

LAKE COUNTY SOLID WASTE PLANNING REGION

Solid Waste Needs Assessment

June, 2010

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
401 Church Street, 8th Floor
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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 Lake County

Since the last U.S. Census in 2000, Lake County's population has remained more or less steady. There has been less than a 1% decrease in the population according to population estimates. The population in 2000 was 7,954 and the estimated population in 2009 was 7,926.

TABLE 1.1 Historic and Projected Population Trends (1999 thru 2015)

| Year | County Population | Ridgely | Tiptonville | Unincorporated |
|-------------|--------------------------|----------------|--------------------|-----------------------|
| 1999 | 8,131 | 1,726 | 2,113 | 4,292 |
| 2000 | 7,954 | 1,667 | 2,439 | 3,848 |
| 2001 | 7,952 | 1,701 | 4,228 | 2,023 |
| 2002 | 7,944 | 1,680 | 4,196 | 2,068 |
| 2003 | 7,952 | 1,667 | 4,183 | 2,102 |
| 2004 | 7,954 | 1,608 | 4,113 | 2,233 |
| 2005 | 7,967 | 1,574 | 4,077 | 2,316 |
| 2006 | 7,952 | 1,554 | 4,051 | 2,347 |
| 2007 | 7,941 | 1,545 | 4,039 | 2,357 |
| 2008 | 7,938 | 1,756 | 4,008 | 2,174 |
| 2009 | 7,926 | 1,760 | 4,000 | 2,166 |
| 2010 | 7,935 | 1,763 | 3,995 | 2,177 |
| 2011 | 7,930 | 1,765 | 3,990 | 2,175 |
| 2012 | 7,925 | 1,768 | 3,985 | 2,172 |
| 2013 | 7,920 | 1,770 | 3,980 | 2,170 |
| 2014 | 7,915 | 1,773 | 3,975 | 2,167 |
| 2015 | 7,910 | 1,775 | 3,970 | 2,165 |

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

The U. S. Census Bureau is projecting that Lake County's population will continue to decline slightly during the next six years. Since the unemployment rate in Lake County has increased to 11.3%, the decline in population should be accurate, as people will relocate to find new jobs.

Based on the latest U. S. Census Bureau statistics, 13.8% of Lake County's population is 65 years of age and older and 16.3% is under the age of 18. These figures account for slightly over 30% of Lake County's total population.

If the population does decrease in Lake County, the solid waste disposal by the residents should also decrease accordingly. Due to the dire economic situation, residents will be buying less, thus, they will be throwing away less. Lake County will continue to operate the two convenience centers to manage the residential solid waste disposal. Reducing, reusing, and recycling will continue to be promoted to the residents.

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 Lake County

As shown on Table 2.1 on the following page, the Lake County economy is very weak when compared to the state and national averages. Unemployment rates have ranged from a low of 5.6% in 2001 to a high of 11.2% in 2009. Between 2007 and 2009, the unemployment rate in Lake County jumped from 5.9% to 11.2%.

In January, 2010, Lake County's unemployment rate was 12.9%. According to the latest figures, the unemployment rate has dropped back to 11.7% in March. The unemployment rate may drop slightly more, but all indicators show the rate to continue to be high.

In 2000, Lake County's poverty rate was 29.0, which was 1st in the state and 45th in the nation. In 2008, the poverty rate increased to 37.8, which is still 1st in the state and 12th in the nation. The median household income in 2008 was \$26,739, which ranks 93rd in the state. Likewise, the per capita personal income in 2008 was \$20,745, which ranks 94th in the state. The average total wage in all areas in Lake County is \$21,453, which is significantly lower than the state average of \$36,146.

The top ten county manufacturers cannot be listed in Lake County because there are no manufacturers located within the county. The largest employer in the county is the Northwest Tennessee Correctional Complex. According to the 2000 US Census Bureau, 32.6% of the workforce in Lake County commutes outside the county to go to their jobs.

Almost 44% of the total population 25 and older in Lake County does not have a high school diploma or GED. Only 1.9% has earned an Associate Degree and only 3.7% has earned a Bachelor's Degree.

