

## **C. SOLID WASTE CHARACTERIZATION AND QUANTIFICATION**

### **1. Waste Characterization**

Because curbside, household waste collection with regard to rubbish and yard wastes is handled differently in Purvis than the remainder of Lamar County and since the residential solid waste collected in Lumberton is disposed of in a different landfill than the remainder of Lamar County, separate waste characterizations were performed for the waste collected within Lamar County by the Lamar County Solid Waste Department, the waste collected within Purvis and the waste collected within Lumberton. The waste collected within Sumrall should mirror that collected in Lamar County by the County Solid Waste Department since yard waste and rubbish are separated from the household waste collected at the curb.

For each characterization, a random sample of at least 200 pounds of waste was selected from the waste being collected and dumped for the governmental body in question. This 200 pound sample was then separated into the following components: Metal; Aluminum; Glass; Paper (including newsprint); Styrofoam; Food; Plastic; Cardboard; and Textile/Fabrics. Originally a separate grouping was set up for newsprint, but in all cases it represented such a small percentage of the paper total that it was included in the paper weights. Once the separations had been made, the various components were then weighed and their percentage of the total determined. The waste for Lamar County was characterized at the Trashhunter's Transfer Station in Oak Grove on June 10, 2010, the waste for Lumberton was characterized at the Central Landfill Facility operated by Waste Management in McNeil, MS on June 14, 2010 and the waste for Purvis was characterized at the Trashhunter's Transfer Station in Oak Grove on June 15, 2010. The results of the waste characterizations are presented in Table C1.

**TABLE C1**  
**Waste Characterization for Lamar County**

Material	Waste Source					
	Lamar Co.		Lumberton		Purvis	
	Wt. (lbs.)	% of Total	Wt. (lbs.)	% of Total	Wt. (lbs.)	% of Total
Metal	11	5.21	4	1.98	4	1.91
Aluminum	5	2.37	5	2.48	4	1.91
Glass	15	7.11	17	8.42	9	4.31
Paper	45	21.33	33	16.34	28	13.40
Styrofoam	5	2.37	6	2.97	4	1.91
Food	35	16.59	40	19.80	33	15.79
Plastic	50	23.70	42	20.79	38	18.18
Cardboard	30	14.22	20	9.90	25	11.96
Textile	15	7.10	35	17.32	64	30.63
Yard Waste	0	0	0	0	0	0
Rubbish	0	0	0	0	0	0
<b>Total</b>	<b>211</b>	<b>100.00</b>	<b>202</b>	<b>100.00</b>	<b>209</b>	<b>100.00</b>

As seen from Table C1, yard wastes and rubbish were not present in any of the samples and in fact were not apparent in any of the trash dumped during the sampling. This indicates that all of the residents and those collecting the waste are doing an excellent job of insuring that rubbish and yard wastes are not disposed of in the residential solid waste landfills. The waste characterization presented in Lamar County's 1996 Solid Waste Management Plan indicated that rubbish and yard waste comprised 15% by weight of the waste being disposed of as residential solid waste. This is a significant improvement.

## 2. Existing and Projected Municipal Solid Waste Quantities

### Existing Lamar County Solid Waste Quantities Exclusive of Municipalities and

**Schools:** Presented in Table C2 are the 2009 solid waste quantities in tons generated in Lamar County, excluding all municipalities, schools and major industries.

**TABLE C2**  
**2009 Solid Waste Quantities for Lamar County**  
**Exclusive of Municipalities and Schools**  
**(Tons)**

<b>Residential</b>	<b>Commercial</b>	<b>Rubbish</b>	<b>Yard</b>	<b>Total</b>
14,089	3,866+	4,951+	4,025	26,931

Residential waste as presented above represents the amount picked up from all the homes within the county outside of any municipal boundaries and disposed of at the Trashhunter's Transfer Station located in Oak Grove for ultimate disposal at the Clearview Landfill in Scott County. Commercial waste represents that collected in all the front load dumpsters within the county outside of any municipal boundaries by all three commercial waste handlers operating in Lamar County; Waste Management (WM), Enviro and Allied. Depending on the company, this waste is ultimately disposed of at Clearview Landfill (WM & Allied) or Pine Belt Regional Landfill in Perry County (Enviro).

