

OBION COUNTY SOLID WASTE PLANNING REGION

Solid Waste Needs Assessment

June, 2011

As required by The Solid Waste Management Act (T.C.A. §68-211-811).



**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
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Prepared by:

The Northwest Tennessee Development District

INTRODUCTION

In an effort to coordinate and plan for safe, efficient solid waste disposal in the state, the Tennessee General Assembly enacted several pieces of legislation, which are compiled in Title 68, Chapter 211 of the *Tennessee Code Annotated*. To comply with the requirements of this chapter, all local governments must engage in specified planning and organizational activities (See the Solid Waste Management Act of 1991, T.C.A. §§ 68-211-801 through 68-211-874).

Regional Solid Waste Management Planning

To begin implementation of the Solid Waste Management Act, counties were instructed to form solid waste regions (single or multi-county) and establish a solid waste board. Each region was required to formulate a 10-year plan for collection and disposal of solid waste in the area and submit this plan to the Tennessee Department of Environment and Conservation. Each municipal solid waste region must submit an annual progress report and 5-Year Plan Update (T.C.A. § 68-211-814). The plan, and any revised plan, submitted by each region must be consistent with the state solid waste plan and with all relevant state laws and regulations.

At a minimum, each plan must contain the following items:

- Demographic information and projections;
- Analysis of economic activity in the Region;
- Characterization of the waste stream;
- Projection of solid waste generation;
- Evaluation of collection systems within the Region;
- Current system analysis of waste streams, collection capability, disposal capability, costs, and revenues;
- Description of waste reduction activities designed to attain the required 25 percent reduction in solid waste;
- Description of education initiatives designed to achieve the goals stated in the statute; and
- Any other information the commissioner of the Department of Environment and Conservation deems relevant.

In order that the regional planning effort is implemented on a solid foundation of relevant and objective knowledge of local conditions, the Act requires the Development Districts to coordinate, conduct and maintain a Needs Assessment for each solid waste region. This Assessment shall be revised every five years.

SECTION 1:

DEMOGRAPHIC INFORMATION AND PROJECTION

Provide a table and chart showing the region's population for the last ten (10) years with a projection for the next five (5) years. Provide a breakdown by sub-table and sub-chart, or some similar method to detail all county and municipality populations. Discuss projected trends and how it will affect solid waste infrastructure needs over the next five (5) years.

Population Trends in Obion County

Obion County's population decreased by 2.1% from figures taken from the 2000 Census and the 2010 Census. As shown on Table 1.1 on the next page, the population in 2000 was 32,487, and the population in 2010 was 31,516. Much of this decline was due to the loss of manufacturing jobs. Many of smaller communities in Obion County had several small plants to close. This population decline can result in a declining property tax base and loss of sales tax revenue.

Unfortunately, the U.S. Census Bureau is projecting that Obion County's population will decrease by 7.9% during the next five years. Since the largest manufacturer will be closing its doors at the end of 2011, this projection may be accurate. Many families will have to leave the area to find employment.

Based on the latest U.S. Census Bureau's statistics, 17.68% of Obion County's population is 65 years of age and older and 24.1% is under the age of 18. These figures account for 41.78% of Obion County's total population. More than 50% of the total population is between the ages of 19 – 64.

Since Obion County's population is projected to decrease greatly in the next five years, the solid waste disposal should decrease as well. Obion County is well equipped to handle solid waste in the county. There are two private landfills located within the county. The Northwest Tennessee Disposal Corp. Class I Landfill has twenty-five plus years of life left. Alan's Industrial Waste Class I Landfill also has twenty-five plus years of life left.

The Obion County Solid Waste Director provides extensive educational programs and events to educate the public about waste diversion and recycling. Currently, the Director only utilizes four part-time staff members. The current staff has reached its maximum level and does not have the manpower to increase the number of pickups. As the recycling efforts increase, an additional person will need to be employed. This person will need to be a full-time employee.

TABLE 1.1 Historic and Projected Population Trends (2000 thru 2016)

Year	County Population	Hornbeak	Kenton	Obion	Rives	Samburg	South Fulton	Troy	Union City	Woodland Mills	Unincorporated
2000	32,487	434	554	1,147	331	261	2,514	1,275	10,892	296	14,782
2001	32,300	431	552	1,135	330	260	2,478	1,264	10,782	292	14,775
2002	32,229	430	553	1,130	329	260	2,465	1,260	10,740	290	14,771
2003	32,155	428	552	1,122	327	259	2,456	1,253	10,721	288	14,748
2004	32,090	426	552	1,119	326	258	2,444	1,247	10,717	288	14,714
2005	31,860	422	549	1,110	323	256	2,417	1,235	10,658	283	14,606
2006	31,618	418	548	1,097	320	254	2,403	1,223	10,581	281	14,492
2007	31,575	416	550	1,091	318	253	2,403	1,218	10,584	280	14,461
2008	31,565	416	549	1,090	318	252	2,406	1,216	10,578	279	14,460
2009	31,431	413	547	1,083	316	251	2,391	1,210	10,546	278	14,395
2010	31,807	424	542	1,119	326	217	2,354	1,371	10,895	378	14,181
2011	31,500	420	535	1,100	320	220	2,340	1,250	10,500	370	14,445
2012	30,100	415	520	1,025	315	225	2,300	1,200	10,000	325	13,775
2013	29,800	400	512	995	310	230	2,250	1,150	9,975	300	13,678
2014	29,500	395	506	990	308	235	2,200	1,140	9,950	290	13,486
2015	29,397	391	500	988	306	238	2,192	1,130	9,936	282	13,434
2016	29,300	388	495	985	300	238	2,180	1,125	9,925	280	13,384

Sources: Historic data and projections are based on data from the U.S. Census Bureau.

SECTION 2:

ECONOMIC ACTIVITY WITHIN THE REGION

Provide a table and chart showing the region's economic profile for all county and municipalities for the last ten (10) years with a projection for the next five (5) years. This can be accomplished by using the following economic indicators:

- Taxable sales, property tax generation, and per capita income
- Evaluation by break down of each economic sector
- County or municipal budgeting information
- Other commonly accepted economic indicators

Economic Profile of Obion County

As shown on Table 2.2 on the following page, Obion County is trying to recover from a weak economy. Unemployment rates have ranged from a low of 4.3% in 2001 to a high of 10.4% in 2009. As of March 2011, the unemployment rate in Obion County was 9.9%.

The future does not look bright for Obion County at this time. Goodyear Tire and Rubber Company announced in January, 2011, that they were closing by the end of the year. This industry is the largest employer and approximately 1,900 jobs will be lost. Some of these employees will transfer to other plants, but the majority will have to find other employment. With the impending closure of this industry, unemployment rates are expected to increase, and the population is expected to decrease.

Obion County is actively pursuing industries to come to the area. There are several industrial sites with infrastructure available as well as a fully equipped airport. The average total wages in all industries in Obion County was \$35,681, which is lower than the state average of \$36,146 and the national average of \$40,259.

