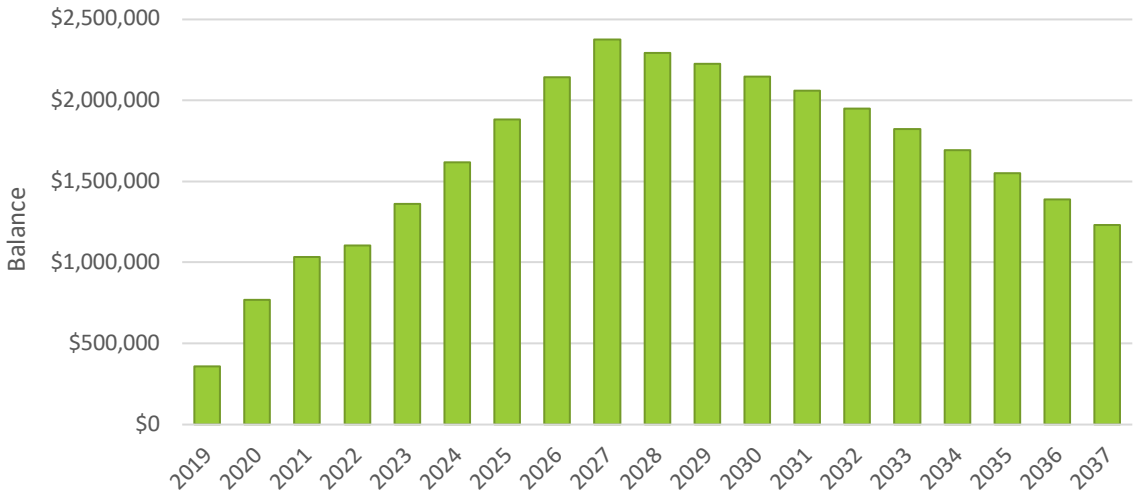
3. Expense Summary

The District is projecting to spend $600,257 in 2023, the first year of the planning period and $1,020,953 in 2037, the final year of the planning period. The following chart summarizes the District's actual and projected expenses throughout the planning period.



Based on the projected revenue and expenses detailed in Table VIII-8, the District's excess fund balance is expected to grow through 2027 at which time the expected expenses for the possible recycling center expansion/relocation and/or drop-off collection system enhancements start to draw down the balance. Through the next 10 years of the planning period, the fund balance is projected to decline. The Board of County Commissioners will decide what form of capital expense payment to use at the time (a loan or or withdrawal from the unencumbered balance). The following graph depicts the projected annual fund balance throughout the planning period:

District Fund Balance (2019 – 2037)

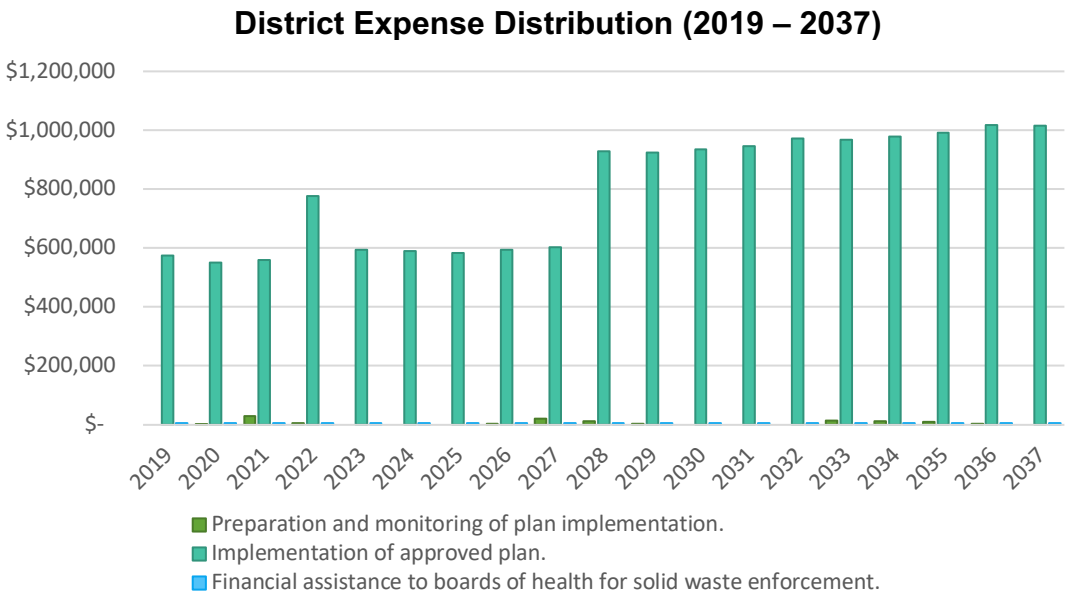


The District has designed a plan that meets the goals of the state of Ohio and is building a fund balance that can be utilized to develop potential new programing. The District would like to evaluate the needs of the District during the next planning cycle for available funds for expansion of programming.

C. Funds Allocated from ORC 3734.57(B), ORC 3734.572 and ORC 3734.573

Table VIII-6, "Revenues and Allocations in Accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573," presents the District's projected costs for the ten allowed uses. The District's budget falls into three categories: preparation and monitoring of plan implementation, implementation of the approved plan, and financial assistance to boards of health for solid waste enforcement.

The following graph depicts the District's annual expense to implement this *Plan Update* based on the expense distribution:



D. Contingent Funding

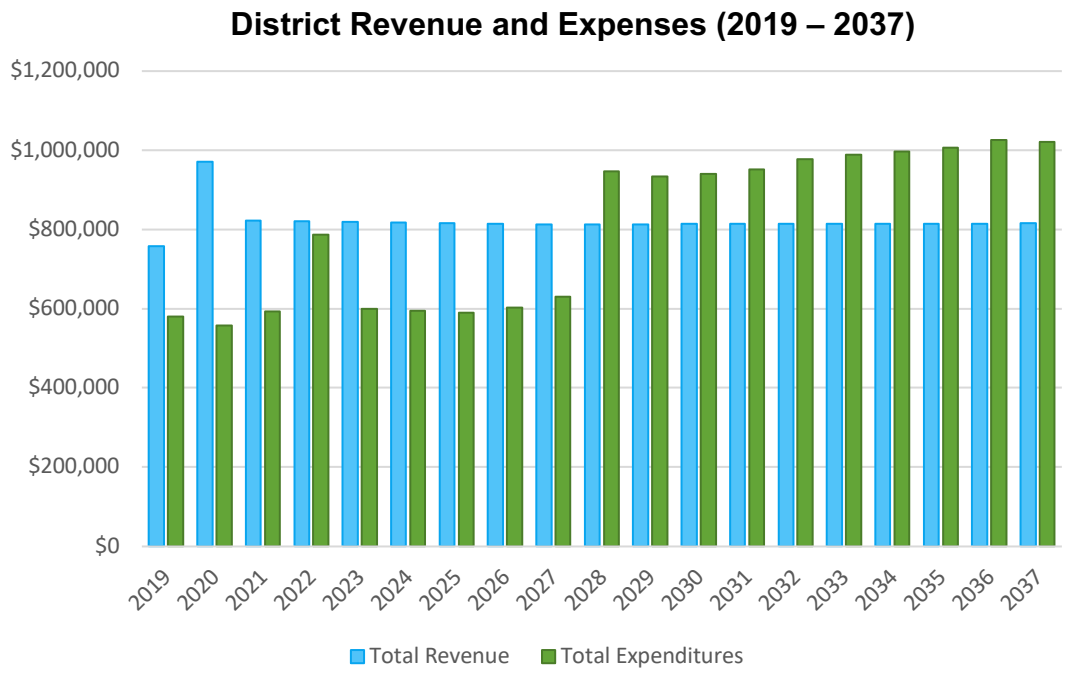
The Policy Committee does not consider funding to be an issue of concern during the planning period. The District reserves the right to further increase generation and/or disposal fees in the future if expenses become an issue of concern. The District also reserves the right to implement a designation contract fee which would be collected from facilities designated to receive solid waste generated within the District.

E. Summary of Costs and Revenues

Table VIII-8, "Summary of District Revenues and Expenditures," includes the annual costs for each program and activity for the reference year and each year of the planning period. Total expenditures for the first year of the planning period are projected to be $600,257 and will rise slowly over the planning period ending at $1,020,953 in 2037. The District is projected to begin the planning period with a carryover balance of $1,033,288 and will have an ending balance of approximately $448,671 in 2037.

Each year of the planning period has sufficient funding for each of the programs.

The following graph depicts the actual and projected revenues vs. expenses of the District throughout the planning period:



The District may move funds between programs and activities as costs and revenues may increase or decrease during the planning period.

Table VIII-1
District Disposal Fee Schedule and Revenues Generated

Year	Fee Schedule ($/ton)			Tons Disposed in the District			Total Disposal Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2019	$2.00	$4.00	$1.00	36,963	152,885	-	$642,373
2020	$2.00	$4.00	$1.00	30,418	195,000	-	$838,962
2021	$2.00	$4.00	$1.00	35,609	151,417	-	$676,885
2022	$2.00	$4.00	$1.00	35,212	151,417	-	$676,090
2023	$2.00	$4.00	$1.00	34,809	151,417	-	$675,285
2024	$2.00	$4.00	$1.00	34,402	151,417	-	$674,471
2025	$2.00	$4.00	$1.00	33,990	151,417	-	$673,647
2026	$2.00	$4.00	$1.00	33,581	151,417	-	$672,829
2027	$2.00	$4.00	$1.00	33,167	151,417	-	$672,000
2028	$2.00	$4.00	$1.00	33,134	151,417	-	$671,935
2029	$2.00	$4.00	$1.00	33,100	151,417	-	$671,866
2030	$2.00	$4.00	$1.00	33,063	151,417	-	$671,793
2031	$2.00	$4.00	$1.00	33,025	151,417	-	$671,716
2032	$2.00	$4.00	$1.00	32,984	151,417	-	$671,636
2033	$2.00	$4.00	$1.00	32,942	151,417	-	$671,551
2034	$2.00	$4.00	$1.00	32,898	151,417	-	$671,462
2035	$2.00	$4.00	$1.00	32,894	151,417	-	$671,455
2036	$2.00	$4.00	$1.00	32,855	151,417	-	$671,376
2037	$2.00	$4.00	$1.00	32,813	151,417	-	$671,293

