

# 2015 SOLID WASTE NEEDS ASSESSMENT MADISON COUNTY, TENNESSEE



This Report is required by the  
SOLID WASTE MANAGEMENT ACT OF 1991  
(TCA 68-211-801 through 68-211-874)



DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF SOLID WASTE MANAGEMENT

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## **Preface**

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.

### **Solid Waste Needs Assessments**

The State of Tennessee Department of Environment and Conservation (TDEC) contracted with the Southwest Tennessee Development District (SWTDD) to prepare this Solid Waste Needs Assessment. The planning window for these needs assessments is every five years. Thus, this report's period of applicability will be from 2015 through 2020.

Sources consulted to compile demographic and economic statistics for this report include the U.S. Census Bureau, the Tennessee Advisory Commission on Intergovernmental Relations (TACIR), the University of Tennessee Center for Business and Economic Research, the Tennessee Department of Economic and Community Development (TDECD), Annual Progress Reports (APRs) of the Madison County Solid Waste Planning Region, the Madison County Chamber of Commerce, and other sources. Some estimates and projections in this document may differ from one another based on the source of the information the type of methodology used to develop the numbers, and/or the year the estimate or projection was made, however, every effort was made to select and use the most reliable information available.

Three documents from the past specifically addressing solid waste services in Madison County were reviewed. They were the Municipal Solid Waste Regional Plan for the Madison County Solid Waste Region (1994) by Kevin Tucker Design Group and the Madison County Solid Waste Needs Assessment (2009) by the Southwest Tennessee Development District. Previous Annual Progress Reports were also consulted when drafting this report.

This Madison County, Tennessee, Solid Waste Needs Assessment, 2015 was prepared by Thomas Skehan, Environmental Programs Coordinator with SWTDD; under the direction of R. Ashby Barnes of TDEC's Division of Solid Waste Management. The document "Guidelines for Preparing Solid Waste Needs Assessments", updated by TDEC in September of 2012, was used to establish the format of this report.

For more information on the 2015 Madison County, Tennessee, Solid Waste Needs Assessment please contact Southwest Tennessee Development District, 102 East College Street, Jackson, Tennessee 38301 | 731-668-7112 | [swtdd@swtdd.org](mailto:swtdd@swtdd.org).

### **Solid Waste Planning Region – General Profile**

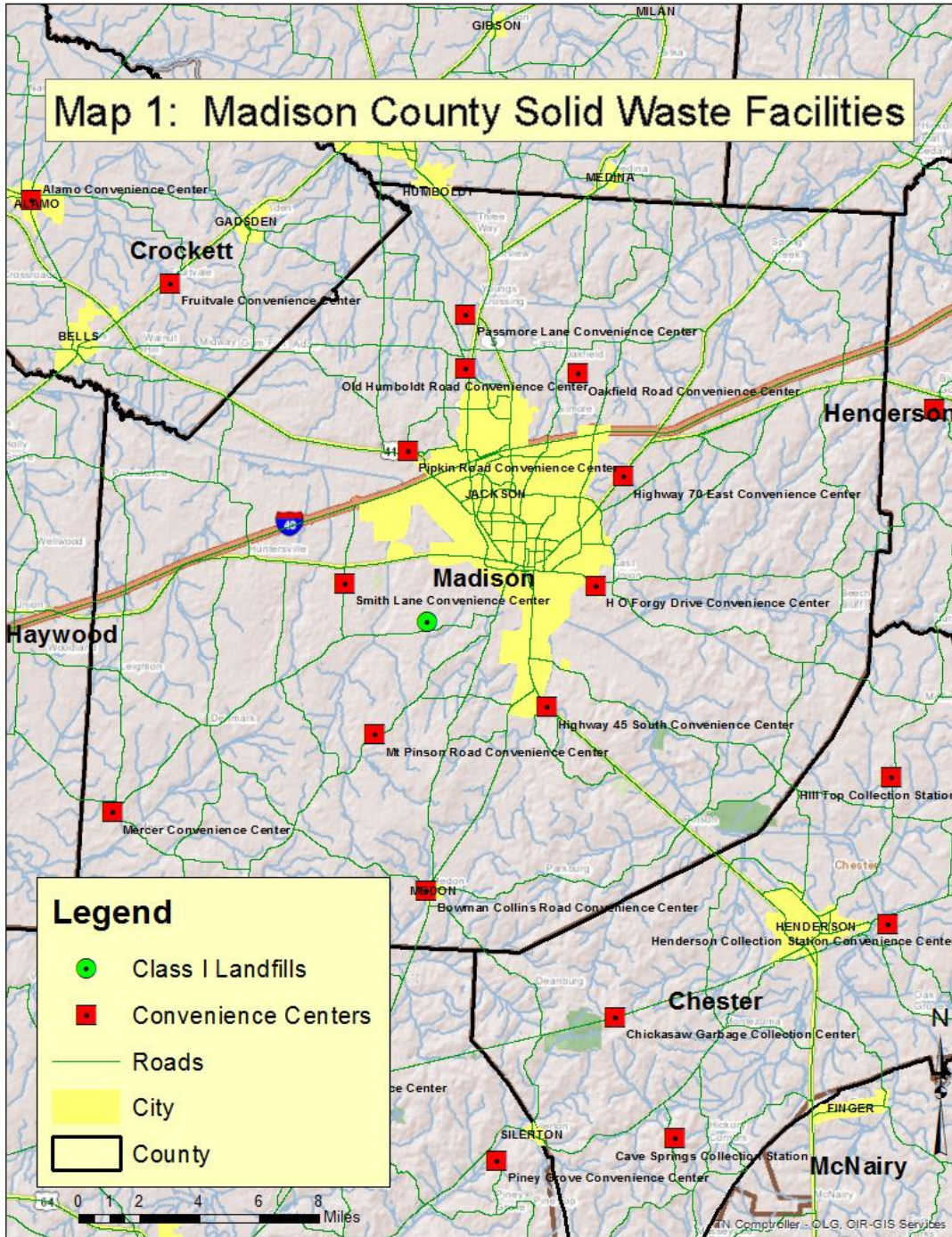
The Madison County Municipal Solid Waste Planning Region is composed of one county, Madison County, Tennessee. Madison County is located in central West Tennessee. It is bordered by Carroll and Gibson counties on the north, Crockett County on the northwest, Hardeman County on the south, Chester County on the southeast, Henderson County on the east, and Haywood County on the west. Madison County has a total of 559 square miles.

