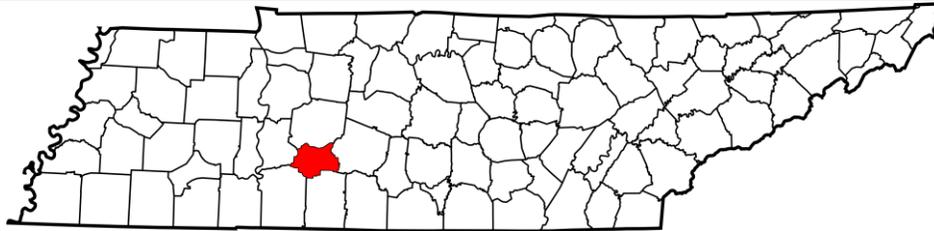


Lewis County, Tennessee



SOLID WASTE NEEDS ASSESSMENT

Prepared by
The South Central Tennessee Development District
June 30, 2013

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].

Lewis County

Lewis County is a county located in the U.S. state of Tennessee. As of 2000, the population was 11,367. Its county seat is Hohenwald. Lewis County is named for explorer Meriwether Lewis, who died and was buried at Grinder's Stand in 1809. Lewis's grave is located at the geographic center of the county. On October 7, 2009, a ceremony was held at the cemetery to commemorate the bicentennial of Lewis's death.

Birth of Lewis County

In 1843, the Tennessee General Assembly created Lewis County out of parts of Maury, Lawrence, Wayne, and Hickman counties. The Assembly chose the name "Lewis" because the land included the area on the Natchez Trace where the famous explorer Meriwether Lewis' died from gunshot wounds. It also ordered that a monument be erected over the site of his grave. The first county seat was located near Swan Creek in the town of Gordon and the first circuit court met at the John Blackburn house. The jury deliberated in the "shucking barn" or corn crib of the Blackburn farm. However by 1849, the seat moved closer to the Natchez Trace to the small community of Newburg. This created a boom for Newburg as town lots were developed and a courthouse and jail were built. At its height, Newburg contained four stores, two saloons, two hotels, a livery stable for horses, and several mechanic shops. New roads led from the new county seat to the neighboring towns of Hampshire, Waynesboro, Swan and Cane Creek, and Perryville. Early Lewis County extended as far east as present-day Hampshire. 1850 marked the early highpoint of population in the county. Over 4,000 whites, a handful of free blacks, and over 700 African American slaves resided in Lewis County. Most whites lived on small subsistence farms, but a few managed to own more than 20 slaves who likely labored in agriculture or mining. A lawsuit challenging creation of the county led to a temporary dissolution of the county in 1853. The legislature soon reinstated the county; however, its size was much reduced. According to local tradition, a series of poor years in farm production also led to a significant population decline.

Baby Boom Era

In 1970, a caravan of brightly painted school buses and vans rolled into Lewis County bringing the area's next wave of settlers with cultural beliefs different from long-term residents. Led by Stephen Gaskin, a former English professor at San Francisco State College, these "hippies" purchased 1,764 acres of land near Hohenwald to create an "intentional religious collective community." Called the Farm Community, it advocated a philosophy of complete self-sufficiency (for example, residents owned and operated their own phone system). They earned income together and owned everything collectively. Although not originally welcomed by the residents of Lewis County, the Farm's occupants gained respect through their work ethics and abilities to co-exist peacefully with the county's older inhabitants. In addition, the Farm's Midwifery Center gained national recognition as a center for natural childbirth information and services. While its population peaked at around 1,500 residents in 1982, healthcare costs and other factors made the collective impossible to maintain. Today the Farm only averages 200

residents that partially hold expenses in common, but members operate businesses that range from publishing to satellite technology.

The most recent “arrivals” to Lewis County are perhaps the most unique, and are not even human. The Elephant Sanctuary in Hohenwald, founded in 1995, is the nation’s largest natural habitat refuge developed specifically for endangered African and Asian elephants. On 2700 acres of land, it provides a haven for old, sick, or needy circus and zoo elephants. A 200-acre cable and post fence and 222-acre chain link fence keeps the elephants corralled and safe from intruders. In 1999, the Sanctuary added a 9000-square-foot elephant barn, and the organization has 70,000 members worldwide. A planned welcome center and educational facility is part of the Sanctuary’s continued expansion.