TABLE 2.1 Lake 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 | | Goods Producing | | | | Service Producing | | | | | | |
| | | | Total | %Rate | Total | Total | Mfg | Other | Total | Trade | Health | Govt. | Other | | |
| 1999 | 2,560 | 2,400 | 160 | 6.3% | 1,850 | 130 | N/D | N/D | 1,720 | 210 | 210 | 1,000 | N/D | \$12,136 | \$23,854,899 |
| 2000 | 2,420 | 2,280 | 140 | 5.8% | 1,760 | 90 | N/D | N/D | 1,670 | 200 | 190 | 990 | N/D | \$12,957 | \$24,299,721 |
| 2001 | 2,500 | 2,360 | 140 | 5.6% | 1,790 | 110 | N/D | N/D | 1,680 | 200 | 190 | 1,010 | N/D | \$13,256 | \$24,548,699 |
| 2002 | 2,640 | 2,480 | 160 | 6.1% | 1,850 | 110 | N/D | N/D | 1,740 | 200 | 180 | 1,020 | N/D | \$13,197 | \$24,102,216 |
| 2003 | 2,760 | 2,560 | 200 | 7.2% | 1,870 | 100 | N/D | N/D | 1,770 | 210 | 160 | 1,050 | N/D | \$14,653 | \$26,896,409 |
| 2004 | 2,620 | 2,440 | 180 | 6.8% | 1,810 | 90 | N/D | N/D | 1,720 | 190 | 170 | 1,060 | N/D | \$15,556 | \$27,757,157 |
| 2005 | 2,600 | 2,380 | 210 | 8.2% | 1,800 | 40 | N/D | N/D | 1,760 | 180 | 190 | 1,090 | N/D | \$16,558 | \$28,271,371 |
| 2006 | 2,680 | 2,500 | 180 | 6.8% | 1,830 | 40 | N/D | N/D | 1,790 | 180 | 170 | 1,110 | N/D | \$17,085 | \$29,639,979 |
| 2007 | 2,700 | 2,540 | 160 | 5.9% | 1,870 | 50 | N/D | N/D | 1,820 | 200 | 180 | 1,110 | N/D | \$19,091 | \$30,553,069 |
| 2008 | 2,680 | 2,480 | 200 | 8.1% | 1,865 | 40 | N/D | N/D | 1,825 | 205 | 180 | 1,110 | N/D | \$20,745 | \$34,928,401 |
| 2009 | 2,639 | 2,343 | 296 | 11.2% | 1,860 | 40 | N/D | N/D | 1,820 | 200 | 180 | 1,110 | N/D | \$20,750 | \$30,500,000 |
| 2010 | 2,635 | 2,330 | 305 | 11.6% | 1,855 | 40 | N/D | N/D | 1,815 | 200 | 180 | 1,105 | N/D | \$20,755 | \$30,450,000 |
| 2011 | 2,633 | 2,333 | 300 | 11.4% | 1,850 | 40 | N/D | N/D | 1,810 | 200 | 180 | 1,100 | N/D | \$20,760 | \$30,600,000 |
| 2012 | 2,630 | 2,332 | 298 | 11.3% | 1,845 | 40 | N/D | N/D | 1,805 | 200 | 180 | 1,095 | N/D | \$20,765 | \$30,600,100 |
| 2013 | 2,628 | 2,333 | 295 | 11.2% | 1,840 | 40 | N/D | N/D | 1,800 | 200 | 180 | 1,090 | N/D | \$20,770 | \$30,600,200 |
| 2014 | 2,625 | 2,332 | 293 | 11.2% | 1,835 | 40 | N/D | N/D | 1,795 | 200 | 180 | 1,085 | N/D | \$20,775 | \$30,600,300 |
| 2015 | 2,623 | 2,333 | 290 | 11.1% | 1,830 | 40 | N/D | N/D | 1,790 | 200 | 180 | 1,080 | N/D | \$20,780 | \$30,600,400 |

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. How will the total waste stream be handled in the next five (5) years? 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 Lake County Solid Waste Annual Progress Report (2009), the total MSW stream was reported as 8,950 tons. This amount consisted of 4,732 tons being disposed in Class I landfills, and 4,218 tons being recycled.

A large portion of the MSW stream is due to the residents of Lake County. It is estimated that the citizens make up 40% of the MSW stream. The remaining MSW stream is estimated to be 25% commercial, 25% institutional, and 10% industrial.