Madison County is governed by a mayor and board of commissioners. The City of Jackson has a mayor-council form of government. Medon, Three Way, and Humboldt have mayor-aldermen forms of government. The mayor of Madison County is Jimmy Harris. Jerry Gist is mayor of Jackson. Connie Mullins is mayor of Medon, Larry Sanders is mayor of Three Way, and Marvin Sikes is mayor of Humboldt.

Jackson is the county seat and largest city in the county. Jackson is approximately 80 miles northeast of Memphis and 125 miles southwest of Nashville. Other municipalities in Madison County are Medon in the southern part of the county and Three Way in the northern part of the county. The City of Humboldt in Gibson County has annexed a small portion of northwestern Madison County into its corporate limits.

Principal rural communities in Madison County include Oakfield in the north, Spring Creek in the northeast, Pinson in the southeast, Beech Bluff in the east, Denmark in the west and Mercer in the southwest. Madison County is part of the Jackson, Tennessee, Metropolitan Statistical Area (MSA) along with Chester County. The Jackson Metro Trade Area consists of 13 West Tennessee counties (Benton, Carroll, Chester, Crockett, Decatur, Gibson, Hardeman, Hardin, Haywood, Henderson, Madison, McNairy, and Weakley).

Madison County is served by Interstate 40 running southwest to northeast through the county and U.S. highways 45E, 45W, 45BP, 70, and 412. Intercity bus service is provided by Greyhound Bus Lines. There are three freight railroads: CSX Transportation, Norfolk-Southern, and West Tennessee Railroad. Rail passenger service is available at Memphis via Amtrak with daily connections to Chicago and New Orleans. Jackson has a general aviation airport, McKellar-Sipes Regional Airport, located west of Jackson. The nearest commercial airline service is at Memphis International Airport. The nearest navigable waterway is the Mississippi River with port facilities at Memphis.



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Madison County has several public and private educational facilities. These include the twenty eight schools in the Jackson-Madison County School system, the thirteen private schools and four post-secondary institutions.

Electricity in Madison County is supplied by the Jackson Energy Authority (JEA) and the Southwest Tennessee Electric Membership Corporation with the Tennessee Valley Authority as its source. Natural gas is supplied through JEA by Williams Pipeline. There are eight suppliers of liquefied petroleum gas and one supplier of fuel oil in Madison County.

JEA supplies water services throughout the county. Water is drawn from deep wells. JEA also supplies storm water and sewer services county-wide.



**Item 1 – Demographic Information and Projections**

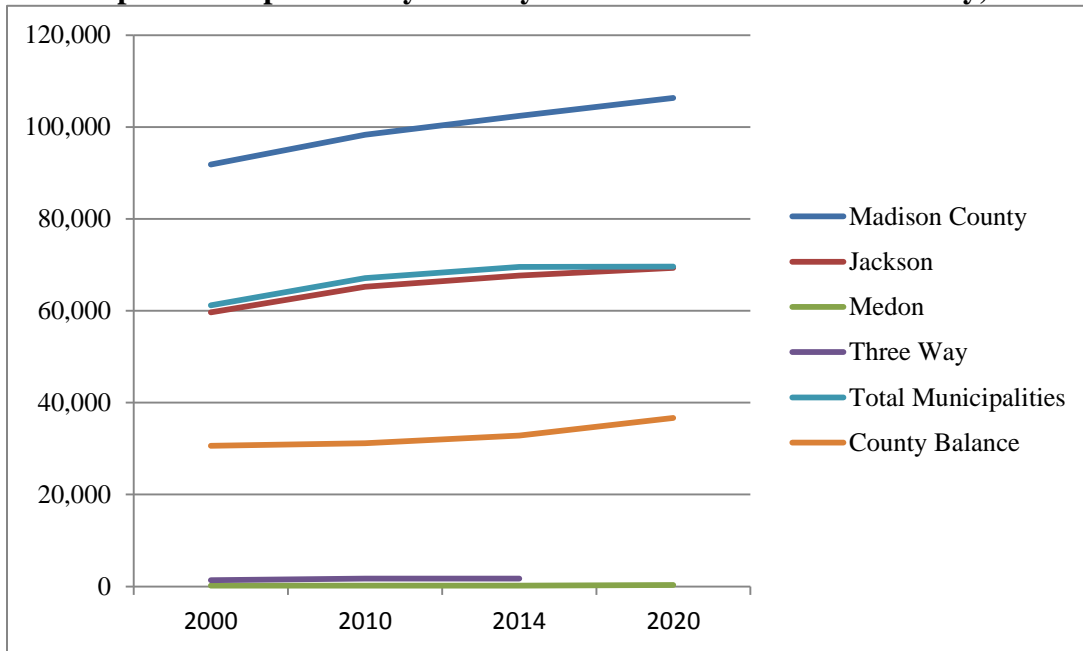
Provide a table and chart of the region’s population during the past ten (10) years with a projection for the next five (5) years. Provide a breakdown by sub- table and sub-chart, or some similar method to detail county and municipality populations. Considering the trends, discuss the effect on the solid waste infrastructure needs over the next five (5) years.