Table VIII-2
Generation Fee Schedule and Revenues

Year	Base Generation Fee	Tons of District Waste to be Disposed	Total Generation Fee Revenue (QFR)
2019	$3.00	37,435	$80,473
2020	$3.00	30,816	$93,036
2021	$4.00	36,313	$145,254
2022	$4.00	35,908	$143,632
2023	$4.00	35,498	$141,991
2024	$4.00	35,083	$140,331
2025	$4.00	34,662	$138,650
2026	$4.50	34,245	$154,104
2027	$4.50	33,823	$152,205
2028	$4.50	33,790	$152,055
2029	$4.50	33,755	$151,896
2030	$4.50	33,718	$151,729
2031	$4.50	33,678	$151,553
2032	$4.50	33,637	$151,368
2033	$4.50	33,594	$151,173
2034	$4.50	33,549	$150,969
2035	$4.50	33,545	$150,954
2036	$4.50	33,505	$150,772
2037	$4.50	33,462	$150,581

Source(s) of information: Tons to be disposed (2019-2037) - Tables VII-2 and VII-3

Table VIII-3
Summary of Revenue Generated and Mechanisms Used

Year	Disposal Fees	Generation Fees	Recycling Revenues	Total Revenue Generated
2019	$642,373	$80,473	$35,151	$757,996
2020	$838,962	$93,036	$39,351	$971,350
2021	$676,885	$145,254	$37,251	$859,390
2022	$676,090	$143,632	$37,623	$857,346
2023	$675,285	$141,991	$38,000	$855,276
2024	$674,471	$140,331	$38,380	$853,181
2025	$673,647	$138,650	$38,763	$851,060
2026	$672,829	$154,104	$39,151	$866,084
2027	$672,000	$152,205	$39,543	$863,747
2028	$671,935	$152,055	$39,938	$863,928
2029	$671,866	$151,896	$40,337	$864,100
2030	$671,793	$151,729	$40,741	$864,263
2031	$671,716	$151,553	$41,148	$864,417
2032	$671,636	$151,368	$41,560	$864,563
2033	$671,551	$151,173	$41,975	$864,699
2034	$671,462	$150,969	$42,395	$864,826
2035	$671,455	$150,954	$42,819	$865,228
2036	$671,376	$150,772	$43,247	$865,395
2037	$671,293	$150,581	$43,680	$865,554

Source(s) of information:
2019, 2020 - Quarterly Fee Reports
2019-2037 Generation Fees - Calculated from tonnage in Table VIII-2
2019-2037 Recycling Revenue and User Fee

Table VIII-4
Anticipated Loans Secured by the District

Year	Loans Obtained by the District		Interest Rate	Years Remaining on Loan	Annual Debt Service
	Lending Institution	Remaining Principal			
2019	N/A	$0.00	N/A	0	$0.00
2020	N/A	$0.00	N/A	0	$0.00
2021	N/A	$0.00	N/A	0	$0.00
2022	N/A	$0.00	N/A	0	$0.00
2023	N/A	$0.00	N/A	0	$0.00
2024	N/A	$0.00	N/A	0	$0.00
2025	N/A	$0.00	N/A	0	$0.00
2026	N/A	$0.00	N/A	0	$0.00
2027	N/A	$0.00	N/A	0	$0.00
2028	N/A	$0.00	N/A	0	$0.00
2029	N/A	$0.00	N/A	0	$0.00
2030	N/A	$0.00	N/A	0	$0.00
2031	N/A	$0.00	N/A	0	$0.00
2032	N/A	$0.00	N/A	0	$0.00
2033	N/A	$0.00	N/A	0	$0.00
2034	N/A	$0.00	N/A	0	$0.00
2035	N/A	$0.00	N/A	0	$0.00
2036	N/A	$0.00	N/A	0	$0.00
2037	N/A	$0.00	N/A	0	$0.00

Table VIII-5
Estimated Costs for Plan Implementation

Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
District Administration Budget																				
Personnel	Admin-1	**$255,945**	$251,220	$258,071	$263,233	$268,498	$273,867	$279,345	$284,932	$290,630	$296,443	$302,372	$308,419	$314,588	$320,879	$327,297	$333,843	$340,520	$347,330	$354,277
Benefits	Admin1.2	**$124,978**	$129,610	$141,640	$152,387	$164,141	$136,934	$139,672	$142,466	$145,315	$148,221	$151,186	$154,210	$157,294	$160,440	$163,648	$166,921	$170,260	$173,665	$177,138
Office Overhead	Admin-2	**$72,775**	$29,789	$36,883	$37,252	$37,624	$38,001	$38,381	$38,764	$39,152	$39,544	$39,939	$40,338	$40,742	$41,149	$41,561	$41,976	$42,396	$42,820	$43,248
Plan Prep and Monitoring	Admin-3	**$0**	$1,150	$29,350	$5,000	$0	$0	$0	$4,000	$20,000	$12,000	$4,000	$0	$0	$0	$15,000	$12,000	$10,000	$3,000	$0
Other																				
Subtotal		**$453,698**	**$407,769**	**$465,945**	**$457,872**	**$470,263**	**$448,802**	**$457,398**	**$470,162**	**$495,098**	**$496,208**	**$497,497**	**$502,987**	**$512,623**	**$522,468**	**$547,506**	**$554,741**	**$563,176**	**$566,815**	**$574,663**

Table VIII-5 (continued)
Estimated Costs for Plan Implementation

Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Residential/Commercial/Industrial Programs																				
Curbside Recycling Technical Assistance	CC-01	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Drop-Off Recycling	CC-02	**$2,757**	$827	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Business Recycling Collection	CC-03	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Crawford County Recycling Center	CC-04	**$95,539**	$98,299	$99,282	$300,275	$101,278	$102,291	$103,314	$104,347	$105,390	$406,444	$407,509	$408,584	$409,669	$410,766	$411,874	$412,993	$414,123	$415,264	$416,416
Yard Waste Composting	CC-05	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Special Waste Materials	CC-06	**$13,691**	$36,585	$13,828	$13,966	$13,828	$28,966	$13,966	$14,106	$14,247	$29,389	$14,389	$14,533	$14,533	$29,678	$14,678	$14,825	$14,973	$29,973	$15,123
Education and Awareness	CC-07	**$8,750**	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750
Litter Clean-Up	CC-08	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Commercial Recycling	CC-09	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Commercial Recycling Technical Assistance	CC-10	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Buyback Recycling Facilities	CC-11	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Emergency Disaster Debris Management	CC-12	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Health District Partnership Program	CC-13	**$6,000**	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Subtotal		**$126,737**	$150,461	$127,860	$328,991	$129,856	$146,007	$132,030	$133,202	$134,387	$450,583	$436,648	$437,867	$438,952	$455,194	$441,302	$442,568	$443,846	$459,987	$446,289
Totals		$579,835	$558,230	$593,805	$786,863	$600,118	$594,808	$589,427	$603,364	$629,484	$946,791	$934,144	$940,834	$951,576	$977,663	$988,808	$997,308	$1,007,022	$1,026,802	$1,020,953

Table VIII-6
Revenues and Allocations in Accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573

Year	Total Annual Revenue ($)	Allocations of ORC 3734.57 and ORC 3734.573 Revenue For the Following Purposes:										Year-End Balance ($)
		1	2	3	4	5	6	7	8	9	10	Total Budget Allocation ($)	
Beginning Balance													**$ 178,161**
2019	$ 757,996	$ -	$ 573,835	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 579,835	$ 356,322
2020	$ 971,350	$ 1,150	$ 551,080	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 558,230	$ 769,442
2021	$ 823,077	$29,350	$ 558,455	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 593,805	$ 998,714
2022	$ 821,438	$5,000	$775,863	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 786,863	$ 1,033,288
2023	$ 819,778	$0	$594,118	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 600,118	$ 1,252,948
2024	$ 818,098	$0	$588,808	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 594,808	$ 1,476,238
2025	$ 816,397	$0	$583,427	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 589,427	$ 1,703,208
2026	$ 814,716	$4,000	$593,364	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 603,364	$ 1,914,560
2027	$ 813,013	$20,000	$603,484	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 629,484	$ 2,098,088
2028	$ 813,243	$12,000	$928,791	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 946,791	$ 1,964,540
2029	$ 813,468	$4,000	$924,144	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 934,144	$ 1,843,863
2030	$ 813,687	$0	$934,834	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 940,834	$ 1,716,716
2031	$ 813,900	$0	$945,576	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 951,576	$ 1,579,040
2032	$ 814,107	$0	$971,663	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 977,663	$ 1,415,484
2033	$ 814,308	$15,000	$967,808	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 988,808	$ 1,240,984
2034	$ 814,503	$12,000	$979,308	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 997,308	$ 1,058,179
2035	$ 814,910	$10,000	$991,022	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 1,007,022	$ 866,067
2036	$ 815,138	$3,000	$1,017,802	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 1,026,802	$ 654,402
2037	$ 815,360	$0	$1,014,953	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 1,020,953	$ 448,809

Notes:

1 - Preparation and monitoring of plan implementation.
2 - Implementation of approved plan.
3 - Financial assistance to boards of health for solid waste enforcement.
4 - Financial assistance to defray the costs of maintaining roads and other public services related to the location or operation of solid waste facilities.
5 - Contracts with boards of health for collecting and analyzing samples from water wells adjacent to solid waste facilities.
6 - Out-of-state waste inspection program.
7 - Financial assistance to local boards of health to enforce ORC 3734.03 or to local law enforcement agencies having jurisdiction within the District for anti-littering.
8 - Financial assistance to local boards of health for employees to participate in Ohio EPA's training and certification program for solid waste operators and facility inspectors.
9 - Financial assistance to local municipalities and townships to defray the added cost of roads and services related to the operation of solid waste facilities.
10 - Payment of any expenses that are agreed to awarded or ordered to be paid under section 3734.35 of the Revised Code and any administrative costs incurred pursuant to that sec