The top ten county manufacturers are listed in the following table:

TABLE 2.1 Obion County Top 10 Manufacturers

Manufacturer	Product	# Employed
Goodyear Tire & Rubber Co.	Tires	1,900
Tyson Foods Inc.	Chicken slaughtering & processing	1,300
Kohler	Shower & tub enclosures	500
Lennox Hearth Products	Prefabricated fireplaces	300
Williams Sausage Co. Inc.	Sausages from purchased meat	200
Waymatic Welding & Fabricating	Custom built trailers	125
Liggett Corp.	Clothing & sportswear	100
Griffin Industries Inc.	Rendered inedible grease	55
Keneric Corp.	Jackets	50
Jiffy Steamer Company	Electric steamers	40

TABLE 2.2 Obion County Historic and Projected Economic Indicators

Labor Force Data					Non-Farm Wage and Salary Employment									Per Capita Income	Total Retail Sales
Year	Total	Emp.	Unemployed		Total	Goods Producing			Service Producing						
			Total	Rate(%)		Total	Mfg	Other	Total	Trade	Health	Govt.	Other		
2000	15,710	15,020	690	4.4%	15,630	7,860	7,170	690	7,770	2,640	1,070	1,710	2,350	24,344	318,832,936
2001	16,130	15,430	700	4.3%	15,730	7,870	7,100	770	7,860	2,650	1,060	1,700	2,450	24,242	327,242,819
2002	16,330	15,560	770	4.7%	15,510	7,720	7,030	690	7,790	2,580	1,090	1,700	2,420	24,136	310,741,386
2003	16,260	15,100	1,160	7.1%	14,690	6,700	6,010	690	7,990	2,750	1,100	1,680	2,460	25,040	321,377,848
2004	15,790	14,770	1,020	6.5%	14,690	6,560	5,880	680	8,130	2,810	1,130	1,690	2,500	26,107	349,538,017
2005	15,540	14,600	940	6.0%	14,790	6,500	5,790	710	8,290	2,860	1,170	1,680	2,580	27,772	352,478,605
2006	15,770	14,900	870	5.5%	14,200	5,820	5,240	580	8,380	2,910	1,220	1,660	2,590	28,316	358,619,330
2007	15,480	14,600	890	5.7%	14,440	6,000	5,470	530	8,440	2,820	1,210	1,700	2,710	30,028	374,685,521
2008	15,500	14,430	1,070	6.9%	14,420	6,110	5,550	560	8,310	2,710	1,180	1,680	2,740	31,824	388,443,917
2009	15,070	13,510	1,560	10.4%	13,210	5,320	4,900	420	7,890	2,480	1,150	1,710	2,550	32,100	360,733,531
2010	15,120	13,650	1,470	9.7%	13,150	5,000	4,600	400	8,150	2,500	1,140	1,700	2,810	32,700	415,050,248
2011	15,000	13,400	1,600	10.7%	13,000	4,500	4,120	380	8,500	2,505	1,145	1,700	3,150	32,900	418,658,252
2012	14,500	12,800	1,700	11.7%	12,400	3,990	3,630	360	8,410	2,525	1,150	1,690	3,045	28,900	398,642,963
2013	14,550	12,850	1,700	11.7%	12,350	3,985	3,635	350	8,365	2,530	1,150	1,680	3,005	28,850	399,926,826
2014	14,550	12,900	1,650	11.3%	12,345	3,960	3,620	340	8,385	2,510	1,160	1,680	3,035	28,775	402,521,365
2015	14,660	13,000	1,660	11.3%	12,350	3,975	3,630	345	8,375	2,520	1,165	1,685	3,005	28,995	405,524,963
2016	14,710	13,000	1,710	11.6%	12,365	4,000	3,650	350	8,365	2,525	1,170	1,690	2,980	29,225	407,625,005

Sources: Historic employment data are from the Tennessee Department of Labor and Workforce Development, per capita income data is from the U. S. Bureau of Economic Analysis, and retail data is from the Tennessee Department of revenue. All projections are by the NWTDD staff.

SECTION 3:

SOLID WASTE STREAM CHARACTERIZATION

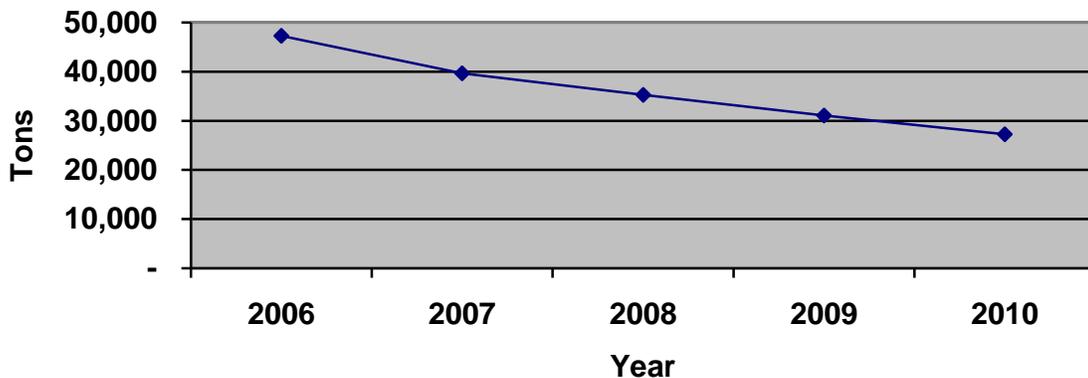
Elaborate on the entire region's solid waste stream. Compare today's waste stream with anticipated waste stream over the next five (5) years, and discuss how this new total will be handled. Include in this discussion how problem wastes like waste tires, used oil, latex paint, electronics and other problem wastes are currently handled and are projected to be handled in the next five (5) years. What other waste types generated in this region require special attention? Discuss disposal options and management of these waste streams as well as how these waste streams will be handled in the future. Include in this discussion how commercial or industrial wastes are managed. Also provide an analysis noting source and amounts of any wastes entering or leaving out of the region.

Current MSW Stream

In the most recent Obion County Solid Waste Annual Progress Report (2010), the total MSW stream was reported as 79,071 tons. This amount consisted of 27,276 tons being disposed in Class I landfills, and 51,795 tons being recycled.

Obion County's Class I disposal numbers have greatly decreased since the Recycle Center opened in July 2006. As detailed in the chart below, Obion County's Class I disposal tonnage decreased from a high of 47,289 tons in 2006 to a low of 27,276 in 2010. That constitutes a decrease of more than 20,000 tons.

Class I Disposal Tonnage From 2006-2010



A large portion of the MSW stream is due to the residents of Obion County. It is estimated the citizens and the industrial plants make up more than 75% of the MSW stream. The waste stream estimate is estimated to be 37% residential, 18% commercial, 5% institutional, and 40% industrial.

TABLE 3.1 Regional Solid Waste Stream Disposal for 2011 – 2016

Class I Disposal Site	Reported Year (APR 2010)	Projected Year					
	2010	2011	2012	2013	2014	2015	2016
MSW disposed in NW TN Disposal Corp. Class I Landfill located in Obion County	26,941	26,840	25,656	25,418	25,180	25,111	25,048
MSW disposed in West Camden Class I Landfill located in Benton County	270	250	230	210	190	170	150
MSW disposed in Madison County Class I Landfill located in Madison County	60	0	0	0	0	0	0
MSW disposed in Dyersburg Municipal Class I Landfill located in Dyer County	5	0	0	0	0	0	0
Total Regional Waste Disposal	27,276	27,090	25,886	25,628	25,370	25,281	25,198

The five-year projections for waste disposal in Obion County are provided in the table above. These estimates are based on a 7.9% decrease to coincide with the population decreases that were projected in Section 1 of this assessment.