Overall, Madison County has experienced moderate growth (Madison’s County growth is at 7%, while the state of Tennessee is at 11.5%) but will experience a tempering rate in the future, less than 4% according to 2015 projection numbers. The City of Jackson will continue to responsible for this growth. Reasons for this include the general migration from rural to urban where jobs are more plentiful with manufacturing leaving many rural areas and the increasing price of gasoline making commutes more expensive.

<b>TABLE 1.1: Population by Year by Jurisdiction in Madison County, TN</b>							
<b>Jurisdiction</b>	<b>2000</b>	<b>2010</b>	<b>2014</b>	<b>2020</b>	<b>% Change 2000 - 2010</b>	<b>% Change 2010 - 2015</b>	<b>% Change 2015 - 2020</b>
<b>Madison County</b>	<b>91,837</b>	<b>98,284</b>	<b>102,429</b>	<b>106,352</b>	<b>6,447</b>	<b>4,145</b>	<b>3,923</b>
Jackson	59,643	65,211	67,685	69,334	5,568	2,474	1,649
Medon	191	178	174	311	-13	-4	137
Three Way	1,375	1,709	1,692	N/A	334	-17	N/A
<b>Total Municipalities</b>	<b>61,209</b>	<b>67,098</b>	<b>69,551</b>	<b>69,645</b>	<b>5,889</b>	<b>2,453</b>	<b>94</b>
<b>County Balance</b>	<b>30,628</b>	<b>31,186</b>	<b>32,878</b>	<b>36,707</b>	<b>558</b>	<b>1,692</b>	<b>3,829</b>

2000 and 2010 Data from the US Census Bureau; 2015 and 2020 Population Projections for the State of Tennessee University of Tennessee Center for Business and Economic Research (UTCBER) Humboldt is not affiliated with the Madison County Solid Waste Region but is included since part of the town is located in Madison County.

**Graph 1.1: Population by Year by Jurisdiction in Madison County, TN**



2000 and 2010 Data from the US Census Bureau; 2015 and 2020 [Population Projections for the State of Tennessee](#) University of Tennessee Center for Business and Economic Research (UTCBER) Humboldt is not affiliated with the Madison County Solid Waste Region but is included since part of the town is located in Madison County.

**Table 1.2 Total Population, Tennessee and Counties, 1950 - 2010**

County	2015 Projection*	2010	2000	1990	1980	1950	Change, 2000-2010	
							Number	%
<b>Chester</b>	18,076	17,131	15,540	12,819	12,727	11,149	1591	10.2
<b>Decatur</b>	11,939	11,757	11,731	10,472	10,857	9,442	26	<1.0
<b>Hardeman</b>	27,285	27,253	28,105	23,377	23,873	23,311	-852	-3.0
<b>Hardin</b>	26,479	26,026	25,578	22,633	22,280	16,908	448	1.8
<b>Haywood</b>	18,477	18,787	19,797	19,437	20,318	26,212	-1010	-5.1
<b>Henderson</b>	29,101	27,769	25,522	21,844	21,390	17,173	2247	8.8
<b>McNairy</b>	27,019	26,075	24,653	22,422	22,525	20,390	1422	5.7
<b>Madison</b>	102,429	98,294	91,837	77,982	74,546	60,128	6457	7.0
<b>Tennessee</b>	6,735,022	6,346,105	5,689,283	4,877,185	4,591,023	3,291,718	656,822	11.5

www.census.gov; US Census 2010 and earlier editions

\*CBER, Tennessee, Projected Population

*Item 2 – Analysis of Economic Activity within the Region*

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

Economic indicators, like the aforementioned demographic data, are at best stable over the last ten years. The recent economic downturn in the nation’s economy has disproportionately had a negative effect on Madison County. Madison County has a poverty rate of 20% and counties surrounding Madison County Has a poverty rate ranging from 18.8% (Henderson) low to a high of 24.6% (Hardeman).

This Needs Assessment will not focus on unemployment rates since the author found no research showing that this economic indicator adds any additional understanding of factors influencing waste streams.

The 2013 per capita income for Madison County is estimated by the US Census Bureau at \$23,283. This represents an increase of \$3,444 or 17.4% since 2000. With the exception of Three Way, per capita income for the County, Jackson and Medon have increased.

<b>TABLE 2.1: Per Capita Income – County and Cities</b>				
<b>Jurisdiction</b>	<b>2000</b>	<b>2013</b>	<b>2000-2013 % Difference</b>	<b>2000-2013 Difference</b>
<b>Madison County</b>	<b>\$19,839</b>	<b>\$23,283</b>	<b>17.4%</b>	<b>\$3,444</b>
Jackson	\$18,495	\$22,997	24.3%	\$4,502
Medon	\$13,313	\$17,107	28.5%	\$3,794
Three Way	\$23,313	\$23,283	-0.1%	(\$30)

US Census Bureau (Decennial Census and ACS)

Property tax revenues (\$2.15 per \$100 value) have been fairly flat. In 2013, local sales tax collections were \$42,195,269 according to Tennessee’s Economic & Community Development. In 2014, local sales tax collections were \$42,701,824. This represents a 1.2% increase from FY

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2013 to FY 2014. Not only is sales tax relatively flat, Madison County has a high percentage of households within income below poverty, almost 20% which influences tax revenue.

