

Perry County

Municipal Solid Waste Planning Region

2006 Qualitative Review



Tennessee Department of Environment and Conservation
Division of Solid Waste Management
Solid Waste Assistance Programs
401 Church Street, 5th Floor
Nashville, Tennessee 37243

Introduction

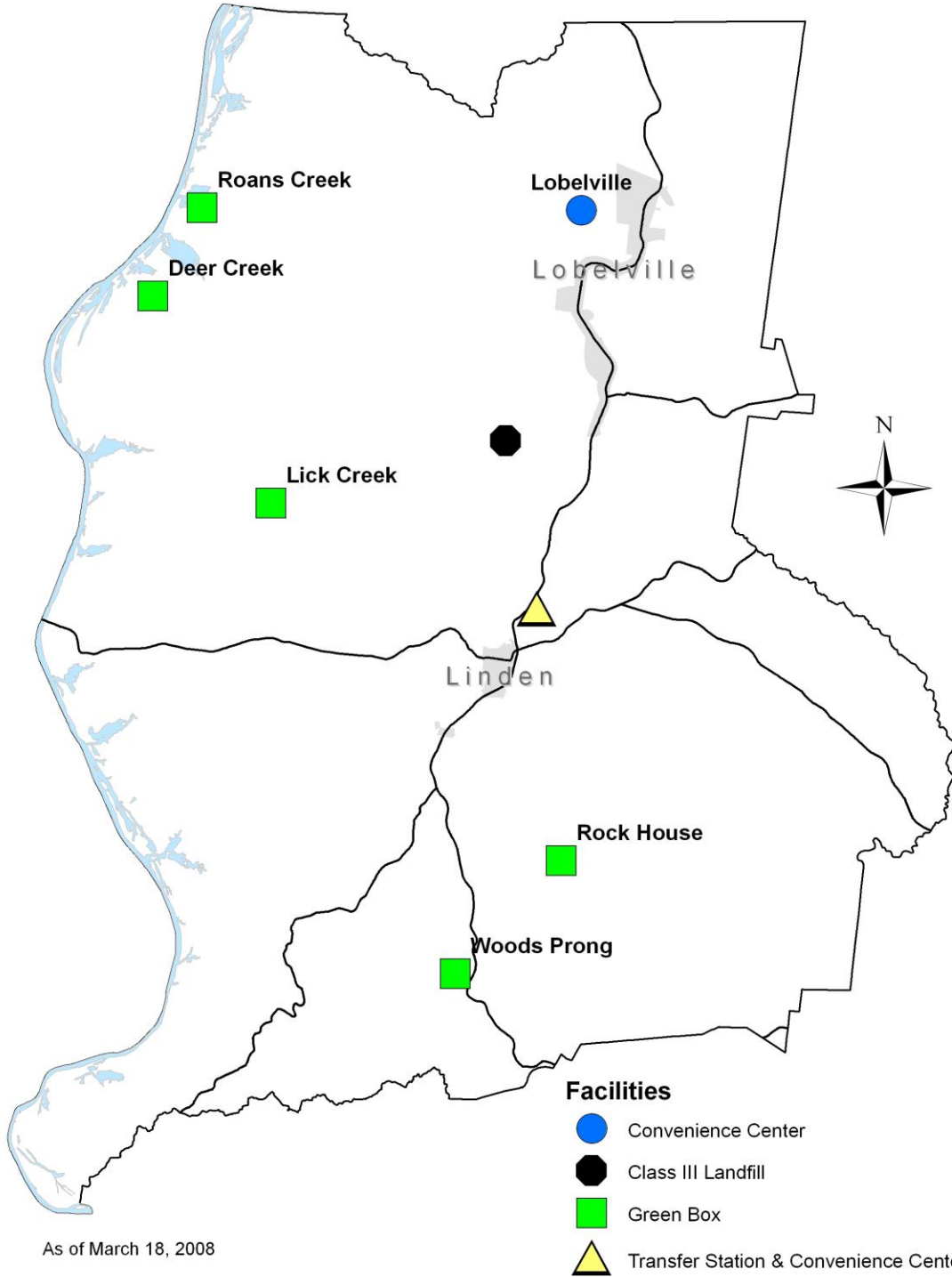
Tennessee's *Solid Waste Management Act of 1991* (SWMA) requires solid waste regions to achieve a twenty-five percent (25%) waste reduction goal for solid waste going into Class I landfills by December 31, 2003. Under T.C.A. § 68-211-861, the basis for determining compliance with this waste reduction goal is based on a per capita reduction measurement that may be adjusted for economic or population trends, or by a qualitative assessment that evaluates whether the region had comparable progress to those of similar regions that made the waste reduction goal based on the per capita methodology. Until 2003 the need to define the qualitative assessment was not necessary since there were no regions out of compliance. After the 2003 reporting period, 34 regions failed to meet the 25% waste reduction goal, which necessitated the promulgation of rules describing the methodology for qualitative assessment of regions failing to meet the per capita base year reduction. These rules became effective August 6, 2006.