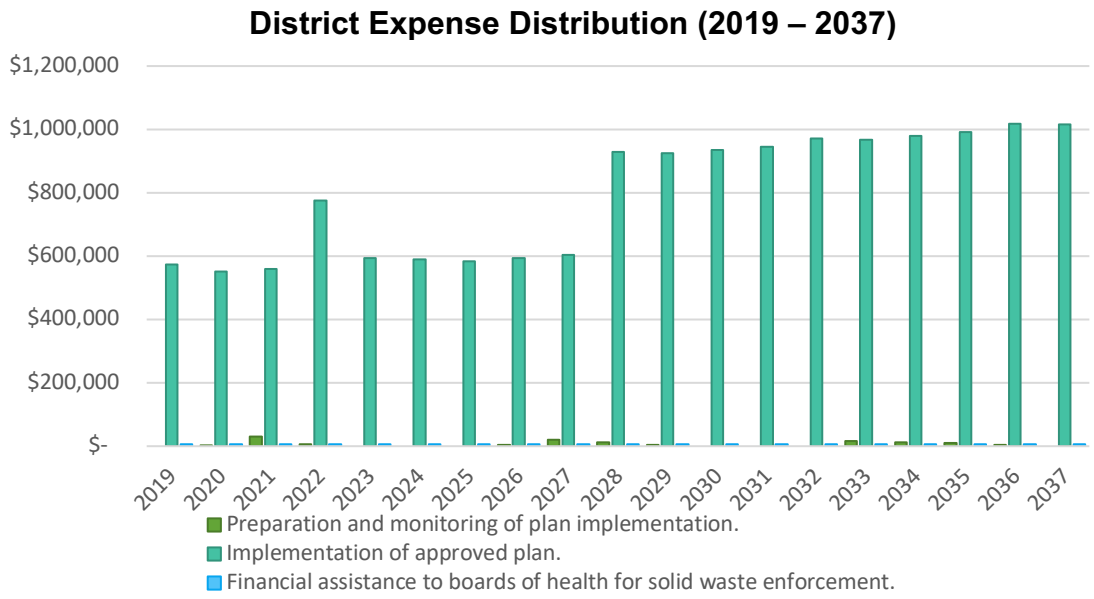
Table VIII-7
Contingent Funding Sources

Year	Amount of Contingent Funding for Each Source		Total
	Generation Fee Revenue	Total Tons	
2017	See Narrative in Section VIII		
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			

Note: The generation fee can be adjusted up or down to meet contingent needs.

Table VIII-8
Summary of District Revenues and Expenditures

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Beginning Balance	$ 178,161	$ 356,322	$ 769,442	$ 1,035,027	$ 1,105,510	$ 1,360,529	$ 1,618,902	$ 1,880,534	$ 2,143,254	$ 2,377,517	$ 2,294,654	$ 2,224,610	$ 2,148,039	$ 2,060,880	$ 1,947,780	$ 1,823,671	$ 1,691,189	$ 1,549,395	$ 1,387,987
Revenues																			
Disposal Fees	$ 642,373	$ 838,962	$ 676,885	$ 676,090	$ 675,285	$ 674,471	$ 673,647	$ 672,829	$ 672,000	$ 671,935	$ 671,866	$ 671,793	$ 671,716	$ 671,636	$ 671,551	$ 671,462	$ 671,455	$ 671,376	$ 671,293
Generation Fees	$ 80,473	$ 93,036	$ 145,254	$ 143,632	$ 141,991	$ 140,331	$ 138,650	$ 154,104	$ 152,205	$ 152,055	$ 151,896	$ 151,729	$ 151,553	$ 151,368	$ 151,173	$ 150,969	$ 150,954	$ 150,772	$ 150,581
Recycling Revenues	$ 35,151	$ 39,351	$ 37,251	$ 37,623	$ 38,000	$ 38,380	$ 38,763	$ 39,151	$ 39,543	$ 39,938	$ 40,337	$ 40,741	$ 41,148	$ 41,560	$ 41,975	$ 42,395	$ 42,819	$ 43,247	$ 43,680
Total Revenue	**$757,996**	**$971,350**	**$859,390**	**$857,346**	**$855,276**	**$853,181**	**$851,060**	**$866,084**	**$863,747**	**$863,928**	**$864,100**	**$864,263**	**$864,417**	**$864,563**	**$864,699**	**$864,826**	**$865,228**	**$865,395**	**$865,554**
Expenditures																			
District Administration Budget																			
Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Personnel	Admin-1	$ 380,923	$ 376,830	$ 399,712	$ 415,620	$ 432,638	$ 410,801	$ 419,017	$ 427,398	$ 435,946	$ 444,664	$ 453,558	$ 462,629	$ 471,881	$ 481,319	$ 490,945	$ 500,764	$ 510,780	$ 520,995	$ 531,415
Office Overhead	Admin-2	$ 72,175	$ 29,789	$ 36,883	$ 37,252	$ 37,624	$ 38,001	$ 38,381	$ 38,764	$ 39,152	$ 39,544	$ 39,939	$ 40,338	$ 40,742	$ 41,149	$ 41,561	$ 41,976	$ 42,396	$ 42,820	$ 43,248
Plan Prep and Monitoring	Admin-3	$ -	$ 1,150	$ 29,350	$ 5,000	$ -	$ -	$ -	$ 4,000	$ 20,000	$ 12,000	$ 4,000	$ -	$ -	$ -	$ 15,000	$ 12,000	$ 10,000	$ 3,000	$ -
Subtotal		**$453,098**	**$407,769**	**$465,945**	**$457,872**	**$470,263**	**$448,802**	**$457,398**	**$470,162**	**$495,098**	**$496,208**	**$497,497**	**$502,967**	**$512,623**	**$522,468**	**$547,506**	**$554,741**	**$563,176**	**$566,815**	**$574,663**
Residential/Commercial/Industrial Programs																			
Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Curbside Recycling Technical Assistance	CC-01	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Drop-Off Recycling	CC-02	$2,757	$827	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Business Recycling Collection	CC-03	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Crawford County Recycling Center	CC-04	$95,539	$98,299	$99,282	$300,275	$101,278	$102,291	$103,314	$104,347	$105,390	$406,444	$407,509	$408,584	$409,669	$410,766	$411,874	$412,993	$414,123	$415,264	$416,416
Yard Waste Composting	CC-05	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Special Waste Materials	CC-06	$13,691	$36,585	$13,828	$13,966	$13,966	$28,966	$13,966	$14,106	$14,247	$29,389	$14,389	$14,533	$14,533	$29,678	$14,678	$14,825	$14,973	$29,973	$15,123
Education and Awareness	CC-07	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750
Litter Clean-Up	CC-08	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Commercial Recycling	CC-09	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Commercial Recycling Technical Assistance	CC-10	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Buyback Recycling Facilities	CC-11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Emergency Disaster Debris Management	CC-12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Health District Partnership Program	CC-13	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Subtotal		**$126,737**	**$150,461**	**$127,860**	**$328,991**	**$129,994**	**$146,007**	**$132,030**	**$133,202**	**$134,387**	**$450,583**	**$436,648**	**$437,867**	**$438,952**	**$455,194**	**$441,302**	**$442,568**	**$443,846**	**$459,987**	**$446,289**
Total Expenditures		**$579,835**	**$558,230**	**$593,805**	**$786,863**	**$600,257**	**$594,808**	**$589,427**	**$603,364**	**$629,484**	**$946,791**	**$934,144**	**$940,834**	**$951,576**	**$977,663**	**$988,808**	**$997,308**	**$1,007,022**	**$1,026,802**	**$1,020,953**
Difference		**$178,161**	**$413,120**	**$265,585**	**$70,483**	**$255,020**	**$258,373**	**$261,632**	**$262,720**	**$234,263**	**-$82,863**	**-$70,044**	**-$76,571**	**-$87,158**	**-$113,100**	**-$124,109**	**-$132,482**	**-$141,794**	**-$161,407**	**-$155,399**
Ending Balance		**$356,322**	**$769,442**	**$1,035,027**	**$1,105,510**	**$1,360,529**	**$1,618,902**	**$1,880,534**	**$2,143,254**	**$2,377,517**	**$2,294,654**	**$2,224,610**	**$2,148,039**	**$2,060,880**	**$1,947,780**	**$1,823,671**	**$1,691,189**	**$1,549,395**	**$1,387,987**	**$1,232,588**



D. Contingent Funding

The Policy Committee does not consider funding to be an issue of concern during the planning period. The District reserves the right to further increase generation and/or disposal fees in the future if expenses become an issue of concern. The District also reserves the right to implement a designation contract fee which would be collected from facilities designated to receive solid waste generated within the District.

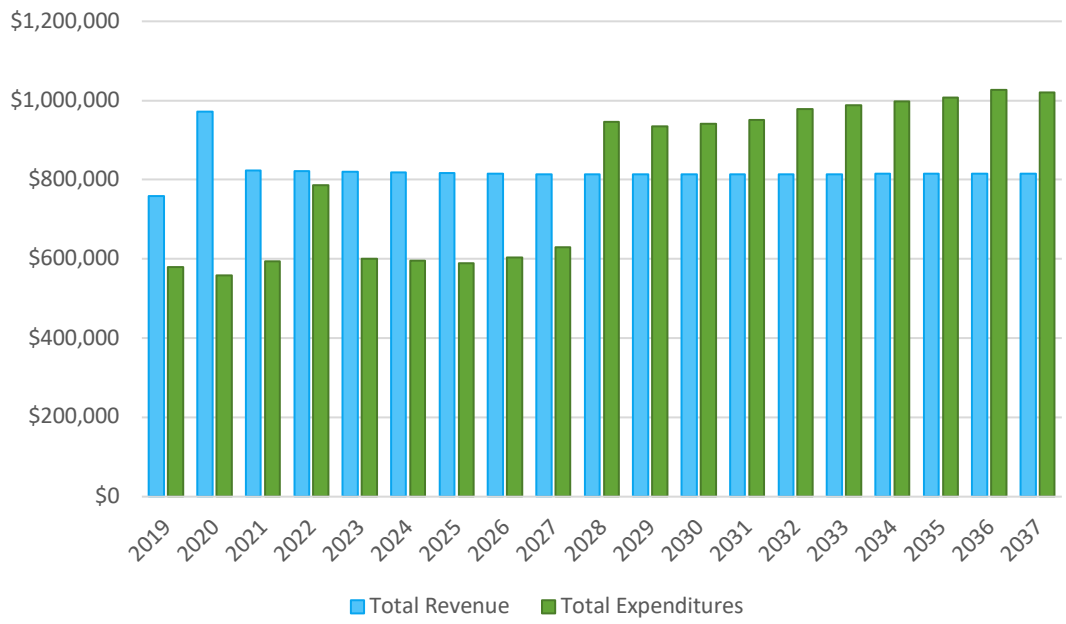
E. Summary of Costs and Revenues

Table VIII-8, "Summary of District Revenues and Expenditures," includes the annual costs for each program and activity for the reference year and each year of the planning period. Total expenditures for the first year of the planning period are projected to be $600,257 and will rise slowly over the planning period ending at $1,020,953 in 2037. The District is projected to begin the planning period with a carryover balance of $1,033,288 and will have an ending balance of approximately $448,671 in 2037.

