2015

Bedford County Solid Waste District Needs Assessment

101 Sam Watkins Boulevard Mount Pleasant, Tennessee 38474

As required by the Solid Waste Management Act of 1991 (T.C.A. 68-211-801 through 68-211-874)

For the

Tennessee Department of Environment and Conservation Division of Solid Waste Management, TDEC William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Ave. 14th Floor Nashville, Tennessee 37243

Introduction

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

The categories of information required are:

- Demographic information & projections;
- An analysis of economic activity within the region;
- Characterization of the waste stream;
- Solid Waste Collection System
- Analysis of Existing or Potential Solid Waste Flows within the Region and Between Adjacent Regions
- Analyze Attitude of Region Towards Waste Management in General and Specify Needed Changes and/or Educational Measures
- Evaluation of the Waste Reduction Systems for Counties & Municipalities in Region
- Collection / Disposal Capacity and Projected Life of Solid Waste Sites
- Unmet Financial Needs and Cost Summary
- Compare revenue sources for the Region's Current Solid Waste Programs with Projected future Demands. Identify Any Potential Shortfalls in that Capacity

Please provide the following information as the core foundations of the region's needs. The Needs Assessment is an attempt to outline the obstacles, difficulties, and needs unique to the region's handling and ideal disposal of its solid waste flow. You are encouraged to expound on the

following items and provide additional information as warranted. There is no required format, only that the requested information is researched and answered thoroughly, with the improvement of the region in mind.

Item #1

DEMOGRAPHIC INFORMATION AND PROJECTION

Provide a table and chart showing the region's population during 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. Considering the trends, discuss the effect on the solid waste infrastructure needs over the next five (5) years.

Population Trends in Bedford County

According to the U. S. Census Bureau, Bedford County's annual population in 2004 was 40,981 and in 2014, it was 46,316 showing an increase of 13%. As shown in Table 1.1 below, projections for the next five years also reflect increases in population. Unincorporated areas still comprise the majority of the county's population. Residents seek homes in the County more than in the city limits.

The three major municipalities Shelbyville, Bell Buckle and Wartrace contain the majority of the population. Bell Buckle and Wartrace are in close proximity to Murfreesboro, TN which is a growing city and many Rutherford County workers wish to get out of the city and avoid higher property taxes from Rutherford County.

The City of Shelbyville hosts approximately 46% of Bedford County's population. There should be a substantial increase in population for Bedford County over the next five years due to increase in businesses and the housing market to include new residential homes, apartments and the southern Rutherford County line extending toward Bedford County.

Calsonic, a global automotive parts supplier, is expanding their workforce due to the reopening of GM in Spring Hill with the new Eco-Tec engine. Bedford County is welcomed by a diversity of industries lending steadiness to the resident economies. A new Industrial Park is approved to come to Bedford County soon. A new County jail is mandatory in Bedford County but remains in the planning stages.

TABLE 1.1 Historic and Projected Population Trends (2004 thru 2019)

Year	County Populatio n	Shelbyville	Bell Buckle	Wartrace
2004	40,981	17,844	408	566
2005	42,147	18,581	407	565
2006	43,444	19,113	411	570
2007	44,531	19,579	414	586
2008	45,384	19,903	419	600
2009	45,947	20,149	420	610
2010	45,134	20,293	500	651
2011	45,326	20,522	501	647
2012	45,489	20,598	502	649
2013	45,901	20,764	506	647
2014	46,316	20,312	442	651
2015	52,552	20,512	482	655
2016	52,702	20,712	522	659
2017	52,802	20,912	562	663
2018	52,902	21,112	602	667
2019	53,002	21,312	642	672

Sources: Historic and Projected Population Trends, U.S. Census Bureau Population Estimate, www.city-data.com/county/bedford County- TN.html . www.city-data.com/city/Shelbyville-Tennessee.html. Tennessee.gov/Tacir. Quick Facts.gov.

60,000 50,000 Population 40,000 3-D Column 2 3-D Column 3 30,000 3-D Column 4 20,000 ■ 3-D Column 5 3-D Column 6 10,000 2004 2006 2008 2011 2013 2015 2017 2019

Chart 1.1 Historic and Projected Population Trends (2004-2019)

Sources: Historic and Projected Population Trends, U.S. Census Bureau Population Estimate for Bedford County, www.city-data.com/county/bedford_County-TN.html . www.city-data.com/city/Shelbyville-Tennessee.html. Tennessee.gov/Tacir Bedford County. Quick Facts.gov. for Bedford County.