The first step in the qualitative assessment process is to determine if the failing region met the waste reduction goal using the real-time methodology. This method is calculated annually by dividing the total amount recycled or diverted from Class I landfills by the total generated waste stream. If the region did not meet the 25% goal through this process, the region is then reviewed in order to determine if a "good faith" effort was made toward compliance and if their programs and solid waste infrastructure are qualitatively equivalent to like regions of similar population and economic characteristics who have achieved the goal.

In 2006, five regions failed to meet the goal by either base year or real-time methods. With a base year reduction of -48% and a real-time comparison of 9%, Perry County was one of those regions. Perry County, along with the four other regions who failed to meet the goal, were compared to regions who met the goal on a base year (per capita) method in 2006 and who have similar population size and economic characteristics. Comparison regions included Cocke, Grainger, Hardeman, Humphreys, Lawrence, Lewis and Van Buren.

On March 18, 2008, Wayne Brashear, Bob Knight, Nick Lytle and Matt Maynard from the Division of Solid Waste Management visited the county and met with County Mayor John Carroll, Solid Waste Director Tim Trull, Linden Mayor Jim Azbill, and Lobelville Mayor Robbie Moore to discuss all facets of the region's solid waste management programs. Visits were made to the two convenience centers, the transfer station, two of the five public collection receptacle or "green box" sites, and the Class III/IV landfill. The equipment and facilities at each of those sites were examined and noted. Future facility and equipment needs for the programs were reviewed by staff at time of visit and financial statements were obtained from the county and the municipalities.

Perry County Solid Waste System



Solid Waste Facilities and Infrastructure

Every county in Tennessee is required by law to provide both a minimum level of waste reduction and also waste collection assurance. The solid waste and recycling collection programs of the Perry County Solid Waste Planning Region serve a population of 7,653 and an area of 415 square miles. The minimum number of convenience center sites required by state statute, based on Perry County's population, is calculated at one site. The region satisfies these requirements through the following systems:

Perry County operates a combined transfer station and convenience center in Linden, and an additional convenience center located in Lobelville. Each location utilizes front-end loader boxes to collect municipal solid waste. After collection and compaction, the municipal solid waste is taken from the convenience centers to the transfer station for further consolidation. The waste is then transported to Waste Services of Decatur Landfill located in Decatur County. The county accepts corrugated cardboard (OCC), mixed metals, tires, and used oil in addition to municipal solid waste. Mixed metals and bulk items are collected in a large roll-off at the transfer station. At the time of the visit, this material was being diverted to the county's Class III landfill due to contamination according to Tim Trull. Furthermore, no mixed metal recycling was reported in the 2006 Annual Progress Report (APR). Cardboard is collected and transported to the transfer station where it is prepared for market through the use of a vertical baler. Both convenience centers have used oil collection tanks. Tires are accepted at the Linden Convenience Center and Transfer Station.



Lobelville Convenience Center

Additionally the county operates five public collection or “green boxes” sites located in the Rock House, Deer Creek, Woods Prong, Lick Creek and Roans Creek communities.

These sites offer no recycling options, are unmanned, have no fencing and consist of several front-loader boxes. The sites visited had a significant problem with users of these boxes disposing of waste outside of the receptacles.

Public collection or “green boxes” sites are referenced in T.C.A. § 68-211-851(d)(1), which states that no later than July 1, 1997, each county which maintains and uses receptacles for the collection of municipal solid waste from the general public at sites separate from a convenience center for the needs of residents of the county shall submit to the Department the location and operational information of these locations.

Furthermore, T.C.A. § 68-211-851(d)(3) states that a county which did not have receptacles in use on January 1, 1996, or which subsequent to such date discontinues use of any receptacle permitted, shall be prohibited from installing or maintaining additional receptacles after July 1, 1996. According to documents dated April 28, 1997, and signed by Leon Dailey, Perry County Executive, the region operated twenty “green box” sites. Thirteen of these sites have ceased collection since 1997.

