

VII. Measurement of Progress Toward Waste Reduction Goals [ORC Section 3734.53(A)]

The Tables referenced throughout Section VII of this *Plan Update* are included as attachments at the end of the section.

A. Compliance with Goal #1

SWACO will comply with Goal #1: Access to Waste Management Opportunities. The District shall provide access to recycling and waste minimization opportunities for municipal solid waste to its residents and businesses.

B. Demonstration of Compliance with Goal #1

Table VII-1, "Materials Designated to Demonstrate Compliance with Goal #1", presents the materials designated for the Residential Sector and materials for the Commercial/Institutional Sector. SWACO designated four materials for the Residential Sector: newspaper, glass, aluminum and plastic containers. The four materials designated for the Commercial/Institutional Sector are cardboard, office paper, aluminum containers and steel containers.

1. Residential Sector

The Plan Format prescribes a formula for solid waste management Districts to use to determine the percentage of the population which has access to curbside and drop-off recycling services. The types of services offered within the District are listed below and include an explanation of the population credit assigned to each type of service.

Non-Subscription Curbside Recycling

A solid waste district receives one hundred percent population credit when all residential single family households receive curbside recycling service. In order to qualify, all residents must receive the curbside recycling service whether they use the service or not. Typically, payment for the service is made by the resident to the political subdivision or by the political subdivision through local taxes.

Subscription Curbside Recycling

A solid waste district receives twenty-five percent population credit when a subscription service is offered by waste haulers operating in the political subdivision. Subscription curbside recycling is a service that is paid directly by the resident similar

to a magazine subscription. The resident chooses to subscribe to a hauler that provides the recycling service. The credit for subscription service can be higher than twenty-five percent if the District can demonstrate more homes participate in the subscription service.

Recycling Drop-Offs

SWACO receives a population credit toward the infrastructure goal for each recycling drop-off. The credit is also dependent upon the following factors:

- Rural or Urban – A rural area is defined as any municipality or township with a population of less than 5,000. An urban area is defined as any municipality or township with a population equal to or greater than 5,000.
- Full Service or Part-time – A full service drop-off is a site that is open to the public at least 40 hours per week which manages the four materials designated for the Residential Sector. A part-time drop-off is a site that is open to the public less than 40 hours per week; however, the site is available at a regular scheduled time at least once per month. The part-time drop-off must collect the same four materials designated for the Residential Sector.
- Credit – If the drop-off is located in a rural area with less than 5,000 persons, the population credit is 2,500. If the drop-off is located in an urban area with a population of more than 5,000, the credit is 5,000 for full-time drop-offs and 2,500 for part-time drop-offs.

a. Service Area

The service area includes SWACO's District, which includes all of Franklin County and excludes small portions of Lithopolis Village and Pickerington City where a majority of each political subdivision's population resides in Fairfield County. These two political subdivisions fall under the jurisdiction of the Coshocton-Fairfield-Licking-Perry Joint District. SWACO's District also includes portions of Union, Delaware, Fairfield, Licking, and Pickaway counties where the majority of a municipal corporation's population resides in Franklin County.

b. Access

The District provides access to waste reduction/recycling services via non-subscription and subscription curbside programs and full-time recycling drop-off locations. In 2008, there were 29 political subdivisions that offered curbside recycling programs and the District had 202 full-time publically-available recycling drop-offs.

Table VII-2, "Calculation of Access for Residential Sector", summarizes access during the 2008 reference year and in 2011, the first year of the planning period. For 2011, the first year of the planning period, the District is projected to exceed a 100 percent recycling access rate for the Residential Sector. The following section summarizes SWACO's achievement of recycling access and demonstrates SWACO's ability to provide access to the Residential Sector in the reference year and first year of the planning period.

Curbside Recycling Access Results

The curbside recycling access calculation was based on the population of each political subdivision in 2008 and 2011 and whether the program was subscription or non-subscription. Figure VII-1 summarizes the curbside population access credit for SWACO in 2008 and 2011.

Figure VII-1 – Curbside Recycling Population Access

Curbside Program	Reference Year Curbside Recycling Population Access (2008)	First Year of Planning Period Curbside Recycling Population Access (2011)
Non-Subscription Curbside	346,868	353,736
Subscription Curbside	27,573	31,213
Total Curbside	374,441	384,949

The curbside recycling access is projected to increase by over 10,000 persons to account for an annual population increase of 0.62 percent from 2008 to 2011.

The Solid Waste Management Plan Format prescribes that a credit equal to 25 percent of the total population of a political subdivision is to be applied when subscription

curbside recycling service is offered in that political subdivision and the actual number of subscriptions is unavailable. In 2008, the City of Columbus operated a subscription curbside recycling program. If the number of subscriptions were unavailable, then the population access credit for the City of Columbus would be 188,721 according to the equation below:

$$754,885 \text{ (2008 population)} \times 25\% = 188,721 \\ \text{population access}$$

Rumpke provided SWACO with the estimated number of households that participated in the City of Columbus' subscription curbside recycling program in 2008. Rumpke estimated that there were 11,400 households that participated in the subscription program out of a possible 324,633 households. The number of households in the City of Columbus for the 2008 reference year (324,633) comes from the Mid-Ohio Regional Planning Commission ("MORPC"). MORPC makes annual population and household projections based on the number of new housing units and takes into account each jurisdiction's vacancy rate and population per household as reported by the U.S. Census Bureau.

To calculate the population credit for the City of Columbus subscription curbside recycling program, the total Columbus population in 2008 (754,885) was divided by the number of households in 2008 (324,633). The result is 2.33 persons per household in the City of Columbus.

$$754,885 \text{ persons} / 324,633 \text{ households} = 2.33 \text{ persons} \\ \text{per household}$$

The number of persons per household was then multiplied by the 11,400 households that participated in the City of Columbus subscription curbside program in 2008.

$$2.33 \text{ persons per household} \times 11,400 \text{ households} \\ = 26,562 \text{ population credit}$$

Using the population credit of 26,562, as opposed to the credit of 188,721, more accurately reflects the actual level of participation in the Columbus subscription program and provides a conservative calculation of access.

If the City of Columbus implements a non-subscription curbside recycling program in 2012, the access credit for the City of Columbus will increase to match the 2012 population projection for the City of Columbus. The addition of population access credit for the entire City of Columbus will assist SWACO in far exceeding the access requirement.