Obion County will continue to offer recycling at the Recycle Center. Nearly 700 tons of recyclables were collected at the Obion County Recycle Center in 2010. This figure includes more than 35 tons of electronic waste and nearly 360 tons of waste tires. There are also several other private recycling facilities in the county that take recyclables. 16,107 tons of recyclables were reported by these facilities in 2010. More than 34,000 tons of recyclables were reported by industries.

Regional Solid Waste Management

The table on the next page describes how the region’s total waste stream is managed currently and how it will be managed in the next 5 years. Obion County and its municipalities and the businesses are all listed separately.

TABLE 3.2 Waste Stream Management

Jurisdiction or Sector	Solid Waste Stream Collection	Solid Waste Disposal Options	Present Problem Waste Handling	Future Problem Waste Handling 2010-2015	Other Problem Waste Types
Obion County Including Hornbeak	Residential solid waste Door-to-door waste pickup available throughout county Local businesses Subscription service	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for unincorporated residents of Obion County and local businesses	Waste tires: Waste tire contract Used oil: Recycle Center Automobile fluids: Local Businesses Latex paint: HHW Event Electronics: Recycle Center	Waste tires: Waste tire contract Used oil: Recycle Center Used oil filters: Recycle Center Automobile fluids: Local Businesses Latex paint: Recycle Center Electronics: Recycle Center	HHW collected at mobile collection events. Due to limited statewide mobile collection site scheduling, no regional approach has been developed to handle HHW. A regional approach to handle HHW could be evaluated by the Northwest Development District. Planned program discussions can be scheduled in the near future.
Kenton	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Kenton and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Obion	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Obion and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Rives	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Rives and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Samburg	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Samburg and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
South Fulton	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of South Fulton and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Troy	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Troy and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Union City	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Union City and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Woodland Mills	Solid waste curbside collection fee service for city residents.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Woodland Mills and local businesses	Provided by Obion County	Provided by Obion County	Provided by Obion County
Business	Subscription service provided by: Contracts with private haulers, and Direct haul by business.	Northwest TN Disposal Corp., Inc. Class I Landfill located in Obion County as primary waste disposal facility for residents of Obion County and local businesses	Available service provided by: In-house business programs and Contractors	Available service provided by: In-house business programs and Contractors	Hazardous waste generated from commercial and industrial businesses is regulated by TDEC, Division of Solid Waste Management, and Hazardous Waste Section.

Wastes Entering or Leaving the County

Obion County does not operate nor own a Class I landfill. There are two private landfills located within the county. The majority of Obion County's MSW was disposed at Northwest TN Disposal Corporation, Inc. Class I landfill. Obion County disposed 26,941 tons in this landfill and did not dispose of any MSW at Alan's Industrial Waste, Inc. Class I landfill.

TABLE 3.3 Wastes Entering Obion County

County	Northwest TN Disposal Corp., Inc.	Alan's Industrial Waste, Inc.
Carroll County	26,050	
Crockett County	765	
Dyer County	6,680	1,884
Fayette County	10	
Gibson County	9,735	
Hamilton County	27	
Henderson County	46	
Henry County	6,911	
Lake County	2,254	1,821
Lauderdale County		1,065
Madison County	1,300	
Tipton County	1	
Weakley County	13,672	
Ballard County, KY	48	
Fulton County, KY	2,804	1,970
Graves County, KY	40,987	
Hickman County, KY	9,641	
McCracken County, KY	66,136	
Calloway County, KY	23,309	
Pemiscott County, MO	2,160	2,713
Total	212,536	9,453

Source: TDEC 2010 Solid Waste Origin Report and Alan's Industrial Waste Services and Northwest TN Disposal Corporation Quarterly Reports for 2010.

In 2010, only a total of 335 tons of MSW was sent to three different Class I landfills outside of Obion County. The table below illustrates where the MSW was disbursed.

TABLE 3.4 Wastes Leaving Obion County

Class I Landfill	County Location	Tonnage
West Camden Landfill	Benton County	270
Madison County Landfill	Madison County	60
Dyersburg Municipal Landfill	Dyer County	5
Total		335

Source: TDEC 2010 Solid Waste Origin Report

SECTION 4:

REGIONAL COLLECTION SYSTEMS

Provide a detailed description of the waste collection system in the county and every municipality, including a narrative of the life cycle of solid waste from the moment it becomes waste (loses value) until it ceases to be a waste by becoming a useful product, residual landfill material or an emission to air or water. Label all major steps in this cycle noting all locations where wastes are collected, stored or processed along with the name of operators and transporters for these sites.

County and city government throughout the United States are struggling to develop efficient and cost-effective plans for managing their MSW. Obion County has an excellent system in place and plans to continue this system into the future.

Obion County

Obion County has door-to-door waste pick up service contracted through Barker Brothers. This service is available to 100% of the rural residents and the citizens of Hornbeak. Through this contract, the rural citizens pay a price of \$17.92 per household per month. Senior citizens only pay \$13.18 per month.

Obion County does not have a convenience center but the county does operate a successful Recycle Center. Cardboard, plastics, electronic waste, paper, metals, used oil, oil filters and tires are collected at this location. The operating hours of the Recycle Center are 8 a.m. to 4 p.m. Monday through Friday. There are also several other private recyclers that operate within Obion County.

Municipalities

There are nine municipalities in Obion County. Eight of the municipalities contract with either Barker Brothers or Alan's Industrial Services for door-to-door solid waste collection for their residents. The Town of Hornbeak is covered under the county's contract with Barker Brothers. The fees each municipality charges vary from a low of \$12 per month to a high of \$19 per month. None of the municipalities offer curbside recycling options.

The table below illustrates all locations where wastes are collected and stored along with the name of operators and transporters for these sites.

TABLE 4.1 Regional Collection Systems

Jurisdiction	Transporter	Class I Landfill
Obion County	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Kenton	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Obion	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Rives	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Samburg	Alan's Industrial Services	Northwest TN Disposal Corp.
South Fulton	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Troy	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Union City	Barker Brothers, Inc.	Northwest TN Disposal Corp.
Woodland Mills	Barker Brothers, Inc.	Northwest TN Disposal Corp.

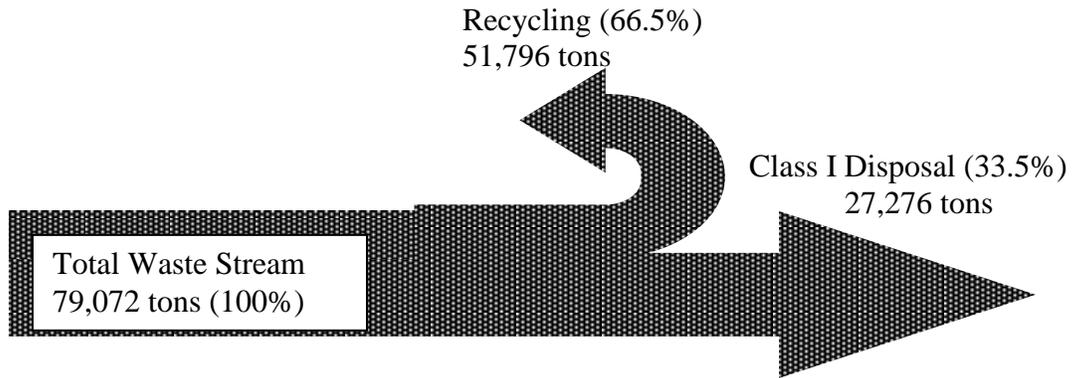
Obion County recycles several different commodities. The table below shows these commodities and what processors are utilized.