In addition to the public collection facilities, the county operates a Class III landfill located between Lobelville and Linden. The landfill accepts waste from county residents only. Assuming 264 working days in a year, the landfill processed 6 tons of waste per day during calendar year 2006.



Class III Landfill

The Cities of Lobelville and Linden operate curbside waste collection routes inside the city limits, each utilizing one ton rear-loader packer trucks and two man crews. The collected waste is transported to the county's transfer station and merged with that of Perry County. This is the extent of the municipalities' handling of municipal solid waste. Neither city operates any recycling programs.

According to the 2006 Annual Progress Reports (APR), the county processed the following materials collected within the Region:

3.0 Tons Non-Ferrous Metals
460 Tons Corrugated Cardboard

The County Solid Waste Department employs a full time solid waste director. By employing a solid waste director, Perry County is able to have a greater level of management over the day-to-day operations of all aspects of their solid waste system. Direct oversight of routes, collection schedules, materials marketing and public education allows the program to operate more efficiently and aids in financial stability. The municipalities in the region that provide for residential solid waste collection are managed by the public works departments without a dedicated solid waste director.



Linden Transfer Station & Convenience Center

Financial Information

T.C.A. § 68-211-874(a) states that each county, solid waste authority and municipality shall account for financial activities related to the management of solid waste in either a special revenue fund or an enterprise fund established expressly for that purpose. According to the Fiscal Year 2007 Annual Financial Report of Perry County Tennessee performed by the Tennessee Comptroller of the Treasury, Perry County operates a special revenue fund to account for its solid waste program. The solid waste financial information of Perry County was examined by department staff. From a solid waste management standpoint, the expenditures and revenues appeared to be in line with state mandates. Perry County's solid waste revenues and expenditures were found to be financially solvent.

Expenditures

Sanitation Education/Information	\$9,256
Transfer Stations	\$329,206
Convenience Centers/"Green Boxes"	\$35,200
Landfill Operation and Maintenance	\$80,300
Other	\$900
Total	\$454,862

Revenues

Local Taxes	\$360,677
Charges for Services	\$55,922
Other Revenues (Including Sale of Recyclables)	\$811
State of Tennessee (Grants)	\$52,266
Total	\$469,636

