

## Chapter 5 Waste Reduction and Recycling

### Purpose of Chapter 5

As was explained in Chapter 1, a SWMD must have programs and services to achieve reduction and recycling goals established in the state solid waste management plan. A SWMD also ensures that there are programs and services available to meet local needs. The SWMD may directly provide some of these programs and services, may rely on private companies and non-profit organizations to provide programs and services, and may act as an intermediary between the entity providing the program or service and the party receiving the program or service.

Between achieving the goals of the state plan and meeting local needs, the SWMD ensures that a wide variety of stakeholders have access to reduction and recycling programs. These stakeholders include residents, businesses, institutions, schools, and community leaders. These programs and services collectively represent the SWMD's strategy for furthering reduction and recycling in its member counties.

Before deciding upon the programs and services that are necessary and will be provided, the policy committee performed a strategic, in-depth review of the SWMD's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall operations. This review consisted of a series of 12 analyses that allowed the policy committee to obtain a holistic understanding of the SWMD by answering questions such as:

- Is the SWMD adequately serving all waste generating sectors?
- Is the SWMD recovering high volume wastes such as yard waste and cardboard?
- How well is the SWMD's recycling infrastructure being used/how well is it performing?
- What is the SWMD's financial situation and ability to fund programs?

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

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

## A. Solid Waste Management District's Priorities

Over the past five years the District has implemented the programs and activities as described in the District's 2015 approved plan. The strategic evaluation process included in Plan Format 4.0 helped the District to take a close look at each of the existing programs. It also served as a catalyst to encourage the District to look at the big picture. The purposes of the Darke County Solid Waste District are those set out in H.B. 592, the legislation that created solid waste districts in Ohio. The Darke County Solid Waste Management District's mission is to reduce the amount of waste generated in Darke County, to ensure that there is adequate landfill capacity to safely dispose of waste, and to reduce reliance on landfills.

The District performed an analysis and recorded findings in APPENDIX H. The findings include successes, but also made it apparent that there are areas that need improvement. As a result of the analysis the District has decided not to start major new initiatives or make drastic changes in programs. Instead, the focus will be in continued evaluation of existing programs with an emphasis on changes that will enhance the efficiency and effectiveness of key programs that address Goal 1 and Goal 2. Goal 1 is to provide opportunities for residential, commercial, and industrial waste generators to reduce waste using appropriate infrastructure and programs. Goal 2 is to increase measurable waste reduction through reuse, recycling, and composting. The key questions asked in evaluating actions and programs are, "Will this increase the amount of waste reduced? Will this increase the participation in recycling and composting programs? Will this improve the value of the recycling and composting products by decreasing contamination?"

## B. Program Descriptions

The following program description are brief snapshots. See Appendix H and I for more detailed discussions of existing and planned programs.

### *Residential Recycling Infrastructure*

Non-subscription recycling is a type of residential recycling that is available to all residents automatically within a defined area. There are two non-subscription curbside recycling programs in the District. *In Table 5-1 the abbreviation for non-subscription curbside is NSC.*

Subscription curbside recycling is a type of curbside recycling service through which residents must take a voluntary action to sign up for and agree to pay for service. *In Table 5-1 the abbreviation for non-subscription curbside is SC.*

Both types of curbside programs collect office paper, mixed paper, cardboard, paperboard, cartons (juice, milk, and egg substitute), steel and aluminum cans and aerosol cans with tips removed, glass bottles and jars, PETE and HDPE bottles and jars.

Versailles Village provides waste collection and recycling to residents and small commercial businesses. Rumpke provides the collection and processing services for all of the other curbside programs.

**Table 5-1 Curbside Recycling Services**

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
NCS1	Versailles Village	Village of Versailles	Ongoing
NCS2	Arcanum Village	Rumpke Waste by agreement with Village	Ongoing program, Rumpke became service provider in 2020
SC1	Greenville City	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC2	Palestine Village	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC3	Adams Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC4	Brown Township (South of St. St. 47)	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC5	Butler Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC6	Franklin Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC7	Greenville Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC8	Harrison Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC9	Jackson Township (South of St. St. 47)	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC10	Liberty Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC11	Monroe Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC12	Neave Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC13	Richland Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC14	Twin Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC15	Van Buren Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC16	Washington Township	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
SC17	Wayne Township (South of St. St. 47)	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period

*Drop-off Recycling Locations*

Rumpke Recycling and Transfer Facility provides a multi material drop-off box at the Rumpke Transfer Facility on Jaysville -St. Johns Road on the outskirts of Greenville. It serves primarily the Greenville city and Greenville Township area but is also used by people bringing waste and recycling to the transfer facility from all over the county

The District pays for all of the drop-off locations listed in Table 5-2 with the exception of the drop-off at the Rumpke Transfer Facility. The on-site drop-off containers, collection service, and processing are provided by Rumpke.