TABLE 4.2 Obion County Commodities and Processors

Commodities	Processor	Location
Paper/Aluminum Cans	Yorkville Recycling	Dyer, TN
Cardboard/Books	Yorkville Recycling	Dyer, TN
Plastics #1 and #2	Yorkville Recycling	Dyer, TN
Tires	Martin Tires	Marion, KY
E-Waste	Creative Recycling	Nashville, TN
Used Oil	FCC Environmental	Memphis, TN
Fluorescent Bulbs	SE Recycling Tech.	Memphis, TN

Flow Diagram of Obion County Total Annual Regional Waste Stream

The figures shown in the flow diagram below were taken from the 2010 Obion County Solid Waste Annual Progress Report.



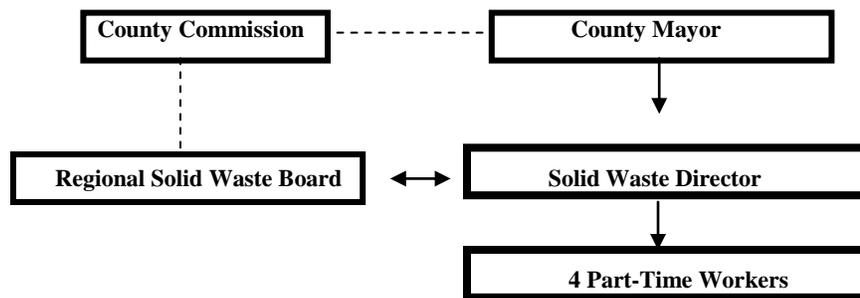
SECTION 5:

SOLID WASTE MANAGEMENT INFRASTRUCTURE

Provide organizational charts of each county and municipality's solid waste program and staff arrangement. Identify needed positions, facilities, and equipment that a fully integrated solid waste system would have to provide at a full level of service. Provide a scale county level map indicating location of all facilities including convenience centers, transfer stations, recycling centers, waste tire drop-off sites, used oil collection sites, paint recycling centers, all landfills, etc. Identify any shortcomings in service and note what might be needed to fill this need.

Obion County

An organizational chart is provided below for operations of the Obion County Solid Waste Department.



Future Solid Waste Infrastructure Development Needs

Since opening in July of 2006, the Obion County Recycle Center has increased the number of recyclables collected. One of the most pressing needs at this time is additional manpower. Currently, the Solid Waste Director is the only full-time employee. There are four part-time workers, but this is not enough to meet the current demands. In order to honor requests of more pickups, one full-time worker will need to be hired. Also, by hiring a full-time employee, the Director can devote more time to educating the public.

Paving the gravel turn around driveway would facilitate public deliveries of recyclables, and providing a rain awning would be helpful for the residents as they unload their items. An outside retaining wall/loading dock for off loading used tires would be a tremendous asset for the program. As the recycle collections increase, more space will be needed in the future. There is ample room to add onto the current building.

Current equipment is constantly wearing out and needs to be replaced. New equipment and replacement of old equipment are regular needs every year. The county will continue to apply for grants for these needs.

The table on the next page provides a list of the future needs for Obion County to continue to operate an integrated solid waste management program. The costs listed are estimates only and should be considered a baseline for future planning.

TABLE 5.1 Future Solid Waste Needs

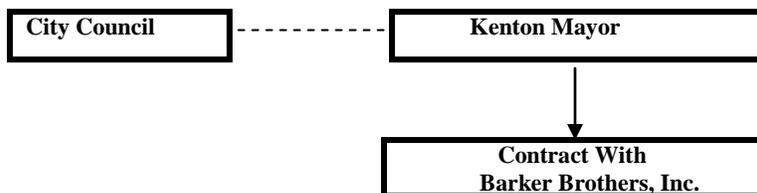
Need	Estimated Cost	Potential Revenue Source
Upgraded Paper Shredder	\$ 30,000	Grants
Recycle Containers	\$ 25,000	Grants
Additional Vertical Baler	\$ 10,000	Grants
Recycling Building Expansion	\$300,000	Grants
Paved Drive at Recycle Center	\$ 50,000	Grants
Rain Awning at Recycle Center	\$ 20,000	Grants
Retaining Wall/Loading Dock for Tires	\$ 30,000	Grants

Municipalities

All of the municipalities contract directly with either Barker Brothers, Inc. or Alan’s Industrial Waste for waste disposal. None of the municipalities offer recycling services.

Kenton

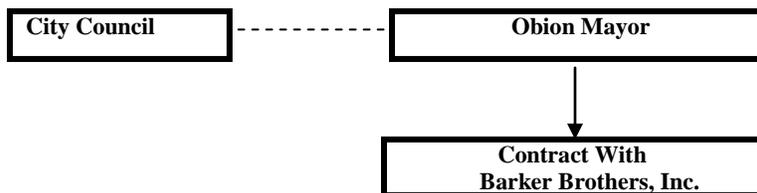
The Town of Kenton provides residential curbside collection and commercial subscription service for approximately 1,280 customers. Of these customers, 542 reside in Obion County and 739 reside in Gibson County. The city does not provide recycling collection services. An organizational chart for the Town of Kenton is provided below.



No positions are funded out of the Kenton Solid Waste Budget. The city contracts directly with Barker Brothers, Inc. for waste disposal. Kenton residents pay \$13 per month for collection service and the commercial rates vary.

Obion

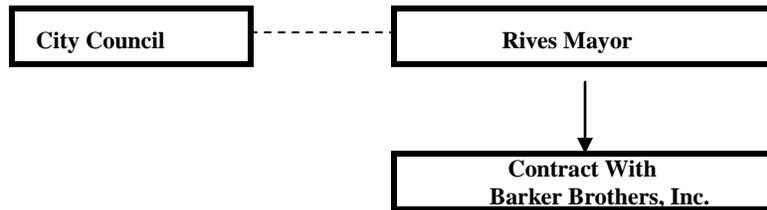
The Town of Obion provides residential curbside collection and commercial subscription service for approximately 1,120 customers. The town does not provide recycling collection services. An organizational chart for the Town of Obion is provided below.



No positions are funded out of the Obion Solid Waste Budget. The city contracts directly with Barker Brothers, Inc. for waste disposal. Obion residents pay \$14.82 per month for collection service and the commercial rates vary.

Rives

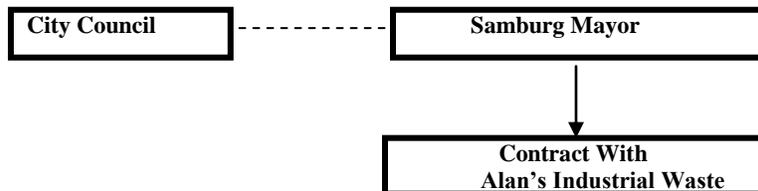
The Town of Rives provides residential curbside collection and commercial subscription service for approximately 325 customers. The city does not provide recycling collection services. An organization chart for the City of Rives Sanitation Department is provided below.