<b>Table 2.2: Tennessee’s Economic &amp; Community Development</b>	
<b>Property Tax</b>	
<b>Property Tax Rate (County)</b>	<b>\$2.15</b>
<b>Sales Tax</b>	
<b>State Sales Tax Rate</b>	<b>7.0%</b>
<b>County Sales Tax Rate</b>	<b>2.75%</b>
<b>Local Sales Tax Collections (FY 2013)</b>	<b>\$42,195,269</b>
<b>Local Sales Tax Collections (FY 2014)</b>	<b>\$42,701,824</b>
<b>Local Sales Tax Collections Growth (FY 2013-FY 2014)</b>	<b>1.2%</b>

Tennessee Comptroller of the Treasury (2014)  
 Tennessee Department of Revenue (2014)  
 The Tax Foundation (2014)  
 - See more at: <http://www.tnecd.com/county-profiles/#cp-data-resp>

<b>Table 2.3: Tennessee’s Economic &amp; Community Development</b>	
<b>Housing &amp; Income</b>	
<b>Persons In Households With Income Below Poverty Level</b>	<b>20.0%</b>
<b>Homeownership Rate</b>	<b>66.3%</b>
<b>Personal Income Per Capita</b>	<b>\$38,998</b>

U.S. Census Bureau, 2009-2013 5-Year American Community Survey  
 Tennessee Housing Development Agency (2013)  
 U.S. Bureau of Economic Analysis (2013)  
 - See more at: <http://www.tnecd.com/county-profiles/#cp-data-resp>

<b>TABLE 2.4: Businesses and Employees by Industry in Madison County (2002, 2007 &amp; 2012)</b>						
<b>Code Industry</b>	<b>1998</b>		<b>2005</b>		<b>2012</b>	
	<b>Employees</b>	<b>Establishments</b>	<b>Employees</b>	<b>Establishments</b>	<b>Employees</b>	<b>Establishments</b>
11 Forestry, Fishing, Hunting & Agriculture Support	27	6	8	6	-	12
21 Mining	57	3	-	1	-	2
22 Utilities	-	2	-	2	-	3
23 Construction	3,626	265	3,155	227	2,315	184
31 Manufacturing	12,151	134	10,479	109	8,424	101
42 Wholesale Trade	2,138	162	2,200	160	2,094	154
44 Retail Trade	7,564	533	7,523	519	7,072	472
48 Transportation and Warehousing	1,252	107	1,730	86	1,443	90
51 Information	708	34	711	38	564	30
52 Finance and Insurance	1,337	189	1,320	196	1,232	187
53 Real Estate, Rental & Leasing	449	95	817	109	1,220	102
54 Professional, Scientific &	1,220	149	1,146	181	1,075	170

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	Technical Services						
55	Management of Companies & Enterprises	259	11	606	16	341	21
56	Administrative, Support, Waste Management Remediation Services	2,976	130	3,270	121	3,833	117
61	Educational Services	879	18	1,804	27	1,988	27
62	Health care & Social Assistance	8,031	270	9,991	296	11,478	312
71	Arts, Entertainment & Recreation	385	30	445	26	345	30
72	Accommodation & Food Services	4,119	194	4,817	204	4,855	219
81	Other services (except Public Administration)	2,426	309	2,283	278	1,913	264
95	Auxiliaries (Exec. Corporate, Subsidiary & Regional Mgt.)	-	3	0	0	0	0
99	Unclassified Establishments)	33	18	8	4	-	1
	<b>Total</b>	<b>49,684</b>	<b>2,662</b>	<b>52,366</b>	<b>2,606</b>	<b>50,364</b>	<b>2,498</b>

US Census Bureau or calculations based directly on said data. “-“Data suppressed.

According to the Chamber of Commerce, Madison County’s largest employers include:

<b>Table 2.5: Largest Employers Company/Organization</b>	<b>Number of Employees</b>
West Tennessee Healthcare	5,368
Jackson-Madison County School System	2,019
Delta Faucet*	880
Union University	835
The Kellogg Company*	735
City of Jackson	725
Regional Hospital of Jackson	718
Pinnacle Foods Group*	590
Stanley Black and Decker*	533
Madison County	514

[http://jacksontn.com/economic/business\\_resources/workforce/major\\_employers](http://jacksontn.com/economic/business_resources/workforce/major_employers) (June 2015)

\* Top 4 Manufacturing / Distribution

<b>Table 2.6: Largest Employers - Manufacturing and Distribution Employers</b>	<b>Number of Employees</b>
Delta Faucet Company	880
The Kellogg Company	735
Pinnacle Foods Group, Inc.	590
Stanley Black and Decker	570
TBDN Tennessee Company	386
Gerdau	365
ARJ Manufacturing	334
Aldelano Packaging Corporation	275
Perseus Distribution	264

[http://jacksontn.com/economic/business\\_resources/workforce/major\\_employers](http://jacksontn.com/economic/business_resources/workforce/major_employers) (June 2015)

The given economic data above leads one to a similar conclusion as with the moderate population growth: these economic forces likely will cause a small increase in the county’s waste generation over the next five to ten years. The overall decrease in the number of employers, since 1998, presents a challenge to reach out to these companies and create for more opportunities to recycle their production or packaging materials.

*Item 3 – Characteristics of the Solid Waste Stream*

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.

Madison County’s Solid Waste Program is directed by Mark Morris and their recycling coordinator is Shane Lee. All collection and recycling questions for Jackson should be directed to Kathleen Honeycutt.