The five-year projections for waste disposal in Lake County are provided in the table below. These estimates show a very slight decrease in MSW disposal to coincide with the slight population decreases that were projected in Section 1 of this assessment.

TABLE 3.1 Regional Solid Waste Stream Disposal for 2009 – 2014

| Class I Disposal Site | Reported Year (APR 2009) | Projected Year | | | | | |
|---|-----------------------------|----------------|--------------|--------------|--------------|--------------|--------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| MSW disposed in NW TN Disposal Corp. Class I Landfill located in Obion County | 2,701 | 2,698 | 2,696 | 2,694 | 2,692 | 2,690 | 2,688 |
| MSW disposed in Alan's Industrial Waste Class I Landfill located in Obion County | 2,031 | 2,029 | 2,027 | 2,025 | 2,023 | 2,021 | 2,019 |
| Total Regional Waste Disposal | 4,732 | 4,727 | 4,723 | 4,719 | 4,715 | 4,711 | 4,707 |

Lake County showed a reduction of more than 1,500 tons of MSW going to Class I landfills from 2008 to 2009. This is more than a 24% reduction. The county also had a significant natural disaster in February 2009. There was a major ice storm that hit the county, which resulted in the county being declared a disaster area by the governor. People were still getting loose branches out of trees in the spring of 2010.

Regional Solid Waste Management

The table below describes how the region's total waste stream is managed currently and how it will be managed in the next 5 years. Lake County, Ridgely, Tiptonville, and the businesses are 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 2011-2015 | Other Problem Waste Types |
|------------------------|---|---|---|---|--|
| Lake County | <p>Residential solid waste 2 County Convenience Center s Available to all residents of the County</p> <p>Local businesses Not permitted to use the convenience center</p> | Alan's Industrial Waste Class I Landfill located in Obion County as primary waste disposal facility for unincorporated residents of Lake County and local businesses | <p>Waste tires: Waste tire contract</p> <p>Used oil: Private Businesses</p> <p>Automobile fluids: Private Businesses</p> <p>Latex paint: Not collected</p> <p>Electronics: Not collected</p> | <p>Waste tires: Waste tire contract</p> <p>Used oil: Private Businesses</p> <p>Used oil filters: Private Businesses</p> <p>Automobile fluids: Private Businesses</p> <p>Latex paint: HHW Event</p> <p>Electronics: Convenience Center</p> | 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. |
| Ridgely | Solid waste curbside collection fee service for city residents. | Alan's Industrial Waste Class I Landfill located in Obion County as primary waste disposal facility for unincorporated residents of Ridgely and local businesses | Provided by Lake County | Provided by Lake County | Provided by Lake County |
| Tiptonville | 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 Tiptonville and local businesses. | Provided by Lake County | Provided by Lake County | Provided by Lake County |
| Business | <p>Subscription service provided by:</p> <p>Contracts with private haulers, and direct haul by business.</p> | Alan's Industrial Waste Class I Landfill and Northwest TN Disposal Corp., Inc. Class I Landfill, both located in Obion County as primary waste disposal facilities for Ridgely, Tiptonville, and unincorporated residents of Lake County and local businesses | <p>Available service provided by:</p> <p>In-house business programs and Contractors</p> | <p>Available service provided by:</p> <p>In-house business programs and Contractors</p> | 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

Lake County does not operate nor own a Class I landfill. No wastes from other areas enter the county. In 2009, a total of 4,732 tons of MSW as sent to two different Class I landfills. The table below illustrates where the MSW as disbursed.

TABLE 3.3 Wastes Leaving Lake County

| Class I Landfill | County Location | Tonnage |
|-----------------------------------|-----------------|--------------|
| Northwest TN Disposal Corp., Inc. | Obion County | 2,701 |
| Alan's Industrial Waste, Inc. | Obion County | 2,031 |
| | | |
| Totals | | 4,732 |

Source: TDEC 2009 Solid Waste Origin Report

SECTION 4:

REGIONAL COLLECTION SYSTEMS

Describe in detail the waste collection system of the region and every county and municipality. Provide 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 governments throughout the United States are struggling to develop efficient and cost-effective plans for managing their MSW. In Lake County, the waste management systems consist primarily of waste collection and disposal at the Class I landfills.