The Town of Rives funds no positions out of the Solid Waste Budget. Rives residents pay \$15 per month for collection service and the commercial rates vary.

Samburg

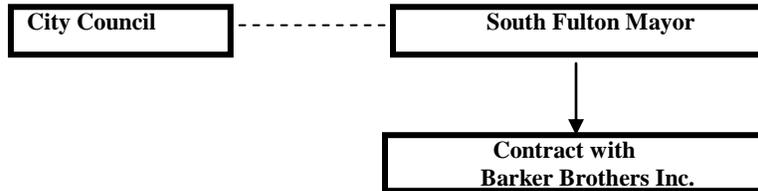
The Town of Samburg provides residential curbside collection and commercial subscription service for approximately 215 customers. The city does not provide recycling collection services. An organizational chart for the Town of Samburg is provided below.



No positions are funded out of the Samburg Solid Waste Budget. The city contracts directly with Alan's Industrial Waste for waste disposal. Samburg residents pay \$13 per month for collection service and the commercial rates vary.

South Fulton

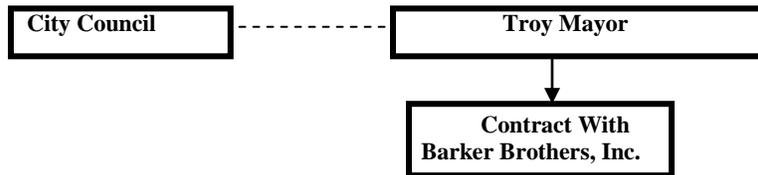
The City of South Fulton provides residential curbside collection and commercial subscription service for approximately 2,355 customers. The city does not provide recycling collection services. An organizational chart for the City of South Fulton is provided below.



No positions are funded out of the South Fulton Solid Waste Budget. The city contracts directly with Barker Brothers, Inc. for waste disposal. South Fulton residents pay \$13.46 per month for collection service and the commercial rates vary.

Troy

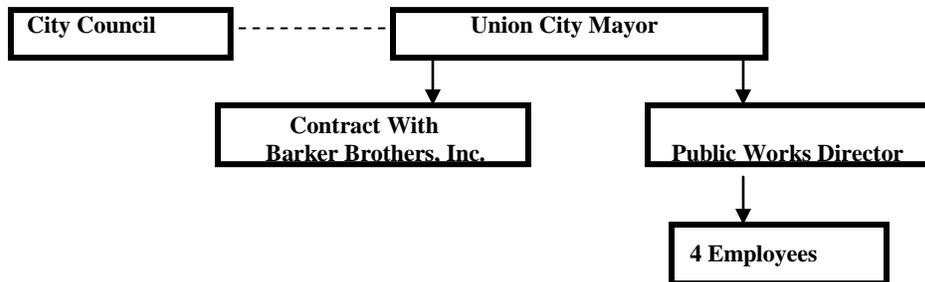
The Town of Troy provides residential curbside collection and commercial subscription service for approximately 1,370 customers. The city does not provide recycling collection services. An organizational chart for Troy is provided below.



Troy contracts directly with Barker Brothers, Inc. for MSW collection and disposal. The residents pay \$13 per month for collection service and the commercial rates vary. Senior citizens only pay \$12 per month.

Union City

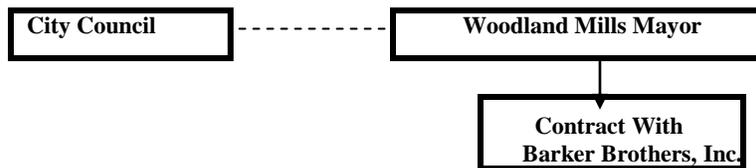
The City of Union City provides residential curbside collection and commercial subscription service for approximately 10,895 customers. The city does not provide recycling collection services. An organizational chart for Union City is provided below.



The city contracts directly with Barker Brothers, Inc. for waste disposal. Union City residents pay \$19 per month for collection service and the commercial rates vary. This amount per month includes not only trash pickup, but also includes the removal of bulky items, limb debris, and other items. The cost of the street sweeper is also included.

Woodland Mills

The City of Woodland Mills provides residential curbside collection and commercial subscription service for approximately 380 customers. The city does not provide recycling collection services. An organizational chart for Woodland Mills is provided below.



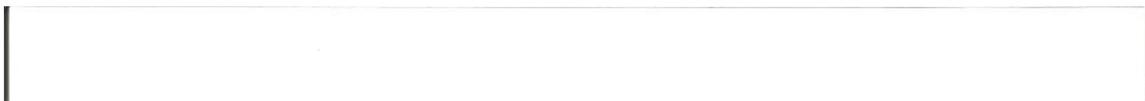
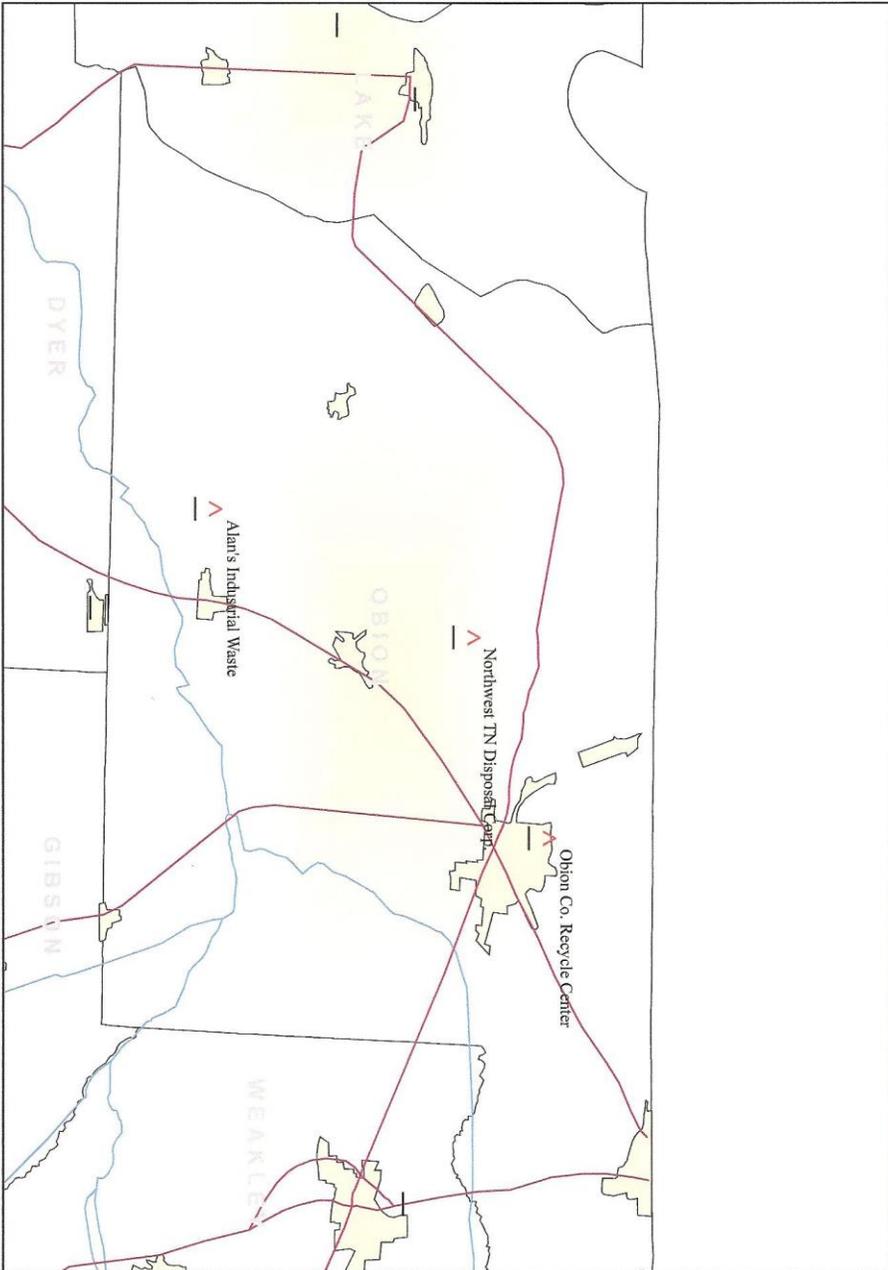
Woodland Mills contracts directly with Barker Brothers, Inc. for MSW disposal. The residents pay \$12 per month for collection service and the commercial rates vary.