In Table 5-2, *FTU* denotes a full-time urban drop-off that is in a municipality with a population of at least 5,000 and is available at least 40 hours per week. *FTR* denotes a full-time rural drop-off which is open at least 40 hours per week in an area with a population under 5,000. All of the drop-off locations take the same mix of material as the curbside collection programs.

**Table 5-2 Drop-off Recycling Locations**

<b>ID#</b>	<b>Name of Drop-off/Community Served</b>	<b>Service Provider</b>	<b>When Service was/will be Available</b>
FTU1	Rumpke Recycling Facility Greenville	Rumpke Waste and Recycling	Pre- 2018 ongoing through planning period
FTU2	Location to be decided within Greenville City	District sponsor, Rumpke Service.	2022 through planning period
FTR1	Allen Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR2	Brown Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR3	Butler Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR4	Harrison Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR5	Patterson Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR6	Twin Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR7	Wabash Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR8	Wayne Township	District sponsor, Rumpke Service.	Pre- 2018 ongoing through planning period
FTR9	New drop-off sites. Locations to be decided based on need, interest, and ability to monitor use.	District sponsor, Rumpke Service.	Not decided. Optional depending on need.
FTR10			
FTR11			

### **Mixed Solid Waste Material Recovery Facility**

There are no mixed solid waste recovery facilities serving the District and none are planned.

### **Multi-Family Unit Recycling**

The District was not involved in any multi-unit recycling options in the reference year. However, the District recognizes that research is necessary to evaluate the need for District involvement in creating multi-material recycling opportunities convenient to apartment dwellers. The District has included an additional drop-off location in this Plan in anticipation of this drop-off being located in the area of Greenville where multi-family housing is most prevalent. This area is also a busy shopping area.

**Other Residential Recycling Programs:** No other residential collection initiatives are planned. The District will focus on increasing participation in existing programs.

### ***Commercial/Institutional Sector Reduction and Recycling Programs***

*School Recycling:* The District provides 8 multi-material drop-off containers for schools primarily in county school districts. Rumpke provides containers at Greenville City Schools as part of their service agreement with the city. The school recycling program has 2 purposes—to reduce waste and to involve students in hands-on participation in recycling accompanied by inclusion of waste reduction and recycling in the curriculum.

*Collection Services;* The Village of Versailles residential curbside program includes small businesses.

County offices and garages have appropriately sized containers for recyclable materials. The recyclables are collected by Rumpke.

Several of the waste collection companies that serve the county provide commercial recycling services. In this Plan the District has included an initiative to invite small businesses that do not generate enough material to justify a collection service to use public drop-off containers in areas where container capacity is available. The invitation will be accompanied by clear instructions as to acceptable and not acceptable material and how to prepare material to conserve container space.

*Large Venue Recycling:* The District will continue to work with the County Fair Board and 4-H to facilitate recycling at the County Fair. This Plan includes outreach to other large venues to collect information about their waste management methods and to offer assistance in waste reduction and recycling planning.

*Waste Assessments/Waste Audits:* The District does not plan to offer detailed waste audits, but is available to review waste management practices, provide information, and connect businesses with information resources.

*Contracting Assistance:* None planned.

*Workgroup/Roundtable:* None planned

*Award/Recognition:* The District does not have a plan for an award or recognition program at this time. However, if there is an innovation program identified, the District could bring a recommendation to the Policy Committee for an award or recognition.

*Other Programs:* None planned. However, if a need or opportunity arises and funds are available, the Policy Committee could make a recommendation to the Board of Directors to add a new program or service.

***Industrial Sector Reduction and Recycling Programs***

*Waste Assessments/Waste Audits:* The District has not done any formal waste audits or waste assessments and has not identified a pressing need for this service. The District is available to answer questions and link industries with outside resources if needed.

*Collection Services:* The District does not provide any collection or processing services, but it keeps and publishes a comprehensive list of waste haulers, scrap yards, pallet reclaimers, fiber recyclers, document destruction companies and other material management service providers that serve the area.