Lake County

Lake County operates two convenience centers in the county. There is no charge for the residents of Lake County to take their MSW to these convenience centers. The county budgeted \$77,638 to operate these convenience centers during FY2010.

The operating hours of the convenience centers are illustrated in the table below:

TABLE 4.1 Convenience Center Schedules

| Convenience Center | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat. |
|---------------------------|-------------|--------------|-------------|---------------|-------------|-------------|
| Lake County CC | 8am-4pm | 8am-4pm | 8am-4pm | 8am-4pm | 8am-4pm | |
| Tiptonville CC | 8am-5pm | 8am-5pm | 8am-5pm | 8am-5pm | 8am-5pm | 8am-12pm |
| | | | | | | |

The Lake County Convenience Center collects metals, batteries, and tires. There is an incinerator at the convenience center where brush and yard waste are burned. The Tiptonville Convenience Center only collects MSW.

Municipalities

Lake County has two municipalities. Tiptonville is the largest municipality and is the county seat. Tiptonville contracts with Barker Brothers, Inc., and the waste is hauled to the Northwest Tennessee Disposal Corp., Inc. Landfill. Ridgely, the other municipality in the county, operates its own collection system utilizing one employee and prison inmates. The waste is then collected by Alan's and transported to Alan's Industrial Waste Class I Landfill. Both municipalities help to pay the costs of the operation of the incinerator.

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

TABLE 4.2 Regional Collection Systems

| Jurisdiction | Transporter | Class I Landfill |
|--------------|-------------------------|-----------------------------|
| Lake County | Alan's Industrial Waste | Alan's Industrial Waste |
| Ridgely | Alan's Industrial Waste | Alan's Industrial Waste |
| Tiptonville | Barker Brothers, Inc. | Northwest TN Disposal Corp. |

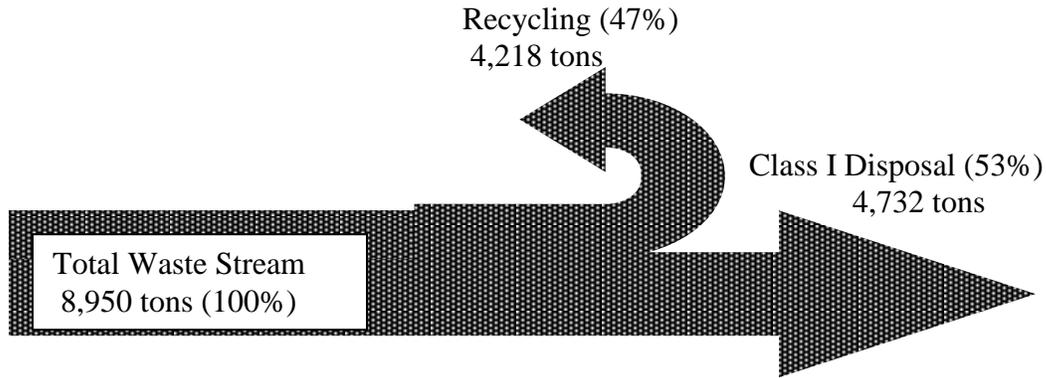
Lake County recycles several different commodities. The table below illustrates these commodities and what processors are utilized.

TABLE 4.3 Lake County Commodities and Processors

| Commodities | Processor | Location |
|-------------|--------------------|---------------|
| Batteries | Mathis Battery | Dresden, TN |
| Metals | Wright's Recycling | Gates, TN |
| Tires | Mac Tires | Nashville, TN |

Flow Diagram of Lake County Total Annual Regional Waste Stream

The figures shown in the flow diagram below were taken from the 2009 Lake County Solid Waste Annual Progress Report.



SECTION 5:

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 they 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 5.1 Measurement of Regional Waste Reduction Goal

| County | Waste Reduction Goal Calculation Method | | | |
|-----------------------------------|---|------------------|---------------------------|-------------------------|
| | Compared to Base Year | Population Ratio | Economic-Population Ratio | Qualitative - Real Time |
| Lake County | -14.3% | -14.3% | -20.5% | 47.1% |
| 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 Lake 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.

Lake County did meet the Qualitative – Real Time Method of waste reduction by showing a real time diversion rate of 47.1%. The majority of the recycling was completed by private entities.