Demographic Information & Projections

Lewis County -- As of the census of 2000, there were 11,367 people, 4,381 households, and 3,215 families residing in the county. The population density was 40 people per square mile. There were 4,821 housing units at an average density of 17 per square mile. The racial makeup of the county was 97.07% White, 1.45% Black or African American, 0.20% Native American, 0.18% Asian, 0.29% from other races, and 0.80% from two or more races. 1.20% of the population was Hispanic or Latino of any race.

There were 4,381 households out of which 33.20% had children under the age of 18 living with them, 58.90% were married couples living together, 10.70% had a female householder with no husband present, and 26.60% were non-families. 23.50% of all households were made up of individuals and 10.60% had someone living alone who was 65 years of age or older. The average household size was 2.54 and the average family size was 2.98.

In the county, the population was spread out with 25.80% under the age of 18, 8.30% from 18 to 24, 27.40% from 25 to 44, 24.80% from 45 to 64, and 13.60% who were 65 years of age or older. The median age was 37 years. For every 100 females there were 96.90 males. For every 100 females age 18 and over, there were 91.80 males.

The median income for a household in the county was \$30,444, and the median income for a family was \$35,972. Males had a median income of \$27,060 versus \$19,847 for females. The per capita income for the county was \$14,664. About 10.30% of families and 13.40% of the population were below the poverty line, including 16.60% of those under age 18 and 12.20% of those ages 65 or over.

Hohenwald-- As of the census of 2000, there were 3,754 people, 1,534 households, and 989 families residing in the city. The population density was 861.4 people per square mile. There were 1,708 housing units at an average density of 391.9 per square mile. The racial makeup of the city was 96.59% White, 2.08% Black, 0.11% Native American, 0.16% Asian, 0.32% from other races, and 0.75% from two or more races. Hispanic or Latino of any race was 1.12% of the population.

There were 1,534 households out of which 28.4% had children under the age of 18 living with them, 48.2% were married couples living together, 13.1% had a female householder with no husband present, and 35.5% were non-families. 32.6% of all households were made up of individuals and 17.3% had someone living alone who was 65 years of age or older. The average household size was 2.30 and the average family size was 2.89.

In the city the population was spread out with 24.6% under the age of 18, 7.7% from 18 to 24, 24.6% from 25 to 44, 22.8% from 45 to 64, and 20.3% who were 65 years of age or older. The median age was

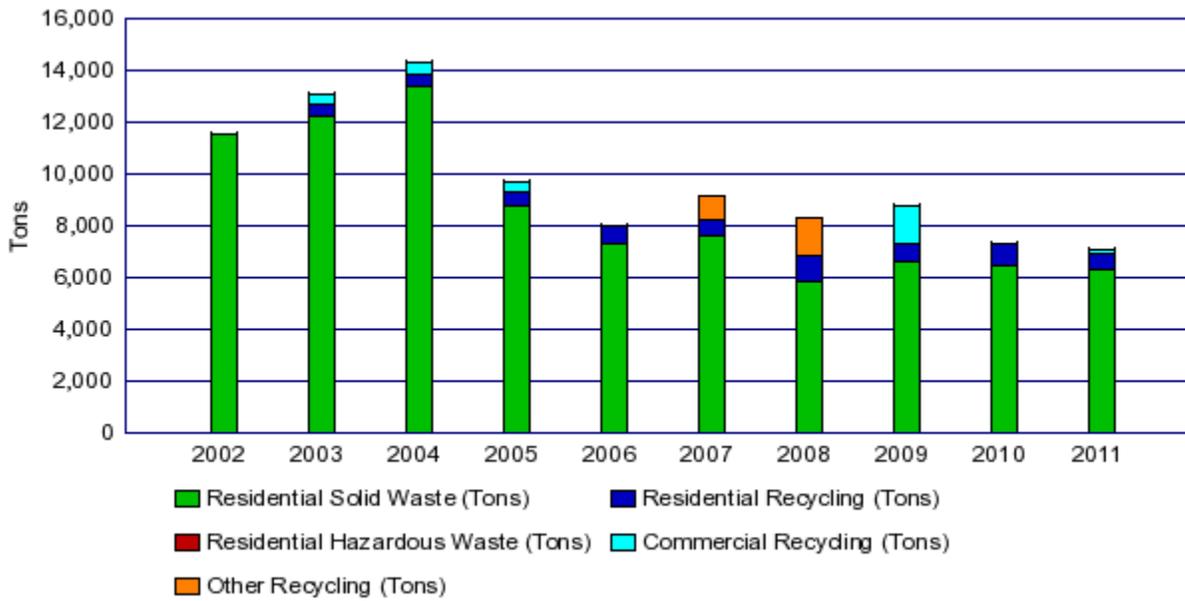
39 years. For every 100 females there were 86.9 males. For every 100 females age 18 and over, there were 80.2 males.