Population trends for Bedford County including the City of Shelbyville, Bell Buckle and Wartrace indicate that population will increase over the next five years. This will continue beyond 2019. Bedford County's population has experienced significant growth of 19.8%, since 2000 and 13% in the last 10 years. The Solid Waste infrastructure will be affected by the growth of Calsonic, Tyson Foods, Albea, National Pen, Walmart DC, Dollar Generals, Heritage Medical Center, expansion of a new jail and other plants in Bedford County.

Item #2

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 Bedford County

The average household income for Bedford County residents is estimated to be \$40,237.00 for 2014 while the average household income for the United States in 2014 is estimated to be \$52,961.00. The Bedford County household income will continue to increase with the expansion of manufacturing in Shelbyville and the neighboring Rutherford County.

The current unemployment rate for November 2014 in Bedford County is 5.9% according to Bedford County Tennessee unemployment rate report. The U.S. unemployment rate for 2014 is 5.8% while Tennessee is 7.1%. Statistically that is down 1.2% from last year. It is projected that the unemployment rate will slightly decrease.

Shelbyville, the county seat of Bedford County is located a little over 50 miles southeast of Nashville. Shelbyville has a world event that takes place every year known as The Tennessee Walking Horse National Celebration. The seat capacity of this event is 30,000 at the outdoor facility and 8,000 in the indoor facility. This world event in 2014 brought in around 1400 horses to participate for the ten days and nights of classes and over 250,000 spectators, including 15,000 spectators on the last Saturday night alone. Spectators and exhibitors start coming to town 3 weeks prior to the event starting every year in August. This causes an increase in population and waste stream for the city of Shelbyville.

Shelbyville has a wonderful climate, and is a center in South Central Tennessee for manufacturing and distribution. Lower taxes and the Tennessee Walking Horse National Celebration have helped increase population in Bedford County. People moving in from out of state view Bedford as a mild climate and a pleasant area for future retirement and relocation for Bedford School District.

Table 2.1 Bedford County Historic and Projected Economic Indicators

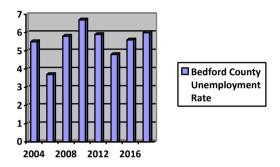
Year	Employed	Unemployed	Unemployment Rate	Per Capita	Total Retail Sales	Property Tax Rate
				Capita Income	Sales	Tax Kate
				HICOHIE		
2004	20,214	1,022	4.8	17,603	271,584,641	2.49
2005	20,790	1,051	4.8	17,962	276,337,373	2.77
2006	21,621	956	4.2	18,329	281,173,277	2.27
2007	21,568	1,338	5.8	19,067	286,093,809	2.27
2008	20,593	1,848	8.3	19,805	291,100,451	2.27
2009	19,353	2,680	12.2	18,061	296,194,709	2.27
2010	18,415	2,500	12.0	18,471	301,378,116	2.27
2011	18,318	1,939	9.6	18,813	306,652,233	2.27
2012	18,225	1,845	9.2	19,245	312,018,647	2.27
2013	17,788	1,413	7.4	19,303	317,478,973	2.27

2014	17,685	1,239	6.5	21,492	323,034,855	2.27
2015	18,048	1,319	6.8	21,922	328,687,965	2.27
2016	18,098	1,349	6.9	22,122	333,687,966	2.27
2017	19,148	1,449	6.9	22,322	343,687,960	2.27
2018	19,208	1,549	6.9	22,422	348,687,960	2.27
2019	19,308	1,649	6.9	22,572	353,687,960	2.27

Sources: U.S. Bureau of Economic Analysis, Tennessee Comptroller of the Treasury, MITDA Community Data Profile for Bedford County, Tennessee Department of Labor, Tennessee Department of Revenue, South Central Tennessee Development District

The above table illustrates the breakdown of employment characteristics in Bedford County.

Chart 2.1 Bedford County Unemployment Rate



The chart above suggests Bedford County's current unemployment rate shows a gradual increase. Economy is expected to improve over the next five years.

Industry in Bedford County

Bedford County's close proximity to the Interstates 65 & 24 makes it a prime location for industrial and manufacturing facilities. Tennessee Technology Centers are within driving distance of Bedford County residents providing technical training to students in Bedford County and surrounding counties which brings in more industry. Motlow State Community College in Lynchburg, Columbia State Community College in Columbia, and Middle Tennessee State University (MTSU) in Murfreesboro and recently an addition of MTSU satellite campus, are all in the vicinity of Bedford County. There is always an open door for new companies.

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.