Locations of Solid Waste Facilities

An Obion County map is provided on the following page with the locations all solid waste facilities in the county.

Obion County Solid Waste Facilities

Obion County



SECTION 6:

PUBLIC PARTICIPATION

Describe current attitudes of the region and its citizens towards recycling, waste diversion, and waste disposal in general. Where recycling is provided, discuss participation within the region. Indicate current and ongoing education measures to curb apathy or negative attitude towards waste reduction. Are additional measures needed to change citizen's behaviors? If so, what specific behaviors need to be targeted and by what means?

Current Attitudes Concerning Recycling, Waste Diversion, and Waste Disposal

Trends are continuing to improve through education on solid waste, recycling, and environmental issues. Industries are finding recycling a viable tool to reduce expenditures while meeting State and Federal environmental mandates. The Obion County Solid Waste Director has been instrumental in keeping the public apprised on current issues.

Since 2006, the amount of MSW disposed in Class I landfills has significantly decreased. In 2006, the amount of MSW disposed in Class I landfills was 47,289 tons. This figure dropped to 35,292 in 2008. In the most recent Annual Progress Report (2010), the amount of MSW disposed in Class I landfills was only 27,276 tons. These reductions reflect how peoples' attitudes about recycling, waste diversion, and waste disposal have changed for the better.

Since opening in 2006, the Obion County Recycle Center has seen significant increases in the amount of recyclables it handles each year. Each year, the Recycle Center adds new commodities. In 2010, paint, #1 and #2 plastics, and fluorescent bulbs were added.

Directional signs were recently placed so people will have an easier time finding the Recycle Center. Also, a large sign with the name of the Recycle Center will be placed on the building in the very near future. Both of these measures will help bring in more recyclables.

Education Measures

Tours are conducted at the Recycle Center to promote the program. Many student groups and civic organizations partake of these tours. Numerous presentations are made to various groups throughout the year. The Solid Waste Director utilizes the radio stations, newspaper, and cable TV from time to time to help promote recycling, waste diversion and special events like the HHW event. Handouts are also utilized to promote the HHW event.

The table below illustrates the programs that were conducted in 2010.

TABLE 6.1 Public Education and Information Activities

Program Name	Sponsor	Effectiveness	Program Type	Target Group	# Served
Litter Grant Ads	Litter Grant	Positive	Classroom/ Advertisement	Adult/General Public	County-Wide
The Obion County Sheriff's Department offers educational spots on the radio to promote anti-littering, recycling and waste diversion. The Department also offers high school seniors a chance to earn college scholarship money by sponsoring an essay contest on littering and recycling.					
Public Tours	Obion County	Positive	Classroom/Tour	Adult/General Public Children/Educators	Approximately 50
Tours of the Recycling Center are conducted for all who request.					
Presentations	Obion County	Positive	Community Outreach	Adult/General Public Children/Educators	Approximately 20
Presentations are conducted by the Solid Waste Director at schools, civic groups, and others.					
Advertisements	Obion County	Positive	Advertisements	Adult/General Public	County-Wide
The Solid Waste Director utilizes the radio stations, newspaper, and cable TV from time to time to help promote recycling, waste diversion and special events such as the HHW event.					

The Obion County Solid Waste Director has done an excellent job promoting recycling and waste reduction within the county.

SECTION 7:

REGIONAL SOLID WASTE REDUCTION GOAL

The Solid Waste Management Act of 1991 states that all regions must reduce the amount of waste going into Class I landfills by 25%. Amendments to the Act allow for consideration of economic growth, and a “qualitative” method in which the reduction rate is compared on a yearly basis with the amount of Class I disposal. Provide a table showing reduction rate by each goal calculation methodology. Discuss how the region made the goal by each methodology or why it did not. If the Region did not meet the 25% waste reduction goal, what steps or infrastructure improvements should be taken to attain the goal and to sustain this goal into the future.

TABLE 7.1 Measurement of Regional Waste Reduction Goal

County	Waste Reduction Goal Calculation Method			
	Compared to Base Year	Population Ratio	Economic-Population Ratio	Qualitative - Real Time
Obion County	-0.1%	-0.1%	-5.8%	65.5%
25% Waste Reduction Goal Achieved	No	No	No	Yes

Source: TDEC, Division of Solid Waste Management, Division of Solid Waste Assistance Program.

Variables Affecting Regional Waste Reduction Efforts

The main reason Obion County cannot meet three of the four waste reduction goal calculation methods is because the base year figures cannot be accurate. There are several reasons these figures are inaccurate.

1. Most existing disposal contracts in the 1990’s established fees based on cubic yards and reporting tonnage figures required estimating how many cubic yards of waste weighed a ton.
2. The landfill operators depend on the customer to accurately report the origin of the MSW. There was no system in place in 1995 to determine if the origin was accurate. Currently, the customer is still the first source of information for the landfill operators to initiate the reporting process to TDEC.

Obion County did meet the Qualitative – Real Time Method of waste reduction by showing a real time diversion rate of 65.5%. Most of the recycling was completed by private entities but the county did divert over 700 tons of materials from the Class I landfills. The Obion County Solid Waste Director has been instrumental in implementing the recycle program.

Future Regional Waste Reduction Program

No major changes need to be made to this successful program. One of the most pressing needs at this time is additional manpower. Currently, the Solid Waste Director is the only full-time employee. There are four part-time workers, but this is not enough to meet the current demands. In order to honor requests of more pickups, one full-time worker will need to be hired. Also, by hiring a full-time employee, the Director can devote more time to educating the public.

Paving the gravel turn around driveway would facilitate public deliveries of recyclables, and providing a rain awning would be helpful for the residents as they unload their items. An outside retaining wall/loading dock for off loading used tires would be a tremendous asset for the program. As the recycle collections increase, more space will be needed in the future. There is ample room to add onto the current building.

Current equipment is constantly wearing out and needs to be replaced. New equipment and replacement of old equipment are regular needs every year. The county will continue to apply for grants for these needs.

SECTION 8:

SOLID WASTE DISPOSAL CAPACITY

Provide a chart indicating current collection and disposal capacity by facility site and the maximum capacity the current infrastructure can handle at maximum through put. Provide this for both Class I and Class III/IV disposal and recycled materials. Identify and discuss any potential shortfalls in materials management capacity whether these are at the collection or processor level.

