

**2012  
HAWKINS COUNTY  
DISTRICT SOLID WASTE  
NEEDS ASSESSMENT**



Prepared by  
First Tennessee Development District

JUNE 2012

## **INTRODUCTION**

The *Solid Waste Management Act of 1991* requires Tennessee local governments to prepare and maintain a comprehensive plan for managing their solid waste through modern, integrated, efficient systems. To assure that such planning is carried out on a solid foundation of relevant and objective knowledge of local conditions, the Act requires that the Development District staff coordinate, conduct and maintain an assessment of the solid waste needs for each municipal solid waste planning region. This assessment shall be revised every five years [T.C.A. 68-211-811].

### Categories of information required:

Demographic information & projections.

An analysis of economic activity within the region.

A characterization of the waste stream.

Projections of solid waste generation.

An evaluation of the county and municipal waste collection systems.

An evaluation of existing solid waste management facilities and capacities, and of any new or expanded facilities planned.

A statement of solid waste management goals that are consistent with the state plan.

An analysis of existing or potential waste flows within the region and between adjacent regions.

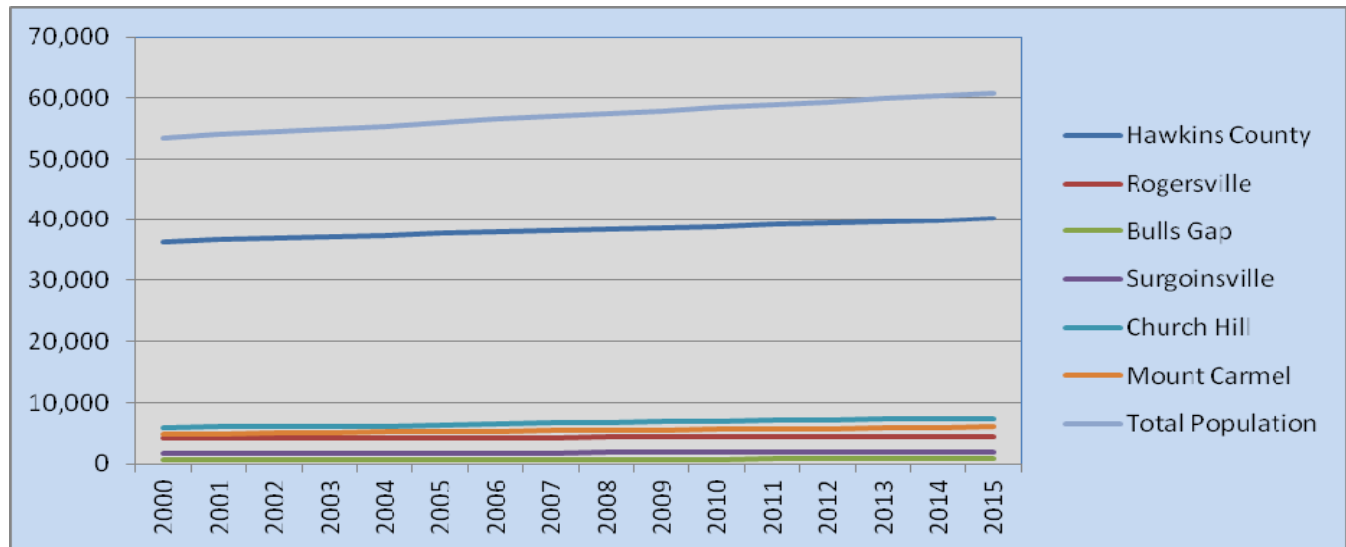
A comparison of the projected volume of generated and imported waste, with available and projected capacity to manage it, and identification of potential shortfalls in that capacity.

10. Any additional information as the commissioner may require.

**Item 1.**

Provide a table and chart of the region’s population during the past 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 county and municipality populations. Considering the trends, discuss the affect on the solid waste infrastructure needs over the next five (5) years.

	Hawkins County	Rogersville	Bulls Gap	Surgoinsville	Church Hill	Mount Carmel	Total Population
2000	36,216	4,245	713	1,600	5,964	4,825	53,563
2001	36,620	4,230	711	1,626	6,037	4,938	54,162
2002	36,847	4,231	711	1,655	6,067	5,020	54,531
2003	37,143	4,244	712	1,692	6,139	5,103	55,033
2004	37,363	4,251	711	1,711	6,203	5,179	55,418
2005	37,665	4,270	714	1,738	6,372	5,255	56,014
2006	37,898	4,294	732	1,744	6,539	5,328	56,535
2007	38,153	4,321	749	1,754	6,676	5,401	57,054
2008	38,344	4,346	749	1,811	6,765	5,462	57,477
2009	38,610	4,359	754	1,837	6,865	5,542	57,966
2010	38,876	4,371	758	1,864	6,965	5,621	58,456
2011	39,142	4,384	763	1,890	7,065	5,701	58,945
2012	39,408	4,397	767	1,917	7,166	5,781	59,434
2013	39,674	4,409	772	1,943	7,266	5,860	59,923
2014	39,940	4,422	776	1,969	7,366	5,940	60,413
2015	40,206	4,434	781	1,996	7,466	6,019	60,902