Future Regional Waste Reduction Program

As stated in previous sections, Lake County is a very poor county. There are not enough funds to hire a Solid Waste Director. The Lake County Mayor does an excellent job of managing the solid waste program. The county plans to continue to utilize the incinerator to burn the brush and yard waste, thus reducing the amount of waste that goes into the

landfills. Lake County will continue to search for an outlet for the ash that is currently going to these landfills.

SECTION 6:

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 throughput. 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 6.1 10-Year Regional Disposal Assurance in Lake County in 2009/10

| Site Name(s) | Annual Tons Disposed by Lake County* | Solid Waste Permit # | Current Disposal (daily throughput) | Maximum Disposal Capacity (daily throughput) | Projected Life of Facility |
|---|--------------------------------------|----------------------|-------------------------------------|--|----------------------------|
| NW Tennessee Disposal Corporation Class I Landfill located in Obion Co. | 2,701 | SNL 66-0143 | 2,200 tons per day | 5,000 tons per day | 25+ years remaining life |
| Alan's Industrial Waste Class I Landfill located in Obion County | 2,031 | SNL 66-0276 | 1,200 tons per day | 4,000 tons per day | 25+ years remaining life |

Source: NW Tennessee Disposal Corp., Alan's Industrial Waste Landfill, November 2009

*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 6.2 Public and Private Collection Service in Lake County in 2009

| 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) |
|----------------------------------|---|---|---|--|
| LakeCounty Unincorporated | County-wide Local business subscriptions | 6 days per week (Drop Off) | 1,276 | 2 Convenience Centers |
| Ridgely | City residents Local business subscription | Weekly | 1,056 | Residential curbside Local business subscription |
| Tiptonville | City residents Local business subscription | Weekly | 2,400 | Residential curbside Local business subscription |
| Total | | | 4,732 | |

SECTION 7:**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 7.1 Expenditures and Revenues for Lake County for 2009/10

| Expenditures | |
|-------------------------------|------------------|
| Description | Amount |
| Waste Incinerator | \$ 41,638 |
| Contracts with Govt. Agencies | \$ 36,000 |
| | |
| Total Expenditures | \$ 77,638 |
| Revenues | |
| Local Taxes | \$ 31,400 |
| Other Local Revenue | \$ 6,500 |
| Other Governments | \$ 26,900 |
| Operating Transfer | \$ 7,000 |
| | |
| Total Revenues | \$ 71,800 |

Lake County expends more than \$77,000 to operate its two convenience centers and incinerator. In this fiscal year, the county will have to transfer in \$7,000 from the general fund and utilize nearly \$6,000 from the fund balance to meet the solid waste expenditures. Doing this every year is depleting the general fund. Also, the convenience centers and the incinerator are in need of repair. Without assistance from the state, the county cannot provide this needed maintenance. Lake County

contracts with Alan's Industrial Waste, Inc. for waste disposal.

TABLE 7.2 Expenditures and Revenues for the Town of Ridgely for 2009/10

| Expenditures | |
|---------------------------|-------------------|
| Description | Amount |
| Sanitation | \$ 145,616 |
| | |
| Total Expenditures | \$ 145,616 |
| Revenues | |
| Collection Fees | \$ 133,200 |
| County Garbage | \$ 14,400 |
| | |
| Total Revenues | \$ 147,600 |

The Town of Ridgely operates its own door-to-door collection system within the city for approximately 1,760 residents. The Sanitation Department has one employee and utilizes the services of the inmates from the Northwest TN Correctional Complex. The MSW is taken to Alan's Industrial Waste, Inc. Class I Landfill. The city charges the residents \$14.25 per month for this service.

TABLE 7.3 Expenditures and Revenues for the Town of Tiptonville for 2009/10

| Expenditures | |
|---------------------------|-------------------|
| Description | Amount |
| Sanitation | \$ 234,458 |
| | |
| Total Expenditures | \$ 234,458 |
| Revenues | |
| Collection Fees | \$ 200,000 |
| Operating Transfer | \$ 5,000 |
| | |
| Total Revenues | \$ 205,000 |

Tiptonville provides residential curbside collection and commercial subscription service for approximately 4,000 residents. The Town of Tiptonville charges the citizens \$15.50 per month for weekly waste collection and contracts with Barker Brothers, Inc. for waste disposal.