As reported in the previous Needs Assessment, Jackson’s municipal solid waste is collected by Waste Management Incorporated (WMI). The contract between the City and WMI is administered by the city’s Health, Sanitation, and Animal Control Department. The current contract runs until July 2019. The City of Jackson has benefitted from Waste Management’s introduction of CNG (Compressed Natural Gas) garbage trucks. Other city fleets have also benefitted from CNG and LPG (Liquid Petroleum Gas) cars and trucks. The vehicles can be easily identified by their “THINK GREEN, THING CLEAN” branding.

Residents within the City of Jackson are provided twice-a-week garbage collection services with backdoor pickup. Residents also are provided once-a-week, curbside trash collection services for items that are too large for garbage containers. Apartments, condominiums, trailer parks, and other multi-family dwellings of four or more units must have dumpsters. Waste Management rents the dumpsters. Waste Management also rents dumpsters to businesses generating large amounts of solid waste. Rates are set according to the size of the container and the amount of service required. Businesses not generating an amount of solid waste to justify a dumpster may elect to have loose garbage collected through the Commercial Hand Pick-up Program.

Collection is twice weekly and does not include trash or bulky waste. For residents of Medon, Three Way, and unincorporated areas or rural areas of Madison County, solid waste is collected through a system of ten convenience centers located throughout the rural sections of the county.

All solid waste collected by the Jackson municipal system operated by Waste Management and the collection systems operating in unincorporated Madison County is disposed at the Jackson-

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Madison County Landfill west of Jackson. The landfill, at 550 Aaron Long Road, is owned by BFI Allied Waste. The landfill consists of Class I and Class III/IV operations. The entire landfill site is about 250 acres total including fill areas, operations buildings, and buffer zones. The Class I landfill has about 14 years of use left with about 10 years of use left for the Class III/IV landfill.

Table 3.1 shows the amount of waste disposed of by Madison County since 2010 and makes predictions for the amount of solid waste to be disposed of from 2015 through 2020.

The amount of solid waste disposed of in Madison County has decreased considerably since 2010 due to an increase in the amount of local recycling. The largest amount of solid waste disposed of in Madison County was 175,235 tons in 2010. The best prediction is that the amount of solid waste disposed of by Madison County will likely remain in the 90,000 to 100,000 ton range over the next few years based on local population and economic trends in the county. All well within Madison County's capacity and ability to handle its waste disposal needs for the coming years.

Regarding Waste Flow, the Madison County Solid Waste Department estimates that 40 percent of the waste generated in Madison county it disposes of its residential in origin, 20 percent commercial, 25 percent industrial, and 15 percent institutional.

Problem wastes; such as batteries, oil and oil filters, and tires; are collected year round by the Madison County Solid Waste Department at its convenience centers and its landfill. The county, however, does not collect antifreeze. The site of the HHW is near Farmer's Market and is hosted by the City of Jackson, 112 Union Street, Jackson, TN 38301. The latest event was in April 2015. Overall, Madison County reports over seven tons of household hazardous waste collected (2014 Annual Progress Report (APR))

The 2014 APR also reported 1,959.43 tons of tires being managed. All were sent to beneficial use (tires are shredded into chips) and none were disposed of in a landfill. Tires are accepted at the Madison County Landfill owned by Republic Waste on Aaron Long Road. Madison County has an agreement with them. The County pays a company in Slaton, MS to recycle through the waste tires Grant.



<b>TABLE 3.1: SOLID WASTE DISPOSED OF BY THE MADISON COUNTY SOLID WASTE DEPARTMENT ACTUAL (2000–2013) AND PROJECTED (2014–2018)</b>	
<b>Year</b>	<b>Disposed Tons</b>
2010	175,235
<b>2014</b>	<b>110,401</b>
2020 (projected)	90,000-100,000

Tennessee Department of Environment and Conservation and Madison County Solid Waste Department

Madison County did collect 215 tons of cardboard, newspaper, cans in the last 12 month period. Waste tires will likely remain a problem for the county over the next five years. The county will reevaluate their strategy regarding discharged tires after the State’s new tire program has been in effect for a year. According to local officials “The waste tire grant program does not cover the cost to recycle our tires.”

Industrial and commercial wastes are still handled either in-house by the company or are picked up by a contractor. The county does not pickup recyclables. Much of the waste collected by the independent haulers contracting with the businesses and industries is transported to the Fairgrounds Convenience Center, while the rest is taken to landfills in the surrounding area depending on the hauler.

<b>TABLE 3.2: SOLID WASTE RECYCLED/DIVERTED FROM CLASS I LANDFILLS BY PUBLIC AND PRIVATE PROGRAMS (2010 &amp; 2014)</b>	
<b>Year</b>	<b>Tons Recycled/Diverted</b>
2010	40,280.20 / 9,443.50
2013	61,272.40 / 17,595.70

Tennessee Department of Environment and Conservation and Madison County Solid Waste Department.

The 2014 APR data under reports the recycling / diversion data cited in above. This is due in large part to a miscommunication between SWTDD and the Madison County Solid Waste Department regarding data collection responsibilities. This will undoubtedly lead to a dramatic reduction of in the reported 2014 recycling/diversion tonnage but should not be viewed as an indication of future reporting. It should be viewed a data collection error. This problem has been addressed and the data should show “correction” in 2015.

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Madison County works with local schools to collect sorted paper and cardboard. The county currently collects sorted paper and cardboard in all public schools. The county also partners with “Keep America Beautiful” in its “Stop Litter Program” to help reduce the amount of litter in the county. Overall, the waste stream in Madison County will be handled the same way using the same resources.

**Item 4 – Solid Waste Collection System**

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.

In general, Madison County’s solid waste facilities are considered adequate to serve the county for the next five years and no major facility upgrades have been identified.