The median income for a household in the city was \$24,676, and the median income for a family was \$37,609. Males had a median income of \$25,863 versus \$23,056 for females. The per capita income for the city was \$16,665. About 11.1% of families and 17.6% of the population were below the poverty line, including 18.0% of those under age 18 and 17.3% of that age 65 or over.

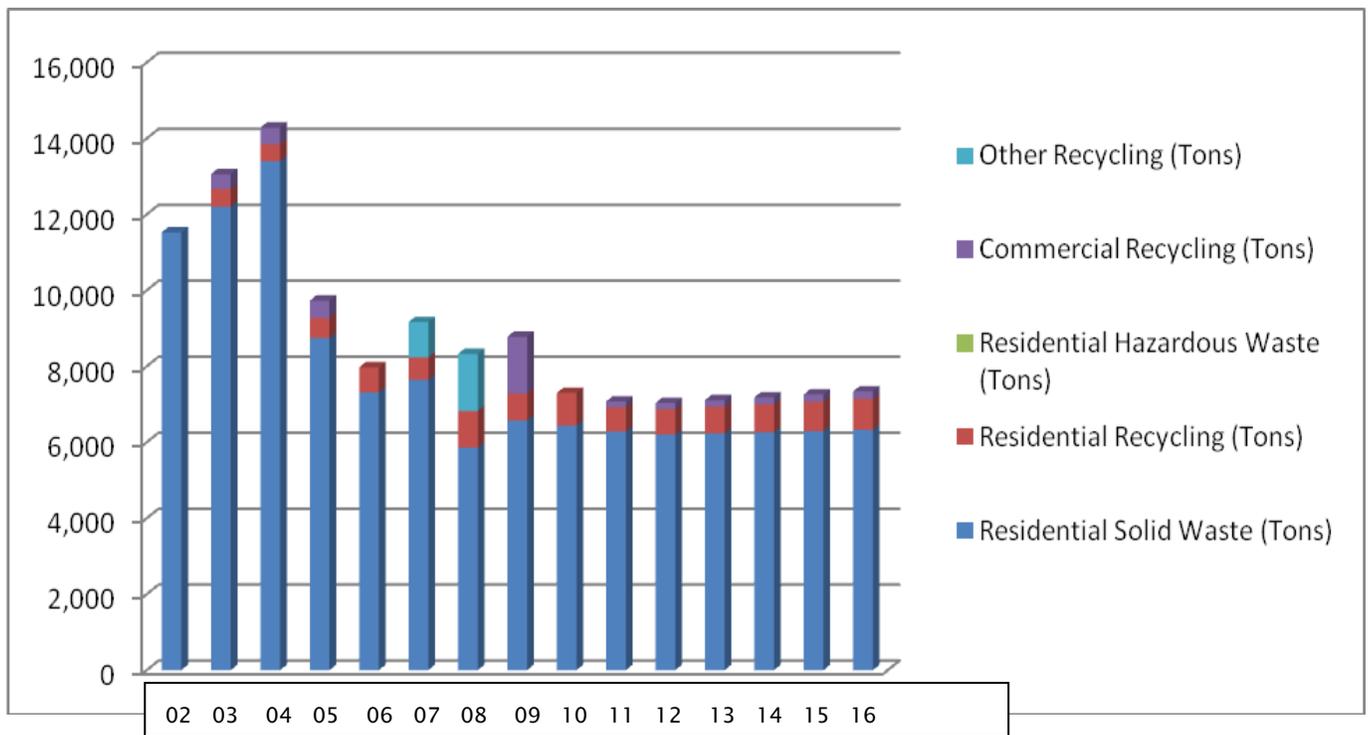
Lewis County Population (2010 US Census Data)