Each year of the planning period has sufficient funding for each of the programs.

The following graph depicts the actual and projected revenues vs. expenses of the District throughout the planning period:

District Revenue and Expenses (2019 – 2037)



The District may move funds between programs and activities as costs and revenues may increase or decrease during the planning period.

Table VIII-1
District Disposal Fee Schedule and Revenues Generated

Year	Fee Schedule ($/ton)			Tons Disposed in the District			Total Disposal Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2019	$2.00	$4.00	$1.00	36,963	152,885	-	$642,373
2020	$2.00	$4.00	$1.00	30,418	195,000	-	$838,962
2021	$2.00	$4.00	$1.00	35,609	151,417	-	$676,885
2022	$2.00	$4.00	$1.00	35,212	151,417	-	$676,090
2023	$2.00	$4.00	$1.00	34,809	151,417	-	$675,285
2024	$2.00	$4.00	$1.00	34,402	151,417	-	$674,471
2025	$2.00	$4.00	$1.00	33,990	151,417	-	$673,647
2026	$2.00	$4.00	$1.00	33,581	151,417	-	$672,829
2027	$2.00	$4.00	$1.00	33,167	151,417	-	$672,000
2028	$2.00	$4.00	$1.00	33,134	151,417	-	$671,935
2029	$2.00	$4.00	$1.00	33,100	151,417	-	$671,866
2030	$2.00	$4.00	$1.00	33,063	151,417	-	$671,793
2031	$2.00	$4.00	$1.00	33,025	151,417	-	$671,716
2032	$2.00	$4.00	$1.00	32,984	151,417	-	$671,636
2033	$2.00	$4.00	$1.00	32,942	151,417	-	$671,551
2034	$2.00	$4.00	$1.00	32,898	151,417	-	$671,462
2035	$2.00	$4.00	$1.00	32,894	151,417	-	$671,455
2036	$2.00	$4.00	$1.00	32,855	151,417	-	$671,376
2037	$2.00	$4.00	$1.00	32,813	151,417	-	$671,293

Table VIII-2
Generation Fee Schedule and Revenues

Year	Base Generation Fee	Tons of District Waste to be Disposed	Total Generation Fee Revenue (QFR)
2019	$3.00	37,435	$80,473
2020	$3.00	30,816	$93,036
2021	$4.00	36,313	$145,254
2022	$4.00	35,908	$143,632
2023	$4.00	35,498	$141,991
2024	$4.00	35,083	$140,331
2025	$4.00	34,662	$138,650
2026	$4.50	34,245	$154,104
2027	$4.50	33,823	$152,205
2028	$4.50	33,790	$152,055
2029	$4.50	33,755	$151,896
2030	$4.50	33,718	$151,729
2031	$4.50	33,678	$151,553
2032	$4.50	33,637	$151,368
2033	$4.50	33,594	$151,173
2034	$4.50	33,549	$150,969
2035	$4.50	33,545	$150,954
2036	$4.50	33,505	$150,772
2037	$4.50	33,462	$150,581

Source(s) of information: Tons to be disposed (2019-2037) - Tables VII-2 and VII-3

Table VIII-3
Summary of Revenue Generated and Mechanisms Used

Year	Disposal Fees	Generation Fees	Recycling Revenues	Total Revenue Generated
2019	$642,373	$80,473	$35,151	$757,996
2020	$838,962	$93,036	$39,351	$971,350
2021	$676,885	$145,254	$37,251	$859,390
2022	$676,090	$143,632	$37,623	$857,346
2023	$675,285	$141,991	$38,000	$855,276
2024	$674,471	$140,331	$38,380	$853,181
2025	$673,647	$138,650	$38,763	$851,060
2026	$672,829	$154,104	$39,151	$866,084
2027	$672,000	$152,205	$39,543	$863,747
2028	$671,935	$152,055	$39,938	$863,928
2029	$671,866	$151,896	$40,337	$864,100
2030	$671,793	$151,729	$40,741	$864,263
2031	$671,716	$151,553	$41,148	$864,417
2032	$671,636	$151,368	$41,560	$864,563
2033	$671,551	$151,173	$41,975	$864,699
2034	$671,462	$150,969	$42,395	$864,826
2035	$671,455	$150,954	$42,819	$865,228
2036	$671,376	$150,772	$43,247	$865,395
2037	$671,293	$150,581	$43,680	$865,554

Source(s) of information:
2019, 2020 - Quarterly Fee Reports
2019-2037 Generation Fees - Calculated from tonnage in Table VIII-2
2019-2037 Recycling Revenue and User Fee

Table VIII-4
Anticipated Loans Secured by the District

Year	Loans Obtained by the District		Interest Rate	Years Remaining on Loan	Annual Debt Service
	Lending Institution	Remaining Principal			
2019	N/A	$0.00	N/A	0	$0.00
2020	N/A	$0.00	N/A	0	$0.00
2021	N/A	$0.00	N/A	0	$0.00
2022	N/A	$0.00	N/A	0	$0.00
2023	N/A	$0.00	N/A	0	$0.00
2024	N/A	$0.00	N/A	0	$0.00
2025	N/A	$0.00	N/A	0	$0.00
2026	N/A	$0.00	N/A	0	$0.00
2027	N/A	$0.00	N/A	0	$0.00
2028	N/A	$0.00	N/A	0	$0.00
2029	N/A	$0.00	N/A	0	$0.00
2030	N/A	$0.00	N/A	0	$0.00
2031	N/A	$0.00	N/A	0	$0.00
2032	N/A	$0.00	N/A	0	$0.00
2033	N/A	$0.00	N/A	0	$0.00
2034	N/A	$0.00	N/A	0	$0.00
2035	N/A	$0.00	N/A	0	$0.00
2036	N/A	$0.00	N/A	0	$0.00
2037	N/A	$0.00	N/A	0	$0.00

Table VIII-5
Estimated Costs for Plan Implementation

Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
District Administration Budget																				
Personnel	Admin-1	$255,945	$251,220	$238,071	$263,233	$268,498	$273,867	$279,345	$284,932	$290,630	$296,443	$302,372	$308,419	$314,588	$320,879	$327,297	$333,843	$340,520	$347,330	$354,277
Benefits	Admin1.2	$124,978	$125,610	$141,640	$152,387	$164,141	$136,934	$139,672	$142,466	$145,315	$148,221	$151,186	$154,210	$157,294	$160,440	$163,648	$166,921	$170,260	$173,665	$177,138
Office Overhead	Admin-2	$72,175	$29,789	$36,883	$37,252	$37,624	$38,001	$38,381	$38,764	$39,152	$39,544	$39,939	$40,338	$40,742	$41,149	$41,561	$41,976	$42,396	$42,820	$43,248
Plan Prep and Monitoring	Admin-3	$0	$1,150	$29,350	$5,000	$0	$0	$0	$4,000	$20,000	$12,000	$4,000	$0	$0	$0	$15,000	$12,000	$10,000	$3,000	$0
Other																				
Subtotal		$453,098	$407,769	$445,945	$457,872	$470,263	$448,802	$457,398	$470,162	$495,098	$496,208	$497,497	$502,967	$512,623	$522,468	$547,506	$554,741	$563,176	$566,815	$574,663

Table VIII-5 (continued)
Estimated Costs for Plan Implementation

Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Residential/Commercial/Industrial Programs																				
Curbside Recycling Technical Assistance	CC-01	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Drop-Off Recycling	CC-02	$2,757	$927	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Business Recycling Collection	CC-03	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Crawford County Recycling Center	CC-04	$93,539	$99,239	$99,282	$300,275	$101,276	$102,291	$103,314	$104,347	$105,390	$106,444	$407,539	$408,934	$409,669	$410,766	$411,874	$412,993	$414,123	$415,264	$416,416
Yard Waste Composting	CC-05	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Special Waste Materials	CC-06	$13,681	$36,585	$13,828	$13,966	$13,828	$28,966	$13,966	$14,106	$14,247	$29,389	$14,389	$14,533	$14,533	$29,678	$14,678	$14,825	$14,973	$29,973	$15,123
Education and Awareness	CC-07	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750
Litter Clean-Up	CC-08	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Commercial Recycling	CC-09	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Commercial Recycling Technical Assistance	CC-10	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Buyback Recycling Facilities	CC-11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Emergency Disaster Debris Management	CC-12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Health District Partnership Program	CC-13	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Subtotal		$124,727	$150,461	$127,860	$328,991	$129,855	$146,007	$132,030	$133,202	$134,387	$450,583	$436,648	$437,957	$438,952	$455,194	$441,302	$442,568	$443,846	$459,987	$446,289
Totals		$579,825	$558,230	$573,805	$786,863	$600,118	$594,809	$589,427	$603,364	$629,484	$946,791	$934,144	$940,924	$951,576	$977,663	$988,808	$997,308	$1,007,022	$1,026,802	$1,020,953

Table VIII-6
Revenues and Allocations in Accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573