According to historical data and projected trends over the next few years, Hawkins County and the 5 municipalities in the County are expected to continue slight but steady population growth to the year 2015. The anticipated increase in population expected in the coming years is not significant enough to greatly impact solid waste infrastructure needs during those years. However, County officials currently believe the infrastructure in place is not sufficient enough to

meets the needs of the existing population. This issue deals primarily with the fact that Hawkins County covers a large geographical area. Additional infrastructure, such as drop-off recycling centers or convenience centers may be needed in the coming years to meet the needs of the County to accommodate population growth in specific areas of the County. Overall, population trends would not indicate much need, however depending on where the growth is experienced, will determine the need for additional infrastructure in those specific population growth areas of Hawkins County.

**Item 2.**

**Provide a table and chart showing the region’s economic profile for the county and its 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

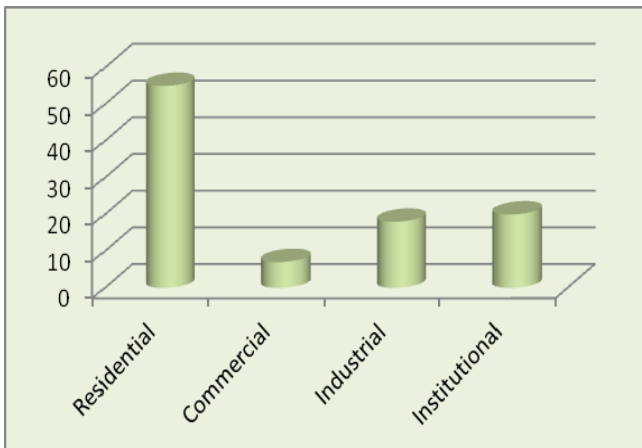
Year	Total Labor Force	Total Employed	Unemployed	Unemployment Rate	Per Capita Income	Retail Sales	Property Tax Rate
1998	23,730	22,600	1,130	4.80%	\$17,758		3.00
1999	24,370	23,100	1,270	5.20%	\$19,248		3.00
2000	24,690	23,630	1,060	4.30%	\$20,255	\$232,690,888	3.00
2001	25,130	23,790	1,340	5.30%	\$20,984	\$237,971,538	2.41
2002	25,110	23,660	1,450	5.80%	\$21,379	\$250,978,348	2.41
2003	25,570	23,850	1,720	6.70%	\$21,589	\$236,397,114	2.41
2004	25,180	23,620	1,560	6.20%	\$22,645	\$250,116,033	2.53
2005	25,480	23,900	1,580	6.20%	\$23,026	\$250,602,321	2.68
2006	26,380	24,880	1,500	5.70%	\$24,089	\$250,267,996	2.36
2007	25,970	24,740	1,230	4.70%	\$25,023	\$261,833,494	2.61
2008	26,760	24,990	1,770	6.60%	\$25,601	\$258,471,864	2.61
2009	26,967	25,126	1,841	10.40%	\$26,135	\$261,049,962	2.65
2010	27,151	25,260	1,891	11.50%	\$26,650	\$263,357,804	2.67
2011	27,355	25,420	1,935	8.20%	\$27,177	\$264,595,750	2.70
2012	27,533	25,577	1,957	6.20%	\$27,736	\$267,415,613	2.73
2013	27,769	25,772	1,996	6.20%	\$28,245	\$269,145,571	2.75
2014	27,997	25,959	2,038	6.20%	\$28,767	\$270,999,896	2.75
2015	28,159	26,067	2,092	6.25%	\$29,235	\$273,073,086	2.79

Source: U.S. Bureau of Economic Analysis, ETSU Bureau of Economic Research, Tennessee Comptroller of the Treasury, Tennessee Department of Labor, First Tennessee Development District staff.