Year	Lewis County	Hohenwald	Total
2001	7613	3754	11367
2002	7651	3773	11424
2003	7689	3792	11481
2004	7728	3811	11538
2005	7766	3830	11596
2006	7805	3849	11654
2007	7844	3868	11712
2008	7883	3887	11771
2009	7923	3907	11830
2010	8235	3926	12161
2011	8099	3946	12045
2012	7930	3966	11896
2013	7797	3986	11783
2014	7836	4005	11842
2015	7876	4025	11901
2016	7915	4046	11961

Solid Waste Total Tons Generated, Lewis County, 2002 to 2011



The chart above indicates that the residential solid waste stream has tracked downward over the seven years. In 2004 the residential solid waste was ~13k tons. Over the next seven years the tonnage has basically dropped by 50%. The five (5) year projections would essentially reveal that with population growth remaining stable with very modest gains that the residential solid waste stream will remain at the 6-7k net ton level.



The chart above indicates that with increased focus on residential recycling the amount of residential solid waste could be drastically impacted. A residential recycling program could drop the residential solid waste going to landfills by as much as 50%. In real dollar terms, this could be a \$150,000 savings per year for the county.

Analysis of Economic Activity within the Region



Principal Private Employers in Lewis County

MAJOR INDUSTRIAL MANUFACTURERS/DISTRIBUTION

Firm Product or Service	Total Employees	Union	Phone Number
B&B Fabrication	8	None	931-796-7883
Kanson Electronics, Inc.	16	None	800-233-9354
Kenton Technologies Products	3	None	931-796-3908
King’s Machine Works, Inc.	3	None	931-796-5585
Mid TN Fabrication	5	None	931-796-7883
Oliver Fiberglass Custom	20	None	931-796-4555
Oliver Technologies, Inc.	75	None	931-796-4555
S.E. International Radiation	18	None	931-964-3561
Tanner Forest Products Box lumber	10	None	931-796-1239
V & W Ready Mix Ready Mix Concrete	14	None	931-796-5952
Wedlake Ind., LLC PVC compounds	7	None	931-796-4999

Category	Per capita income	Median Household Income	% Unemp	Civilian Employed	Private	Gvnmnt	Self Employed	Unpaid Family Workers	Total
2003	14667	15674	6.40	4055	2946	521	540	48	8110
2004	14740	15753	7.70	4096	2976	526	545	48	8192
2005	14814	15832	7.90	4138	3006	532	551	49	8275
2006	14888	15912	5.60	4179	3037	537	556	49	8359
2007	14963	15992	8.90	4222	3067	542	562	50	8443
2008	15037	16072	11.90	4264	3098	548	568	50	8528
2009	15113	16153	15.30	4307	3130	553	573	51	8615
2010	15188	16234	14.40	4351	3161	559	579	51	8702
2011	15264	16316	10.90	4395	3193	565	585	52	8790
2012	15340	16398	10.40	4439	3225	570	591	52	8878
2013	15417	16480	11.20	4484	3258	576	597	53	8968
2014	15494	16562	10.90	4506	3274	579	600	53	9013
2015	15572	16645	10.50	4529	3291	582	603	54	9058
2016	15649	16728	10.00	4552	3307	585	606	54	9103
2017	15728	16812	9.50	4574	3324	588	609	54	9149
2018	15806	16896	9.00	4597	3340	591	612	54	9194

Lewis County Solid Waste Stream

The estimated percentages of the total material placed into the waste stream are:

Residential	55.0%
Commercial	25.0%
Institutional	10.0%
Industrial:	10.0%

Lewis County continues to strive to meet diversion / waste reduction goals set forth by the State of Tennessee. Predicted generation percents will remain unchanged for the next five years barring an influx of industrial sites starting up during the next five years. Population trends do not give reason to expect and or anticipate that Lewis County will increase solid waste tonnage over the next 5 years. In fact, with increased offsets by the recycling program the tonnage to landfills should continue to decrease at a modest rate over the next 5 years.

Solid Waste Collection System

Lewis County

As of the census of 2000, there were 11,367 people, 4,381 households, and 3,215 families residing in Lewis County. The population density was 40 people per square mile. There were 4,821 housing units at an average density of 17 per square mile.