Year	Total Annual Revenue ($)	Allocations of ORC 3734.57 and ORC 3734.573 Revenue For the Following Purposes:										Year-End Balance ($)
		1	2	3	4	5	6	7	8	9	10	Total Budget Allocation ($)
Beginning Balance												**$ 178,161**
2019	$ 757,996	$ -	$ 573,835	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 579,835	$ 356,322
2020	$ 971,350	$ 1,150	$ 551,080	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 558,230	$ 769,442
2021	$ 823,077	$29,350	$ 558,455	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 593,805	$ 998,714
2022	$ 821,438	$5,000	$775,863	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 786,863	$ 1,033,288
2023	$ 819,778	$0	$594,118	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 600,118	$ 1,252,948
2024	$ 818,098	$0	$588,808	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 594,808	$ 1,476,238
2025	$ 816,397	$0	$583,427	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 589,427	$ 1,703,208
2026	$ 814,716	$4,000	$593,364	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 603,364	$ 1,914,560
2027	$ 813,013	$20,000	$603,484	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 629,484	$ 2,098,088
2028	$ 813,243	$12,000	$928,791	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 946,791	$ 1,964,540
2029	$ 813,468	$4,000	$924,144	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 934,144	$ 1,843,863
2030	$ 813,687	$0	$934,834	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 940,834	$ 1,716,716
2031	$ 813,900	$0	$945,576	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 951,576	$ 1,579,040
2032	$ 814,107	$0	$971,663	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 977,663	$ 1,415,484
2033	$ 814,308	$15,000	$967,808	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 988,808	$ 1,240,984
2034	$ 814,503	$12,000	$979,308	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 997,308	$ 1,058,179
2035	$ 814,910	$10,000	$991,022	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 1,007,022	$ 866,067
2036	$ 815,138	$3,000	$1,017,802	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 1,026,802	$ 654,402
2037	$ 815,360	$0	$1,014,953	$ 6,000.00	$0	$0	$0	$0	$0	$0	$0	$ 1,020,953	$ 448,809

Notes:

1 - Preparation and monitoring of plan implementation.
2 - Implementation of approved plan.
3 - Financial assistance to boards of health for solid waste enforcement.
4 - Financial assistance to defray the costs of maintaining roads and other public services related to the location or operation of solid waste facilities.
5 - Contracts with boards of health for collecting and analyzing samples from water wells adjacent to solid waste facilities.
6 - Out-of-state waste inspection program.
7 - Financial assistance to local boards of health to enforce ORC 3734.03 or to local law enforcement agencies having jurisdiction within the District for anti-littering.
8 - Financial assistance to local boards of health for employees to participate in Ohio EPA's training and certification program for solid waste operators and facility inspectors.
9 - Financial assistance to local municipalities and townships to defray the added cost of roads and services related to the operation of solid waste facilities.
10 - Payment of any expenses that are agreed to awarded or ordered to be paid under section 3734.35 of the Revised Code and any administrative costs incurred pursuant to that se

Table VIII-7
Contingent Funding Sources

Year	Amount of Contingent Funding for Each Source		Total
	Generation Fee Revenue	Total Tons	
2017	See Narrative in Section VIII		
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			

Note: The generation fee can be adjusted up or down to meet contingent needs.

Table VIII-8
Summary of District Revenues and Expenditures

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Beginning Balance	$178,161	$356,322	$769,442	$1,035,027	$1,105,510	$1,360,529	$1,618,902	$1,880,594	$2,143,254	$2,377,517	$2,294,654	$2,224,610	$2,149,039	$2,060,880	$1,947,780	$1,823,671	$1,691,189	$1,549,395	$1,397,987
Revenues																			
Disposal Fees	$ 842,373	$ 838,962	$ 876,985	$ 676,090	$ 675,285	$ 674,471	$ 673,647	$ 672,829	$ 672,000	$ 671,935	$ 671,866	$ 671,793	$ 671,716	$ 671,636	$ 671,551	$ 671,462	$ 671,455	$ 671,376	$ 671,293
Generation Fees	$ 80,473	$ 93,036	$ 145,294	$ 143,632	$ 141,981	$ 140,331	$ 138,650	$ 154,104	$ 152,205	$ 152,055	$ 151,896	$ 151,720	$ 151,553	$ 151,388	$ 151,173	$ 150,969	$ 150,954	$ 150,772	$ 150,581
Recycling Revenues	$ 35,151	$ 39,351	$ 37,251	$ 37,623	$ 38,000	$ 38,380	$ 38,763	$ 39,151	$ 39,543	$ 39,938	$ 40,337	$ 40,741	$ 41,148	$ 41,560	$ 41,975	$ 42,395	$ 42,819	$ 43,247	$ 43,680
Total Revenue	**$757,996**	**$971,350**	**$859,390**	**$857,346**	**$855,276**	**$853,181**	**$851,060**	**$866,084**	**$863,747**	**$863,928**	**$864,100**	**$864,263**	**$864,417**	**$864,583**	**$864,699**	**$864,826**	**$865,228**	**$865,395**	**$865,564**
Expenditures																			
Environmental Administration Budget																			
Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Personnel	Admin-1	$ 380,923	$ 376,930	$ 399,712	$ 415,620	$ 432,639	$ 410,801	$ 419,017	$ 427,398	$ 435,946	$ 444,664	$ 453,558	$ 462,629	$ 471,881	$ 481,319	$ 490,945	$ 500,764	$ 510,780	$ 520,995	$ 531,415
Office Overhead	Admin-2	$ 72,175	$ 29,789	$ 36,983	$ 37,252	$ 37,624	$ 39,001	$ 38,381	$ 38,764	$ 39,152	$ 39,544	$ 39,939	$ 40,338	$ 40,742	$ 41,149	$ 41,561	$ 41,976	$ 42,396	$ 42,820	$ 43,248
Plan Prep and Monitoring	Admin-3	$ -	$ 1,150	$ 29,350	$ 5,000	$ -	$ -	$ -	$ 4,000	$ 20,000	$ 12,000	$ 4,000	$ -	$ -	$ -	$ 15,000	$ 12,000	$ 10,000	$ 3,000	$ -
Subtotal		**$453,098**	**$407,869**	**$465,945**	**$457,872**	**$470,263**	**$449,802**	**$457,398**	**$470,162**	**$495,098**	**$496,208**	**$497,497**	**$502,967**	**$512,623**	**$522,468**	**$547,506**	**$554,741**	**$563,176**	**$566,815**	**$574,663**
Recycling/Waste Minimization Programs																			
Description	Program #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Curbside Recycling Technical Assistance	CC-01	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Drop-Off Recycling	CC-02	$2,757	$827	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Business Recycling Collection	CC-03	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Crawford County Recycling Center	CC-04	$95,539	$98,293	$99,282	$100,275	$101,278	$102,291	$103,314	$104,347	$105,390	$406,444	$407,509	$408,594	$409,669	$410,766	$411,874	$412,993	$414,123	$415,264	$416,416
Yard Waste Composting	CC-05	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Special Waste Materials	CC-06	$13,691	$36,585	$13,828	$13,966	$13,986	$28,966	$13,966	$14,106	$14,247	$29,389	$14,389	$14,533	$14,533	$29,678	$14,678	$14,825	$14,973	$29,973	$15,123
Education and Awareness	CC-07	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750	$8,750
Litter Clean-Up	CC-08	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Commercial Recycling	CC-09	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Commercial Recycling Technical Assistance	CC-10	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Buyback Recycling Facilities	CC-11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Emergency Disaster Debris Management	CC-12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Health District Partnership Program	CC-13	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Subtotal		**$126,737**	**$150,461**	**$127,860**	**$328,891**	**$129,994**	**$146,007**	**$132,030**	**$133,202**	**$134,387**	**$450,583**	**$436,648**	**$437,867**	**$439,952**	**$455,194**	**$441,302**	**$442,568**	**$443,846**	**$459,987**	**$446,289**
Total Expenditures																			
Difference																			
Ending Balance																			

IX. District Rules [ORC Section 3734.53(C)]

A. Existing Rules

According to Ohio Revised Code Section 3734.53(C), "the solid waste management plan of a county or joint district may provide for the adoption of rules under division (G) of section 343.01 of the Revised Code after approval of the plan under section 3734.521 or 3734.55 of the Revised Code." The District reserves the authority for the Board to adopt rules under the provision of Ohio Revised Code.

The District does not have any existing rules. There are no current plans to adopt new rules at the time of the development of this *Plan Update*.

B. Proposed Rules

The District reserves the right to adopt rules under division (G) of section 343.01 and under division (c) of section 3734.53 of the Revised Code. Such rules shall comply with the legislative grant of authority to the District to promulgate such rules and to regulate solid waste services, facilities and operation of the District in accordance with the Plan or amended Plan of the District and/or as authorized by applicable statutes, governmental regulations, local ordinances and rules of the District as now existing or hereafter enacted or amended.

Any rule promulgated by the District shall be designed to promote the health, safety, and welfare of the residents of the District, effective and efficient administration and operation of the District, to comply with state requirements and/or to implement the Solid Waste Management Plan and amended Plan of the District. The District may conduct all reviews, investigations, evaluations, studies, and hearings as the District deems necessary and appropriate to determine the character, degree, and scope of any proposed rule.

Rule adoption shall follow the procedures listed in Section C before becoming final.

Rule Making Authority - ORC 343.01

The solid waste management plan provides authority to the Board of County Commissioners (Board) to adopt, publish, and enforce all rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

ORC 343.01(G)(1)

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

(1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities located within the solid waste management district, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code. However, rules adopted by a board under division (G)(1) of this section may be adopted and enforced with respect to solid waste disposal facilities in the solid waste management district that are not owned by a county or the solid waste management district only if the board submits an application to the director of environmental protection that demonstrates that there is insufficient capacity to dispose of all solid wastes that are generated within the district at the solid waste disposal facilities located within the district and the director approves the application. The demonstration in the application shall be based on projections contained in the plan or amended plan of the district. The director shall establish the form of the application. The approval or disapproval of such an application by the director is an action that is appealable under section 3745.04 of the Revised Code.

In addition, the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:

(a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
(b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;

(c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

(d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;

(e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;

(f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years.

Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

ORC 343.01(G)(2)

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of

making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

ORC 343.01(G)(3)

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district's solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district's solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

ORC 343.01(G)(4)

Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan or amended plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

Rule Making Authority - ORC 3734.53

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

(1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:

(a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;

(b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;

(c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

(d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;

(e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;

(f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

(2) Governing the maintenance, protection, and use of solid waste

collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;

(3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;

(4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

C. Rule Approval Process

Proposed rules shall be adopted and enforced by the Board of County Commissioners as provided in Section 343.01(G).