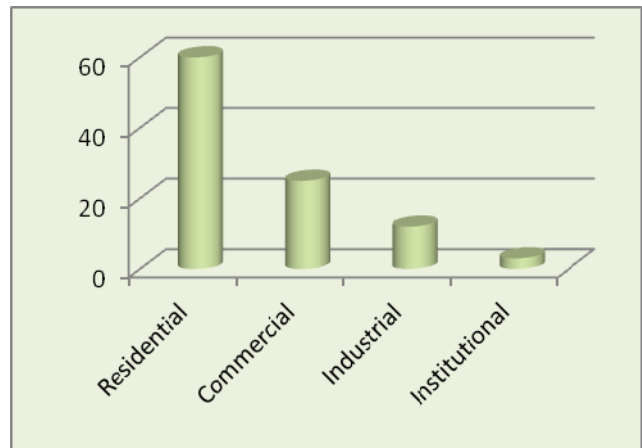
**Item 3.**

**Elaborate on the region’s solid waste stream. Compare the current waste stream with trend anticipated 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 and industrial wastes are managed. Also, provide an analysis of any wastes entering or leaving the region, noting the source and amounts of such wastes.**

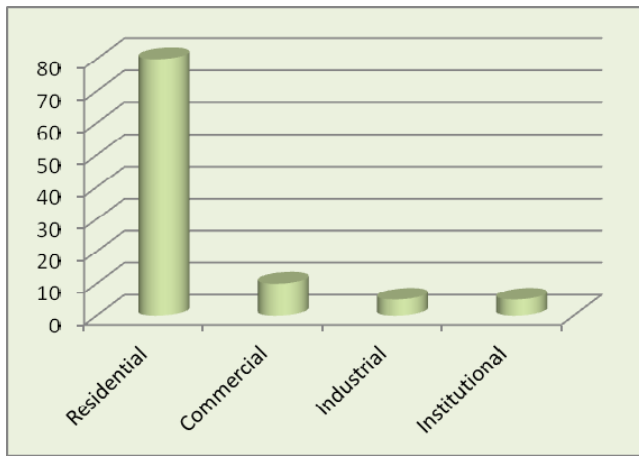
Hawkins County’s waste stream has changes slightly over the past several years due to significant changes in the job market and economic structure. Slower economic conditions, downsizing by the private sector and a change in the job market, has lead to a reduction in the percentage of industrial waste generated in the County. Most of the waste generated in Hawkins County is from residential sources and fortunately the infrastructure is in place to handle this type of waste, now and in the future. Waste tires are collected at the Recycling Center during open hours and at one convenience center 2 Saturdays per month. Used oil is collected at each of the County’s nine convenience centers and latex paint is accepted at the Recycling Center as well. This structure is expected to continue for the next five years. The following diagrams show the changes in the waste stream over the past several years and the projected make-up of the waste stream in the coming years.



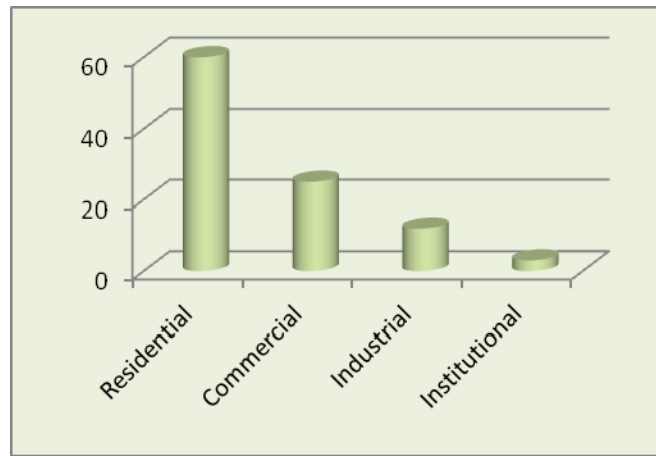
1999



2005



2010



2015 est.

The private sector is primarily responsible for collecting waste generated from businesses and industries. In some of the municipalities, this service may be provided by the local government for a fee. According to data obtained from the 2011 Hawkins County Annual Solid Waste Progress Report, 99.996% of the waste generated in Hawkins County is disposed of in Hawkins County at the Carter's Valley Landfill. Carter's Valley Landfill is a regional facility owned by Allied Waste. This facility accepts waste from several customers, mostly public entities and private haulers from outside Hawkins County. Hawkins County disposes of approximately 180 tons of waste per day of the estimated 1,400 tons per day the facility currently accepts.