Solid waste pickup is not a function of the Lewis County government. Two private carriers provide pickup throughout the county and transports the solid waste to the Lewis County Transfer Station (Permit# CCC510000088) located at 641 Waynesboro Highway, Hohenwald, TN. Recyclables are received / collected at the convenience center (Permit# CCC510000088) located at 641 Waynesboro Highway, Hohenwald, TN 38462 which operates from 8 AM to 5 PM M-F, and 8 AM to 2 PM on Saturday. The acceptable recyclables collected at the Convenience Center are listed below:

- 1) Metals
- 2) Plastic
- 3) Used Oil
- 4) Paper products
- 5) Pallets
- 6) E-Scrap

Hohenwald

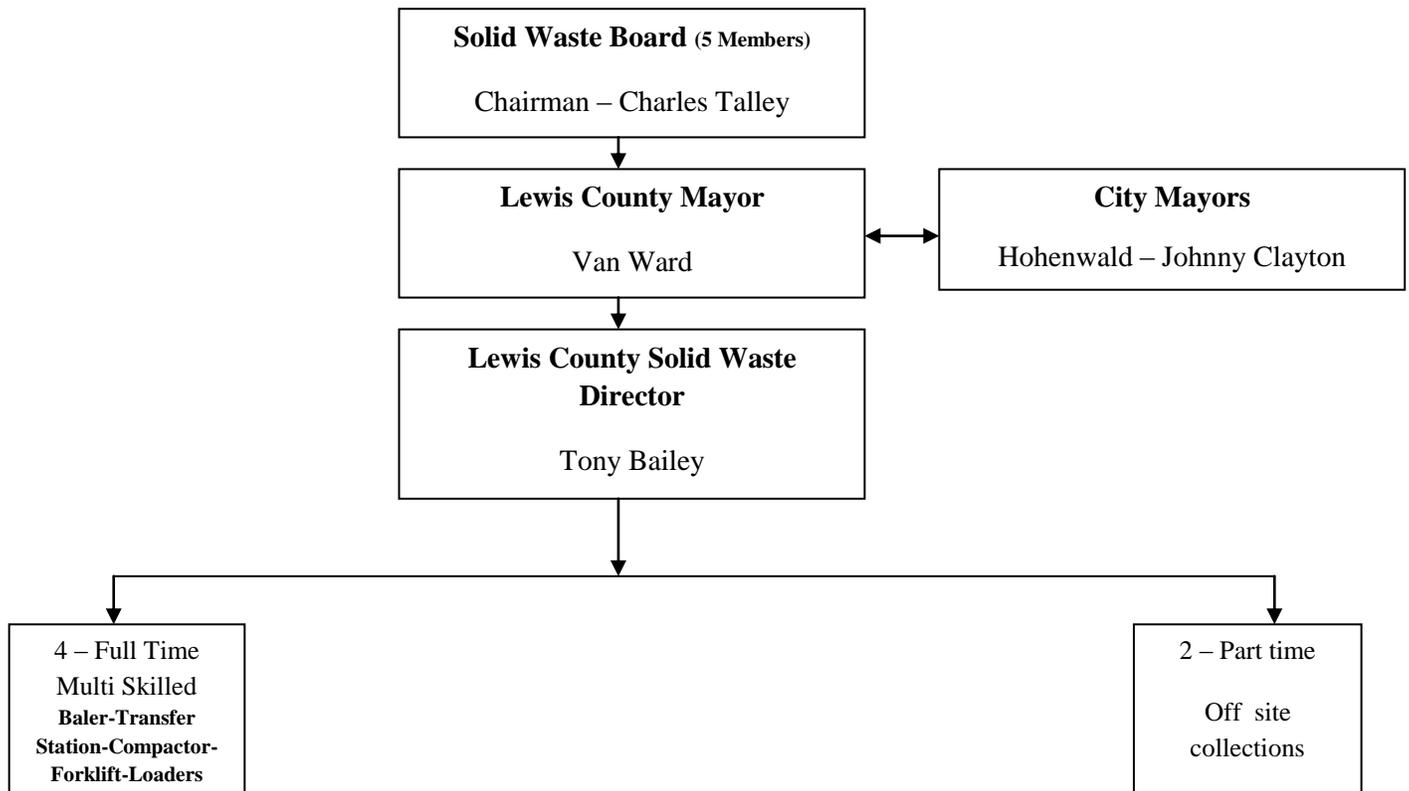
As of the census of 2000, there were 3,754 people, 1,534 households, and 989 families residing in the city. The population density was 861.4 people per square mile. There were 1,708 housing units at an average density of 391.9 per square mile.

The Public Works Department of Hohenwald provides curbside pickup of solid waste and transports it to the Lewis County Transfer Station located at 641 Waynesboro Highway, Hohenwald, TN 38462.

