

Van Buren County
Municipal Solid Waste Planning Region
2007 Qualitative Review



Tennessee Department of Environment and Conservation
Division of Solid Waste Management
Solid Waste Assistance Programs
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Introduction

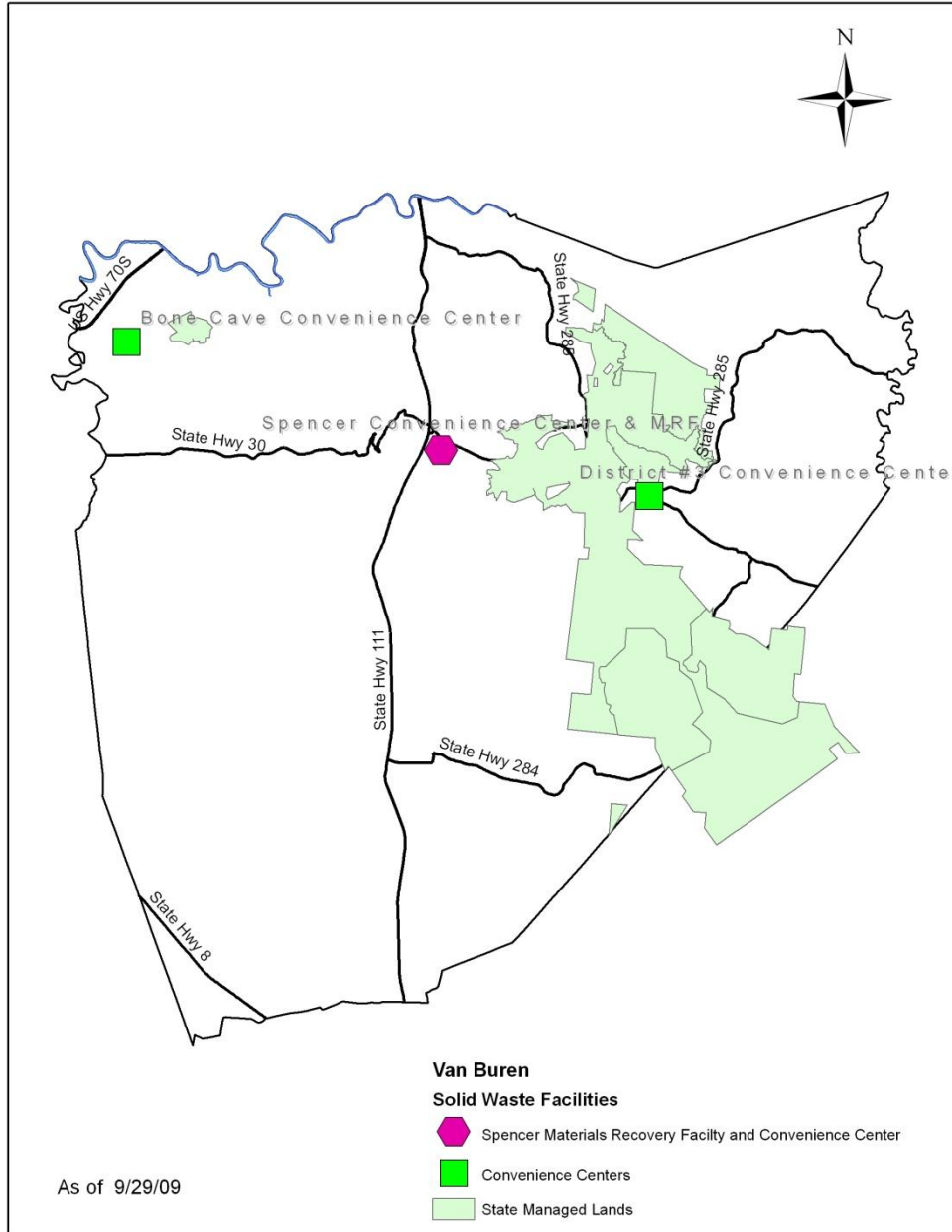
Tennessee's *Solid Waste Management Act of 1991* (SWMA) required solid waste regions to achieve a twenty-five percent (25%) waste reduction/diversion rate for solid waste going into Class I landfills by December 31, 2003. Under TCA § 68-211-861, the basis for determining compliance with this reduction/diversion rate was 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 diversion 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/diversion goal, which necessitated the promulgation of rules describing the methodology for qualitative assessment of regions failing to meet the per capita base year reduction/diversion. 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/diversion rate 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 2007, five regions failed to meet the goal by either base year or real-time methods. With a base year reduction of -30% and a real-time comparison of 17%, Van Buren County was one of those regions. Van Buren 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 2007 and who have similar population size and economic characteristics. Comparison regions included Grainger, Humphreys, Lewis, DeKalb, Blount, and Madison.