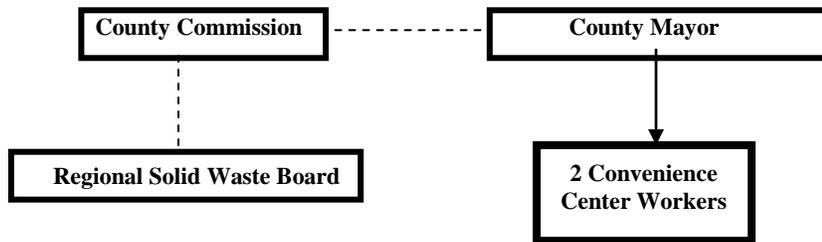
SECTION 8:

SOLID WASTE MANAGEMENT INFRASTRUCTURE

Provide organizational charts of each county and municipality's solid waste program and staff arrangement. Provide a scale county level map indicating location of all existing facilities including convenience centers, transfer stations, recycling centers, waste tire drop-off sites, used oil collection sites, paint recycling centers, all landfills, etc. Identify all current revenue sources by county and municipality that are used for materials and solid waste management. Identify needed positions, facilities, and equipment that a fully integrated solid waste system would have to provide at a full level of service. Project future revenue needs from these categories and discuss how this need will be met in the future.

Lake County

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



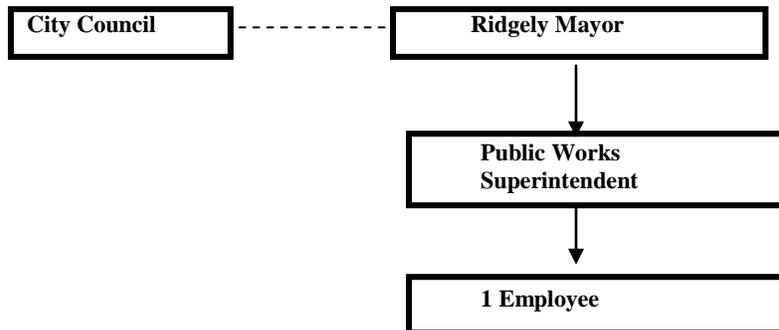
Future Solid Waste Infrastructure Development Needs

New infrastructure is needed at the Lake County Convenience Center and Incinerator. The building needs to be replaced and a new chute is needed for the incinerator. The county cannot afford these improvements and will need assistance from other sources.

Municipalities

Ridgely

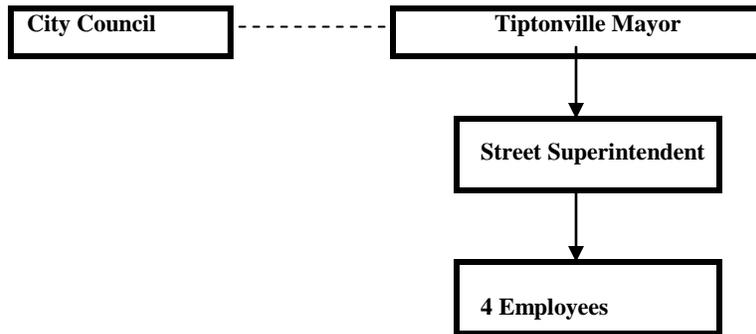
The Town of Ridgely provides residential curbside collection and commercial subscription service for approximately 1,760 residents. Ridgely does not provide recycling collection services, but the Mayor has applied in the past for a building to handle recyclables and recycling equipment. An organizational chart for the Town of Ridgely is provided below.



Ridgely employs a full-time Public Works Superintendent and one full-time sanitation worker. The town utilizes inmate labor from the nearby Correctional Complex. Ridgely residents pay \$14.25 per month for collection service and the commercial rates vary.

Tiptonville

The Town of Tiptonville provides residential curbside collection and commercial subscription service for approximately 4,000 customers. The city does not provide recycling collection services. An organizational chart for the Town of Tiptonville is provided below.