There are paper product drop off locations at:

- 1) Family Dollar, 541 East Main Street, Hohenwald, TN 38462
- 2) Morrow's Grocery, 100 North Court Street, Hohenwald, TN 38462
- 3) 412 Building Supply, 755 West Main Street, Hohenwald, TN 38462

Organization Chart for Lewis County Solid Waste Department



Lewis County assumed responsibility for solid waste disposal from the City of Hohenwald on October 17th, 1994.

The Solid Waste Department of Lewis County includes three different areas of disposal. There is a transfer station that handles disposal of household garbage. The solid waste is loaded into a trailer, compacted and transported to a Class I Landfill located in Decatur County, TN.

A Convenience Center for recycling is located 641 Waynesboro Highway, Hohenwald, TN 38462 where materials such as cardboard, paper, scrap metal, aluminum, paper, electronics (currently computers and computer monitors), used batteries; oil and tires are received and separated for the recycling process. These items are purchased by vendors generating revenue for Lewis County. These funds supplement the enterprise fees paid by residents and businesses and help to keep those fees at the current rate – a rate that hasn't increased since 1994.

In addition to the Transfer Station and the Convenience Center, Lewis County has a Class III Landfill which is used for demolition disposal. Brush, trees and other demolition materials such as scrap lumber, composition roofing shingles, and sheetrock are accepted. There are exceptions – materials that are considered to be hazardous by state standards may not be accepted.

The Convenience Center, Transfer Station and Class III Landfill are all inspected by the State Department of Environment and Conservation on a regular basis.

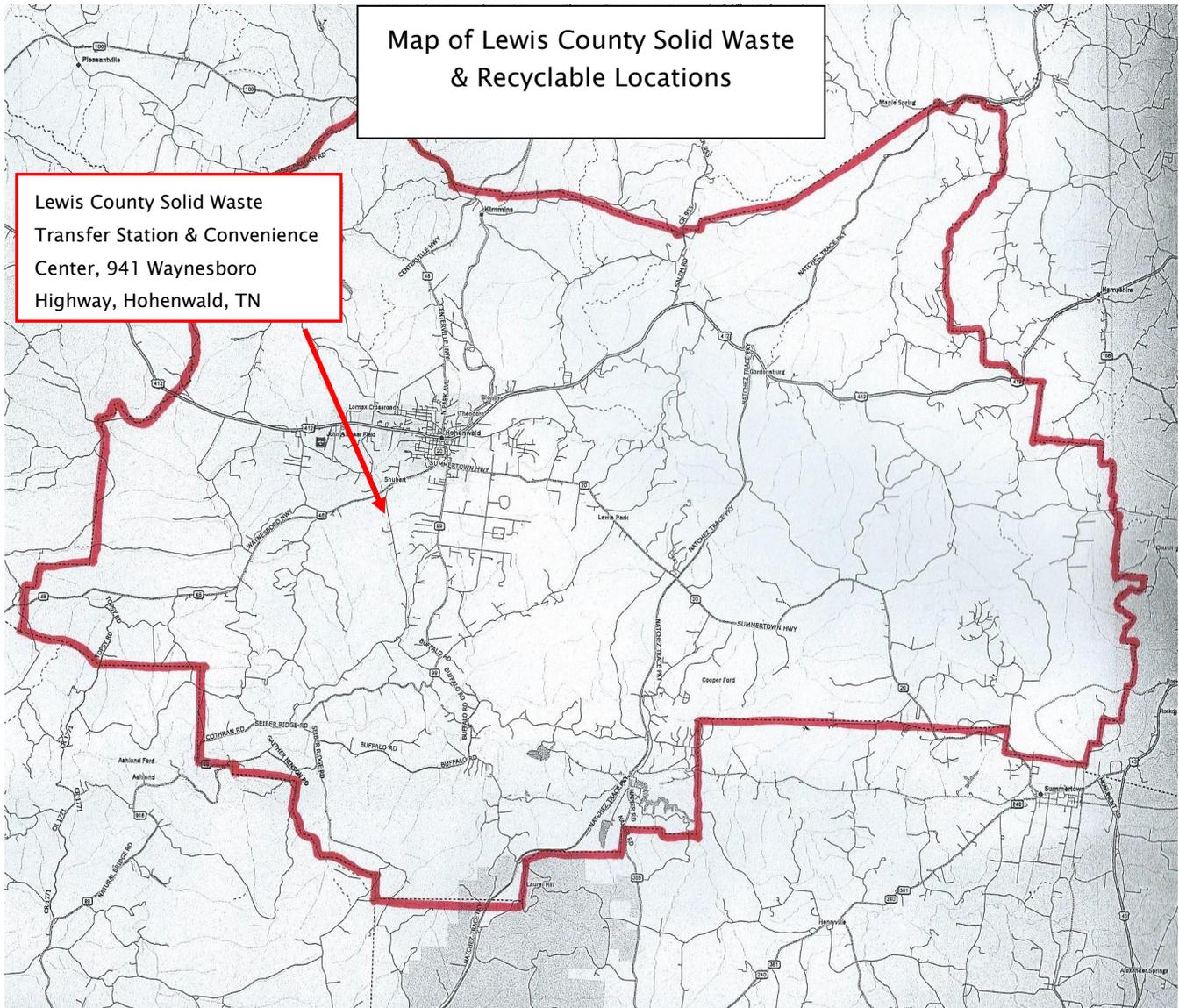
The Lewis County Solid Waste Department currently has four full time employees and two part time employees. The full time employees are Tony Bailey, Solid Waste Director; James Powell attendant; Freddie McNabb attendant and Ronald Odom attendant. The two part time employees go to off site locations in Lewis County to collect solid waste out in the county. The two part-time employees are Carl McNabb and Tommy Rasbury. Drivers and employees of the Lewis County Solid Waste Department are always willing to assist county residents. The offsite pickups are located at designated days and areas from 3:00 until 5:00 PM.