*Contracting Assistance:* None planned.

*Workgroup/Roundtable:* None planned.

*Award/Recognition:* The District will consult with the Chamber of Commerce to discuss the possibility of cooperating with the Chamber on a waste reduction or environmental achievement award.

*Other Programs:* No additional programs are planned.

***Restricted/Difficult to Manage Wastes***

*Yard Waste:* The District will continue to rely on local government and private sector programs to manage yard waste. These programs include curbside collection of yard waste during growing season and autumn in Greenville and Versailles and community autumn leaf collection with field spreading in Villages. In 2018, villages reporting this activity were Ansonia, Gettysburg, Pittsburg, and New Madison

There are three registered composting facilities in the District, Versailles Village compost facility, and privately owned and operated Fitzwater Landscaping facility, and Fresh Aire Farms.

This plan also continues distribution of composting information and an initiative to explore the possibility of working with the Cooperative Extension Service or Soil and Water Conservation on a workshop series on home composting.

*Household Hazardous Waste:* The District plans to continue the annual household hazardous waste collection event. The materials are managed by a qualified private contractor. Modest fees are charged for paint disposal to encourage participants to use alternative methods for safely disposing of paint and to defray some of the cost of the event.

*Scrap Tires:* The District plans to continue the annual tire collection and recycling event. There is a modest charge included for all types of tires, but the charge has not appeared to discourage participation. The District pays for the disposal/recycling fee for local governments to dispose of illegally dumped tires that they pick up and transport to the Greenville Rumpke facility.

*Appliances and Electronic Equipment:* The District provides information in printed literature and on the District website about private sector opportunities to recycle appliances and electronics. The District promotes and pays for advertising of an annual appliance and electronics recycling event that is held at 1 Shot Recycling in Bradford. 1 Shot provides all the labor and free freon removal for the duration of the event. The amount collected is reported to the District. Residents and commercial businesses are welcomed. The District plans to continue the event throughout the planning period with the cooperation of 1 Shot.

*Lead-Acid Batteries:* The District will continue to rely on private businesses to manage lead acid batteries through deposit programs and scrap yards. The District provides information in printed literature and on the District website about private sector recycling opportunities.

*Pharmaceuticals:* The District will continue to promote the DEA drug collection by posting the event on the District's website and will assist as needed with the actual collection event/s.

### ***Other Material Specific Programs***

*Home use dry cell batteries:* District has collected household dry cell batteries since 2007. There are collection sites at public buildings and private businesses around the county. The District collects, packs, and sends the batteries to a qualified recycler. The District will continue to provide the program as long as adequate funds are available. If private sector businesses offer this service, the District may discontinue it.

*Food:* Research commercial food waste handling practices and opportunities in Darke County. Based on findings develop plan to encourage additional food waste diversion. Study to be completed before December 2023.

*Glass:* The District does not have any separate programs for glass. Glass is included in curbside programs and in the District sponsored drop-offs.

***Funding/Grants:*** The District does not fund Incentive Based Grants or Improvement Grants for local governments or businesses. The District will continue to look for outside grant opportunities that could assist commercial and industrial waste generators or local governments in expanding or improving recycling opportunities. The District will share the information and will continue to provide assistance in the application process to the extent possible.

### ***Economic Incentives***

*Volume-Based Billing/Pay-As-You-Throw Trash Collection;* The only residential pay as you throw program is in Greenville City where bags can be purchased for waste disposal as an alternative to weekly collection service with toter. The District will consult with local governments or haulers that are considering pay as you throw to formulate plan that will encourage recycling but discourage using the program to avoid subscribing for regular waste collection services.

*Financial Award Programs* (e.g. RecycleBank, “Get Caught Recycling”) : The District has not included any financial incentives in this Plan. However, some type of limited duration financial incentive could be included in a marketing plan to increase residential recycling participation if funding is available.

*Other Economic Incentive Programs:* No other programs are included in this plan.

***Market Development Programs:*** The District will continue to encourage county offices to buy recycled material when possible. And include buy-recycled in displays and presentations.

The District has implemented a plastic caps collection program. The program has been popular and promotes the use of recycled products because the caps are used in making recycled content benches. The District, local governments, and individuals have purchased them and has placed them in public places. The program is labor intensive. Whether it promotes increased participation in other recycling programs is not known. Staff is reviewing the program and will make a recommendation to the Policy Committee regarding future implementation.