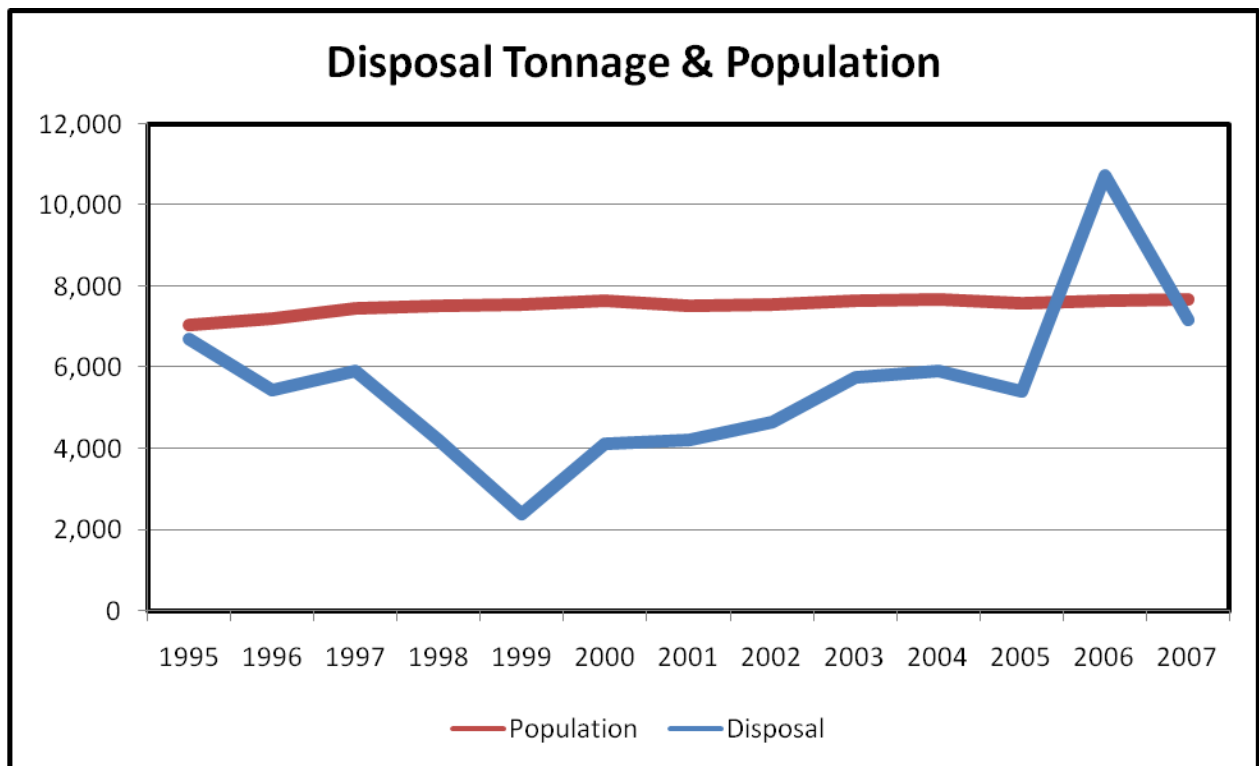
Solid Waste Planning Board

The Solid Waste Management Act states that every solid waste region in the state must appoint a solid waste planning board, composed of representatives of each county and each city which participates in a solid waste planning region. The Municipal Solid Waste Planning Region Board is tasked with accurately reviewing and approving annual progress reports. Also, they are instrumental in the approval process for any new solid waste permits for the region. At a minimum, having an active board that meets with regularity is vital to complete these tasks. The planning board is also needed to develop ten year plans, assess disposal capacity and collection assurance, provide for solid waste education, and assist in other aspects of integrated solid waste management. Duties and powers of the solid waste planning board are spelled out in T.C.A. §§ 68-211-813 thru 815.

Mayor John Carroll stated that the board holds called meetings at an interval of two to three times a year as needed to consider solid waste matters.

Statistics

<i>Year</i>	<i>Population</i>	<i>Disposal</i>	<i>Tons Per Capita</i>
1995	7,055	6,712	0.95
1996	7,217	5,453	0.76
1997	7,470	5,928	0.79
1998	7,529	4,232	0.56
1999	7,560	2,397	0.32
2000	7,631	4,134	0.54
2001	7,504	4,221	0.56
2002	7,548	4,664	0.62
2003	7,627	5,755	0.75
2004	7,673	5,913	0.77
2005	7,574	5,419	0.72
2006	7,653	10,745	1.40
2007	7,671	7,200	0.94



Analysis of local conditions

In 1995, the State of Tennessee averaged 1.3 tons of municipal solid waste placed into Class I landfills per capita. In contrast, the Perry County Municipal Solid Waste Region reported 6,712 tons of waste going into Class I landfills, or 0.95 tons per person, which was in line with other rural single county regions of like demographics. A 25% reduction of this value would require a disposal rate of 0.71 tons per person per year. In the years from 1998 through 2002, the region obtained waste disposal rates below 0.71; while in the years from 2003 through 2005 the region achieved rates of just above 0.71.

The 2006 Annual Progress Report (APR) submitted by the Region listed 5,033 tons of waste disposed of in Class I landfills. During the review of the APR, it was noted that the 5,033 reported tons were less than half of the 10,745 tons of Class I disposal listed in the Solid Waste Origin Report as submitted by the Class I landfills. The discrepancy was due to 5,712 tons of waste credited to Perry County by West Camden Landfill in Benton County. During the review process, in consultation with the South Central Development District, but without direct input from the county, the tonnage from West Camden Landfill was added to the 2006 APR due to a lack of contradictory evidence. Later, as noted below, it was deemed that this material was mis-credited to Perry County and should have been credited to Decatur County.

During the qualitative review visit, questions arose as to the validity of the amended 2006 Class I disposal tonnage. While meeting with county and city officials, Tim Trull mentioned that a local waste hauler transported waste generated at a facility located in Decatur County to the West Camden Landfill in Benton County. The truck used for transportation of this waste had Perry County identification and the landfill incorrectly credited 5,712 tons to Perry County in the 2006 Solid Waste Origin Report. This information was corroborated by the discovery that all of the waste in question from West Camden Landfill was credited to Perry County during the third quarter of 2006, which shows that it was not Perry County's normal waste flow. Furthermore, county officials insist that there are no private haulers collecting waste in Perry County.