Drop-Off Recycling Access Results

There were 202 full-time recycling drop-off locations in SWACO in 2008. By 2011, the District will close nine drop-off centers which are identified in Table VII-2 at the end of this section. All recycling access drop-off locations are open to anyone in the District and accept all seven of the designated materials. The drop-off located at Highbanks Metro Park is not included in the access calculation because this drop-off is located within an adjacent solid waste management district. Figure VII-2 summarizes the drop-off population access credit for SWACO in 2008 and 2011.

Figure VII-2 – Drop-off Recycling Population Access

Service Area	Reference Year Drop-off Recycling Population Access (2008)	First Year of Planning Period Drop-off Recycling Access Population (2011)
SWACO	997,500	952,500

Overall Recycling Access Results

The following figure summarizes the total population access credit and access rate in SWACO for the reference year (2008) and the first year of the planning period (2011). Figure VII-3 summarizes the overall recycling access credit for SWACO in 2008 and 2011.

Figure VII-3 – Overall Recycling Results

SWACO Service Area	Reference Year 2008	First Year of Planning Period 2011
Population with Access	1,371,941	1,337,449
Population	1,160,301	1,184,472
90 Percent of Population	1,044,271	1,066,025
Percent Access	118%	113%

c. Participation

The strategies identified in Section V address the requirements for education and awareness to demonstrate participation. SWACO will continue to conduct education and awareness program as planned. The existing education and community awareness programs meet or exceed State Plan requirements. For example, the District maintains the following:

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

SWACO's Smart Communities program is one outreach and education program that SWACO uses to increase participation rates in curbside recycling programs in villages, townships and cities. The school district recycling program focuses on increasing recycling in schools and educating students about recycling and waste reduction. The success of each of these education efforts is tracked annually on SWACO E-TRAC. SWACO also incorporates other residential education programs that are detailed in Sections IV and V of this *Plan Update*.

d. Financial Incentives

In addition to the education and awareness programs articulated in this *Plan Update*, SWACO has a significant economic incentive program in place. SWACO offers the following residential programs:

- General Grants Program – SWACO offers competitive grants to encourage re-use programs, waste reduction programs and the use of recycled content equipment and materials. These grants are available to communities, community groups, schools and institutions, and non-profit organizations.
- Solid Waste Consortiums – SWACO works with several suburban communities to negotiate waste hauling services for trash and recycling. Participation in the consortium can provide a significant increase in recycling volume and result in better pricing for hauling services than if each community was bidding for services separately.

These programs offer a wide variety of incentives to increase participation, education and recycled tonnage. The details of each of the above listed programs, as well as other incentive programs, are listed in Sections IV and V of this *Plan Update*.

2. Commercial/Institutional Sector

Solid Waste Management Districts must demonstrate that commercial and institutional generators have access to recycling or other alternative management methods for at least four materials identified in the *1995 State Solid Waste Management Plan* and any four materials as being highly amenable to recovery from solid waste generated by commercial and institutional generators.

a. Service Area

The service area includes SWACO's District, which includes all of Franklin County and excludes small portions of Lithopolis Village and Pickerington City where a majority of each political subdivision's population resides in Fairfield County. These two political subdivisions fall under the jurisdiction of the Coshocton-Fairfield-Licking-Perry Joint District. SWACO's District also includes portions of Union, Delaware, Fairfield, Licking, and Pickaway counties where the majority of a political subdivision's population resides in Franklin County.

b. Access

Methods of providing access for Commercial/Institutional Sector entities include hauler pickup, and drop-off (or buyback) availability. SWACO has designated four materials for the Commercial/Institutional Sector including cardboard, office paper, aluminum containers and steel containers.

In addition, Districts must demonstrate at least one of the following collection options for each service area:

- At least one drop-off available or buyback available;
- Haulers which will pick up recyclables for a fee or at no charge; or
- At least one MRF receiving Commercial/Institutional Sector waste and recovering recyclables from waste received.

Each entity listed under the each of the four materials was surveyed and contacted to confirm the type of material collected, hours of operation, Commercial/Institutional Sector services and whether hauling services are provided.

It is important to point out that all of SWACO's full-time publically available recycling drop-off centers accept all four of the required materials (cardboard, office paper, aluminum containers and steel containers) and are open to commercial and institutional generators.

The following entities identified in Figure VII-4 supply drop-off or pick-up services for the entire service area and are organized by material.

Figure VII-4 – Access Demonstration

Material	Entity	
	Hauler/Pick Up	Drop-off
Cardboard	Royal Document Destruction Commercial Collection Route, Waste Management Commercial Collection Route, Rumpke Commercial Collection Route, Republic Services Commercial Collection Route, Local Waste Commercial Collection Route	Recycling Exchange North, Royal Document Destruction, Shred-It, The Grossman Group, Inc., SWACO Recycling Drop-offs
	Hauler/Pick Up	Drop-off
Office Paper	Royal Document Destruction Commercial Collection Route, Waste Management Commercial Collection Route, Rumpke Commercial Collection Route, Republic Services Commercial Collection Route, Local Waste Commercial Collection Route	Abitibi Bowater, Royal Document Destruction, Shred-it, The Grossman Group, Inc., SWACO Recycling Drop-offs
	Hauler/Pick Up	Drop-off
Aluminum Containers	Waste Management Commercial Collection	CycleMET, Inc., I.H. Schlezinger, Inc., PSC

	Route, Rumpke Commercial Collection Route, Republic Services Commercial Collection Route, Local Waste Commercial Collection Route	Metals, Recycling Exchange North, SWACO Recycling Drop-offs
	Hauler/Pick Up	Drop-off
Steel Containers	Waste Management Commercial Collection Route, Rumpke Commercial Collection Route, Republic Services Commercial Collection Route, Local Waste Commercial Collection Route	CycleMET, Inc., I.H. Schlezinger, Inc., PSC Metals, SWACO Recycling Drop-offs

The four primary waste haulers operating in SWACO’s jurisdiction all collect the four designated materials from the Commercial/Institutional Sector as well as glass, plastic and mixed paper. All of SWACO’s recycling drop-offs accept the four designated materials as well as glass, plastic and mixed paper from the Commercial/Institutional Sector. There are also a number of facilities listed in Figure VII-4 above, which have drop-offs or allow businesses to bring their materials to the facilities.

c. Participation

Education and Awareness

The education and awareness programs articulated in Sections IV and V of this *Plan Update* address this requirement. SWACO assembles the Business Round Table four times annually to provide a forum for businesses to learn about disposal options, the latest innovations in waste reduction, re-use and recycling and other subjects to address sustainability. SWACO also promotes a majority of the commercially available recycling facilities in SWACO’s District via their website. In addition, on occasion, the District assists with waste assessments for local businesses, industry and institutions.