Solid Waste Stream Characterization

In the most recent Bedford County Solid Waste Annual Progress Report in 2013, the total disposal tonnage for Bedford County reported is 22,103 tons to Middle Point Landfill in Walter Hill, Tennessee, 4,833 tons to Cedar Ridge Landfill in Lewisburg, TN and 2,287 tons to Bi-County/Sanifil Landfill Woodlawn, TN. according to solid waste origin reports submitting to the Tennessee Department of Environment and Conservation (TDEC). This total includes all sources including Class I commercial, residential, convenience centers and city collections in Bedford County.

Currently all waste collected by Bedford County Solid Waste Department includes the City of Shelbyville, Bell Buckle, Unionville, El Bethel, Deason, WBTS, Tollgate, Normandy, and Wartrace. Each community has a center to accept waste which is taken directly to Middle Point Landfill by Bedford County Solid Waste Department. Bedford County provides 8 centers for its residents. The city of Shelbyville operates a Municipal Solid Waste transfer station and Shelbyville city employees haul the solid waste collected from the transfer station to the Middle Point Landfill.

The County's solid waste disposal fees are handled by the ISWA committee set up with the purpose of monitoring this waste. There are 8 convenient centers in the county and recyclable items collected at these centers are paper, cardboard, metal, batteries, and used oil. Glass is only collected at three of the eight centers.

Bedford County currently has a Tire Depot located on Hwy 82 South that is open every Wednesday from 7:30 am to 3:00 pm. Residents bring waste tires and pay a \$2/per tire fee to help offset recycling/freight cost of Liberty Tire, Nashville, TN., who spots two (2) forty eight (48') foot van trailers for collection and pulls to their recycling center. New tire vendors pay \$1.35 to the state on every new tire sold and \$1.00 of each sale is sent back quarterly to the county based on reported tire sales to the state.

The County has used oil collection containers at each of the eight convenience / recycling centers across the county. Once these containers are full, Enterprise Oil,

Knoxville, TN. pulls to their recycling center and oil is processed. The county receives revenue from the used oil, at present \$1.00/gallon.

Bedford County in conjunction with the city of Shelbyville operates a transfer station in Shelbyville on Blue Ribbon Parkway where old paint can be collected and dried, and then transferred to the landfill at Middle Point in Walter Hill, Tn.

Bedford County's new e-waste program is handled by Dollar Sanitation Company Shelbyville, TN. Old electronics and TV's are separated at the convenience recycling centers and transported to DSC. The County is charged for this service. TV's continue to be a costly item to dispose.

Plastic recycling is a commodity that needs to be eliminated from the waste stream according to Bedford County Solid Waste Department. Bedford County recently requested grant funding for collection canisters at each of the eight centers. The County hopes to receive assistance to allow them to begin plans to implement a new recycling program. The past recycling coordinator retired from the Bedford County Solid Waste Department in 2014.

Bedford County has a local company, DSC-Shelbyville who will pull the containers, bale and ship to the end user. It may be Rock-Tenn, Chattanooga or Plastics Kept Simple (PKS) in Franklin, TN. Bedford County would not receive any revenue, also no landfill charges or freight expense.

The convenience centers produced an income of \$105,976.00 and a savings from tipping fees for \$26,247.00, for a total of \$132,223.00 to the county for recycling efforts.

In 2013 the total tons of garbage going into the landfill was 22,103 tons. This includes commercial, residential, convenience centers, and city collections in Bedford County. This does not include the waste that goes to Cedar Ridge which totaled 4,833 tons. Cedar Ridge is located in Marshall County, owned and operated by Waste Management Inc.

Industrial recycling continues to grow as industries responded to the Tennessee Recycling Report showing a total of 68,328.1 tons recycled in 2014.

During the next five (5) years Bedford County plans to continue the collection of hazardous waste (HHW). Household hazardous waste collection days are effective in keeping problem waste out of the stream. In 2014 1 ton of household hazardous waste was collected by Bedford County Solid Waste Department. Bedford County will continue to collect at the recycle center and convenience centers for e-scrap, scrap metal, white goods, tires, and used oil.

Problem Waste includes waste tires, automotive fluids, paint, electronics and lead-acid batteries. Bedford County accepts tires at a Tire Center located on Highway 82 South on Wednesdays

Commercial and industrial waste will continue to be collected and transported to the appropriate collection facility for disposal by private haulers. The County does not provide collection for industries; industries contract with private haulers such as Allied Waste and Waste Management for their solid waste collection. Some commercial and

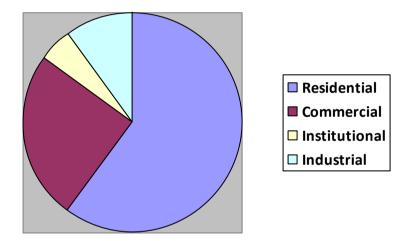
industrial recyclables are collected and transported to the recycle center by Bedford County Solid Waste.