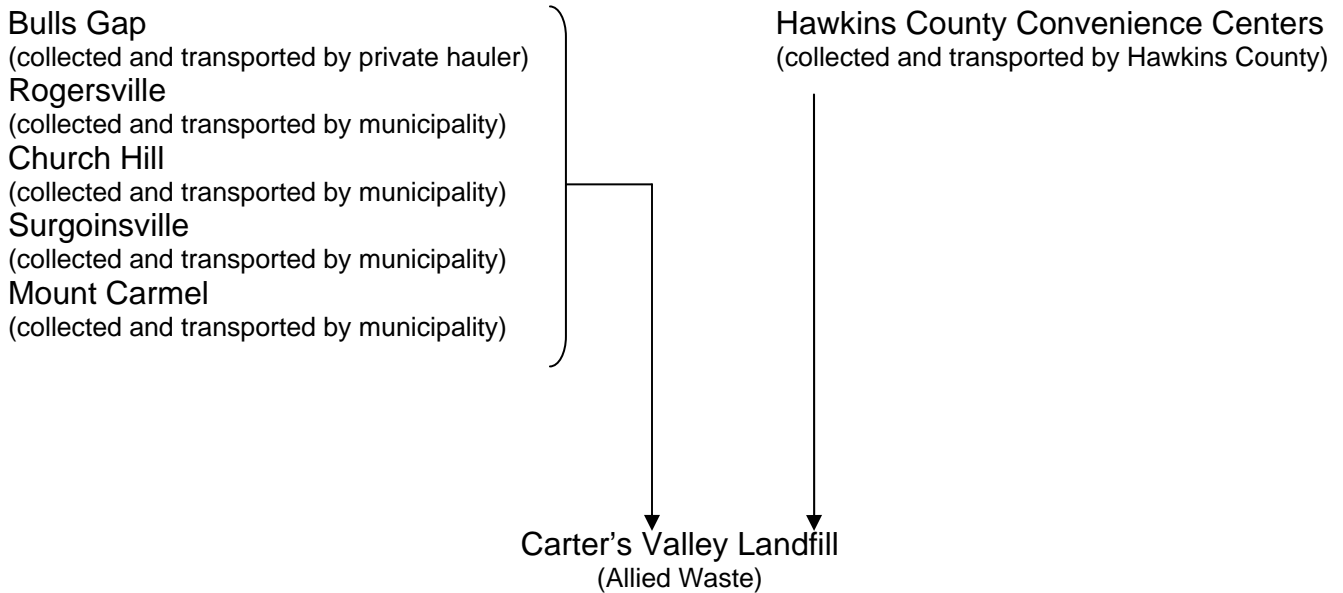
**Item 4.**

**Provide a detailed description of the waste collection system in the county and each 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.**

Hawkins County has had a long relationship with the various owners/operators of the "Hawkins County Landfill". Although ownership has changed over the years, all of the waste generated in Hawkins County, whether collected at convenience centers (county owned/operated) or in each of the County's 5 municipalities, is disposed in the Allied Waste Landfill. The landfill is located on Carter's Valley Road in the Church Hill area. Often referred to as the Carter's Valley Landfill, the facility is the only disposal site in Hawkins County.



Each of the 5 municipalities in Hawkins County collect solid waste door-to-door from residences. Rogersville, Church Hill, Mount Carmel and Surgoinsville provide door-to-door collection services through public works or municipal solid waste departments. These communities operate their own individual solid waste collection programs. Bulls Gap provides door-to-door collection services through a contract with a private hauler. Through a long-standing agreement, Hawkins County is responsible for all disposal costs for wastes collected through the 5 municipal collection programs and the county convenience center collection program. The following diagram shows the flow of waste through the system to the final disposal site. Also included are pictures of the County's 9 convenience centers to better illustrate the methods and facilities used by the County.





Hunt's Gap Convenience Center



Carter's Valley Convenience Center





Burem Convenience Center



113 Convenience Center



Stanley Valley Convenience Center



Rock Hill Convenience Center



Clinch Valley Convenience Center



Lakeview Convenience Center



Lakemont Convenience Center

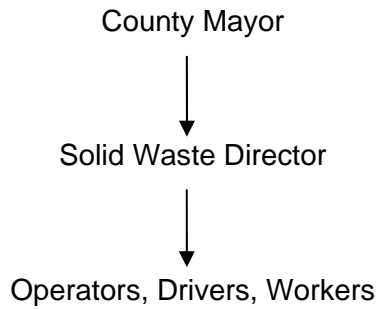
**Item 5.**

**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 short comings in service and note what might be needed to fill this need.**