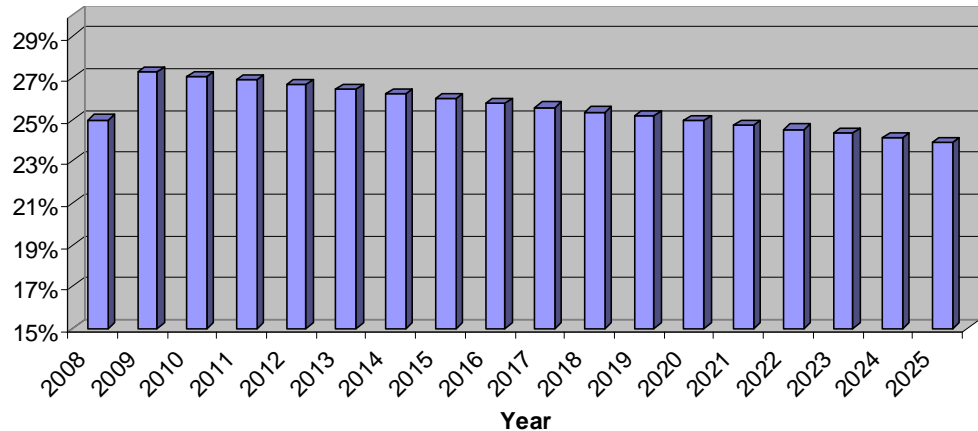
C. Targets for Reduction and Recycling

1. Residential and Commercial Sectors

Table VII-3, “Annual Rate of Waste Reduction: Residential/Commercial Waste”, presents the annual waste reduction rates for Residential/Commercial waste. SWACO’s Residential/Commercial Sector had a waste reduction rate of 25 percent in the reference year (2008). In the first year of the planning period (2011), the waste reduction rate target for Residential/Commercial Sector waste is projected to rise to 27 percent. The District anticipates the waste reduction will fall to approximately 24 percent by the end of the planning period (2025).

Figure VII-5 depicts the District’s projected waste reduction rate over the planning period for the Residential/Commercial Sector:

Figure VII-5 – SWACO Residential/Commercial Waste Reduction Percentage (2008 – 2025)



In the first year of the planning period, Residential/Commercial Sector waste generation is projected to be 1,391,816 tons and is projected to increase to 1,644,026 tons in 2025, an 18 percent increase during the planning period. Residential/Commercial Sector waste reduction is projected to increase in 2011 from 374,319 tons to 393,085 tons in 2025, approximately a 5 percent increase. To calculate the waste reduction percentage for the first year of the planning period and the final year of the planning period, the projected recycling and composting tonnages are divided by the projected generation.

2011 Waste Reduction Calculation

$$\frac{(208,819 \text{ (2011 Recycling)} + 165,500 \text{ (2011 Composting)})}{1,391,816 \text{ (2011 Generation)}} = 28.3\%$$

2025 Waste Reduction Calculation

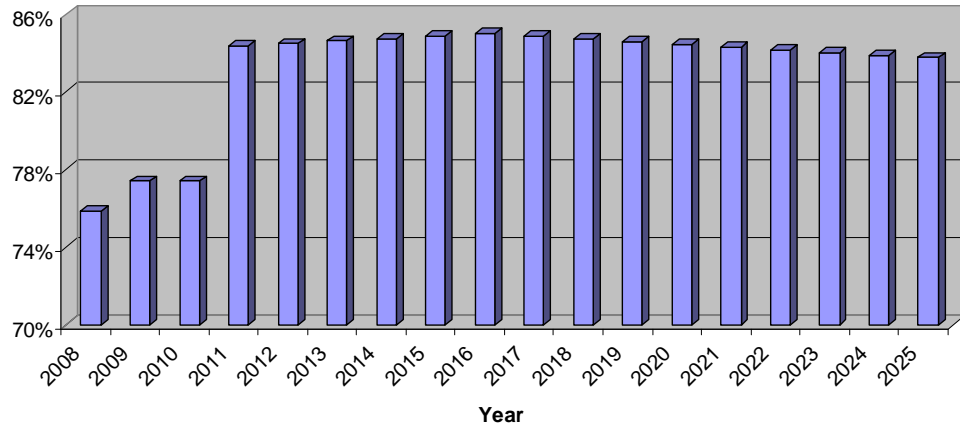
$$\frac{(227,585 \text{ (2025 Recycling)} + 165,500 \text{ (2025 Composting)})}{1,644,026 \text{ (2025 Generation)}} = 23.9\%$$

Even though SWACO is projecting an increase in recycling in the Residential/Commercial Sector each year of the planning period, the projected increase in waste generation and disposal cancels the increase in recycling resulting in a downward trend. During the planning period, several factors could contribute to a reversal in the declining waste reduction rate. During the planning period, the potential implementation of a City of Columbus non-subscription recycling program and diversion of organics from the landfill through organics collection and digestion could change the projected trend in Residential/Commercial Sector waste reduction. The current projections for recycling are conservative. For further discussion regarding projections in generation and recycling, refer to Section V of this *Plan Update*.

2. Industrial Sector

Table VII-4, "Annual Rate of Waste Reduction: Industrial Waste," presents the annual waste reduction rate for Industrial Sector waste. SWACO's Industrial Sector had a waste reduction rate of approximately 76 percent in the reference year (2008). In the first year of the planning period (2011), the waste reduction rate target for Industrial Sector waste is projected to be over 84 percent. SWACO anticipates the waste reduction will remain within one percent of 84 percent for the duration of the planning period. Figure VII-6 depicts the District's projected waste reduction rate over the planning period for the Industrial Sector:

Figure VII-6 – SWACO Industrial Waste Reduction Percentage (2008 – 2025)