There is currently no Class I municipal solid waste landfill operation that is operational in the Region. Currently there is no commercial Class II Industrial Waste Landfill in operation in the Region.

Table: 3.1 2013 Percentage of Bedford County Total

Sector	Percentage of Bedford County
	Total
Residential	60%
Commercial	25%
Institutional	5%
Industrial	10%

Graph 3.1 Percentage of Bedford County Total for 2013



Sources: From 2013 Bedford County Annual Progress Report (2013 landfill origin by Bedford County)

Solid Waste is projected to increase in Bedford County due to population increasing and manufacturing in Bedford County increasing. Bedford County does not have a residential pick up for solid waste or a pick up for recyclables. Because industries grow so will jobs, population, and solid waste. Hopefully recycling efforts will continue to increase.

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.

Waste is generated by individuals in the county from household waste. OCC, newspaper, glass, batteries, oil, and metal are commodities that are pulled out for recycling and sold to vendors as part of revenue for the solid waste program. Tires and e-waste are removed and processed (staged at the Tire Depot) for a fee paid by the county. All of the above are recycled and eliminated from the waste stream and new products are produced from this recycled material. The balance of waste is transported from the eight county recycling convenience centers across the county then hauled by county trucks to Middle Point landfill. Four trucks are hauling loads daily to the landfill at Middle Point. Some loads are heavier than others based on what is in the canister and how it was loaded. The county tries to get as much weight on a load to help offset freight expense.

County Provided Services

Bedford County has eight convenience centers located throughout the county (See Bedford Map **Figure** 5.1) use bv County residents. convenience centers are staffed and operated by Bedford County Solid Waste. Bell Buckle and Wartrace do not have public or private service for their wastes. Residents of those towns can take their solid wastes to any of the eight convenience centers. The County does not provide collection for industries; Industries contract with private haulers such as Allied Waste and Waste Management for their solid waste collection. Bedford County provides a household hazardous waste (HHW) collection day for its residents on an annual basis in conjunction with TDEC.

Convenience Centers

The hours of operation of the eight convenience centers are Tollgate, Wartrace, Unionville, Bell Buckle, W.B.T.S., Deason, and Normandy, Monday and Friday 6:00 am to 5:00 pm, Wednesday 6:00 am to 10:00 am and 1:00 pm to 5:00 pm and Saturday 6:00 am to 4:00 pm, El Bethel is open Monday thru Friday 6:00 am to 5:00 pm and Saturday 6:00 am to 4:00 pm. In addition Bedford County has a year round paint collection program as well as an electronics collection program.

All convenience centers collect municipal solid waste, metals, used oil, paper, cardboard, and E-scrap. Batteries are also accepted and recycled. Glass is only accepted at three convenience centers.

Single stream recyclable items in Bedford County include tin, aluminum, and paper. Plastic 1-7 are not included in Bedford County's recycling program.

The majority of the waste collected at the convenience centers and within Bedford County's municipalities is disposed of at the Middle point landfill in Walter Hill, Tn. In 2013, Bedford County disposed of approximately 22,103 tons at Middle Point.

Bedford County has a population of 46,316. The estimated per capita rate, not including all of the industry in Bedford County is calculated by dividing total tonnage by the population. The per capita rate is 22,103 tons. Tonnage reports for MSW disposal and recycled goods were provided by 2013 Bedford County Annual Progress Report.

The convenience centers are funded from Bedford County general fund and any revenues from recycling and grant funding.

County residents may contract with private haulers. Bedford County Solid Waste Department does not know of any private haulers at the present time.

Household hazardous waste (HHW) is collected annually at Bedford County's Household Hazardous Waste Day event in conjunction with TDEC.

Cities of Bedford County

The City of Shelbyville has a population of approximately 20,312. Shelbyville collects curbside collection of municipal solid waste for its residential population and contracts commercial entities. The City's Sanitation Department has six men responsible for the collection of residential waste Monday through Thursday. They average pick up for seven thousand (7,000) homes weekly. They run two trucks with three men each. Rules for residential collection are posted on the City of Shelbyville's website. A resident may call for route information at the number listed on the website.