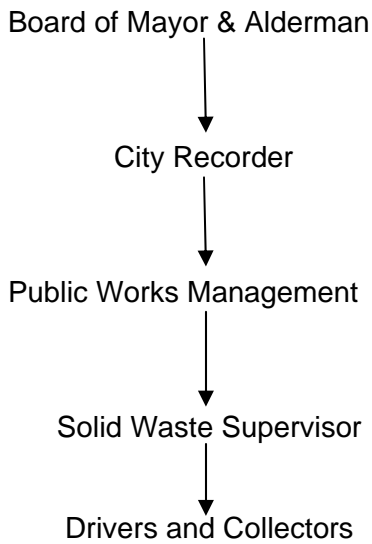
The following are organizational charts of Hawkins County and the 5 municipalities within Hawkins County. Also, see attached map of the solid waste management system in Hawkins County identifying the County's convenience centers, materials processing facility, drop-off recycling centers, used oil collection sites, tire collection site and paint collection site. Unless programs expand, there does not appear to be any needed positions at this time. However, Hawkins County does have a need to develop an additional "mini" MRF in the eastern end of the county to reduce transportation costs and add additional collection routes to its convenience centers to provide quicker turn-around time. The additional MRF would also provide more processing capabilities for the County, thus allow faster turn-around time to get recyclables to the market. If this occurs, additional staff will be needed to staff the additional routes and operate an additional Materials Processing Facility.