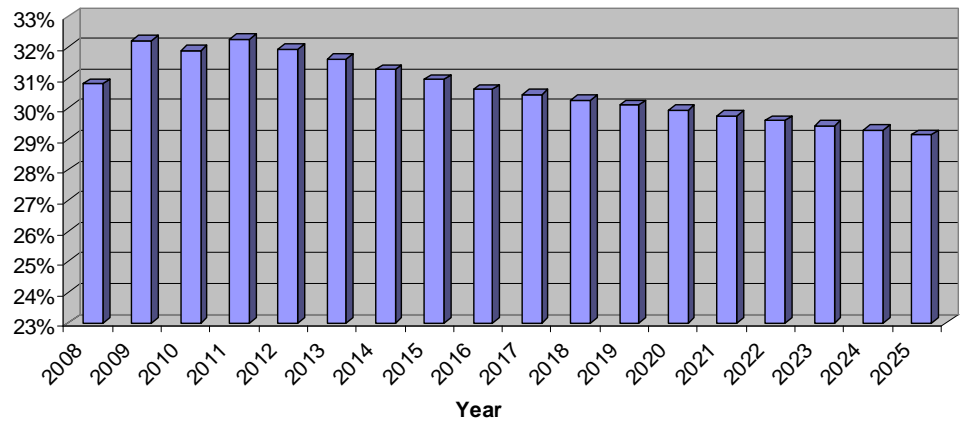


SWACO is projecting a decline in overall Industrial Sector waste generation from the beginning of the planning period until 2016. The decline in disposal and recycling is consistent with the projected loss in industrial employment according to the Ohio Department of Development, Office of Strategic Research. The District projects Industrial Sector waste generation will increase slightly from 2017 – 2025 to reflect economic recovery. The District projects that Industrial Sector waste reduction will remain fairly constant throughout the planning period (2011 – 2025) as the projected trends in disposal are relative to the projected fluctuations in recycling.

3. District Total

Table VII-5, “Annual Rate of Waste Reduction: Total District Solid Waste”, presents annual waste reduction rates for the Residential/Commercial and Industrial Sectors. SWACO’s annual waste reduction rate for the reference year (2008) was 30.8 percent. In 2011, the first year of the planning period, SWACO projects the total waste reduction rate to be 32.3 percent, and then gradually decrease to 29.1 percent by the end of the planning period (2025). This overall downward trend is attributed, primarily, to the projected increase in waste generation from the Residential/Commercial Sector and decrease in Industrial Sector generation. Figure VII-7 depicts the District’s projected waste reduction rate over the planning period for the Residential/Commercial and Industrial Sectors combined:

**Figure VII-7 – SWACO Total Waste Reduction Percentage
(2008 – 2025)**



**Table VII-1
Materials Designated to Demonstrate Compliance with Goal #1**

Eleven Materials Highly Amenable to Recycling, etc.	Sector	Four Materials Designated for the Residential Sector	Four Materials Designated for the Commercial/Institutional Sector	Number of Times Materials are Designated
Aluminum Containers	R,C,I	X	X	2
Corrugated Cardboard	R,C,I		X	1
Food Waste	C,I			0
Glass Containers	R,C,I	X		1
Household Hazardous Waste	R			0
Lead Acid Batteries	R,C,I			0
Major Appliances	R,C,I			0
Mixed Paper	R			0
Newspaper	R,C,I	X		1
Office Paper	C,I		X	1
Plastic Containers	R,C,I	X		1
Scrap Tires	R			0
Steel Containers	R,C,I		X	1
Textiles	R			0
Used Motor Oil	R			0
Wood Pallets and Packaging	C,I			0
Yard Waste	R,C,I			0
Totals		4	4	8