The District will continue to promote OEPA Market Development grants with industry. These grants assist industry in implementing plans to include recycled materials in production of existing or new products.

***Feasibility Studies:*** Other than the research listed above, no research or feasibility studies not previously included are planned.

### ***Facilities***

*Materials Recovery Facilities/Recycling Centers:* The District does not plan to own or operate any material recovery facilities or recycling facilities. The privately owned facilities used by the District are listed in APPENDIX B, Table B-7, page Appendix B-7.

**Landfills:** The District does not own or operate landfills or other disposal facilities. The landfills which accept waste from the District and information regarding the capacity of these landfills is available in APPENDIX M.

**Closed Facility Maintenance (Closure/Post-Closure Care):** The District is not responsible for maintenance of any closed facilities.

**Transfer Facilities:** The District does not own or operate a transfer facility. The transfer facilities used by the waste haulers that serve the District in the reference year are listed in APPENDIX D.

**Composting Facilities:** The District does not own or operate a composting facility. The composting facilities that received material from the District in the reference year are listed in APPENDIX B, Table B-5, page APPENDIX B-12.

**Data Collection:** The District plans to improve commercial data collection by returning to the practice of preparing and using simplified surveys tailored to the type of business. This will continue throughout planning period if it improves the quantity and quality of responses. The District will also step up efforts to follow up with non-respondents.

***Outreach, Education, Awareness, and Technical Assistance***

**Web Page:** The District will continue to provide the website <http://www.co.darke.oh.us/solidwaste/> and refresh it as needed with up-to-date information.

**Resource Guide:** Darke County's Guide to Recycling in printed form and posted on the website is the District's comprehensive Infrastructure Inventory and Resource Guide. It includes "where to recycle" organized by material type. Materials listed include commonly recycled materials and difficult to manage materials like lead acid batteries and used motor oil. It contains other helpful information about waste reduction, and about the process of turning recycled materials back into useful products. More information and recommendations for improving the is website and Guide are included in Appendix L, page L-2.

**Education and Presentations:** The District Director is the main spokesperson and presenter for both adult and youth programs and activities. Through good working relationships with other organizations and the connection with Keep America Beautiful, the District can access resources and work with volunteers to prepare presentations that address specific areas of interest.

**Outreach and Marketing Plan:** The goals of the marketing plans are to increase participation in existing recycling and composting programs and to reduce the amount of contamination of recycling set-outs. The major initiative planned are :

***Residential Sector Marketing and Outreach:***

**Curbside Recycling Participation:** Develop a marketing campaign directed to residents of the three municipalities that have curbside recycling programs, Greenville, Versailles, and Arcanum with the goal of

increasing the number of curbside set outs and decreasing the amount of unaccepted materials in recycling set outs. Aspects of this plan will direct similar messages to drop-off users.

Multi-Family recycling : Contact apartment complex owners or managers to find out what, if any, recycling opportunities are available for residents on site. Would owners consider cooperating on providing recycling and, if so, what are they willing to do? At a minimum District will provide a drop-off in Greenville convenient to the biggest cluster of apartment complexes and market participation to apartment residents.

Exhibits/displays at County Fair and at least one other well attended event featuring residential participation in recycling and composting and other District programs.

Explore creating a compost kitchen training program in conjunction with Cooperative Extension or Soil and Water Conservation.

Commercial/Institutional Sector: The District's outreach with the commercial/institutional sector is intertwined with the survey process for data collection. It is a useful communication opportunity to identify successes and problems and then make contact to help solve those problems. Therefore, the District is including actions to improve the usefulness of the data collection process.

Darke County Government Recycling: Annually contact each agency to identify the person responsible for the recycling program. Check on participation, offer help as necessary to keep the programs on track and reporting problems and successes.

Identify contacts at institutions/businesses including independent living and assisted living facilities, looking for recycling programs or opportunities to assist in developing recycling programs.

Revitalize the annual commercial recycling survey process to increase the number and quality of responses.

Industrial Sector: The industrial sector in Darke County has consistently taken the initiative to implement recycling programs. The data they provide indicates that the industrial sector is successfully doing what they can. The District has always cooperated with industries to try to identify markets for difficult to recycle materials and has welcomed opportunities to pass on relevant information about available programs like the market development grants. There is not evidence to indicate that a marketing plan is necessary. Not developing a formal plan does not mean the District ignores industries. They are an important partner. The District will continue to make contact with industries about District programs and services.