The City of Shelbyville solid waste collection is funded by city taxes. Residents are allowed to bring home furnishings during regular hours to the Transfer Station, two hundred pounds (200lbs.) per day at no charge.

In addition, containers collecting single stream recyclables are located at all school systems.

Table 4.1 Bedford County Solid Waste Convenience Center Operating Hours and Recyclable Materials Collected

Location	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Materials
							Accepted
Tire Center	closed	Closed	7-3	closed	closed	closed	Tires
Tollgate	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	Glass, aluminum cans, oil, newspaper, batteries & scrap metal
Wartrace	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	Cardboard, aluminum cans, oil newspaper, batteries, &scrap metal
Unionville	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	Aluminum cans, oil, newspaper, batteries, & scrap metal
Bell Buckle	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	Aluminum cans, oil, newspaper, batteries, & scrap metal
WBTS	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	Aluminum cans, oil, newspaper, batteries, & scrap metal
Deason	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	Aluminum cans, oil, newspaper, batteries, & scrap metal
Normandy	6-5	Closed	6-10 & 1-5	Closed	6-5	6-4	glass Aluminum cans, oil,

							newspaper, batteries, & scrap metal
El Bethel	6-5	6-5	6-5	6-5	6-5	6-4	Cardboard, glass Aluminum cans, oil, newspaper, batteries, & scrap metal
City of Shelbyville Transfer Station	7-330	7-330	7-330	7-330	7-330	Closed	Residential & commercial refuse, metal, unused water based paint

To determine the number of convenience centers required for a county, according to Tennessee Regulations 1200-1-7-.10. The minimum level of solid waste collection services for a county shall be determined using the following:

- (a) Household Collection- A county shall be deemed to have met minimum level of service if at least ninety (90%) of all residents has access to household collection (Signed confirmation by the County Mayor).
- (b) Convenience Centers Each County must have at least one convenience center unless a higher level of service is provided.

To determine the number of convenience centers for a count, the service area of a county must first be calculated. The service area can be calculated using square miles or population.

According to State of Tennessee calculations, Bedford County is required to have two (2) convenience centers. Since Bedford County has eight (8) convenience centers, it is in compliance.

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.

Current Solid Waste Staff and Infrastructure

Bedford County Solid Waste Director Stanley Smotherman Solid Waste Coordinator Diane Forbes 328 Dover Street Shelbyville, Tennessee 37160 Phone: 931-684-4651

Bedford County Solid Waste Laborers: 5 full time, 8 part time, 4 County jail inmates.

Bedford County Solid Waste Board William Lewis, Committee Chair

Bedford County Solid Waste Department and Highway Department is located in the same office. The Bedford County Solid Waste Director is also in charge of the Highway Department. Currently all positions are filled.

Recently two solid waste disposal trucks burned and will need replacing.

City of Shelbyville Solid Waste Mark Clanton, Director, Phone 931-684-2644

Transfer Station Hours Blue Ribbon Parkway Shelbyville, TN Monday through Friday 7:00AM-3:30PM Closed 12:00-12:30 Lunch Closed on Saturday

The City of Shelbyville Public Works Department is responsible for maintaining Streets, Sanitation & Hazardous Waste, Erosion & Storm Water, Driveway & Street Tiles and City Signs. Shelbyville Public Works is a department of thirty five (35) employees that work day and night to help maintain the health and safety of the community. Two men operate the transfer station. They have two semi-trucks and four self-contained trailers for refuse hauling to the Landfill in Walter Hill (Murfreesboro), TN. Shelbyville's

Sanitation Department is comprised of nine men. There are six men responsible for the collection of residential waste Monday through Thursday.

Residential and Commercial refuse are accepted at this location. The average pick up is 7800 homes weekly.

There is no charge for residential use but commercial is charged a disposal fee of \$8.50 per cubic yard. Metal disposal is also accepted at no cost. The tipping fee for commercial trash haulers is \$17 per cubic yard. The City's Transfer station now accepts unused water based latex paint to be disposed of. There is a joint union with Bedford County Highway Department and the City's Sanitation Department for the recycling of unused paint. This is a free service to both City and County residents for paint disposal only.

Future Solid Waste Infrastructure Development Needs

Bedford County is part of the Interlocal Solid Waste Region, as part of the requirement that all counties form a single or multi-county solid waste planning region. As a result, in 1992 Franklin, Giles, and Lincoln Counties created a three-county municipal solid waste planning region known as the Interlocal Solid Waste Region. Also later in 1992, Franklin, Giles, Lincoln County and the City of Tullahoma created, pursuant to Tenn. Code Ann. 68-211-901, et seq., the Interlocal Solid Waste Authority (ISWA), a part 9 Authority, in part to implement the solid waste plan for the three-county Interlocal Region and to help satisfy the twenty-five percent 25% reduction as quoted by HOUSE ENGINEERING LLC's Interlocal Solid Waste Region Plan in 2013, Nashville, Tennessee.