Rubbish represents all that debris which classifies as rubbish per MDEQ guidelines which is collected by the county and the commercial waste handlers. All of the rubbish material collected in Lamar County is disposed of at the Trashhunter's Rubbish Facility located in Oak Grove and operated by WM. Definitive tonnage data was received from WM and Enviro for the wastes they handle in Lamar County; however, Allied was not able to provide any information regarding the tonnage of commercial and rubbish wastes

handled exclusively in Lamar County as their trucks run routes through Hattiesburg and surrounding counties as well as Lamar County prior to dumping at the transfer station in Oak Grove. Hence, the values shown in Table C2 are indicated “+” signifying that there is some unaccounted for volume for these wastes.

Yard represents all the yard waste, limbs, etc. collected by the Lamar County Road Department which can be chipped for beneficial use. This volume includes the yard wastes collected in Purvis, Sumrall and Lumberton. All of this material is delivered to a commercial operation in northeast Lamar County which is under contract with Lamar County to accept all the yard waste collected by the Road Department and to chip it for use primarily as fuel at local wood and paper mills, thus removing this stream from a landfill.

**Existing Municipal Solid Waste Quantities:** Presented in Table C3 are the 2009 solid waste quantities generated in the towns of Lumberton, Purvis and Sumrall. The values presented represent residential waste only.

**TABLE C3**  
**2009 Solid Waste Quantities for Lumberton, Purvis & Sumrall**  
**(Tons)**

Lumberton	Purvis	Sumrall	Total
840	633	354	1,827

Lumberton picks up waste from approximately 900 residences once per week using two town owned and operated trucks. This waste is hauled to Central Landfill operated by Waste Management in Millard, MS. Commercial wastes in Lumberton are collected by either WM, Enviro or Allied depending on who the individual commercial establishment has contracted with. The commercial wastes collected are therefore included in the values shown for Lamar County as the private companies reporting volumes did not

distinguish between wastes collected in the county or in a municipality. This holds true for Purvis and Sumrall as well. Rubbish and yard wastes are picked up by the Lumberton Road Department and hauled to Lamar County Road Department South Barn. The Lamar County Road Department then separates the rubbish from the yard waste with the rubbish going to the Trashhunter's Rubbish Facility in Oak Grove and the yard waste going to the processing facility in Oak Grove. There is no accounting of the volume of rubbish or yard waste collected in Lumberton; however, these volumes are included in the totals for Lamar County presented in Table C2.

Residential waste in Purvis is collected once per week by Allied from approximately 752 residences and is hauled to the Trashhunter's Transfer Station in Oak Grove for disposal. The Purvis Street Department picks up rubbish, yard waste, white goods and tires from curb side as required. The rubbish is separated from the yard waste, white goods and tires and is loaded into a dumpster which Allied picks up as needed and hauls to the Trashhunter's Rubbish facility in Oak Grove for disposal. There is no accounting of the volume of rubbish either in tons or as a number of dumpsters hauled. Purvis pays Allied a flat monthly rate to handle this rubbish dumpster. The yard waste collected in Purvis is hauled to the Lamar County South Barn where it is included with the remainder of Lamar County's yard waste for processing as a fuel source by a commercial processor. Therefore, the yard waste volume for Purvis is included in that shown for Lamar County in Table C2; however, the volume of rubbish for Purvis is unaccounted for.

Residential waste in Sumrall is collected once per week by Allied from approximately 644 residences and is hauled to the Trashhunter's Transfer Station in Oak Grove for disposal. Sumrall pays the Lamar County Road Department to come in once per month to pick up rubbish and yard waste. The volume of these materials is therefore included in the volumes presented for Lamar County in Table C2.