Political Leaders: Develop and implement a plan and schedule to contact and officials in each municipality and the township trustees in each township at least once every year about some aspect of the recycling program in there area with three purposes: identify problems related to recycling services, keep them informed about District initiatives, ask for active and visible support of recycling programs available in their area.

Schools: Work with schools through the following programs:

Use recycling drop-offs provided by the District to emphasize student hands-on recycling responsibilities: encourage and support direct involvement of students.

Annually update a directory of contacts in each school district that includes the person responsible for the recycling collection program and a faculty member who will take responsibility to sharing information with other faculty and with the District.

Engage older youth in hands-on projects to increase recycling participation, reduce contamination, gather data, and develop marketing plans.

Maintain and update publicly available resource library.

Make age appropriate presentations in classrooms and for youth groups

Outreach Priority:

 **Increase participation in curbside and drop-off recycling programs while reducing contamination**

**Other Programs**

*Health Department Support:* Funding for the Darke County Health Department for the monitoring of solid waste related facilities and services and for the enforcement of solid waste related violations is included in the District budget and can be made available any year or every year of the planning period.

*County Assistance:* None planned.

*Open Dumping/Litter Enforcement:* The County Sheriff and the Greenville Police Department cooperate with the District to investigate and take appropriate action in cases of open dumping or extreme litter. There is no District program or designated funding. The Health Department investigates solid waste related violations.

*Open dump/tire dump cleanup:* The District may provide funding for costs related to supervising, transportation, and supplies for cleaning up litter and illegally dumped materials on public property utilizing court appointed workers. Service area is the entire county.

The District may continue Trash Bash, an annual clean-up event that offers an opportunity to focus on litter and illegal dumping. It involves groups and organizations in working with the District.

The District pays for tire disposal/recycling when townships clean up and deliver illegally dumped or littered tires and deliver them to the Rumpke Tire Facility.

*Municipal Corporation/Township Assistance:* No assistance is planned except the tire disposal assistance listed above.

*Disaster Debris Assistance:* Funds set aside for emergency management of debris generated by natural disasters. Reserved in the District budget to be used any year in the planning period.

*Closed Facility Maintenance/Post-Closure Care:* No facilities needing post closure care exist in the District.

*Facility Ownership/Operations:* The District does not own or plan to own any facilities

**C. Waste Reduction and Recycling Rates**

1. *Residential/Commercial Recycling in the District:* See Appendix E for additional information

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

Year	Projected Quantity Collected (tons)	Residential/Commercial WRR <sup>1</sup> (%)
2022	11,757	24%
2023	11,825	24%
2024	11,930	24%
2025	12,032	25%
2026	12,143	25%
2027	12,075	25%

<sup>1</sup>WRR = Waste Reduction and Recycling Rate

The District believes that a renewed focus on increasing both the quantity and quality of residential and commercial recycling participation in the first years of the planning period will result in measurable increases in the material that is delivered and processed by material recovery facilities. This will result in an increase in the average pounds per person per day recycled. It will also increase the percentage of residential/commercial to the 25% goal. Improved data collection will help the District document commercial recycling that is believed to be occurring but is not reported.

2. *Industrial Recycling in the District:* See Appendix F for additional information.

**Table 5-4 Industrial Waste Reduction and Recycling Rate**

Year	Projected Quantity Collected (tons)	Industrial WRR <sup>1</sup> (%)
2022	14,700	81%
2023	14,700	80%
2024	14,700	79%
2025	14,700	78%
2026	14,700	77%
2027	14,700	76%

<sup>1</sup>WRR = Waste Reduction and Recycling Rate

The District projected 14,700 tons recycled in 2022 and expects the level to remain about the same for the entire planning period. The primary reason is that the industries in the District are well established and have done an excellent job in reducing waste and in diverting materials from disposal through recycling programs. The amount of recycling has gone down from historic highs, but the percent of total industrial waste generation that is recycled continues to be high. In reviewing the industries that have responded to surveys over the years, at least two plants that recycled significant amounts of material in the past have closed. Also, several manufacturers initiated waste reduction programs, like switching to reusable shipping containers. The waste reduction amounts are only countable in the year they are initiated.

Unless new manufacturers open or existing manufacturers make significant changes to increase or decrease production, there is no reason to expect waste disposal or recycling will change significantly.