**Table VII-2
Calculation of Access for Residential Sector**

Program	Reference Year (2008)		Year 2011	
	2008 Population	Population with Access	2011 Population	Population with Access
Non-Subscription Curbside				
Bexley	12,507	12,507	12,755	12,755
Blendon Township	7,841	7,841	7,996	7,996
Dublin	38,536	38,536	39,299	39,299
Gahanna	33,892	33,892	34,563	34,563
Grandview Heights and Marble Cliff	6,956	6,956	7,094	7,094
Grove City	33,829	33,829	34,499	34,499
Groveport	5,240	5,240	5,344	5,344
Hilliard	27,901	27,901	28,453	28,453
Jackson Township	4,621	4,621	4,712	4,712
Jefferson Township	4,540	4,540	4,630	4,630
Madison Township	11,768	11,768	12,001	12,001
Mifflin Township	3,069	3,069	3,130	3,130
Minerva Park	1,205	1,205	1,229	1,229
New Albany Village	7,088	7,088	7,228	7,228
Norwich Township	3,734	3,734	3,808	3,808
Perry Township	3,659	3,659	3,731	3,731
Plain Township	2,196	2,196	2,239	2,239
Reynoldsburg	33,657	33,657	34,323	34,323
Riverlea Village	477	477	486	486
Sharon Township	1,900	1,900	1,938	1,938
Turo Township	1,369	1,369	1,396	1,396
Upper Arlington	31,878	31,878	32,509	32,509
Valleyview Village	569	569	580	580
Washington Township	711	711	725	725
Westerville	36,231	36,231	36,948	36,948
Whitehall	18,180	18,180	18,540	18,540
Worthington	13,314	13,314	13,578	13,578
Subtotal Non-Subscription Curbside		346,868		353,736
Subscription Curbside				
City of Columbus	754,885	26,562	769,832	27,088
Clinton Township	4,045	1,011	4,125	4,125
Subtotal Subscription Curbside		27,573		31,213
Part Time Drop-Off				
None	0	0	0	0
Subtotal Part Time Drop-Off		0		0
Full Time Drop-Off				
Brown Township 2491 Walker Rd.	2,429	2,500	2,477	2,500
Hamilton Township Corner of Lockbourne Rd and 317	4,425	2,500	4,513	2,500
Hamilton Township Hamilton Township Park 5333 Lockbourne Rd.	4,425	2,500	4,513	2,500
Jackson Township 2620 London Groveport Rd.	4,621	2,500	4,712	2,500
Plain Township 4585 Reynoldsburg New Albany Rd.	2,196	2,500	2,239	2,500
Pleasant Township 5373 Norton Road	7,361	5,000	7,507	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
Prairie Township Fire Department 123 Inah Ave.	16,825	5,000	17,158	5,000
Prairie Township Fire Department 451 Hubbard Rd.	16,825	5,000	17,158	5,000
Prairie Township Prairie Township Hall 23 Maple Dr.	16,825	5,000	17,158	5,000
New Albany New Albany Pool 7560 Swickard Woods Blvd.	7,088	5,000	7,228	5,000
Columbus, Fire Station 2250 W. Broad St.	754,885	5,000	769,832	5,000
Columbus, Fire Station 3555 Fishinger Road	754,885	5,000	769,832	5,000
Columbus, Fire Station 3069 Parsons Ave.	754,885	5,000	769,832	5,000
Columbus, Fire Station 211 McNaughten Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 2170 West Case Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 2193 Frank Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 4100 Sullivant Ave.	754,885	5,000	769,832	5,000
Columbus, Fire Station 5151 Little Turtle Way	754,885	5,000	769,832	5,000
Columbus, Fire Station 7560 Smokey Row Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 440 Lazelle Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 3675 Gender Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 3240 McCutcheon Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 5433 Fisher Rd.	754,885	5,000	769,832	5,000
Columbus, Fire Station 5305 Alkire Rd.	754,885	5,000	769,832	5,000
Gahanna, Mifflin Twp. Station #131 485 Rocky Fork Blvd.	33,892	5,000	0	0
Columbus, Recreation Center 1254 Briarwood Ave.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 1826 Lattimer Dr.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 4900 Olentangy River Rd.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 240 W. Oakland Ave.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 276 S. Nelson Rd.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 120 W. Goodale Blvd. - Goodale Park	754,885	5,000	769,832	5,000
Columbus, Recreation Center 1184 Barnett Rd.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 3923 N. High St. - Whetstone Park	754,885	5,000	769,832	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
Columbus, Recreation Center 4900 Sawmill Rd.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 455 S. Westgate Ave.	754,885	5,000	769,832	5,000
Columbus, Recreation Center 2801 Lockbourne Rd.	754,885	5,000	769,832	5,000
Columbus, Kroger Store 1630 Morse Rd	754,885	5,000	769,832	5,000
Columbus, Kroger Store 1350 N. High Street	754,885	5,000	769,832	5,000
Columbus, Kroger Store 3637 S. High St.	754,885	5,000	769,832	5,000
Hilliard, Kroger Store 2525 Rome-Hilliard Rd.	27,901	5,000	28,453	5,000
Columbus, Kroger Store 5727 Emporium Sq.	754,885	5,000	769,832	5,000
Columbus, Kroger Store 1375 Chambers Rd.	754,885	5,000	769,832	5,000
Columbus, Kroger Store 1585 Georgesville Rd.	754,885	5,000	769,832	5,000
Columbus, Kroger Store 3675 E. Broad St.	754,885	5,000	769,832	5,000
Columbus, Kroger Store 850 S. Hamilton Rd.	754,885	5,000	769,832	5,000
Columbus, Former Kroger Store 560 E. Livingston Ave.	754,885	5,000	0	0
Canal Winchester, Kroger Store 6095 Gender Rd.	6,248	5,000	6,372	5,000
Columbus, Kroger Store 150 W. Sycamore/Front St.	754,885	5,000	769,832	5,000
Columbus, Home Depot 6333 Cleveland Ave.	754,885	5,000	769,832	5,000
Reynoldsburg, Home Depot 2480 Brice Rd.	27,239	5,000	27,778	5,000
Columbus, Indianola Plaza 3600 Indianola Ave.	754,885	5,000	769,832	5,000
Columbus, Meijer 5050 N. Hamilton Rd.	754,885	5,000	769,832	5,000
Dublin, Meijer 6175 Sawmill Rd.	38,173	5,000	38,929	5,000
Grove City, Phoenix Golf Links 3413 Jackson Pike	33,829	5,000	34,499	5,000
Grove City, Service Dept. 3262 Ventura Blvd.	33,829	5,000	34,499	5,000
Grove City, The Big Splash 2803 Southwest Blvd.	33,829	5,000	34,499	5,000
Grove City, YMCA (Urbancrest) 3500 1st Ave.	33,829	5,000	34,499	5,000
Columbus, 14-0 Carryout 320 E. Hudson St.	754,885	5,000	769,832	5,000
Columbus, Newman Center 64 W. Lane Ave.	754,885	5,000	769,832	5,000
Columbus, Beta Theta Pi House 165 E. 15th Ave.	754,885	5,000	769,832	5,000
Columbus, Godman Guild 303 E. 6th Ave.	754,885	5,000	769,832	5,000
Columbus, King Arts Center 867 Mount Vernon Ave.	754,885	5,000	769,832	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
Columbus, Columbus Schools Main Office 270 E. State St.	754,885	5,000	769,832	5,000
Columbus, Sam's Club 1755 Rome-Hilliard Rd.	754,885	5,000	0	0
Grove City, Wal-Mart Distribution Center 3880 Southwest Blvd.	33,829	5,000	34,499	5,000
Grove City, Wal-Mart 1693 Stringtown Rd.	33,829	5,000	34,499	5,000
Columbus, Wal-Mart 1221 Georgesville Rd.	754,885	5,000	0	0
Columbus, Wal-Mart 3657 East Main St.	754,885	5,000	769,832	5,000
Columbus, Wal-Mart 3900 Morse Rd.	754,885	5,000	769,832	5,000
Groveport, Three Creeks Metro Park 3860 Bixby Rd.	5,240	5,000	5,344	5,000
Westerville, Sharon Woods Metro Park 6911 S. Cleveland Ave.	36,231	5,000	36,948	5,000
Westerville, Blendon Woods Metro Park 4265 W. Dublin Granville Rd.	36,231	5,000	36,948	5,000
Reynoldsburg, Blacklick Woods Metro Park 6975 E. Livingston Ave.	27,239	5,000	27,778	5,000
Lewis Center, Highbanks Metro Park 9466 Columbus/Pike U.S. Route 23 N.	0	0	0	0
Galloway-Prairie Township, Battelle Darby Creek 1775 Darby Creek Dr.	16,825	5,000	17,158	5,000
Columbus, Wood Lake Village 3535 Hunting Brook Dr.	754,885	5,000	769,832	5,000
Columbus, Runaway Bay 1480 Runaway Bay Dr.	754,885	5,000	769,832	5,000
Columbus, Fox and Hounds 1075 Weybridge Rd.	754,885	5,000	769,832	5,000
Columbus, Lemans Village 5026 Dieker Rd.	754,885	5,000	769,832	5,000
Columbus, Parliament Ridge 4388 Walford St.	754,885	5,000	769,832	5,000
(N.W. Career Center) 2960 Cranston Drive 43017	754,885	5,000	0	0
(Clinton Elementary) 10 Clinton Heights Avenue 43202	754,885	5,000	769,832	5,000
(East on Arcadia) 100 E. Arcadia Avenue 43202	754,885	5,000	769,832	5,000
(Colerain Elementary) 499 E. Weisherimer Road 43214	754,885	5,000	769,832	5,000
(Dominion Middle School) 330 E. Dominion Blvd. 43214	754,885	5,000	769,832	5,000