**Existing School Systems Solid Waste Quantities:** The Lamar County School System has an enrollment of 8,800 students. Waste for the Lamar County School System is

picked up by Waste Management and disposed of at the Trashhunter's Transfer Station at Oak Grove. For 2009, the total waste disposed of was 862 tons.

The Lumberton School System is a separate entity from the Lamar County School System and has an enrollment of 900 students. Its waste is handled by Allied which bills the Lumberton School System at a flat rate per month, so no record of number of dumpsters handled or tons disposed of is available. Utilizing the data for the Lamar County School System, it is seen that the waste generated per student is 862 tons/8,800 students = 0.098 ton/student. Applying this ratio to the Lumberton School System results in an annual solid waste generation rate of: 900 students x 0.098 ton/student = 88 tons.

Therefore, the total estimated solid waste generated by all the school systems in Lamar County in 2009 was 950 tons.

**Total Solid Waste Quantities for Lamar County:** Combining the quantities presented in the foregoing sections and combining residential and commercial solid waste quantities, the total solid waste quantities collected in Lamar County in 2009 are presented in Table C4. Residential waste quantities for Lumberton are not included in this total since its residential waste is disposed of at a different facility from the remainder of Lamar County.

**TABLE C4**  
**2009 Solid Waste Quantities for Lamar County**  
**(Tons)**

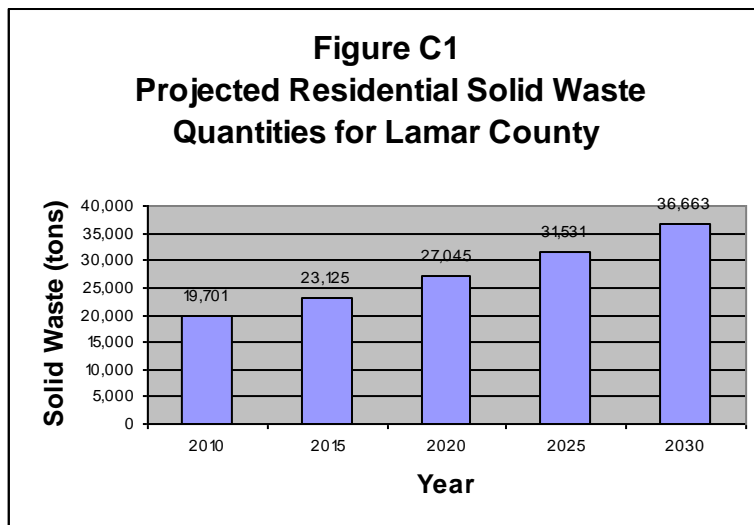
<b>Residential</b>	<b>Rubbish</b>	<b>Yard</b>	<b>Total</b>
19,892	4,951+	4,025	29,708

**Projected Solid Waste Quantities:** Because residential solid waste, rubbish and yard wastes as presented above are disposed of in different manners, projected solid waste generation rates were calculated separately for each.

Residential Solid Waste Generation Rate: Since the residential solid waste quantity presented in Table C4 represents the waste generated by all county residents, exclusive of Hattiesburg residents (West Hattiesburg) and Lumberton, the residential solid waste generation rate for Lamar County was calculated using the total residential tonnage presented in Table C4 divided by the total 2010 projected population of Lamar County presented in Part B of this plan, exclusive of West Hattiesburg and Lumberton residents. This calculation was performed as follows:

$$19,892 \text{ tons}/(35,320+2,210+1,100) = 0.51 \text{ tons/person}$$

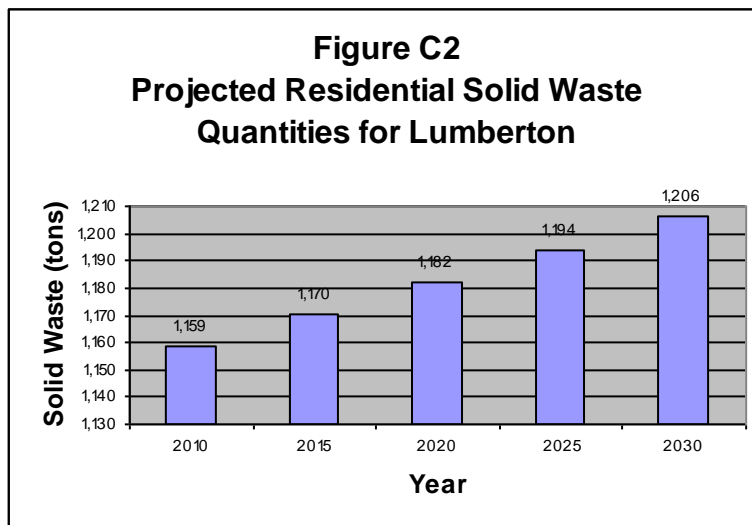
Therefore, utilizing this factor with the population projections presented in Part B of this plan, Figure C1 presents the projected residential solid waste quantities for the next 20 years in five year increments.



As was done for the remainder of the county, the residential solid waste generation rate for Lumberton was calculated as follows:

$$840 \text{ tons}/2,272 = 0.36 \text{ tons/person/year}$$

Therefore, utilizing this factor with the population projections presented in Part B of this plan, Figure C2 presents the projected residential solid waste quantities for Lumberton over the next 20 years in five year increments.

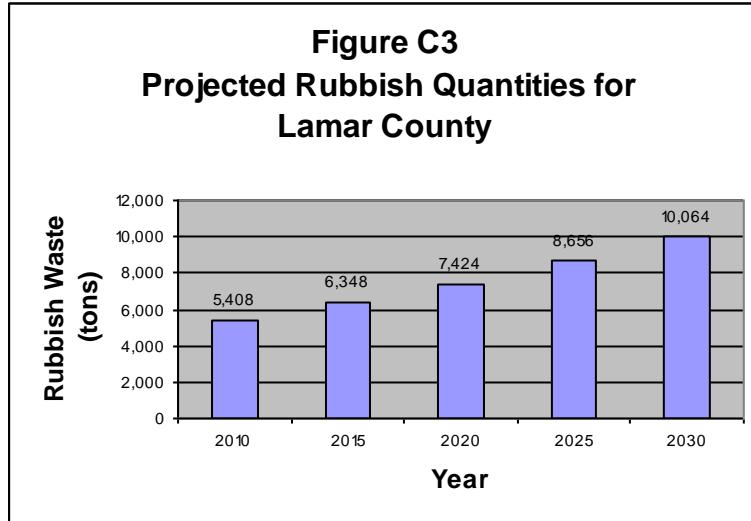


Rubbish Generation Rate: As was discussed in previous sections, reliable rubbish quantity data is only available for Lamar County exclusive of Purvis (Lumberton and Sumrall are included in the Lamar County data). Therefore, the rubbish generation rate per person was calculated by taking the total rubbish quantity presented in Table C4 and dividing it by the Lamar County net population projected for 2010 plus the projected 2010 populations for Sumrall and Lumberton. This calculation was performed as follows:

$$4951 \text{ tons}/(32,320+1,100+2,272) = 0.14 \text{ tons/person/year}$$



Therefore, utilizing this generation rate with the total population projections for Lamar County presented in Part B of this plan, Figure C3 presents the projected rubbish waste quantities for the next 20 years in five year increments.



Yard Waste Generation Rate: The yard waste generation rate per person was calculated by taking the total yard waste quantity presented in Table C4 and dividing it by the Lamar County net population projected for 2010 plus the projected 2010 populations for Purvis, Sumrall and Lumberton. This calculation was performed as follows:

$$4025 \text{ tons}/(32,320+2,210+ 1,100+2,272) = 0.10 \text{ tons/person}$$

Therefore, utilizing this generation rate with the total population projections for Lamar County presented in Part B of this plan, Figure C4 presents the projected yard waste quantities for the next 20 years in five year increments.

**Figure C4**  
**Projected Yard Waste Quantities for**  
**Lamar County**