The 5,712 tons of waste in question should not have been added by the Department to the 2006 APR. When this amount is subtracted from the accepted 2006 disposal, the region's correct reduction rate is 31% using the Base-Year method.

The calculated real-time comparison value in 2006 was 9%. The real-time comparison method for measuring waste reduction is calculated by comparing all documented recycling and waste diversion programs in the region against Class I landfill disposal. Therefore, the more documented waste diversion programs present in the region, the higher the real-time measurement.

In 2006, no Class III/IV landfill data was provided in the APR even though the county operates a Class III landfill. Tim Trull reported approximately 1,500 tons of waste taken to the local Class III landfill during the 2006 calendar year when it was brought to his attention that the Class III disposal was absent from the report. Perry County would

have achieved a real-time diversion rate in 2006 of 34% if the Class III landfill amount was included and the 5,712 tons previously discussed was subtracted.

Another condition leading the region toward waste reduction non-compliance is the lack of recycling options within the county. The Linden Convenience Center collects corrugated cardboard (OCC), scrap tires, used oil and mixed metals. OCC is collected, baled, and stored onsite prior to marketing. Mixed metals are collected in a large unmarked roll-off container. Tim Trull stated that the signage created for this receptacle had been repeatedly stolen. At the time of the visit, the lack of signage and oversight of the roll-off lead to the contents becoming too contaminated with municipal solid waste for marketing and thus required landfilling. Furthermore, the 2005 through 2007 Annual Progress Reports provided no tonnages for mixed metals from county operations, and the Department has received no other documentation to indicate that any recycling of mixed metals has occurred.

The Lobelville Convenience Center provided no containers for recycling of commodities other than used oil. The site has a storage facility that currently was not utilized other than to house a small office.

Perry County utilizes five public collection or “green boxes” sites to provide for waste collection to the remainder of the county. None of these “green box” sites were fenced or monitored. The two “green box” locations visited, Roans Creek and Lick Creek, had large amounts of waste outside the receptacles on the adjacent hillsides and one location showed signs of severe fire activity.

Without oversight of the waste disposal activities at these “green box” locations, the following negative outcomes are a result:

- Large amounts of out-of-county waste can enter Perry County’s waste stream. This increases Perry County’s disposal tonnages and thus increases the solid waste expenditures.
- Perry County cannot control the types and amounts of waste deposited at these locations.
- Any future collection of recyclables at these locations cannot be controlled to eliminate contamination.
- On-site recycling education and waste separation cannot take place.



Lick Creek Green Box Location

Corrective Action

Based on staff observations and discussions with the county representatives as noted in the previous section, the county has an apparent problem with maintaining the public collection sites free of litter and solid waste outside of the receptacles. Because of this, the situation at these sites harbor and attract disease vectors in direct conflict with the Solid Waste Management rules and needs to be mitigated. In addition, the evidence of fires at the “green box” site indicates a greater problem.

These sites must meet the following minimum operational standards according to Rule 1200-1-7-.10(6)(b):

1. All containers must be emptied at a minimum of once every 7 days, except the commissioner may provide an extension of time for severe weather or other emergency conditions.
2. Litter and / or solid waste outside the receptacles must be controlled. Such wastes must be removed at a minimum frequency of at least once every 7 days.
3. Receptacles must be maintained and managed in a manner to minimize disease vectors.
4. Receptacles must be located on an all weather surface (such as gravel).

The Columbia Environmental Field Office has been informed of the problems with the public collection sites in Perry County and will be conducting inspections of these sites to establish their compliance with Rule 1200-1-7-.10(6)(b).



Dumping around Lick Creek Green Box location with fire damage in background.

Recommendations for Improvement

Prior to the completion of this qualitative assessment, Perry County submitted its 2007 Annual Progress Report. Perry County increased its real-time diversion rate from 9% in 2006 to 27% in 2007. Even so, the following are areas that the county should consider in moving forward.

- The county needs to reevaluate its collection, transportation, and storage infrastructure for its recycling program.
 - Materials collected need to be sheltered from the elements to limit contamination and to increase the market value of the commodities.
 - Utilization of existing covered storage space at the Lobelville Convenience Center would be beneficial to the housing and processing of the materials.
 - Standardized collection containers at the convenience center will help not only protect the collected materials, but also present a more organized program to the public, thus increasing participation and support.
 - The scrap metals recycling program should be reviewed to minimize contamination.
 - Markets should be explored to locate buyers willing to pay the best price for commodities collected.
 - Train existing staff to educate and direct the public in the placement of commodity materials at collection points to minimize the contamination levels currently occurring.