<b>TABLE 4.1: MADISON COUNTY SOLID WASTE FACILITIES</b>	
<b>Facility</b>	<b>Address, City</b>
Madison County Landfill (Class I & III/IV)	550 Aaron Long Road (owned by BFI Allied Waste)
Airport	111 Smith Lane
Highway 45 South	3242 Highway 45 South
Highway 70 East	1916 Highway 70 East
H. O. Forgy	130 H. O. Forgy Road
Medon	31 Bowman-Collins Road
Mercer	1411 Highway 138
Mount Pinson	1106 Mount Pinson Road
Oakfield	199 Oakfield Road
Passmore Lane	95 Passmore Lane
Pipkin Road	3 Overpass View

Madison County Solid Waste Department

Convenience centers are open from 7 AM to 5 PM Monday – Saturday. Hours of operation are from 1 PM to 5 PM on Sundays. From July 2013 to June 2014, convenience center visits totaled 468,722.

One area the County will try to improve is the effort to increase participation in the business and industry waste reduction/recycling reporting program through the Development District. In the coming years, Madison County and municipal officials will work more closely with major businesses and industries in the Region to further expand the voluntary reporting program. This program is extremely important to the Region in their efforts to reach the 25% waste reduction goal using the “real time” calculation method. Finally, an e-waste recycling program should be

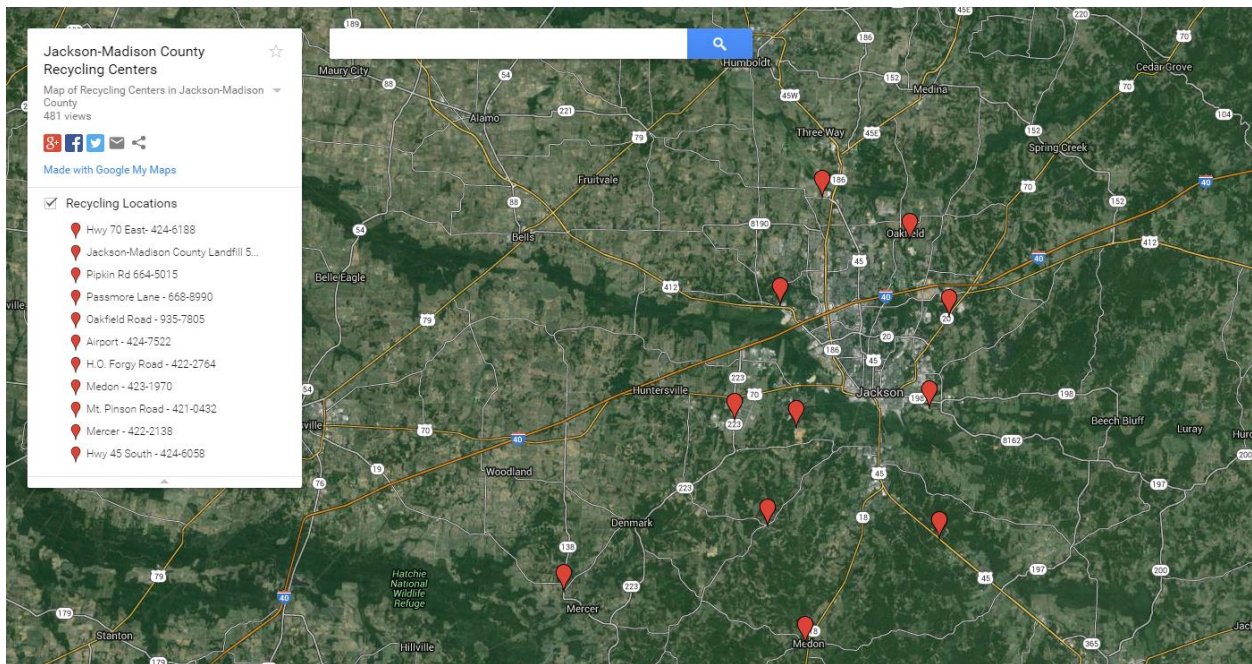
*Madison County – 2015 Solid Waste Needs Assessment*

implemented within the next 5 years to collect and eliminate electronics from the Class I waste stream.

### Item 5 - Analysis of Existing or Potential Solid Waste Flows within the Region and Between Adjacent Regions

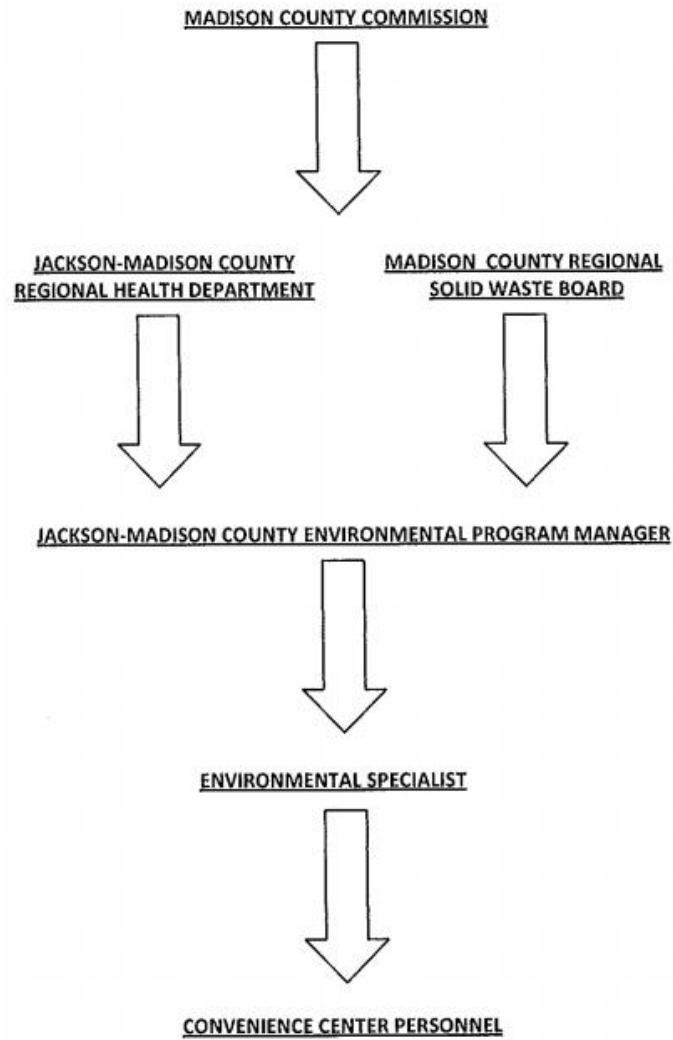
Provide organizational charts of each county and municipality’s solid waste program and staff arrangement. Identify needed positions, facilities, and equipment that a fully integrated solid waste system would have to provide at a full level of service. Provide a page-size, scaled county map indicating the location of all solid waste 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.