## ORGANIZATIONAL CHARTS

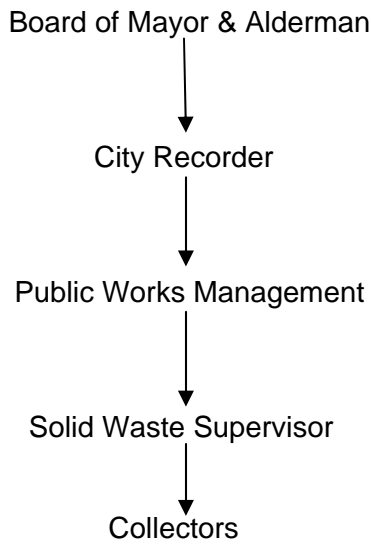
### Hawkins County



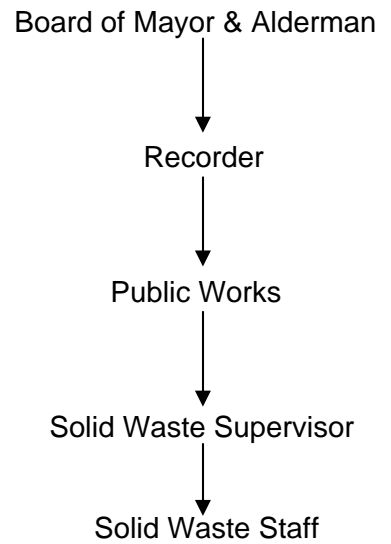
### Rogersville



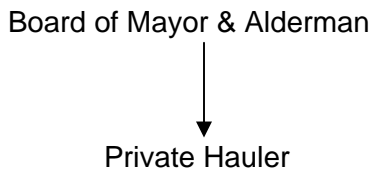
### Surgoinsville



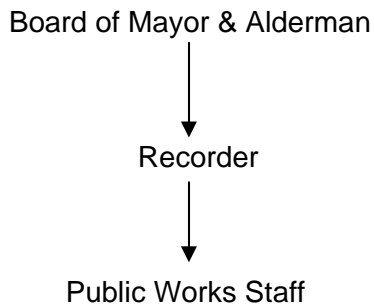
### Church Hill

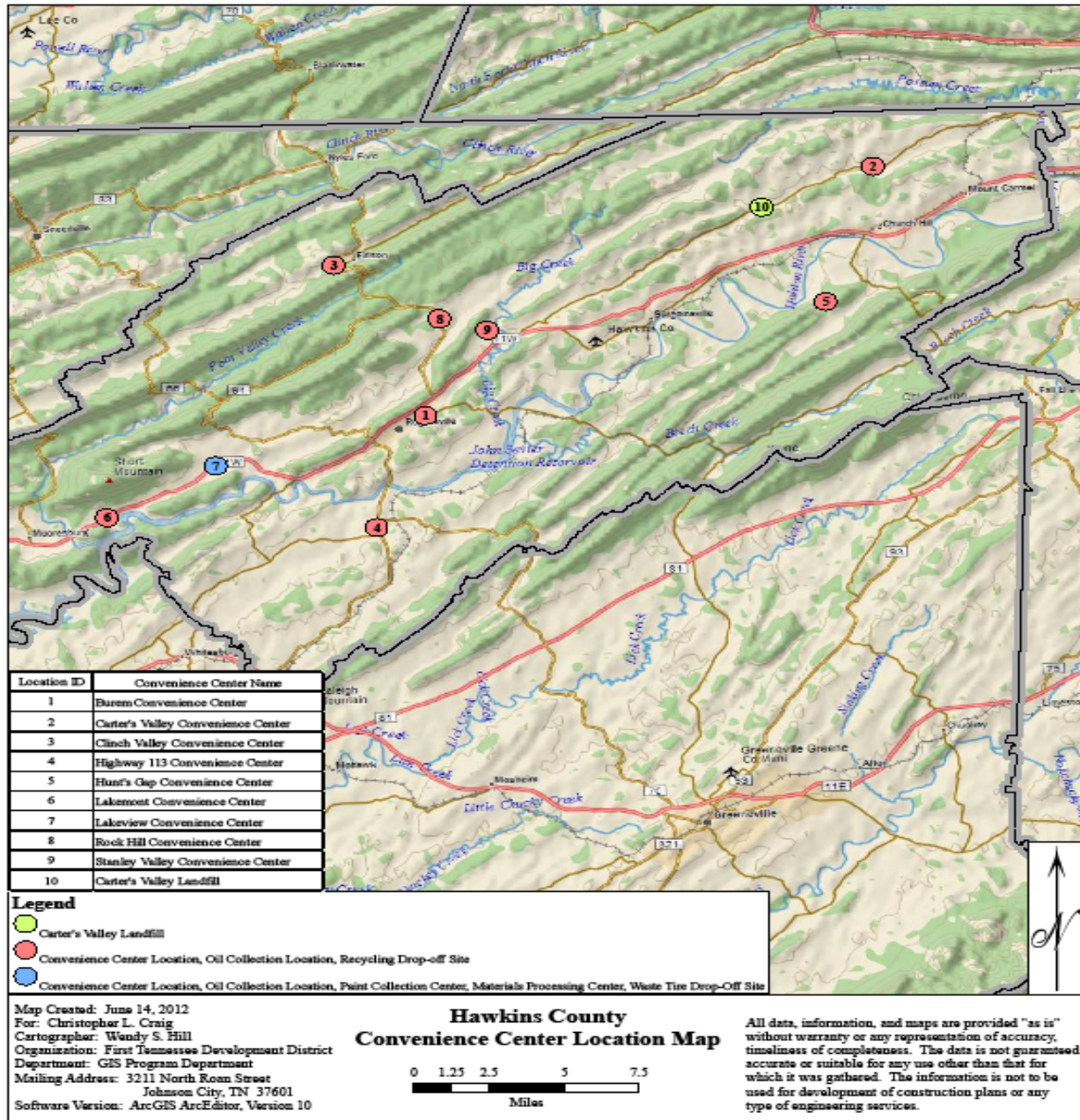


### Bulls Gap



### Mount Carmel





**Item 6.**

**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?**

Hawkins County residents' attitude toward recycling, waste reduction, solid waste management etc., are very similar to those shared by citizens in most rural Tennessee Counties. While most residents would likely support recycling and waste reduction efforts sponsored by local government, there continues to be minimal participation in the County's recycling program. Although, Hawkins County has about average participation rates for its recycling programs, perhaps higher than some counties of similar demographics, it's still a very small percentage of the county's population. Unfortunately most people still find it easier and more convenient to dispose of recyclables instead of using the drop-off recycling program. One of the obstacles identified by local officials in the 2011 Hawkins County Annual Solid Waste Progress Report was "public apathy and lack of participation". Public apathy also leads to illegal dumping which is also one of the issues Hawkins County is facing.

Unfortunately, there are few measures in place or planned that will do much to change "embedded" behavior in adults. Through enforcement, the County is trying diligently to address the illegal dumping issue. Cleanup crews, provided through the County's court system, work tirelessly to clean up litter and illegal dump sites. However, several of these areas are used over and over by illegal dumpers. There are programs in the schools that try to address recycling, waste reduction and anti-littering. Studies show this may be the best avenue to change behavior for the future when it comes to public recycling programs. If feasible, an adult education program designed to inform adults, tax payers, the economic benefits of recycling and waste reduction. Including the possibility to lower taxes or directing property taxes to other programs such as schools, law enforcement, etc instead of solid waste landfilling. The County is interested in developing an informational brochure that would identify these benefits to the general public.