On July 2, 2008, Division of Solid Waste Management staff members, Nick Lytle and Bob Knight, visited with Van Buren County Mayor Kelly Dishman and Solid Waste Director Bill Mosley to discuss all facets of the solid waste management program. Visits were made to the three convenience centers and the materials recycling facility (MRF). The equipment and facilities at each of those sites were examined and noted. Future facility and equipment needs for the program were reviewed with Mayor Dishman at the time of the visit and a statement of the county's solid waste income vs. expenses was obtained.

Van Buren Municipal Solid Waste Planning Region Solid Waste System



Solid Waste Facilities and Infrastructure

Every county in Tennessee is required by law to provide a minimum level of waste reduction and waste collection assurance. Van Buren's solid waste collection and recycling programs serve a population of 5,448 and an area of 273 square miles. The minimum number of convenience center sites required by state statute, based on Van Buren County's population, is calculated at one location. The County has three convenience centers: (1) First District at Drake and Shockley Roads, open Monday-Saturday, (2) Third District at Highway 30 and 285, open only one-half day per week, and (3) Fifth District on Bone Cave Road, also open only one-half day per week. The convenience centers are well maintained, each is equipped with a compactor and sufficient receptacles to handle the waste, and scales to weigh the waste materials received. The county's Class 1 landfill is closed and Van Buren utilizes a "Pay-As You Throw" system for waste disposal, charging residents \$0.11/lb for house-hold waste, including bulky items. High volume private haulers are charged \$0.03/lb. Recycling collection is available at no cost. After compaction, the waste is hauled to the Smith County Landfill via a county owned and operated roll-off truck. The county does not accept construction/demolition waste at the convenience centers and encourages generators of such waste to make arrangements with private haulers for pickup and transportation to the Class III/IV landfill in Smith County.



Figure 1. Bone Cave Convenience Center, Open Only 6 Hours a Week



Figure 2. District # 3 Convenience Center, Open Only 6 Hours a Week

Best Disposal Service (BDS), a private hauler located in Spencer, contracts with some of the residents and commercial businesses in the county to dispose of their waste. Class I waste collected from these customers is hauled to Smith County Landfill, while waste from construction and demolition is taken to Smith Co's. III/IV landfill. In addition, BDS hauls sludge from the City of Spencer's sewage treatment plant to the Smith County Landfill.

Cumberland Waste Disposal, of Crossville, contracts with Fall Creek Falls State Park to pick up and dispose of its waste. In 2007, the Park generated 169.84 tons on the park grounds and 249.58 tons from the inn and restaurant operations for a total of 419.42 tons, which was disposed in the Smith County Landfill.

Waste from the Acument Global Technologies (former Textron) Plant, in Spencer, an after-market manufacturer of automotive steering system components, is taken to Middlepoint Landfill in Rutherford County through a contract the company has with Republic/BFI/Allied Waste to pick up, haul, and dispose of its waste. This waste was not reported in the 2007 APR, but was discovered and added during a review of that APR. This waste consisted of oil cake from the settlings of oil used in the manufacture process and waste from the food area and trash receptacles scattered throughout the plant. Paul Smith, Global Technologies' environmental person, stated that he was new to this job at that time and not aware that it needed to be reported; however, he says, totals for waste disposed in 2008 have already been reported to the county.

The Van Buren County Solid Waste Department has a full-time solid waste director providing the county with management over the day-to-day operations of the solid waste system including; direct oversight of routes, collection schedules, materials marketing, and public education. This allows the program to operate more efficiently and aids in its financial stability. The county employs two full-time convenience center operators and one part-time operator. Spencer, the

only municipality in the county, has no solid waste service or recycling program; therefore its residents utilize Van Buren County's solid waste and recycling facilities.

The recyclable materials deposited at the convenience centers are collected and hauled to the county's Materials Recovery Facility (MRF) located at the First District Convenience Center, where they are sorted and stored until they are marketed. The MRF utilizes a vertical baler, a skid-steer loader, roll-off truck, scales, a glass crusher, and numerous receptacles to handle collected materials. Recyclables collected at the convenience centers include corrugated cardboard, mixed paper, newspaper, scrap metal (white goods), aluminum and steel cans, plastic and glass containers, used oil, oil filters, latex paint, batteries, tires, and e-scrap. The corrugated, mixed paper, and newsprint are baled and marketed through RMCT. The white goods/mixed metals, cans, plastic containers, oil filters, batteries, and e-scrap are also handled by RMCT. The solid waste director notifies Mayor Dishman when a material needs to be moved and either Mayor Dishman or his assistant gets in touch with RMCT. Glass is crushed and, due to low volume, is currently being stored until a quantity can be accumulated. RMCT will then arrange for its sale, as it has in the past. Mayor Dishman states that the low price of glass is resulting in negative income; however, with the landfill cost avoidance, it's about a "break-even" situation. Tires are handled by Mac Tires and the used oil collected is burned for heat at the county garage.