Most of Madison County’s solid waste is disposed of within the county. Although the county has disposed of waste in other landfills outside the county in years past, the great majority of waste generated in Madison County since 2006 has been disposed of in the Madison County Landfill. Some waste generated by local industries is disposed of by contract with private haulers in out-of-county landfills including landfills in Tennessee.



Madison County’s Mark Morris has stated that they could use more personnel and more facilities but without funding they cannot do any more than what is being done at current rate.

Below is the organization chart taken from the 2008 Solid Waste Needs Assessment, emails have gone out asking for organization chart from the county and individual cities along with their MTAS contact and no one has yet to respond.



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SOURCE: Jackson-Madison County Regional Health Department

**Item 6 - Attitudes of Region towards Waste Management in General and Needed Changes and/or Educational Measures**

Madison County has met its 25 percent waste reduction and diversion goal. More so than adding equipment, changing the attitudes of Madison County residents will go a long way in continuing meeting TDEC’s 25% reductions goals.

Current attitudes of the citizens of Madison County toward recycling and waste reduction efforts have basically been about average for counties of similar size, population and economic vitality. While there are some residents that fully support and participate in the drop-off recycling program, most residents are still reluctant to view recycling and waste reduction as an option, plus they are not willing to pay for recycling.

The county also partners with “Keep America Beautiful” in its “Stop Litter Program” to help reduce the amount of litter in the county.

<b>Table 6.1: Recyclers in Madison County</b>	
<b>Company</b>	<b>Address</b>
Dudley’s Recycling Inc.	240 Belmont Avenue
Gerdau Ameristeel Shredder Operations	801 Gerdau Ameristeel Road
Green Metals Inc.	1759 Dr. F. E. Wright Drive
Hub City Waste Paper	174 Meadow Street
Hutcherson Metals Inc.	101 H. O. Forgy Drive
All Fiber (formerly Southeast Recycled Fiber LLC)	532 Mobile Street
Unique Components	250 North Parkway
Sunrise Recycling	PO Box 10213

***Item 7 – Evaluation of the Waste Reduction Systems for Counties and Municipalities in the Region***

Table 7.1 shows the most recent available data for Madison County’s reduction rate. The table shows that the county is meeting the diversion goals of all methods available.

<b>TABLE 7.1: MEETING THE SOLID WASTE REDUCTION GOAL (2013)</b>						
<b>Year</b>	<b>Generation (Disposal + Diversion (Tons)</b>	<b>Disposal (Tons)</b>	<b>Reduction Population Ratio</b>	<b>Reduction Population / Economy Ratio</b>	<b>Real Time Comparison</b>	<b>Per- Capita Rate</b>
2013	199,456	120,017	44%	38%	40%	1.22

Tennessee Department of Environment and Conservation



*Item 8 - Collection/Disposal Capacity and Projected Life of Solid Waste Sites*

Based on the current rate of solid waste disposed of in Madison County, the Madison County Class I has less than 25 years left of life and III/IV Landfill has a remaining capacity of 97 years. This life cycle may be extended future if current declines in population and declines in job growth continue. In the surrounding Southwest TN region, Chester County Class I has a permitted but not operating yet facility, Decatur has less than 25 years left in life, Hardeman has 24 years 6 months left in life.

The Madison County Convenience Centers appear to have plenty of acreage to continue at their current rate of 5 day operations per week with 506 tons being processed a day.

<b>TABLE 8.1: Sites, Capacities and Life Span</b>			
<b>Site Name</b>	<b>Current Capacity</b>	<b>Maximum Capacity</b>	<b>Projected Life of Facility</b>
Madison County Landfill (Class I & III/IV)	42.3 acres	105	97 years
Airport	Sufficient	N/A	N/A
Highway 45 South	Sufficient	N/A	N/A
Highway 70 East	Sufficient	N/A	N/A
H. O. Forgy	Sufficient	N/A	N/A
Medon	Sufficient	N/A	N/A
Mercer	Sufficient	N/A	N/A
Mount Pinson	Sufficient	N/A	N/A
Oakfield	Sufficient	N/A	N/A
Passmore Lane	Sufficient	N/A	N/A
Pipkin Road	Sufficient	N/A	N/A