TABLE 8.1 10-Year Regional Disposal Assurance in Obion County in 2010/11

Site Name(s)	Annual Tons Disposed by Obion County*	Solid Waste Permit #	Current Disposal (daily throughput)	Maximum Disposal Capacity (daily throughput)	Projected Life of Facility
West Camden Sanitary Landfill located in Benton County	270	SNL 03-0247	2,300 tons per day	5,000 tons per day	25+ years remaining life
Madison County Landfill located in Madison County	60	SNL 57-0239	2,000 tons per day	4,000 tons per day	25+ years remaining life
NW Tennessee Disposal Corporation located in Obion Co.	26,941	SNL 66-0143	2,200 tons per day	5,000 tons per day	25+ years remaining life
Dyersburg Municipal Landfill located in Dyer County	5	SNL 23-0218	170 tons per day	500 tons per day	25+ years remaining life

Source: West Camden Landfill, Madison Co. Landfill, NW Tennessee Disposal Corp., Dyersburg Municipal Landfill, May 2011

*Note: Annual tonnage disposed includes Municipalities and Businesses

No potential shortfalls in materials management capacity at the collection or processor level are foreseen.

Provide a chart or other graphical representation showing public and private collection service provider area coverage within the county and municipalities. Include provider's name, area of service, frequency of collection, yearly tons collected, and the type of service provided.

TABLE 8.2 Public and Private Collection Service in Obion County in 2010

Service Provider	Service Area*	Frequency of Service (Weekly, Bi-weekly, on call, etc.)	Estimated Average Annual Tons Collected*	Type Service (Curbside, Convenience Center, Green Box)
Obion County Unincorporated & Hornbeak	County-wide	Weekly	12,471	Residential curbside Local business subscription
Kenton	City residents Local business subscription	Weekly	470	Residential curbside Local business subscription
Obion	City residents Local business subscription	Weekly	965	Residential curbside Local business subscription
Rives	City residents Local business subscription	Weekly	280	Residential curbside Local business subscription
Samburg	City residents Local business subscription	Weekly	190	Residential curbside Local business subscription
South Fulton	City residents Local business subscription	Weekly	2,025	Residential curbside Local business subscription
Troy	City residents Local business subscription	Weekly	1,180	Residential curbside Local business subscription
Union City	City residents Local business subscription	Weekly	9,370	Residential curbside Local business subscription
Woodland Mills	City residents Local business subscription	Weekly	325	Residential curbside Local business subscription
Total			27,276	

SECTION 9:

UNMET FINANCIAL NEEDS

Complete the chart below and discuss unmet financial needs to maintain current level of service. Provide a cost summary for current year expenditures and projected increased costs for unmet needs.

TABLE 9.1 Expenditures and Revenues for Obion County for 2010/11

Expenditures	
Description	Amount
Problem Waste Centers	\$ 25,900
Recycling Center	114,211
Total Expenditures	\$ 140,111
Revenues	
Solid Waste Disposal Fee	\$ 3,000
Sale of Recycled Materials	36,000
Misc. Refunds/Contributions	180
Transfer from General Fund	85,000
Waste Tire Grant	21,500
Recycling Grant	8,397
Total Revenues	\$ 154,077

Obion County has two private landfills located within the county. These landfills pay the county 50 cents per ton collected up to 30,000 tons. After 30,000 tons are collected, this amount increases to \$1.00 per ton. Only the larger landfill (Northwest TN Disposal Corp.) collects more than 30,000 tons during one year. Also, each of the landfills pays a lump sum amount each year. During this fiscal year, Northwest TN Disposal Corp. paid \$5,000. This fee will increase by \$5,000 each year. Alan's Industrial Waste Services only pays a percentage since it is a much smaller

landfill. This landfill only had to pay \$190 this fiscal year. All of these monies go into the Obion County General Fund and are used to assist in funding several different programs. During this fiscal year, \$85,000 was transferred from the General Fund to the Solid Waste Department. Obion County contracts with two waste haulers for rural residential weekly door-to-door collection services. The residents pay the haulers directly, and the cost is \$17.92 per month. Senior citizens only have to pay \$13.18 per month.

TABLE 9.2 Expenditures and Revenues for the Town of Kenton for 2010/11

Expenditures	
Description	Amount
Waste Disposal	\$ 87,000
Total Expenditures	\$ 87,000
Revenues	
Collection Charges	\$ 87,000
Total Revenues	\$ 87,000

Kenton provides residential curbside collection and commercial subscription service for approximately 540 Obion County residents and 740 Gibson County residents. The Town of Kenton charges the citizens \$13 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

TABLE 9.3 Expenditures and Revenues for the Town of Obion for 2010/11

Expenditures	
Description	Amount
Waste Disposal	\$ 90,000
Total Expenditures	\$ 90,000
Revenues	
Collection Charges	\$ 90,000
Total Revenues	\$ 90,000

The Town of Obion provides residential curbside collection and commercial subscription service for approximately 1,120 residents. Obion charges the citizens \$14.82 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

TABLE 9.4 Expenditures and Revenues for the City of Rives for 2010/11

Expenditures	
Description	Amount
Waste Disposal	\$ 18,500
Total Expenditures	\$ 18,500
Revenues	
Collection Charges	\$ 18,500
Total Revenues	\$ 18,500

Rives provides residential curbside collection and commercial subscription service for approximately 325 residents. The City of Rives charges the citizens \$15 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

TABLE 9.5 Expenditures and Revenues for the Town of Samburg for 2010/11

Expenditures	
Description	Amount
Waste Disposal	\$ 29,625
Total Expenditures	\$ 29,625
Revenues	
Collection Charges	\$ 29,625
Total Revenues	\$ 29,625

The Town of Samburg provides residential curbside collection and commercial subscription service for approximately 215 residents. Samburg charges the residents \$13 per month for weekly waste collection and contracts with Alan's Industrial Waste for waste disposal.

TABLE 9.6 Expenditures and Revenues for the City of South Fulton for 2010/11

Expenditures	
Description	Amount
Property Maintenance Contract	\$ 13,000
Waste Disposal	194,820
Total Expenditures	\$ 207,820
Revenues	
Interest Earned	\$ 900
Sanitation Penalty	2,700
Collection Charges	231,540
Total Revenues	\$ 235,140

South Fulton provides residential curbside collection and commercial subscription service for approximately 2,355 residents. The City of South Fulton charges the residents \$13.46 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

TABLE 9.7 Expenditures and Revenues for the Town of Troy for 2010/11

Expenditures	
Description	Amount
Waste Disposal	\$ 125,969
Total Expenditures	\$ 125,969
Revenues	
Collection Charges	\$ 125,969
Total Revenues	\$ 125,969

The Town of Troy provides residential curbside collection and commercial subscription service for approximately 1,370 residents. Troy charges the residents \$13 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

TABLE 9.8 Expenditures and Revenues for the City of Woodland Mills for 2010/11

Expenditures	
Description	Amount
Solid Waste Disposal	\$ 23,000
Total Expenditures	\$ 23,000
Revenues	
Collection Charges	\$ 23,000
Total Revenues	\$ 23,000

Woodland Mills provides residential curbside collection and commercial subscription service for approximately 380 residents. The City of Woodland Mills charges the residents \$12 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

TABLE 9.9 Expenditures and Revenues for the City of Union City for 2010/11

Expenditures	
Description	Amount
Salaries/Benefits	\$ 67,296
Landfill Charges	1,329,240
Street Sweeping/Brush Coll.	316,547
Tonnage Tax	6,000
State Collection Fee	11,000
Roll Off Services	51,600
Bank Charges	50
Total Expenditures	\$ 1,714,437
Revenues	
Collection Charges	\$ 1,773,389
Total Revenues	\$ 1,773,389

Union City provides residential curbside collection and commercial subscription service for approximately 10,895 residents. The City of Union City charges the residents \$19 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. The street sweeper services and brush collection is provided by the city.