Figure 3. Baled Plastics At Materials Recovery Facility



Figure 4. Materials Recovery Facility, Paid for in Part by TDEC Grants

Best Disposal Service (BDS) picks recyclables out of the waste it collects from residents and commercial businesses in Van Buren County: Corrugated, mixed paper, plastics 1 & 2, mixed metals, and non-ferrous metals (aluminum) were separated out and marketed by BDS during 2008. The total of these materials equaled 167 tons.

Acument Global Technologies Plant recycles ferrous and non-ferrous metals, oil filters, corrugated, office paper, mixed paper, pallets, e-waste, lead-acid and dry-cell batteries, and machine oil. Except for the machine oil, Republic/Allied Waste/BFI collects these materials and markets them through its system. In 2008, a total of 1,024 tons were recycled by Global, including the 100 tons of machine oil, which was cleaned and reused by the plant itself. This oil is used in the manufacture process.

Fall Creek Falls State Park recycles its corrugated through Smurfit-Stone (16.83 tons in 2008), along with a small amount of beverage & food containers, and mixed paper (no records kept). Griffith Industries picks up cooking grease from the kitchen operation (no records kept).

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 2008 Annual Financial Report of Van Buren County Tennessee performed by the

Tennessee Comptroller of the Treasury, Van Buren County operates a special revenue fund to account for its solid waste program. The solid waste financial information of Van Buren County was examined by department staff. From a solid waste management standpoint, the expenditures and revenues appear to be in line with state mandates. Van Buren County's solid waste revenues and expenditures were found to be financially solvent.

Revenues

Local Taxes (County Property)	\$88,549
Current Services (PAYT Revenue)	\$76,543
Other Local Revenues	\$3,678
Total	<u>\$168,770</u>

Expenditures

Waste Pick-up/Transportation	\$128,372
Convenience Centers/MRF Operation	\$127,121
Landfill Oper.& Maint. (Closure)	\$7,230
Other (Interest on Debt)	\$440
Total	<u>\$263,163</u>

* Excess (Deficiency) of Revenues.....(\$94,393)

* The deficiency in the solid waste schedule covered by county general funds.

Van Buren County's estimated total expenditures for Fiscal Year 2007-2008 were \$4,149,628 and the total revenues were \$4,410,811. The county's solid waste expenditures were \$263,163 and the solid waste revenues were \$168,770. The solid waste expenditures were 6.3% of the total county expenditures and the solid waste revenues were 3.8% of the total county revenues.

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 responsible for accurately reviewing and approving annual progress reports and is 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 responsible for developing MSW solid waste plans, assessing disposal capacity and collection assurance, providing for solid waste education, and assisting 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.

Van Buren County Mayor Dishman stated that the region's solid waste planning board meets infrequently, only when called to consider solid waste activities of the region. According to him,

there have been no recent meetings, no resolutions, nor any recent record of board accomplishments. The five (5) member board has two expired positions; Chairman Guy and Bennie Bryant. Mayor Dishman indicated that these positions would be appointed at the next meeting of the County Commission.

Analysis of Local Conditions

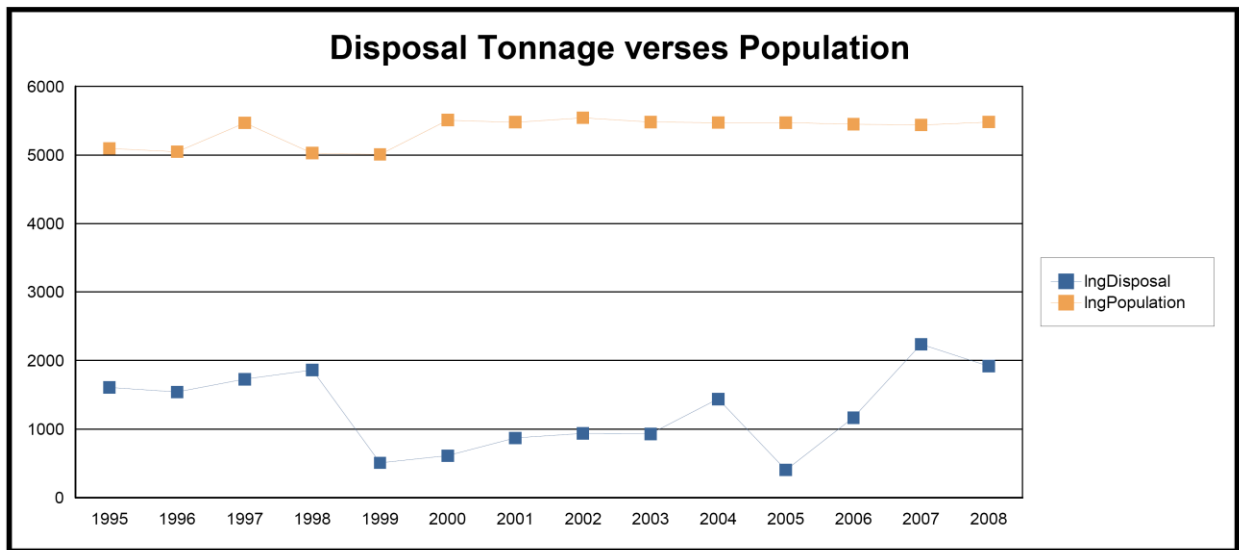
In 1995, the State of Tennessee averaged 1.3 tons/per capita of municipal solid waste placed into Class I landfills. By contrast, in 1995, the Van Buren County Municipal Solid Waste Region reported 1,609 tons of waste going into Class I landfills, or 0.32 tons per person. A 25% reduction of this value would require a disposal rate of 0.24 tons per person/per year. In 2003, the goal's effective year, the region reported 931 tons of Class I waste or 0.17 tons per person. In 2006, Van Buren's reported Class I waste was 1,167 tons (0.21 tons per/person).