**TABLE 8.2: LIFE CYCLE FOR REGION’S SOLID WASTE**

Step	Location	Operator/Transporter
Waste Collected	Unincorporated Madison County	Madison County/Private Haulers
	Jackson, TN	Waste Management, Inc.
	Medon/Three Way, TN	Madison County/Private Haulers
	Humboldt, TN (Madison County Portion)	Barker Brothers Waste, Inc
Waste Disposed	Unincorporated Madison County	Jackson-Madison County Landfill
	Jackson, TN	Jackson-Madison County Landfill
	Medon/Three Way, TN	Jackson-Madison County Landfill
	Humboldt, TN (Madison County Portion)	Northwest Tennessee Landfill
Waste Recycled/ Stored/Processed	Unincorporated Madison County	Jackson-Madison county Landfill
	Jackson, TN	Local and Regional Processors
	Medon/Three Way, TN	Local and Regional Processors
	Humboldt, TN (Madison County Portion)	Local and Regional Processors

**Item 9 - Unmet Financial Needs and Cost Summary**

Table 9.1 presents proposed expenditures and revenues for the Madison County Solid Waste Department’s budget for fiscal year 2014-2015 as provided by the department. The Solid Waste fund is financially sound. Though the department’s fund are healthy and coupled with its non-compliance status regarding waste reduction, the department needs to be more cost effective in reaching solid waste reduction goals versus saving money to the benefit of other county departments.

<b>TABLE 9.1: Madison County Solid Waste Department 2014 Audited Expenses and Revenues</b>	
<b>Revenue:</b>	
Local Taxes	\$933,484
Charges for Current Services	
Other Local Revenue	\$58,046
State of Tennessee	\$92,319
<b>Total Revenues</b>	<b>\$1,083,849</b>
<b>Expenses:</b>	
Landfill Operation and Maintenance	\$454,434
Convenience Centers	\$601,044
Other Charges	
Employee Benefits	
<b>Total Expenses</b>	<b>\$1,055,478</b>
<b>+ Surplus / - Deficit</b>	<b>\$28,371</b>

Audit for the Year Ended June 30, 2014. Fund balance as of 6/30/2014 was \$79,769.

***Item 10 – Comparison of Revenue Sources for the Region’s Current Solid Waste Programs with Projected Future Demands***

In terms of increasing population and declining job growth projections and in terms of comparing revenues to expenses, the Madison County Audit, filed with the State of Tennessee, bare out that the Solid Waste Department appears adequately funded. According to local officials, the future of solid waste management for Madison County is dependent on the tipping fee charges for household garbage and demolition. Recycling can be increased if education is stressed and physical facilities are provided along with the annual budgets required to run the various programs.

*Item 11 – Sustainable Goals Consistent with the State Plan*

This Needs Assessment has identified the following deficiencies in the Madison County solid waste management system:

It is recommended that the following actions be taken over the next five years to address the deficiencies noted in the previous sections:

1. Pursue all TDEC grant funds for equipment acquisition and facility expansion.
2. Expand recycling material types and amounts collected by working with schools, medical facilities and businesses to identify new materials and new strategies.
3. Continue the successful Public School Outreach, Program.
4. Utilize SWTDD and TDEC for Solid Waste Board enhancements.
5. Consider adding curbside recycling pickups. If implemented, one strategy to encourage more recycling would be to offer “free” recycling pickup and charge for trash pickup.
6. Madison County should keep its existing drop-off recycling system for the foreseeable future but add other items to its list of recyclables currently being collected. Currently the program collects non-ferrous metals, newspapers, cardboard, and used tires. It is recommended that other materials be phased in to the list of items recycled as processors are found.
7. New convenience centers will eventually be needed as Madison County’s population increases in the future. It is recommended that new convenience centers be sited in high-growth and potentially high-growth areas of the county—such as northern Madison County, along the Interstate 40 corridor, and south of Jackson along the Highway 45 South corridor.
8. Existing convenience centers be upgraded and improved as needed. Some of the convenience centers have been in existence since the 1980s and the wear-and-tear of thousands of visits per year can take its toll. Additional operating hours and additional personnel may be needed to better monitor the collection of recyclables at the convenience centers.

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9. Local officials cite the need to collect glass for recycling. There is no public collection and businesses appear to recycle very little glass. SWTDD and TDEC officials should assist Madison County in addressing this need.
10. Additional equipment is warranted. Three compactors (~\$15,000 each) were identified in the 2014 APR. The Solid Waste Department indicated that they will seek county funds to cover this expense.

The recommendations outlined above comply with and support all provisions of the State's Solid Waste Management Plan—ensuring that the citizens of Madison County will continue to be provided with professional solid waste services in an efficient and cost-effective manner for years to come.

*Madison County – 2015 Solid Waste Needs Assessment*

**Sources:**

2000 and 2010 Data from the US Census Bureau

2008 Solid Waste Needs Assessment

2015 and 2020 Population Projections for the State of Tennessee University of Tennessee Center for Business and Economic Research (UTCBER)

Google Earth, Maps

Madison County Chamber of Commerce

Madison County Solid Waste Department

Mike Morris, State Health Department, Solid Waste, Madison County (Jackson Madison County Regional Health Department)

State of Tennessee Comptrollers, Audits 2012,

State of Tennessee Comptrollers, 2013

State of Tennessee Comptrollers, 2014

Tennessee Comptroller of the Treasury (2014)

Tennessee Department of Revenue (2014)

Tennessee Department of Environment and Conservation

Tennessee Housing Development Agency (2013)

The Tax Foundation (2014)

U.S. Census Bureau, 2009-2013 5-Year American Community Survey

U.S. Bureau of Economic Analysis (2013)

[http://jacksontn.com/economic/business\\_resources/workforce/major\\_employers](http://jacksontn.com/economic/business_resources/workforce/major_employers) (June 2015)

\* Top 4 Manufacturing / Distribution