SECTION 10:

CURRENT REVENUE SOURCES

Identify all current revenue sources by county and municipality that are used for materials and solid waste management. Project future revenue needs from these categories and discuss how this need will be met in the future.

Obion County

The current Obion County Solid Waste budget is funded through disposal fees, sale of recycled materials, and solid waste grants. The remaining funds are transferred from the General Fund, which is the county's primary operating fund. It accounts for all financial resources of the general government, except those that are required to be accounted for in another fund. The monies received from the two private landfills go into the General Fund.

The 2010 Obion County property tax rate is \$1.9500. Each municipality has its own tax rate, and these rates range from a low of \$0.6500 to a high of \$2.1100. The local option sales tax is at the maximum rate of 2.75%.

Due to the current recession, unemployment rates are expected to increase and local option sales tax to decrease. Monies are very tight within the county at the present time.

The only revenue sources for the county to utilize in these hard economic times are grants for solid waste management and/or waste diversion. Hopefully, if these grants are offered, Obion County will be able to continue to fund a fully integrated solid waste program.

The Waste Tire Grant is sufficient to fund the county's waste tires if the county could receive the entire amount of the budgeted grant. When manifests are reduced or changed, the county has to make up the difference with county funds.

Kenton

Kenton provides residential curbside collection and commercial subscription service for approximately 540 Obion County residents and 740 Gibson County residents. Kenton charges the citizens \$13 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. The only revenue sources are the fees the city collects from the residents.

Obion

The Town of Obion provides residential curbside collection and commercial subscription service for approximately 1,120 residents. Obion charges the citizens \$14.82 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. The only revenue sources are the fees the city collects from the residents.

Rives

Rives provides residential curbside collection and commercial subscription service for approximately 325 residents. Rives charges the citizens \$15 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. The only revenue sources are the fees the city collects from the residents.

Samburg

Samburg provides residential curbside collection and commercial subscription service for approximately 215 residents. Samburg charges the residents \$13 per month for weekly waste collection and contracts with Alan's Industrial Waste Services for waste disposal. The only revenue sources are the fees the city collects from the residents.

South Fulton

South Fulton provides residential curbside collection and commercial subscription service for approximately 2,355 residents. South Fulton charges the residents \$13.46 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. The collection fees that the city collects from the residents are the bulk of the revenue sources for the Solid Waste/Sanitation Department.

Troy

Troy provides residential curbside collection and commercial subscription service for approximately 1,370 residents. Troy charges the residents \$13 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. The only revenue sources are the fees the city collects from the residents.

Union City

Union City provides residential curbside collection and commercial subscription service for approximately 10,895 residents. Union City charges the residents \$19 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal. These fees also provide street sweeper services and curbside brush pickup. The only revenue sources are the fees the city collects from the residents.

Woodland Mills

Woodland Mills provides residential curbside collection and commercial subscription service for approximately 380 residents. Woodland Mills charges the residents \$12 for weekly waste collection and recyclables collection. The city contracts with Barker Brothers, Inc. for solid waste disposal.

FUTURE REVENUE NEEDS

No additional funds from the county budget are expected to be allocated for solid waste or recycling purposes due to the economic conditions of the county. Solid waste grants will be necessary for the future success of the program.

The municipalities will continue to adjust their collection fees in proportion to the increases of the private hauler fees and other costs.

SECTION 11:

REGIONAL SOLID WASTE PLAN

Discuss this region’s plan for managing their solid waste management system for the next five (5) years. Identify any deficiencies and suggest recommendations to eliminate deficiencies and provide sustainability of the system for the next five (5) years. Show how the region’s plan supports the Statewide Solid Waste Management Plan.

The table below summarizes Obion County’s existing programs, future programs, and the Tennessee Solid Waste Management Plan.

TABLE 11.1 Regional Solid Waste Management Plan

Solid Waste Program	Existing Solid Waste Programs	Future Solid Waste Programs	Tennessee Mandated Plan
Residential Solid Waste Collection	Obion County has door-to-door collection service available to 100% of the county.	Continue door-to-door collection service.	County to provide CCC’s for residents according to population or service area, maintain required design and operational standards.
Recycling	Obion County has a Recycle Center to receive recyclables from residents and provide pickup from companies. Private recycling companies are also available.	Expand the current recycling services.	County to provide at least one (1) drop-off site for collection of residential recyclable materials.
Waste Reduction	Obion County met reduction goal by the Real-Time Method.	Continue to meet the 25% Waste Reduction Goal.	Region to achieve 25% Waste Reduction Goal.
Problem Waste Management	Obion County collects electronics, waste tires, automobile fluids, and batteries at the Recycle Center. Obion County hosts a HHW collection event to collect paint.	Continue to collect electronics, waste tires, automobile fluids and batteries at the Recycle Center. Start storing paint so contractor can pick up on milk runs	County to provide at least one (1) site to accept automobile fluids, batteries, and waste tires.
Public Education and Information	Obion County provides educational activities to the schools through programs and to the public through events and presentations.	Continue to provide educational activities to the schools through programs and to the public through events and presentations.	Region to develop and implement solid waste management action plan for adults and children.
Disposal	Obion County contracts with Barker Brothers, Inc. and Alan’s Industrial Waste Services to provide disposal services.	Continue to contract disposal services with Barker Brothers, Inc. and Alan’s Industrial Waste Services or other private hauler.	Region to assure 10-year disposal capacity.
Planning	The Obion County Regional Solid Waste Board meets six times per year to discuss solid waste issues. All reporting requirements are up to date.	Continue meetings throughout the year to discuss solid waste issues. Keep reporting requirements up to date.	Region to provide Annual Progress Reports, Needs Assessments, and other reporting requirements as needed.

Sustainability of the Solid Waste Plan must include, at the minimum:

- Continue Obion County Regional Solid Waste Board involvement,
- Continue the activities of the Solid Waste Director,
- Continue the activities at the Recycle Center,
- Continue to pursue all grant funds for equipment and facilities,
- Continue to utilize technical assistance providers,
- Continue to research technologies and other program options,
- Continue to promote waste reduction efforts, and
- Continue public outreach and educational programs

This list is neither inclusive nor listed in priority. Expansion and sustainability will depend on the economy and funding sources.

SOURCES

U. S. Census Bureau
Tennessee Department of Labor and Workforce Development
U. S. Bureau of Economic Analysis
Tennessee Department of Revenue
2010 Obion County Annual Progress Report
Mike Cary, Obion County Solid Waste Director
Obion County Budget Document
Kenton Budget Document
Obion Budget Document
Rives Budget Document
Samburg Budget Document
South Fulton Budget Document
Troy Budget Document
Union City Budget Document
Woodland Mills Budget Document