APPENDIX A

RESOLUTION FOR DISTRICT FORMATION

MARCH 16, 1989

In the matter of establishing a Single County Solid Waste Management District.

Mr. Charles E. Crall moved the adoption of the following

RESOLUTION

WHEREAS, Crawford County has established a Garbage and Refuse District, by Resolution, for all the unincorporated areas of Crawford County effective February 11, 1969; and

WHEREAS, subsequent to the adoption of such Resolution the legislative authority of each of the cities of Bucyrus, Galion and Crestline, and the villages of Chatfield, Tiro, North Robinson and New Washington has, by ordinance, agreed and consented to be included in a County Garbage and Refuse District; and

WHEREAS, Crawford County has applied and did receive notice from the Ohio Environmental Protection Agency, an exemption from the 120,000 population requirements of AM Sub. H.B. 592 (the Bill) enacted by the 17th General Assembly of the State of Ohio, allowing Crawford County to form a Single County "Solid Waste Management District" pursuant to Section 343.01 of the Ohio Revised Code, as amended by the Bill, for the purposes of solid waste management, planning and causing to be provided for, the safety and sanitary management of solid wastes (as defined by the Bill) within all of the incorporated and unincorporated territory of the County; and

WHEREAS, Crawford County has determined that for the purpose of preparing, adopting, submitting and implementing a solid waste management plan, and for providing for or causing to be provided for, the safe and sanitary management of solid waste within the County, it is necessary to preserve and promote the public health and welfare; and

WHEREAS, the Board of Commissioners has determined that, for and subject to the provisions of the Bill, it is appropriate to adopt an agreement providing for the termination of the existing agreement and the establishment of a Single County Solid Waste Management District as the successor to the County; now, therefore, be it

RESOLVED, by the Board of County Commissioners of Crawford County, Ohio that the following sections be agreed to:

Section 1. It is hereby determined that continued coordinated action by the County for the purposes of preparing, adopting, submitting and implementing a Solid Waste Management Plan for the County and providing for the safe and sanitary management of solid waste within the County is necessary to preserve and promote the public health and welfare of the residents of Crawford County will be of common benefit.

Section 2. To provide for the establishment of a Single County Solid Waste Management District comprised of all of the incorporated and unincorporated territory of the County as the successor to the Garbage and Refuse District, at least two (2) members of this Board are authorized and directed, for and in name of Crawford County and on its behalf, to execute and deliver said Resolution to the Director of the Ohio Environmental Protection Agency.

Section 3. It is found and determined that all formal actions of this Board of Commissioners concerning and related to the adoption

of this Resolution were taken in an open meeting of this Board, and that all deliberations of this Board and any of its committees that resulted in such formal actions, were in meetings open to the public, in compliance with the law.

Section 4. This Resolution shall be in full force and effect from and immediately upon its adoption.

Mr. Burnell Shumaker seconded the above motion and the roll being called upon its adoption, the vote resutled as follows:

Mr. Thomas M. O'Leary aye

Mr. Charles E. Cull aye

Mr. Burnell Shumaker aye

THE BOARD OF COUNTY COMMISSIONERS
CRAWFORD COUNTY, OHIO

The undersigned, Clerk to the Board of County Commissioners, hereby certifies that the foregoing is a true and correct copy of a Resolution of the Board of Commissioners, Crawford County, Ohio duly adopted on March 16, 1989 and appearing on the official records of the Board of Commissioners.

Blanche Murr

Blanche Murr, Clerk to the Board
Crawford County Commissioners

COMMISSIONER'S OFFICE, CRAWFORD COUNTY, OHIO

JANUARY 19, 1989

In the matter of authorizing the Board of Crawford County Commissioners to apply for an exemption to become a Single County Solid Waste Management District.

Mr. Burnell Shumaker moved the adoption of the following

RESOLUTION

WHEREAS, the Board of County Commissioners have researched and discussed with several other counties the possibilities available to Crawford County in meeting the requirements of HB 592 and the requirements of the Ohio Environmental Protection Agency (OEPA); and

WHEREAS, it has been determined by the Crawford County Board of Commissioners, that they will seek an exemption from being included in a Joint-Multi-County Solid Waste Management District which would comprise a total polpulation greater than 120,000 people as required by the OEPA and HB 592; and

WHEREAS, Floyd Browne, Inc., Consulting Engineers, have prepared data and information required for an exemption application; and

WHEREAS, the Board of Commissioners deems the filing a solid waste exemption application to be in order and in the best interest of Crawford County, Ohio; therefore, be it

RESOLVED, the Board of County Commissioners, Crawford County, Ohio,hereby authorize and submit to the Ohio Environmental Protection Agency an application to form a single County Solid Waste Management District as required for exemption to the 120,000 population requirement.

Mr. Charles E. Crall seconded the above motion and the roll being called upon its adoption, the vote resulted as follows

Mr. Thomas M. O'Leary aye

Mr. Charles E Crall aye

Mr. Burnell Shumaker aye

THE BOARD OF COUNTY COMMISSIONERS
CRAWFORD COUNTY, OHIO

Blanche Murr
Clerk

APPENDIX B

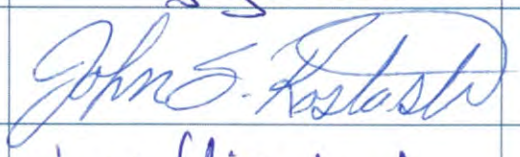
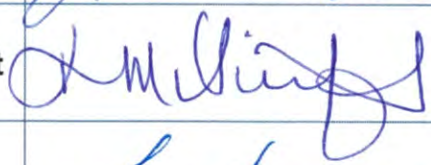
PUBLIC NOTICES FOR PUBLIC HEARINGS AND PUBLIC COMMENT

APPENDIX C

RESOLUTIONS AND CERTIFICATION STATEMENTS

CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee of the Crawford County Solid Waste Management District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and are in compliance with the requirements in the *District Solid Waste Management Plan Format,* revision 3.0.

Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner		
Largest City		
Health District		
Townships		
Industry		
General Interest of Citizens		
Public		
Total Votes		

Date: August 4, 2021

Policy Committee Chairperson:

APPENDIX D

IDENTIFICATION OF CONSULTANTS RETAINED FOR PLAN PREPARATION

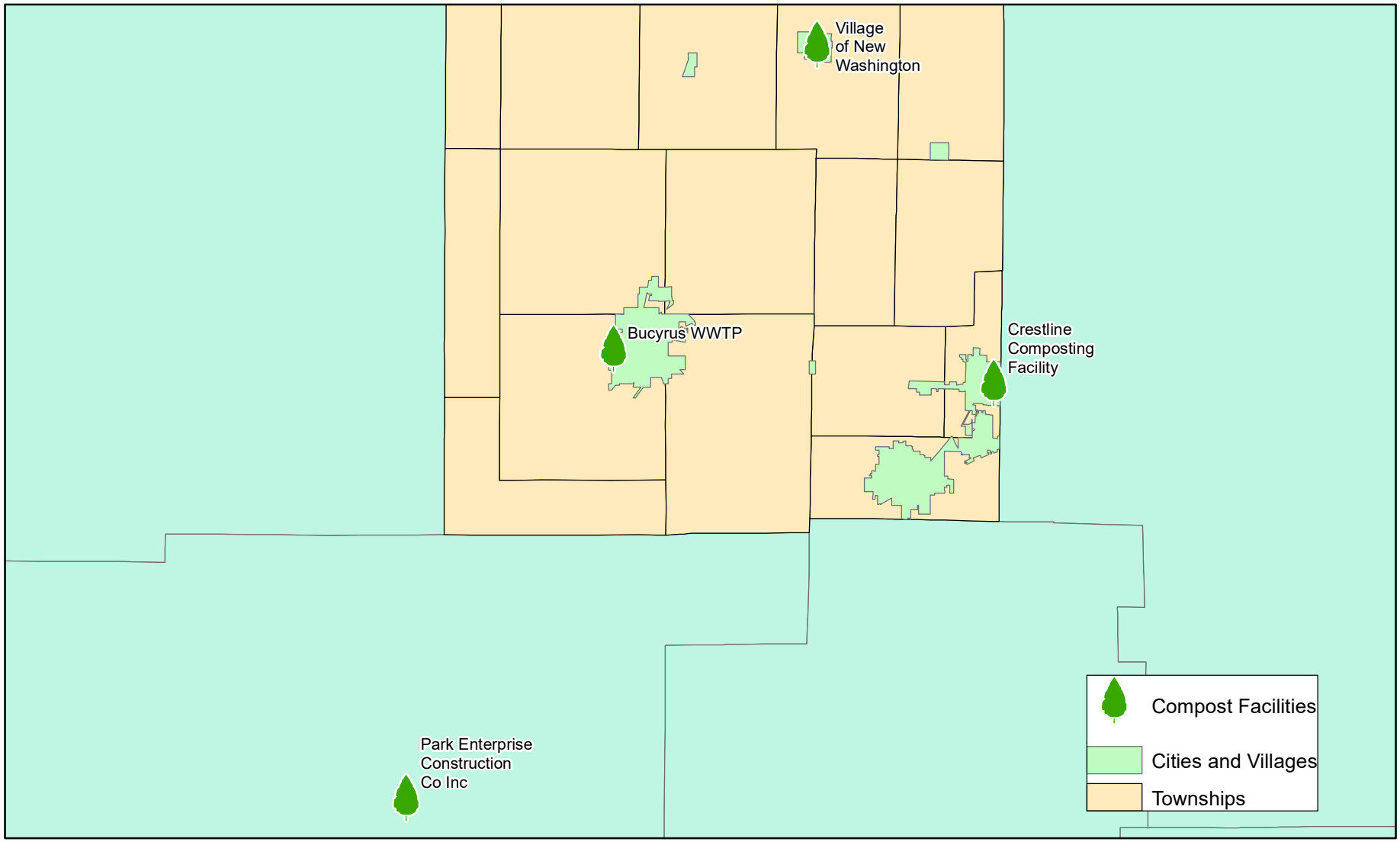
Identification of Consultants for Plan Preparation