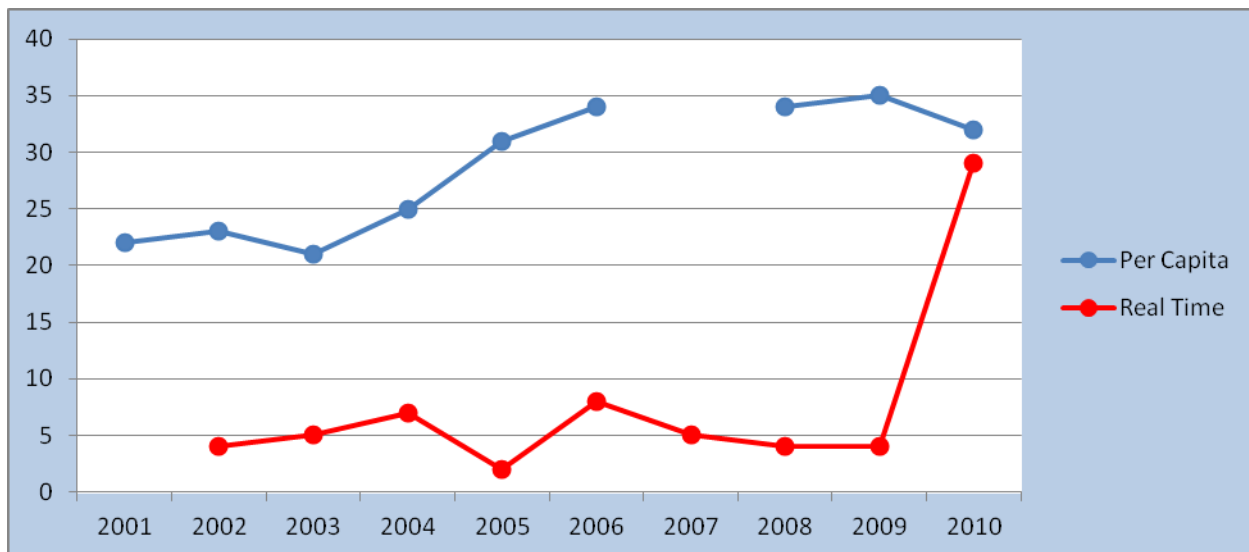
**Item 7.**

**The Solid Waste Management Act of 1991 requires all regions to 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 the reduction rate by each of these goal calculation methodologies. 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.**

As is evident from the following table, Hawkins County has reached the State's 25% Waste Reduction Goal each year since 2001 using either the quantitative assessment tool or qualitative assessment formula. It is believed that Hawkins County has benefited from significant in-house commercial or industrial waste reduction and recycling programs. Companies that report annually to the Region play a major factor in meeting the goal when using the qualitative assessment formula. Although it may simply be a factor of the County's

base year in 2001 was favorable when calculating the per capita waste reduction rate. Hawkins County has operated a successful recycling program for many years, however, it is well known that public drop-off recycling programs do not typically reduce the amount of waste going to Class I landfills independent of other factors. The fact that 3 of the 5 municipalities in Hawkins County also operate recycling programs for residents, is also a factor that has played a role in the success of Hawkins County meeting the 25% Waste Reduction Goal.

Year	Per Capita %	Real Time %
2001	22	No data
2002	23	4
2003	21	5
2004	25	7
2005	31	2
2006	34	8
2007	No data	5
2008	34	4
2009	35	4
2010	32	29





**Item 8.**

**(A) Using the example shown below, 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.**

Site Name(s)	Current Capacity	Maximum Capacity	Projected Life of Facility
Carter's Valley Landfill – Class I (Allied Waste)	1,400 TPD	Dependent on expansion plans and customer levels	12 years - at current disposal levels and capacity.
Iris Glen Environmental Center (Waste Management)	1,500 TPD	Dependent on expansion plans and customer levels	13 years – at current disposal levels and capacity.
Total:	2,900 TPD	N/A	N/A

Hawkins County does not transport any waste to a Class III/IV facility at this time. There are other Class I facilities in the region, and a new Class I landfill will be online in the Fall 2012, however, 99.996% of waste generated in Hawkins County is disposed in the Carter's Valley Landfill facility. The Hawkins County Materials Processing Facility is the processing site for all materials collected at the County's 9 drop-off recycling/convenience centers. Recently, the County purchased a new horizontal baler to deal with capacity and volume issues. This will allow the County to process more materials and address any capacity issues at the MRF for the foreseeable future. Hawkins County added floor space to the MRF a few years ago to allow for more storage area of processed materials prior to marketing. There appears to be NO shortfall of landfill capacity for Hawkins County in the long-term. In fact, there may actually be an excess of landfill capacity for all counties in the region when the new EcoSafe Class I landfill comes online in the next few months.

**(B) Provide a chart or other graphical representation showing service area coverage by public and private waste collectors within the county and municipalities. Include provider's name, area of service, population served by provider, frequency of collection, yearly tons collected, and the type of service provided.**

Provider of Service	Service Area	Population Total Under This Service	Frequency of Service (Weekly, Bi-weekly, on call, etc.)	Annual Tonnage Capacity	Type Service (Curbside, Convenience Center, Green Box)
Hawkins County	County-wide	59,000	Anytime during hours of operation.	N/A	Convenience Center
Bulls Gap	City-wide	770	Weekly	N/A	Curbside
Rogersville	City-wide	4,400	Weekly	N/A	Curbside
Surgoinsville	City-wide	1,900	Weekly	N/A	Curbside
Church Hill	City-wide	7,200	Weekly	N/A	Curbside
Mount Carmel	City-wide	5,800	Weekly	N/A	Curbside
Private Haulers	County-wide	N/A	Weekly	N/A	Curbside

**Item 9.**

Complete the following chart 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.