Bedford County and Moore County have been operating as a single county municipal solid waste planning region in accordance with their respective TDEC-approved Solid Waste Plans. Bedford and Moore determined that they no longer wished to remain as single county regions. These counties decided to join the multi-county regions set forth in Tennessee Code Annotated 68-211-813(a)(4) and to join the Interlocal Solid Waste Region. Moore and Bedford County dissolved their respective single county regions and joined with Franklin, Giles and Lincoln Counties and the City of Tullahoma in the newly reconfigured five-county Interlocal Solid Waste Region in April of 2012.

Currently Bedford County employs five (5) full- time employees, eight part-time employees, and an average of four County inmates.

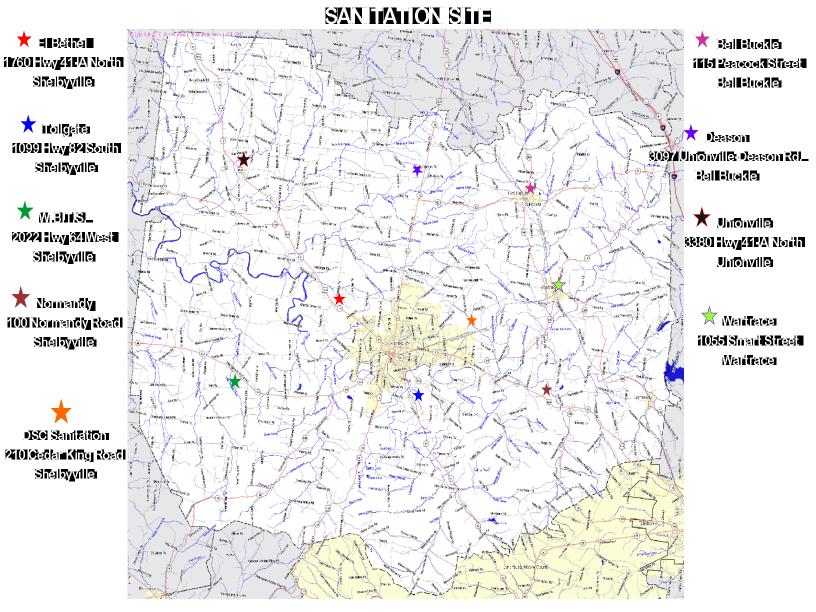
As of April 1 2015 Giles County is no longer included in the Interlocal Solid Waste Authority.

All communities in the county are effectively served. Bedford County is searching for more solid waste trucks for disposal and hauling.

Last year the Solid Waste Coordinator retired and reassignment of her duties is being discussed. Currently there are no identifiable staffing needs in Bedford County. After a review of the Bedford County Solid Waste Department there will be no additions to the staff at this time.

Figure 5.1 Bedford County Convenience Centers

BEDEORD COUNTY CONVENIENCE CENTERS AND



The above is a scale county level map including the eight convenience centers and addresses in Bedford County.

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?

Public Interest

Bedford County continues to strive in improving recycling efforts and impressing upon its citizens the necessity of a strategic plan to diffuse the amount of waste in the solid waste stream. Complaints tend to be from the younger population in Bedford County.

For the most part people in this area are pretty conscientious about recycling. If Bedford County could collect in one step for all the recycling, efforts would improve. If a facility existed that collected and baled all grades of paper, cans, metal, and plastic a positive response would be possible. The convenience centers do take several of these commodities but OCC has to be broken down to go into the bins and Bedford County does not have a plastics program in place.

There is no mandated program for recycling, it is strictly voluntary. The response for Bedford County is to eliminate more of the items going into the landfill and recycle them. School programs, literature, ads to keep recycling in front of you, and disposal of the commodities at most convenient centers is the current means to Bedford County Solid Waste Recycling education. Bedford County residents need to improve their recycling efforts.

The eight convenience centers offer opportunities for the public to participate in recycling. Cardboard, newspaper, and aluminum cans are collected in bins outside Bedford county schools. The single stream bins for cardboard and newspaper that are highly visible at schools are picked up, sold and delivered to Caraustar in La Vergne, TN. Aluminum cans are sold at Mid Tenn Metal (local metal dealer). The Interlocal Solid Waste Authority, Interlocal Regional Administration is in charge of recycling education booths at community events for the five counties in the Interlocal and the City of Tullahoma.