City Public Works trucks, as well as private vehicles are assisted by the staff of the Lewis County Solid Waste Department.

Off Site County Pickup Locations			
Monday	3-5 pm	Firetower @ Summertown Hwy	Sweetwater Church of Christ
Tuesday	3-5 pm	Cothran Rd & Seiber Ridge	Macedonia Church of Christ
Wednesday	3-5 pm	Gandy Rd & Buffalo Rd	Ridgetop & Catheys Creek
Thursday	3-5 pm	Summertown Hwy & Napier Rd	
Friday	3-5 pm	Slippery Road @ Sawmill	Kimmins Church of Christ

Lewis County Solid Waste Department positions need to be upgraded with degree/experience requirements for the Solid Waste Director and adding positions to coordinate, collect, and transport the solid waste and recyclables. A recycle coordinator position reporting to the Solid Waste Director could prove to be beneficial in reducing solid waste to the landfill and generating revenue for the county with marketing recyclables.





Attitudes of Lewis County Residents to Solid Waste Disposal

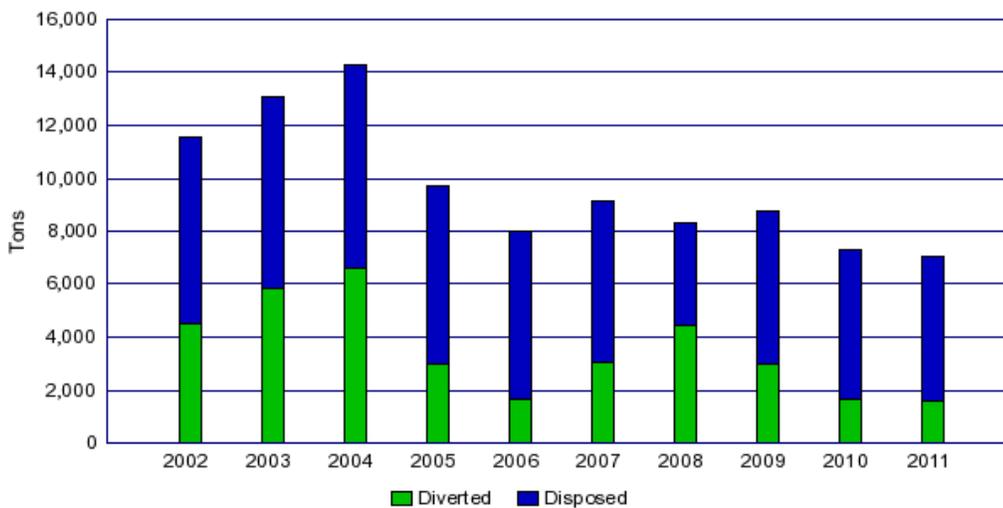
Lewis County is a small rural county with a growing seasonal / recreation business, logging industry, and wine-making future. With a progressive mindset, a recycling program should be accepted by Lewis County residents.