**Table VII-2 (continued)
Calculation of Access for Residential Sector**

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Indian Springs Elementary) 50 E. Henderson Road 43214	754,885	5,000	769,832	5,000
(Ridgeview Middle School) 4241 Rudy Road. 43214	754,885	5,000	769,832	5,000
(Whetstone High School) 4405 Scenic Drive 43214	754,885	5,000	769,832	5,000
(Centennial High School) 1441 Bethel Road 43220	754,885	5,000	769,832	5,000
(Ecole Kenwood Elementary) 3770 Shattuck Avenue 43220	754,885	5,000	769,832	5,000
(Winterset Elementary) 4776 Winterset Dr. 43220	754,885	5,000	769,832	5,000
(Cranbrook Elementary) 908 Bricker Blvd. 43221	754,885	5,000	769,832	5,000
(Gables Elementary) 1680 Becket Avenue 43235	754,885	5,000	769,832	5,000
(Fifth Avenue Elementary) 1300 Forsythe Avenue 43201	754,885	5,000	769,832	5,000
(Indianola Informal K-7) 100 W. 4th Avenue 43201	754,885	5,000	0	0
(Indianola Middle School) 420 E. 19th Avenue 43201	754,885	5,000	769,832	5,000
(Weinland Park Elementary) 211 E. Seventh Ave 43201	754,885	5,000	769,832	5,000
(Hilltonia Middle School) 2345 W. Mound St. 43204	754,885	5,000	769,832	5,000
(Elementary) 2989 Valleyview Drive 43204	754,885	5,000	769,832	5,000
(West Broad Elementary) 2744 W. Broad Street 43204	754,885	5,000	769,832	5,000
(West High School) 179 S. Powell Avenue 43204	754,885	5,000	769,832	5,000
(Westmoor Middle School) 3001 Valleyview Drive 43204	754,885	5,000	769,832	5,000
(Arts Impact Middle School) 680 Jack Gibbs Blvd 43215	754,885	5,000	769,832	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Literature Based Alternative at Hubbard) 104 W. Hubbard Road Avenue 43215	754,885	5,000	769,832	5,000
(Successworks Academy) 617 W. State Street 43215	754,885	5,000	769,832	5,000
(Starling Middle School) 120 S. Central Avenue 43222	754,885	5,000	769,832	5,000
(Briggs High School) 2555 Briggs Road 43223	754,885	5,000	769,832	5,000
(Dana Elementary) 300 S. Dana Avenue 43223	754,885	5,000	769,832	5,000
(Highland Elementary) 40 S. Highland Avenue 43223	754,885	5,000	769,832	5,000
(Lindbergh Elementary) 2541 Lindbergh Dr. 43223	754,885	5,000	769,832	5,000
(Sullivant Elementary) 791 Griggs Avenue 43223	754,885	5,000	769,832	5,000
(West Mound Elementary) 2051 W. Mound 43223	754,885	5,000	769,832	5,000
(Eakin Elementary) 3774 Eakin Road 43228	754,885	5,000	769,832	5,000
(Georgian Heights Elementary) 784 Georgian Dr. 43228	754,885	5,000	769,832	5,000
(Wedgewood Middle School) 3800 Briggs Road 43228	754,885	5,000	769,832	5,000
(Westgate Alternative Elementary) 3080 Wicklow Road 43204	754,885	5,000	769,832	5,000
(Columbus Alternative High School) 2632 McGuffey Road 43211	754,885	5,000	769,832	5,000
(Hamilton STEM Academy) 2047 Hamilton Ave. 43211	754,885	5,000	769,832	5,000
(Hudson Community Education) 2323 Lexington Ave. 43211	754,885	5,000	769,832	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Huy at Gladstone Elementary) 1965 Gladstone Ave. 43211	754,885	5,000	769,832	5,000
(Linden STEM Academy) 2626 Cleveland Ave. 43211	754,885	5,000	769,832	5,000
(Linden McKinley HS) 1320 Duxberry Ave. 43211	754,885	5,000	769,832	5,000
(Windsor STEM Academy) 1219 E. 12th Ave. 43211	754,885	5,000	769,832	5,000
(Arlington Park Elementary) 2400 Mock Road 43219	754,885	5,000	769,832	5,000
(Berwick k-6) 2595 Scottwood Road 43209	754,885	5,000	769,832	5,000
(Beatty Park at Trevitt Elementary) 519 Trevitt Street 43203	754,885	5,000	769,832	5,000
(Cassady Elementary) 2500 N. Cassady Ave. 43219	754,885	5,000	769,832	5,000
(Duxberry Park Elementary) 1779 E. Maynard Road Ave. 43219	754,885	5,000	769,832	5,000
(East Columbus Elementary) 3100 E. 7th Ave. 43219	754,885	5,000	769,832	5,000
(East Linden Elementary) 2505 Brentnell Ave. 43219	754,885	5,000	769,832	5,000
(Mifflin High School) 3245 Oak Spring St. 43219	754,885	5,000	769,832	5,000
(Mifflin Middle School) 3000 Agler Road. 43219	754,885	5,000	769,832	5,000
(N.E. Career Center) 3871 Stelzer Road. 43219	754,885	5,000	0	0
(South Mifflin STEM Academy) 2355 Middlehurst Dr. 43219	754,885	5,000	769,832	5,000
(A.G. Bell School) 1455 Huy Road. 43224	754,885	5,000	769,832	5,000
(Clinton Middle School) 3940 Karl Road. 43224	754,885	5,000	769,832	5,000
(Columbus Spanish Immersion) 2155 Fenton St. 43224	754,885	5,000	769,832	5,000
(Como Elementary) 2989 Reis Ave. 43224	754,885	5,000	769,832	5,000