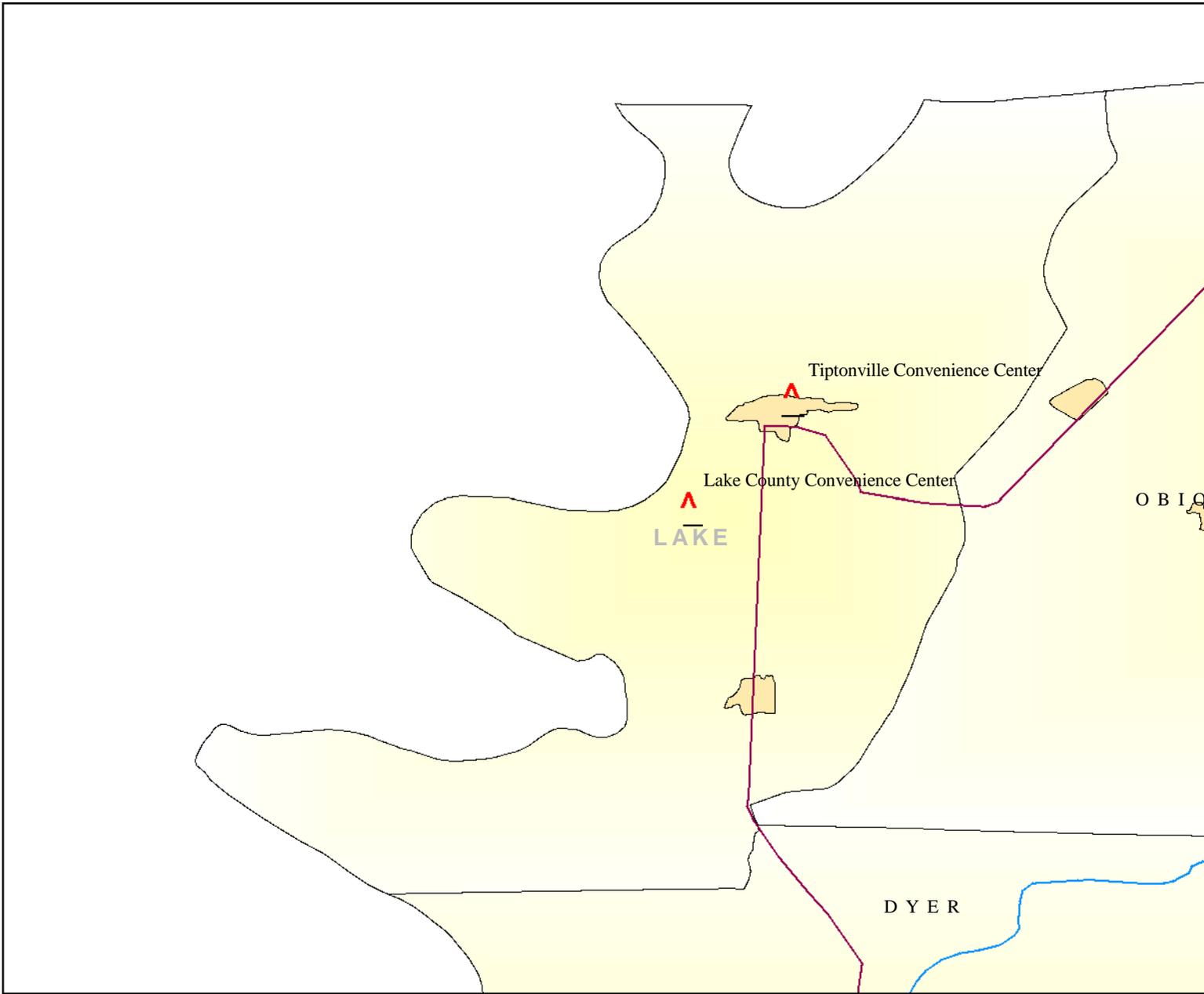


Four positions are funded out of the Tiptonville Sanitation Budget. The city contracts directly with Barker Brothers, Inc. for waste disposal. Tiptonville residents pay \$15.50 per month for collection service and the commercial rates vary.

Locations of Solid Waste Facilities

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

Lake County Solid Waste Facilities



SECTION 9:

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.

Lake County

The Lake County Solid Waste/Sanitation Fund is funded with local taxes and other revenue sources. County Property Taxes and the Wheel Tax fund a large portion of the solid waste needs in the county. The two municipalities fund another large portion for the use of the incinerator. Lake County still has to transfer money in from the General Fund and to utilize the Fund Balance in order to have enough money to fund the solid waste needs within the county.