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 met 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.

Bedford County has a goal to reduce waste as much as possible within the region. Improving upon existing waste reduction and recycling programs, expanding services and increasing participation are general means to accomplish the County's waste reduction goals. In 2010 and 2011 as shown on this chart Bedford County reported as a single county region. Bedford County joined the Interlocal Solid Waste Authority (ISWA) in 2012 and later reported with a multi county region. Bedford County has an excellent recycling program. Their interest in joining the Interlocal is based on obtaining reduced tonnage disposal rates.

Table 7.1 Measurement of Regional Waste Reduction Goal

	Year	% Reduction Based on Base Year Comparison	% Reduction Based on Real Time Comparison
Bedford	2010	47%	83%
	2011	54%	88%
	2012	17%	85%
	2013	19%	74%

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

Bedford County failed to meet the 25% reduction using the Base Year Comparison methodology. However, Bedford County – met the 25% reduction for the last two years using the Real Time Comparison methodology as shown in the 7.1 table above.

Bedford County will continue to reach out to businesses and industries to get their recycling numbers. Bedford County's Solid Waste Coordinator has done an excellent job

at reaching out to the local businesses for their recycling numbers, educating the schools on recycling awareness and increasing recycling efforts in the school system. Letters are sent out in January to local businesses containing a breakdown of recyclables to report and almost all businesses respond and share recycling information to the Bedford County Solid Waste Department.

Item #8

A. 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.

Chart 8A Current Collection Infrastructure

Site Name(s)	Current Capacity	Maximum Capacity	Projected Life of
			Facility
Shelbyville Transfer		80 yards/Full	
Station	6800 tons/2014	21.5tons per trailer	Indefinite
Class 1		2.5 trailers a day, 55 tons	
		daily	
		•	
Tollgate, CC			
,	803/yr	803 /yr	Indefinite
Wartrace CC			
	1607 tons/yr	1607 tons/yr	Indefinite
Unionville			
	1507 tons/yr	1507 tons/yr	Indefinite
Bell Buckle			
	904 tons/yr	904 tons/yr	Indefinite
WBTS (Wheel Bedford			
Thompson Shop)	nompson Shop) 1004 tons/yr		Indefinite
El Bethel			
	2009 tons/yr	2009 tons/yr	Indefinite
Deason			
	1005 tons/yr	1005 tons/yr	Indefinite
Normandy			
	1205tons/yr	1205Tons/yr	Indifinite

Source: Provided by Bedford County Solid Waste Department, City of Shelbyville Public Works Department

B. 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, population served by provider, frequency of collection, yearly tons collected, and the type of service provided.

Chart 8B

Provider of Service	Service Area	Population Total Under This Service	Frequency of Service (Weekly, Bi- weekly, on call, etc.)	Tonnage Capacity	Type Service (Curbside, Convenience Center, Green Box)
Bedford County	County-wide	46,316	Anytime during hours of operation Trucks running 4 days / week. 10 loads a day	10,044 tons	8 Convenience Center & Tire Depot
Shelbyville	City-wide	20,312	Weekly/ Makes 2 runs to Transfer Station/day. 3 trucks / 25 tons a day	Trucks hold 20 yards	Curbside
Shelbyville Transfer Station	City-wide	20,312	7:00-3:30 Monday thru Friday	Full Container 80 yards/21.5 tons per trailer	Transfer Station

Source: Bedford County Solid Waste Department and City of Shelbyville Public Works Department.

Item #9

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 Bedford County Current Year Expenditures