- Expand the recycling program over the coming years.
 - Additional types of commodities need to be collected. A phased-in program targeting mixed paper, metal and plastics collection containers could be a successful next step.
 - Additional collection points are needed to better serve the citizens. Possible locations might include existing convenience centers and schools.
 - Work with local schools and institutions to increase source separation of high value commodities such as paper products, food and beverage containers that will expand and improve existing recycling efforts.

- Develop a plan to eliminate the use of the county public collection sites or “green box” sites or convert them to convenience centers.

- Work to properly educate the public on the proper use of existing solid waste and waste reduction system infrastructure.

- Partner with the cities of Linden and Lobelville to assist the region in waste reduction efforts through providing recycling opportunities to municipal residents (e.g., curbside recycling, centralized collection points, partnership with other governments, school and institutional programs). Report waste reduction programs instituted by the cities in the regional Annual Progress Report.

- A more active role is needed by the region’s solid waste planning board in the region’s waste management effort, as provided by T.C.A. § 68-211-813(a)(4)(b)(1). In addition, the board should work to adopt resolutions prioritizing waste reduction as well as improving current solid waste disposal infrastructure and programs.

- Given the problems with incomplete submission of Perry County Solid Waste Planning Region’s disposal and recycling data discussed in the *Analysis* section above, the region should take greater care to submit accurate information in the Annual Progress Report. The solid waste planning board should review and approve the report prior to submitting to the Department.

Conclusion

T.C.A. § 68-211-861 requires each municipal solid waste region to achieve a twenty-five percent (25%) reduction/diversion rate for solid waste going to Class I landfills by December 31, 2003. Based on Perry County’s accepted Class I disposal and tons diverted, and without consideration of the subsequent amendments in Class I and Class III landfill tonnage, the Perry County Municipal Solid Waste Planning Region failed to meet the required reduction rate for calendar year 2006. This failure caused the

Department to qualitatively assess Perry County Municipal Solid Waste Planning Region's solid waste reduction program activities and expenditures to determine if it was qualitatively equivalent to other comparative counties that did reach the reduction goal.

After reviewing the Perry County Municipal Solid Waste Planning Region's programs, finances, infrastructure, education and staffing; it is the opinion of the Department that Perry County and the cities of Lobelville and Linden are lacking in waste reduction program design and implementation, and are not qualitatively equivalent to comparative regions. Comparison regions of similar population and economic characteristics that were able to achieve a 25% waste reduction rate were consistently found to have more recycling and waste reduction options for their residents than the Perry County Municipal Solid Waste Planning Region. Furthermore, programs in these like regions were widely publicized and promoted to the users of the solid waste systems as a preferred alternative to landfilling.

Even though the region met the waste reduction goal in 2007 by using the "real-time" methodology, continued compliance is unclear with the existing conditions noted previously.



PERRY COUNTY

John H. Carroll, County Mayor

P.O. Box 16 • Linden, TN 37096 • (931)589-2216

January 29, 2009

Dear Mr. Maynard:

I want to thank you and the staff at the Tennessee Department of Environment and Conservation's Division of Solid Waste Management for effort that was spent in researching and preparing the Perry County Municipal Solid Waste Planning Region 2006 Qualitative Review. Additionally, I appreciate your meeting with Tim Trull, Perry County Solid Waste Director, and myself today to review the findings and recommendations.

As noted in the report, there are several areas in which we still have room for improvement. We are interested in pursuing recycling of metals, plastic, mixed paper, and other products to help divert waste from the landfill. The guidance today may help lead us to resources for recycling containers which have been previously denied in our grant applications. Additionally, we are revising our strategy for waste collection in the more rural parts of our county to better mitigate the debris at the collection sites.

One request that we would like to formally make of your department is that the graph and data indicating that Perry County failed to meet the 2006 goals be removed from the permanent record as it has been shown that tonnage from another county was erroneously credited to Perry County's total. We understand that mistakes happen and have no complaints about the initiation of the Qualitative Review as it has provided insight to opportunities for improvement to our solid waste management. However, we do not believe that it is fair to document the erroneous data as a statement of fact that will be a blemish on the record of Perry County from this point forward.

Once again, thank you for your efforts to assist Perry County in improving our solid waste program.

Sincerely,

John H. Carroll,
Perry County Mayor

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