Burning trash in a 55-gallon drum or in just a pile, often in the backyard, is still a too common method of solid waste disposal in Lewis County. National surveys have revealed between 25 and 50 percent of rural residences and farms continue to do backyard burning. The center of population in Hohenwald has taken to the idea of recycling, however, the county remains very rural in nature and culture change will be a long and difficult task for Lewis County officials.

Education of the recycling needs in the school system is largely conducted by the school officials and there is not a specific plan in place that is sponsored by Lewis County. The county could become more interactive with the school system by implementing a recycling program similar to other surrounding counties.

Evaluation of the Waste Reduction Systems for Counties & Municipalities in Region

Year	Diverted (Tons)	Disposed (Tons)	Total Generated (Tons)	Diversion Rate
2002	4,500.0	7,026.0	11,526.0	39.0
2003	5,859.0	7,200.0	13,059.0	44.9
2004	6,631.6	7,653.0	14,284.6	46.4
2005	2,986.8	6,741.5	9,728.3	30.7
2006	1,662.8	6,311.0	7,973.8	20.9
2007	3,020.8	6,144.0	9,164.8	33.0
2008	4,469.0	3,856.0	8,325.0	53.7
2009	2,981.6	5,797.2	8,778.8	34.0
2010	1,639.2	5,658.9	7,298.0	22.5
2011	1,574.6	5,497.5	7,072.1	22.3



Collection/Disposal Capacity and Projected Life of Solid Waste Sites

Site Name(s)	Current Capacity	Maximum Capacity	Projected Life of Facility
Lewis County Transfer Station & Recycle Center	360 NT / Day	360 NT / Day	Indefinite
Total:	360 NT / Day	360 NT / Day	Indefinite

Service Providers

Provider of Service	Service Area	Population Total Under This Service	Frequency of Service	Annual Tonnage Capacity	Type Service
Lewis County	Lewis County	12000	Weekly	10000	Solid Waste Collection / Recycle
Hohenwald	Hohenwald	3800	Weekly	5000	Curbside SW Pickup
Private Carriers (2)	Lewis County	12000	Weekly	10000	Solid Waste Collection



Unmet Financial Needs and Cost Summary for Lewis County

EXPENDITURES			
Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits			
Transportation/hauling	408621.00		408621.00
Collection and Disposal Systems			
Equipment			
Sites			
Convenience Center			
Transfer Station			
Recycling Center			
MRF			
Landfills			
Site	50540.00		50540.00
Operation			
Closure			
Post Closure Care			
Administration (supplies, communication costs, etc.)	57050.00		57050.00
Education			
Public			
Continuing Ed.			
Capital Projects			
REVENUE			
Host agreement fee			
Tipping fees	7100.00		7100.00
Property taxes			
Sales tax			
Surcharges	1000.00		1000.00
Disposal Fees	483000.00		483000.00
Collection charges			
Industrial or Commercial charges			
Residential charges			
Convenience Centers charges			
Transfer Station charges	7400.00		7400.00
Sale of Methane Gas			
Other sources: (Grants, bonds, interest, sales, etc.)	18295.00		18295.00

Lewis County is operating with a budget surplus. At this time there are no unmet needs as revenue is keeping up with costs. Increases will be absorbed with increases in tax revenues. Under the current system of collection activities fuel costs and salary increases are the most pressing expenditures projected.

Lewis County Sustainable Goals Consistent with the State Plan

Lewis County government is always receptive to new ideas and plans considering the Solid Waste Plan. Improvements in recycling efforts could further reduce the amount of material going to landfills. Lewis County is not currently affiliated with a Solid Waste Region Planning Authority. Recommendations are for Wayne, Lawrence, Lewis, and Perry counties to form a region to better utilize resources in one of the most sparsely populated areas of the state and with the smallest amount of population per square mile.

Lewis County is currently running a diversion rate of 22.26% slightly below the 25% reduction mandated by state law. With a renewed interest in recycling and with developing / implementing a curbside recycling pickup plan, the diversion rate will easily exceed the state mandated 25% reduction.



Sources:

US Census Bureau, Lewis County Government, Tony Bailey- Lewis County SWD, MTIDA, City of Hohenwald, Van Ward – County Mayor, Wikipedia