The 2008 Lake County property tax rate was \$2.43. The local option sales tax was at the maximum rate of 2.75%. The people of Lake County cannot afford more taxes.

More money is not available in the county for these solid waste needs. The county does not have any industries and very few retail establishments. The majority of the workforce within the county either commutes to one of the surrounding counties or is employed at the Correctional Complex.

Lake County is trying very hard to develop a deep-water port just outside Tiptonville on the Mississippi River. Once the port is developed, an industrial park should follow. This endeavor would help the county tremendously. The county is trying many different avenues to fund these projects.

Ridgely

The Town of Ridgely provides residential curbside collection and commercial subscription service for approximately 1,760 residents. The residents are charged \$14.25 per month for this service. So far, these fees are adequately funding the solid waste department.

Tiptonville

The Town of Tiptonville provides residential curbside collection and commercial subscription service for approximately 4,000 residents. The residents are charged \$15.50 per month for this service. These fees are not adequately funding the solid waste department. Almost \$30,000 will be expended from the fund balance by June 30, 2010 to meet the solid waste needs of the town. The fund balance will only have approximately \$500 left as of July 1, 2010.

SECTION 10:

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 on-going 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. The Lake County Mayor does an excellent job of utilizing the Litter Grant funds for educational purposes.

There is only one place in the county where illegal dumping occurs. The Levee Road behind Ridgely is a habitual dumping area. The county cleans this area up repeatedly and tries to keep it under surveillance.

The county and the municipalities try to use the incinerator as much as possible to reduce the tonnage going into the landfills. By burning this waste, the tonnage is greatly reduced.

Education Measures

Lake County does an excellent job of educating the public about recycling and waste diversion. The county utilizes the Litter Grant to provide educational materials. Both television and newspaper advertisements are generated to aid in educating the public about solid waste issues.

The table below illustrates the programs that were conducted in 2009.

TABLE 10.1 Public Education and Information Activities

| Program Name | Sponsor | Effectiveness | Program Type | Target Group | # Served |
|--|----------------|----------------------|---------------------|---------------------|-----------------|
| Scholarship Program | Litter Grant | Positive | Classroom | Children/Teachers | 50 |
| Using the Litter Grant Funds, Lake County sponsored a scholarship contest for the senior class at the High School. Seniors wrote essays and three students were granted \$500 scholarships. | | | | | |
| Promotional Materials | Litter Grant | Positive | Classroom | Children/Teachers | 500 |
| Promotional materials were distributed to elementary school students | | | | | |
| Television Advertisements | Litter Grant | Positive | Advertisement | General Public | County-Wide |
| The Litter Grant pays for advertisements about anti-littering, waste reduction, and recycling. These ads run every 15 minutes 24 hours a day. | | | | | |
| Newspaper Advertisements | Litter Grant | Positive | Community Outreach | General Public | County-Wide |
| Advertisements are placed in the newspaper around the holidays about the convenience centers. | | | | | |

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 Lake 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 | Lake County has 2 convenience centers throughout the county. | Improve existing structures. | County to provide CCC’s for residents according to population or service area, maintain required design and operational standards. |
| Recycling | Lake County offers recycling at 1 convenience center. Private recycling companies are also available. | Expand current recycling services. | County to provide at least one (1) drop-off site for collection of residential recyclable materials. |
| Waste Reduction | Lake 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 | Lake County collects waste tires, metals, and batteries at the Convenience Center. | Expand recycling efforts at the Convenience Centers. | County to provide at least one (1) site to accept automobile fluids, batteries, and waste tires. |
| Public Education and Information | Lake County provides educational activities to the public through the Litter Grant. | Continue to provide educational activities to the public through the Litter Grant. | Region to develop and implement solid waste management action plan for adults and children. |
| Disposal | Lake County contracts with Alan’s Industrial Waste Services, Inc. to provide disposal services. | Continue to contract with waste haulers to provide disposal services. | Region to assure 10-year disposal capacity. |
| Planning | The Lake County Regional Solid Waste Board meets as needed throughout the 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 the Lake County Solid Waste Board involvement,
- Continue the activities at the Convenience Centers,
- 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 conclusive 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
2009 Lake County Annual Progress Report
TDEC 2009 Solid Waste Origin Report
Lake County Budget Document
Ridgely Budget Document
Tiptonville Budget Document