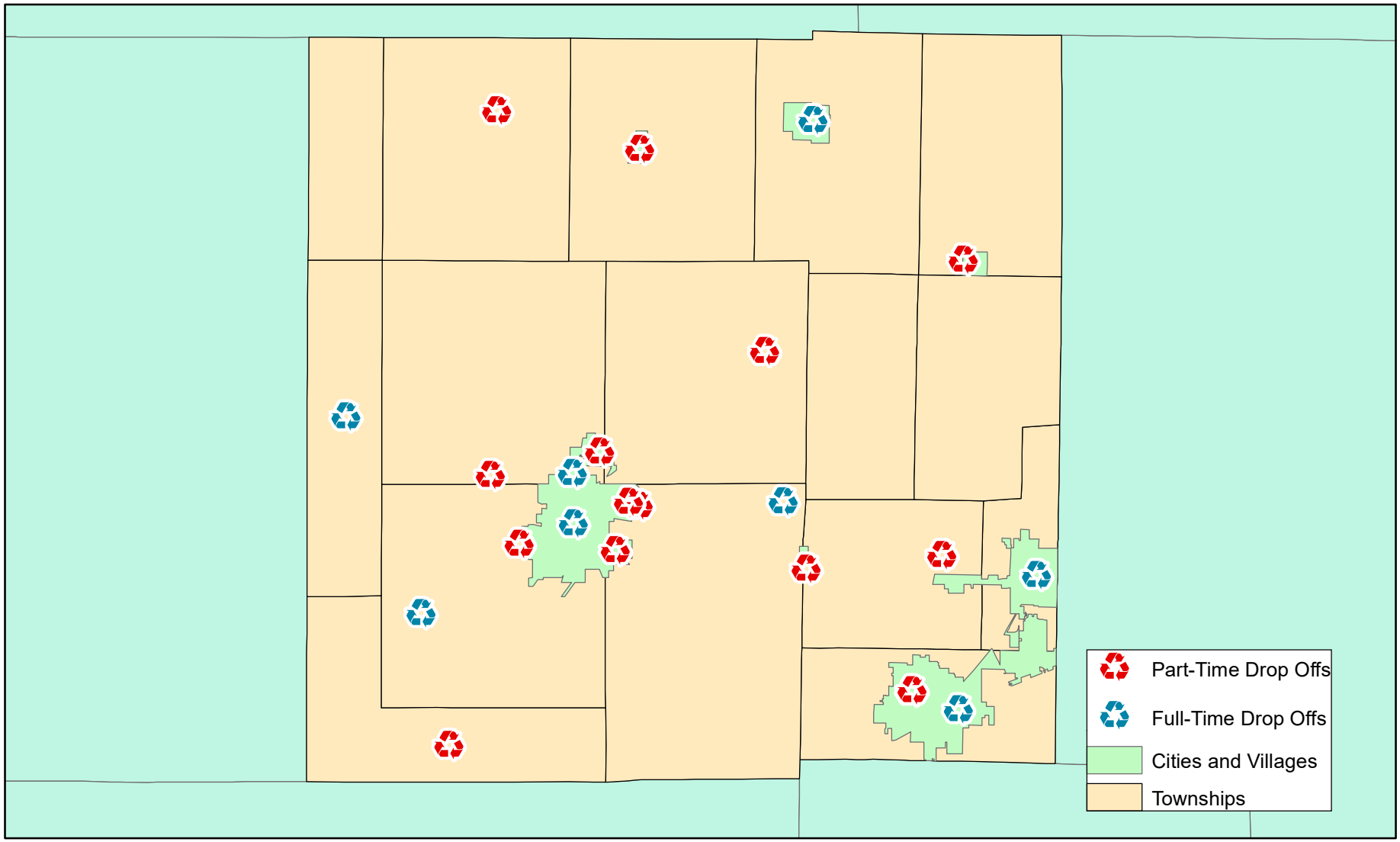
Consulting Firm: GT Environmental, Inc.
2400 Corporate Exchange Drive
Suite 150
Columbus, Ohio 43231

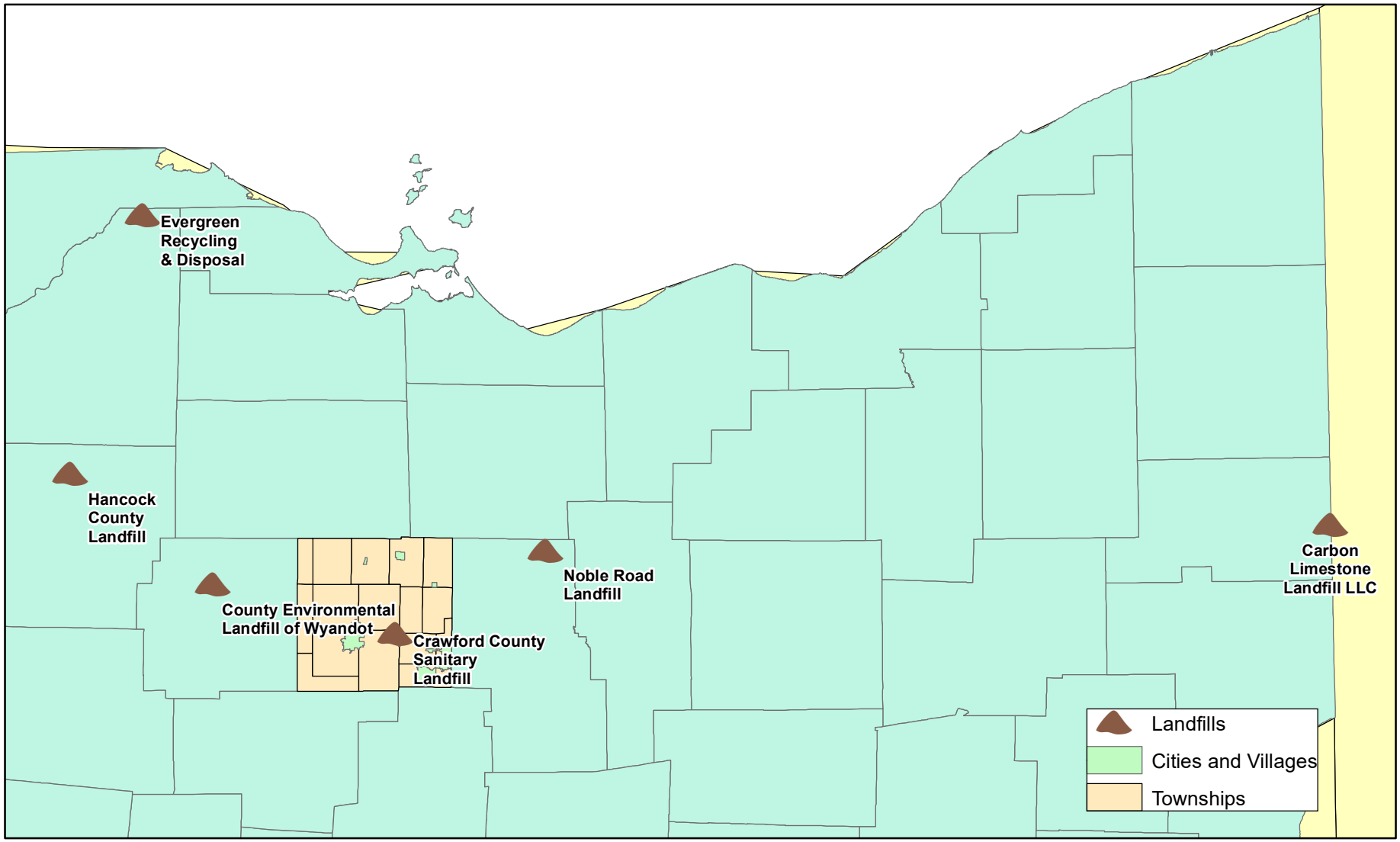
Project Manager: James A. Skora
Materials Management and Sustainability
Business Unit Manager
(330) 603-0138