**Table VII-2 (continued)
Calculation of Access for Residential Sector**

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Como Elementary) 4360 Maize Road 43224	754,885	5,000	769,832	5,000
(Medina Middle School) 1425 Huy Road. 43224	754,885	5,000	769,832	5,000
(North Linden Elementary) 1718 E. Cooke Road 43224	754,885	5,000	769,832	5,000
(Brookhaven High School) 4077 Karl Road. 43224	754,885	5,000	769,832	5,000
(Alpine Elementary) 1590 Alpine Dr. 43229	754,885	5,000	769,832	5,000
(Avalon Elementary) 5200 Avalon Ave. 43229	754,885	5,000	769,832	5,000
(Beechcroft) 6100 Beechcroft Road. 43229	754,885	5,000	769,832	5,000
(Devonshire Elementary) 6286 Ambleside Dr. 43229	754,885	5,000	769,832	5,000
(Forest Park Elementary) 5535 Sandalwood Blvd. 43229	754,885	5,000	769,832	5,000
(Innis Elementary) 3399 Kohr Blvd. 43229	754,885	5,000	769,832	5,000
(Northland High School) 1919 Northcliff Dr. 43229	754,885	5,000	769,832	5,000
(Northtowne Elementary) 4767 Northtowne Blvd. 43229	754,885	5,000	769,832	5,000
(Parkmoor Elementary) 1711 Penworth Dr. 43229	754,885	5,000	769,832	5,000
(Salem Elementary) 1040 Gravey Road 43229	754,885	5,000	769,832	5,000
(Valleyforge Elementary) 1321 Urban Dr. 43229	754,885	5,000	769,832	5,000
(Woodward Park Middle School) 5151 Karl Road. 43229	754,885	5,000	769,832	5,000
Oakland Park Alternative Elementary 3392 Atwood Terrace 43224	754,885	5,000	769,832	5,000
Shepard Center 873 Walcutt Avenue 43219	754,885	5,000	769,832	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Champion Middle School) 284 N. 22nd Street 43203	754,885	5,000	769,832	5,000
(Clearbrook Middle School) 31 N. 17th St. 43203	754,885	5,000	769,832	5,000
(East Pilgrim Elementary) 440 Taylor Ave. 43203	754,885	5,000	769,832	5,000
(Monroe Alternative Middle School) 474 N. Monroe Ave. 43203	754,885	5,000	769,832	5,000
(Douglas Elementary) 43 Douglas Street 43205	754,885	5,000	769,832	5,000
(Fair Elementary) 1395 Fair Ave 43205	754,885	5,000	769,832	5,000
(Franklin Middle School) 1390 Bryden Road 43205	754,885	5,000	769,832	5,000
(Lincoln Park Elementary) 579 E. Markison Avenue 43207	754,885	5,000	769,832	5,000
(Deshler Elementary) 1234 Deshler Ave 43206	754,885	5,000	769,832	5,000
(Heyl Elementary) 760 Reinhard Avenue 43206	754,885	5,000	769,832	5,000
(Livingston at Beck Elementary) 387 E. Beck St. 43206	754,885	5,000	769,832	5,000
(Siebert Elementary) 385 Reinhard Avenue 43206	754,885	5,000	769,832	5,000
(Stewart Elementary) 40 Stewart Ave. 43206	754,885	5,000	769,832	5,000
(Alum Crest High School) 2200 Winslow Dr. 43207	754,885	5,000	769,832	5,000
(Avondale at Old Watkins) 1486 Watkins Road 43207	754,885	5,000	0	0
(Berry Middle School) 2740 Lockbourne Road 43207	754,885	5,000	769,832	5,000
(Binns at Stockbridge Elementary) 3350 S. Champion Ave. 43207	754,885	5,000	769,832	5,000
(Buckeye Middle School) 2950 S. Parsons 43207	754,885	5,000	769,832	5,000
(Cedarwood Elementary) 775 Bartfield Dr. 43207	754,885	5,000	769,832	5,000
(Burroughs at Clairfield) 3220 Groveport Road 43207	754,885	5,000	769,832	5,000
(Leawood Elementary School) 1677 Hamilton Road 43227	754,885	5,000	769,832	5,000

Table VII-2 (continued)
Calculation of Access for Residential Sector

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Marion-Franklin HS) 1265 Koebel Road 43207	754,885	5,000	769,832	5,000
(Moler Elementary) 1560 Moler Road 43207	754,885	5,000	769,832	5,000
(Parsons Elementary) 3231 Lee Ellen Pl. 43207	754,885	5,000	769,832	5,000
(S.E. Career Center) 3500 Alum Creek Dr. 43207	754,885	5,000	0	0
(Southmoor Middle School) 1201 Moler Road 43207	754,885	5,000	769,832	5,000
(Southwood at Reeb) 280 E. Reed Ave. 43207	754,885	5,000	769,832	5,000
(Watkins Elementary) 1520 Watkins Road 43207	754,885	5,000	769,832	5,000
(Broadleigh Elementary) 3039 Maryland Ave. 43209	754,885	5,000	769,832	5,000
(Eastmoor High School) 417 S Weyant Ave. 43213	754,885	5,000	769,832	5,000
(Eastmoor Middle School) 3450 Medway Ave. 43213	754,885	5,000	769,832	5,000
(Fairmoor Elementary) 3281 Mayfair Park 43213	754,885	5,000	769,832	5,000
(Olde Orchard Elementary) 800 McNaughten Road 43213	754,885	5,000	769,832	5,000
(Recreation Center) 1826 Lattimer 43227	754,885	5,000	769,832	5,000
(Johnson Park Middle School) 1130 S. Waverly St. 43227	754,885	5,000	769,832	5,000
(Scottwood Elementary) 3392 Scottwood Road 43227	754,885	5,000	769,832	5,000
(Shady Lane Elementary) 1444 Shady Lane Road 43227	754,885	5,000	769,832	5,000
(Walnut Ridge) 4841 E. Livingston Ave 43227	754,885	5,000	769,832	5,000
(Easthaven Elementary) 2360 Garnet Road 43232	754,885	5,000	769,832	5,000
(Independence High School) 5175 Refugee Road 43232	754,885	5,000	769,832	5,000

**Table VII-2 (continued)
Calculation of Access for Residential Sector**

Program	2008 Population	Population with Access	2011 Population	Population with Access
(Liberty Elementary) 2949 Whitlow Road 43232	754,885	5,000	769,832	5,000
(Maybury Elementary) 2633 Maybury Road 43232	754,885	5,000	769,832	5,000
(Woodcrest Elementary) 5321 E. Livingston Ave 43232	754,885	5,000	769,832	5,000
(Yorktown Middle School) 5600 E. Livingston Ave. 43232	754,885	5,000	769,832	5,000
(Fort Hayes Career Center and Arts and Academic) 546 Jack Gibbs Blvd. 43215	754,885	5,000	769,832	5,000
(South High School @ Barrett) 345 East Deshler 43206	754,885	5,000	769,832	5,000
(Oakmont at Old Shady Lane) 1488 Shady Lane Road 43227	754,885	5,000	769,832	5,000
Total Full Time Drop-Off		997,500		952,500
Total Population With Access		1,371,941		1,337,449
Service Area Population		1,160,301		1,184,472
90 percent		1,044,271		1,066,025
Additional Population Needing Access		-327,670		-271,424
Access Percentage		118%		113%

Source(s) of information:

Service Area Population 2008 from Table IV-1

Service Area Population 2011 from Table V-1

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

Year	Recycling	Composting	Landfill	Tons Waste Reduction	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (lb/day)
2008	204,483	177,596	1,147,340	382,079	1,160,301	25%	1.80
2009	205,746	164,767	988,672	370,513	1,168,298	27%	1.74
2010	206,589	165,500	1,003,312	372,089	1,176,355	27%	1.73
2011	208,819	165,500	1,017,497	374,319	1,184,472	27%	1.73
2012	210,106	165,500	1,032,827	375,606	1,192,650	27%	1.73
2013	211,401	165,500	1,048,352	376,901	1,200,889	26%	1.72
2014	212,704	165,500	1,064,076	378,204	1,209,190	26%	1.71
2015	214,016	165,500	1,080,001	379,516	1,217,553	26%	1.71
2016	215,335	165,500	1,096,131	380,835	1,225,979	26%	1.70
2017	216,663	165,500	1,112,467	382,163	1,234,469	26%	1.70
2018	217,999	165,500	1,129,013	383,499	1,243,023	25%	1.69
2019	219,343	165,500	1,145,771	384,843	1,251,642	25%	1.68
2020	220,696	165,500	1,162,744	386,196	1,260,326	25%	1.68
2021	222,057	165,500	1,179,936	387,557	1,269,076	25%	1.67
2022	223,426	165,500	1,197,348	388,926	1,277,893	25%	1.67
2023	224,804	165,500	1,214,984	390,304	1,286,777	24%	1.66
2024	226,190	165,500	1,232,848	391,690	1,295,728	24%	1.66
2025	227,585	165,500	1,250,941	393,085	1,304,749	24%	1.65

Source(s) of information:

Recycling and Composting data are from Table VI-2.

Landfill data is from Table VI-2.

Population is from Table V-1.

No other waste management methods are used.

Sample Calculation (Year 2008):

Recycling + Composting = Tons Waste Reduction

$$204,483 \text{ tons} + 177,596 \text{ tons} = 382,079 \text{ tons}$$

Tons Waste Reduction / (Tons Waste Reduction + Landfill) * 100 = Waste Reduction Rate

$$382,079 \text{ tons} / (382,079 + 1,147,340) \times 100 = 25\%$$

Tons Waste Reduction * 2000 lbs/ton / (District Population * 365 days/year) = Per Capita Waste Reduction Rate

$$(382,079 \text{ tons} \times 2000) / (1,160,301 \times 365) = 1.80 \text{ lb/day}$$

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

Year	Total Waste Reduction	Landfill	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (lb/day)
2008	149,760	47,707	1,160,301	75.8%	0.71
2009	115,101	33,638	1,168,298	77.4%	0.54
2010	113,075	33,045	1,176,355	77.4%	0.53
2011	121,085	22,464	1,184,472	84.4%	0.56
2012	119,130	21,893	1,192,650	84.5%	0.55
2013	117,209	21,331	1,200,889	84.6%	0.53
2014	115,322	20,780	1,209,190	84.7%	0.52
2015	113,469	20,238	1,217,553	84.9%	0.51
2016	111,648	19,706	1,225,979	85.0%	0.50
2017	113,681	20,300	1,234,469	84.8%	0.50
2018	115,754	20,906	1,243,023	84.7%	0.51
2019	117,869	21,524	1,251,642	84.6%	0.52
2020	120,027	22,155	1,260,326	84.4%	0.52
2021	122,227	22,798	1,269,076	84.3%	0.53
2022	124,472	23,454	1,277,893	84.1%	0.53
2023	126,761	24,123	1,286,777	84.0%	0.54
2024	129,096	24,805	1,295,728	83.9%	0.55
2025	131,478	25,501	1,304,749	83.8%	0.55

Source(s) of information:

Waste reduction data is from Table VI-3.

Landfill data is from Table VI-3.

No other waste management methods are used

Population data is from Table V-1.

Sample Calculations (Year 2008):

Total Waste Reduction / (Total Waste Reduction + Landfill) x 100 = Waste Reduction Rate

$$149,760 \text{ tons} / (149,760 \text{ tons} + 47,707 \text{ tons}) \times 100 = 75.8\%$$

Tons Waste Reduction x 2000 lbs/ton / (District Population x 365 days/year) = Per Capita Waste Reduction Rate

$$(149,760 \text{ tons} \times 2000) / (1,160,301 \times 365) = 0.71 \text{ lb/day}$$

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

Year	Recycling and Source Reduction	Composting	Landfill	Tons Waste Reduction	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (lb/day)
2008	354,243	177,596	1,195,047	531,839	1,160,301	30.8%	2.51
2009	320,847	164,767	1,022,310	485,614	1,168,298	32.2%	2.28
2010	319,664	165,500	1,036,357	485,164	1,176,355	31.9%	2.26
2011	329,904	165,500	1,039,961	495,404	1,184,472	32.3%	2.29
2012	329,236	165,500	1,054,719	494,736	1,192,650	31.9%	2.27
2013	328,610	165,500	1,069,683	494,110	1,200,889	31.6%	2.25
2014	328,027	165,500	1,084,856	493,527	1,209,190	31.3%	2.24
2015	327,485	165,500	1,100,239	492,985	1,217,553	30.9%	2.22
2016	326,983	165,500	1,115,837	492,483	1,225,979	30.6%	2.20
2017	330,344	165,500	1,132,767	495,844	1,234,469	30.4%	2.20
2018	333,753	165,500	1,149,919	499,253	1,243,023	30.3%	2.20
2019	337,213	165,500	1,167,295	502,713	1,251,642	30.1%	2.20
2020	340,722	165,500	1,184,899	506,222	1,260,326	29.9%	2.20
2021	344,284	165,500	1,202,733	509,784	1,269,076	29.8%	2.20
2022	347,898	165,500	1,220,802	513,398	1,277,893	29.6%	2.20
2023	351,565	165,500	1,239,107	517,065	1,286,777	29.4%	2.20
2024	355,287	165,500	1,257,653	520,787	1,295,728	29.3%	2.20
2025	359,064	165,500	1,276,442	524,564	1,304,749	29.1%	2.20

Source(s) of information:

Recycling and Composting data are from Table VI-2 and VI-3.

Landfill data is from Table VI-3 and VI-4.

No other waste management methods are used

Sample Calculations (Year 2008):

Recycling/Source Reduction + Composting = Tons Waste Reduction
 354,243 tons + 177,596 tons = 531,839 tons

Tons Waste Reduction / (Tons Waste Reduction + Landfill) *100 = Waste Reduction Rate
 531,839 tons / (531,839 tons + 1,195,047 tons) x 100 = 30.8%

Tons Waste Reduction * 2000 lbs/ton / (District Population * 365 days/year) = Per Capita Waste Reduction Rate
 (531,839 tons x 2000) / (1,160,301 x 365) = 2.51 lb/day