<b>Expenditures</b>			
<b>Description</b>	<b>Present Need \$/year</b>	<b>Unmet Needs \$/year</b>	<b>Total Needs (Present + Unmet) \$/year</b>
Salary and Benefits	\$549,210		\$549,210
Transportation/hauling	\$219,845		\$219,845
Collection and Disposal Systems	\$570,147		\$570,147
Equipment		\$338,500	\$338,500
Sites			
Convenience Center	\$42,900		\$42,900
Transfer Station			
Recycling Center			
MRF	\$26,900		\$26,900
Landfills			
Site			
Operation			
Closure			
Post Closure Care			
Administration (supplies, communication costs, etc.)			
Education			
Public			
Continuing Ed.			
Capital Projects			
<b>Revenue</b>			
Host agreement fee			
Tipping fees	\$1,800		\$1,800
Property taxes	\$700,000		\$700,000
Sales tax	\$250,000		\$250,000
Surcharges			
Disposal Fees			
Collection charges			
Industrial or Commercial charges			
Residential charges			
Convenience Centers charges			
Transfer Station charges			
Sale of Methane Gas			
Other sources: (Grants, bonds, interest, sales, etc.)	\$273,000		\$273,000

**Item 10.**

**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. Use Chart 9 as an example to present data.**

<b><u>Community</u></b>	<b><u>Current Revenue Source</u></b>
Hawkins County	Property Tax Sales Tax Cable Franchise Fee Grants Sale of Recyclables
Rogersville	General Fund
Bulls Gap	General Fund
Surgoinsville	General Fund
Church Hill	General Fund
Mount Carmel	General Fund

Based on the future equipment needs of Hawkins County as presented in the 2011 Hawkins County Annual Solid Waste Progress Report, there is a significant shortfall in revenues to meet these needs. The County has identified approximately \$338,000 in equipment needs over the next three years. Much of this equipment is needed to replace current aging and deteriorating solid waste collection and transportation equipment. Unfortunately, budget constraints created by lower tax revenues and increasing costs, these needs will not be easily met and a plan to address these needs has not been developed. The solid waste management system in Hawkins County relies primarily on property taxes and sales taxes to fund operations. No new sources of revenue are likely to be implemented and therefore the ability to address need is tied directly to the “fixed” revenue streams. Grants and sale of recyclables are the only sources of revenue that have the potential to allow the County to obtain additional revenue to make equipment purchases. The same applies to municipalities in the County.

**Item 11.**

**Discuss this region’s plan for managing its solid waste system during 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 plans to manage the solid waste system in Hawkins County for the next 5 years will basically continue to follow the same path as is currently in place. There is a desire by County officials to possibly expand the number of drop-off waste disposal sites to provide more convenient service for residents and increase efficiency. Also in these plans is the need to add additional staff and collection routes to reduce transportation costs and increase efficiency. One of the most significant improvements Hawkins County can make to its solid waste

management system is to add an additional “mini” MRF that would provide recyclables processing for drop-off sites and municipalities in the eastern section of the County. This would eliminate costly transportation from sites in eastern Hawkins County to the current MRF in the extreme western end of the County. Sustainability relies solely on the County’s ability to properly fund the solid waste management system. Increased dedication to systematically replace aged equipment and properly staff the program is one of the most positive actions the Region can take. Consistently setting aside tax revenues for improving or maintaining the solid waste system is vitally important to this Region.

Ensuring disposal capacity for the next 10 years is one of the areas Hawkins County has successfully identified. In fact, northeast Tennessee may actually have a surplus of disposal capacity for the next 10-20 years. The Region continues to operate a successful drop-off recycling program that provides service to residents that wish to participate. Unfortunately, participation rates are low, similar to other rural counties. Officials are constantly looking for ways to increase participation and expand the number of items accepted from the public. These would include ewaste and steel food containers. Overall Hawkins County has an efficient, well-managed and effective comprehensive solid waste management system that provides services to all residents.

**Sources:**

U.S. Census Bureau

U.S. Bureau of Economic Analysis

ETSU Bureau of Economic Research

Tennessee Comptroller of the Treasury

Tennessee Department of Labor

First Tennessee Development District staff.

1999 Hawkins County Solid Waste District Needs Assessment Update

1999 Hawkins County Update to the Regional 10 Year Solid Waste Plan

2001-2010 Hawkins County Annual Solid Waste Progress Reports

2012 Hawkins County Operating Budget

First Tennessee Development District GIS Department