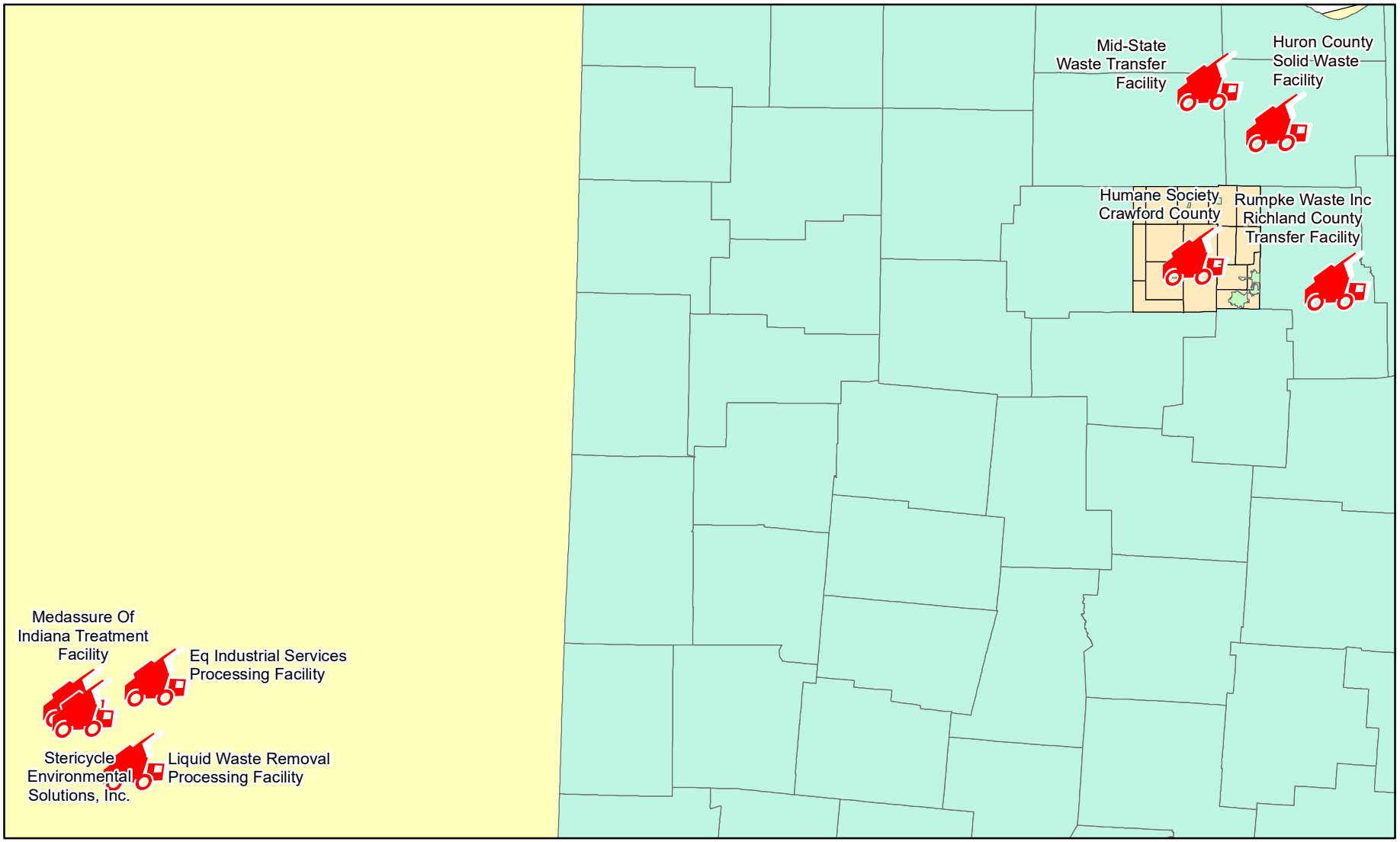
APPENDIX E

DISTRICT MAP


Village
of New
Washington
Bucyrus WWTP
Crestline
Composting
Facility
Park Enterprise
Construction
Co Inc
Compost Facilities
Cities and Villages
Townships


Part-Time Drop Offs
Full-Time Drop Offs
Cities and Villages
Townships


Evergreen
Recycling
& Disposal
Hancock
County
Landfill
County Environmental
Landfill of Wyandot
Crawford County
Sanitary
Landfill
Noble Road
Landfill
Carbon
Limestone
Landfill LLC
Landfills
Cities and Villages
Townships


Mid-State
Waste Transfer
Facility
Huron County
Solid Waste
Facility
Humane Society
Crawford County
Rumpke Waste Inc
Richland County
Transfer Facility
Medassure Of
Indiana Treatment
Facility
Eq Industrial Services
Processing Facility
Stericycle
Environmental
Solutions, Inc.
Liquid Waste Removal
Processing Facility
Transfer Stations, Incinerators, and Other Processing Facilities
Cities and Villages
Townships

APPENDIX F

INDUSTRIAL SURVEY RESULTS

Appendix F
Crawford County Solid Waste Management District
Amount of Industrial Waste Recycled by Standard Industrial Classification (SIC) Category (Tons) as Reported on Industrial Surveys

Type of Waste	20	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	Industrial Recycables Reported from Brokers and Processors Surveyed	Total
Cardboard																					**15,258.45**
Ferrous Metals																					**11,985.75**
Wood																					**412.65**
Food																					**0.89**
Non-Ferrous Metals																					**901.25**
Paper																					**14,855.00**
Plastic																					**2,989.35**
Commingled																					**-**
Glass																					**142.35**
Yard Waste																					**-**
Misc.																					**-**
Rubber																					**-**
Total	**1.15**	**-**	**-**	**-**	**-**	**-**	**352.15**	**-**	**-**	**0.45**	**-**	**-**	**-**	**-**	**-**	**-**	**2.25**	**-**	**78.38**	**46,111.31**	**46,545.69**

Source(s) of information:
CY 2019 Industrial Survey Responses

Appendix F
Crawford County Waste Management District
Amount of Industrial Waste Generated by Standard Industrial Classification (SIC) Category (Tons) as Reported on Industrial Surveys

Type of Waste	20	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	Industrial Generation Reported from Brokers and Processors Surveyed	Total
Cardboard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**15,258**
Ferrous Metals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**11,986**
Wood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**413**
Food	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**1**
Non-Ferrous Metals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**901**
Paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**14,855**
Plastic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**2,989**
Commingled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**-**
Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**142**
Yard Waste	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**-**
Misc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**-**
Rubber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		**-**
General Solid Waste																					**-**
Total	**1.15**	**-**	**-**	**-**	**-**	**-**	**352.15**	**-**	**-**	**0.45**	**-**	**-**	**-**	**-**	**-**	**-**	**2.25**	**-**	**78.38**	**46,111.31**	**46,545.69**

Source(s) of information:
CY 2019 Industrial Survey Responses

APPENDIX G

SURVEY INSTRUMENTS

Crawford County Solid Waste Management District
5128 Lincoln Hwy E., Bucyrus, Ohio 44820-9655

February 28, 2015

RE: Survey of Industrial/Commercial Solid Waste Practices of 2014

Dear Crawford County Business Representative:

The Crawford County Solid Waste Management District (District) is required to conduct a survey of District businesses and institutions to obtain solid waste generation, recycling and waste reduction information. The purpose of this survey is to gather important data and information that will be used for planning for current and future waste and recycling programs in the District and to help the District complete its "Solid Waste Plan Update" that is required by statute and by the Ohio Environmental Protection Agency (OEPA).

To assist the District, we are requesting that you complete the attached survey to the best of your ability so that we may in turn support you with future programs. Please complete as much of the survey, that is strictly voluntary, as possible. Your assistance with this survey will also help the District achieve the long-term goal of reducing the reliance on landfills through increased waste reduction programs and management techniques, allowing you the opportunity to control future costs.

We appreciate your personal attention in the completion of the attached survey. The surveys should be completed using **only** calendar year **2014** data. Please be assured that your establishment will not be identified by name in the District's planning efforts.

Please return the postage-paid survey to the Crawford County Solid Waste Management District by mail before **April 6, 2015**. If you should have any questions on the Crawford County Solid Waste Management Plan, please contact me or visit us at 5128 Lincoln Highway East, Bucyrus, Ohio 44820-9655.

We appreciate your cooperation in completing this survey.

Sincerely,

Brian F. Rockwell

Brian F. Rockwell-Executive Director
Crawford County Solid Waste Management District

Enclosure

Dear Commercial Business,

Thank you for completing this survey. The information you provide for your company is crucial to monitoring the Crawford County Solid Waste Management District's progress towards achieving Ohio's recycling goals. Your information will be combined with information submitted by other businesses and used to calculate the amount of material commercial businesses recycled in the Crawford County Solid Waste Management District and Ohio in 2017. Your company's survey response **will not** be reported individually; all data will be summarized by the North American Industry Classification System (NAICS) category.

For assistance completing this form or any questions related to the survey, please contact Brian Rockwell, the Crawford County Solid Waste Management District's Coordinator, at crawfordswmd@midohio.twcbc.com or (419) 562-4169.

Please complete and submit this survey no later than 4/17/2018.

Options for Returning the Completed Survey

- Email directly to Brian Rockwell at crawfordswmd@midohio.twcbc.com, Subject Line: 2017 Commercial Survey
- Fax to (419) 563-2974, Attention: Brian Rockwell
- Mail to Brian Rockwell at 5128 Lincoln Highway East, Bucyrus, Ohio 44820

Instructions for Table A:

Please provide all information requested in ***Table A*** below. Even if your business does not currently recycle or is unable to report quantities of materials recycled, please complete ***Table A***. Doing so will allow the Crawford County Solid Waste Management District to contact you in the future to discuss your recycling needs.

Table A: Company Information			
Name:	County:	Store I.D.	
Address:	City:		Zip:
Contact Person:	Title:		
Email:	Telephone Number (include area code): ( ) —		
Primary NAICS:	Secondary NAICS:	Number of full-time employees:	
Would you like to be contacted by your local solid waste management district for recycling assistance? ☐ Yes ☐ No			

Instructions for completing Table B:

Table B provides a list of common materials that are recycled by commercial businesses in Ohio. Please indicate the unit of each quantity of material that is reported (pounds, tons or cubic yards). Provide any comments related to each material as necessary. Please do not report any liquid waste, hazardous waste or construction & demolition debris.

The list in ***Table B*** is not all-inclusive. If your business recycles a material that is not listed in ***Table B***, please enter the name and quantity of that material on a line labeled **"Other."** Some materials may not apply to your operation. Some of the listed materials are broad categories. For example, "Plastics" includes plastics #1-7, plastic films etc. Please refer to the ***"Materials Cheat Sheet"*** attached to this document for examples of materials and definitions.

If you do not currently track this information internally, your solid waste hauler or recycling processor may be able to provide it upon request. The Crawford County Solid Waste Management District may also be able to provide you with assistance.

Table B: Quantities of Recycled Materials	

Recyclable Material Category	Amount Recycled in 2017	Units	Name of hauler or processor that takes the material/ other Comments
Lead-Acid Batteries		☐ lbs. ☐ tons ☐ yd^3	
Food		☐ lbs. ☐ tons ☐ yd^3	
Glass		☐ lbs. ☐ tons ☐ yd^3	
Ferrous Metals		☐ lbs. ☐ tons ☐ yd^3	
Non-Ferrous Metals		☐ lbs. ☐ tons ☐ yd^3	
Corrugated Cardboard		☐ lbs. ☐ tons ☐ yd^3	
All Other Paper		☐ lbs. ☐ tons ☐ yd^3	
Plastics		☐ lbs. ☐ tons ☐ yd^3	
Textiles		☐ lbs. ☐ tons ☐ yd^3	
Wood		☐ lbs. ☐ tons ☐ yd^3	
Rubber		☐ lbs. ☐ tons ☐ yd^3	
Commingled Recyclables		☐ lbs. ☐ tons ☐ yd^3	
Yard Waste		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	
Other:		☐ lbs. ☐ tons ☐ yd^3	

Table C: Please provide any additional information, comments, suggestions, questions etc.

Thank you again for taking the time to complete this survey. Please contact Brian Rockwell with any questions.

Brian Rockwell, Coordinator
Crawford County Solid Waste Management District
Phone: (419) 562-4169
Email: crawfordswmd@midohio.twcbc.com