Description	/year
Syyear	
Transportation/hauling	7
Collection and Disposal Systems Equipment 29,450 29,450 329,450	
Equipment 29,450 29,456 Sites 157,147 (attendees) 157,147 Transfer Station Recycling Center MRF MRF 335,000 335,000 Site Operation Closure Post Closure Care Administration (supplies, communication costs, etc.) 46,500 46,500 Education 1000 1000 1000 Public Continuing Ed. Other expenses REVENUE Host agreement fee Tipping fees Property taxes Sales tax Sales tax Surcharges Disposal Fees 15,537 15,537	7
Sites	
Convenience Center)
Transfer Station Recycling Center MRF 335,000 Landfills 335,000 Site 0 Operation Closure 0 Operation Post Closure Care 46,500 Administration (supplies, communication costs, etc.) 46,500 Education 1000 Public 1000 Continuing Ed. 0 Other expenses Host agreement fee Tipping fees Property taxes Sales tax Surcharges Disposal Fees 15,537	
Recycling Center MRF	7
MRF Landfills 335,000 335,000 Site Operation Closure Post Closure Care 46,500 46,500 Administration (supplies, communication costs, etc.) 46,500 1000 1000 Public Continuing Ed. Continuing Ed. Cother expenses REVENUE Host agreement fee Tipping fees Property taxes Sales tax Sales tax Surcharges Disposal Fees 15,537 15,537	
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Site Operation Closure Post Closure Care Administration (supplies, communication costs, etc.) Education Public Continuing Ed. Other expenses REVENUE Host agreement fee Tipping fees Property taxes Sales tax Surcharges Disposal Fees 15,537	
Operation Closure Post Closure Care Administration (supplies, communication costs, etc.) Education Public Continuing Ed. Other expenses REVENUE Host agreement fee Tipping fees Property taxes Sales tax Surcharges Disposal Fees 15,537 15,537	0
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Tipping fees Property taxes Sales tax Surcharges Disposal Fees 15,537 15,537	
Property taxes Sales tax Surcharges Disposal Fees 15,537 15,537	
Sales tax Surcharges Disposal Fees 15,537 15,537	
Surcharges Disposal Fees 15,537 15,537	
Disposal Fees 15,537 15,537	
Collection sharees	,
Collection charges	
Industrial or Commercial	
charges	
Residential charges	
Convenience Centers charges	
Transfer Station charges	
Sale of Methane Gas	
Other sources: (Grants, bonds, 43,200.00 43,200.	00
interest, sales, etc.)	
Sale of recyclable material 95,720 95,720)

Source: Bedford County Finance Dept. and Bedford County Solid Waste Dept.

Bedford County Financial sheet information is provided by the Bedford County Solid Waste Department and Bedford County Finance Department. Revenues for Bedford County consist of county appropriations and collection fees along with the sale of recycled materials, grants, and revenues from citizen groups. Expenditures are salaries, equipment, additions/upkeep, facility management, landfill fees, and capital projects. The only unmet financial needs exist in the replacing of the old disposal trucks that burned and any others that are in need of replacement or repair and purchasing new recycling collection equipment in Bedford County. These needs will be met at the time of replacement or repair through County funds, low interest loans or General Fund appropriations.

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 example in Chart 7 as an example to present data.

Community	Current Revenue
Bedford County	Sale of Recyclables, General Fund, Tire Collection Fee
Shelbyville	General Fund

Source: Bedford County Solid Waste Department and the City of Shelbyville Tn. Public Works Department

Disposal of e-waste and tires are problem areas and costly items collected for Bedford County. Future landfill disposal fees will be increasing and grant funding continues to be an option. Bedford County is trying to pull as much out from the waste stream as possible to reduce landfill tonnage.

Item #11

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.

Bedford County will continue to dispose of solid waste at Middle Point Landfills in Walter Hill (Murfreesboro), TN. The expansion issues at Cedar Ridge and Middle Point are still a topic of discussion for Bedford County's five year plan.

Bedford County's current reduction efforts are commendable. Bedford County will always accept more cooperation from private enterprise and municipalities. New equipment will be mandatory to replace the ones that recently burned and other equipment that is inefficient or older equipment that needs replacing. A maintenance schedule for the equipment is in place and specific local businesses are in place to take care of their needs.

A new contract has been renewed for the ISWA.

Continuing to find ways to improve the existing system will bring challenges as waste reduction goals continue to be achieved. Future plans are being discussed with Bedford County to organize a new recycling program and continue to educate in the schools since the previous coordinator has retired.

Sources:

U.S. Census Bureau

U.S. Bureau of Economic Analysis

Tennessee Comptroller of the Treasury

Tennessee Department of Labor

Tennessee Department of Revenue

South Central Tennessee Development District/STAFF

2010 Bedford County Needs Assessment

2013 Bedford County Annual Progress Report

2014 Annual Progress Report

Population Projection for the State of Tennessee

Bureau of Labor Statistics

House Engineering LLC

Bedford County Chamber of Commerce

Bedford County website

Bedford County Finance Department

City of Shelbyville, TN website

City of Shelbyville TN Public Works Department

Bedford County Highway Department & Solid Waste Department

MITDA Community Data Profile for Bedford County TN

Tennessee Department of Environment and Conservation Division of Solid Waste and

Division of Solid Waste Assistance Program

Historic & Projected Population Trends

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quickfacts .gov