The 2007 Annual Progress Report (APR) submitted by the Region listed 1,167 tons of waste disposed of in Class I landfills. During the review of the APR, it was noted that the 1,167 reported tons were only approximately one-half of the 2,237 tons of Class I generated in the county. A phone call to Mayor Dishman disclosed 1,070 tons of waste, generated by Global Technologies (formerly Textron Corp.), that had been disposed of at the Middlepoint Landfill. Global Technologies made their own arrangements with BFI to haul and dispose of this tonnage at Middlepoint. Mayor Dishman stated that he did not list it in the APR because it came from private industry and it did not go through the county's solid waste system. He was advised that all waste generated in the county must be listed in the APR. After adjusting for the additional tonnage, Van Buren's per capita tons increased to 0.41 and the base year per capita went to -30% with Real Time diversion at 17%.



Figure 5. New Recycling Bins Paid For in Part By TDEC Grants.

Year	Population	Disposal	Tons Per Capita
1995	5,095	1,609	0.32
1996	5,046	1,542	0.31
1997	5,468	1,728	0.32
1998	5,026	1,863	0.37
1999	5,008	508	0.10
2000	5,508	611	0.11
2001	5,477	871	0.16
2002	5,541	939	0.17
2003	5,478	931	0.17
2004	5,471	1,439	0.26
2005	5,470	402	0.07
2006	5,448	1,167	0.21
2007	5,437	2,237	0.41
2008	5,481	1,920	0.35



Van Buren County does not contain the abundance of businesses seen in many urban areas and, as a result, does not have large scale commercial recycling programs to boost their recycling rate. Much of the population of Van Buren works out-of-county and there is a general feeling that some of its recyclable materials are recycled in surrounding counties. Two of the county's three convenience centers are open only one-half day per week. This lack of recycling availability limits the number of residents likely to utilize the collection service afforded at these convenience centers. The Van Buren solid waste program receives no physical or monetary assistance from the City of Spencer, its only incorporated municipality. This results in the county having to provide waste and recycling services for its entire population.

Comparison Counties

Based on Van Buren County's reported Class I disposal and tons diverted, the region failed to meet the mandated 25% solid waste reduction goal in 2007. Therefore, the Department is required to objectively assess the activities and expenditures of the region, and local governments in that region, to determine whether the region's program is qualitatively equivalent to other regions that met the goal, and whether the failure was due to factors beyond the control of the region. This qualitative assessment method, prescribed by the Department and approved by the Municipal Solid Waste Advisory Committee, was promulgated as a rule in accordance with the provisions of the Uniform Administrative Procedures Act, compiled in Title 4, Chapter 5. The two counties selected for comparison are Grainger and Lewis.

GRAINGER COUNTY achieved the MSW reduction goal in 2007 with a 33.37% cross sector Real Time diversion rate. Like Van Buren, Grainger County has a very low per/capita disposal rate; however, Grainger's rate has remained fairly constant over the past eight years, which is reflective of the consistent Class I landfill volume reported each year.

Grainger County maintains eight (8) convenience centers located strategically throughout the county, each with active recycling collection facilities. These centers are open and manned 6-8 hours daily, 5-7 days per week, depending on the community location. Two of the county's three municipalities, Blaine and Rutledge, participate in the cost of maintaining the county's solid waste program by providing an operator and sharing maintenance costs at the convenience center located in their respective municipality.

Grainger County's MSW Program utilizes newspaper ads to keep the public informed on the advantages of recycling, and meets, at least annually, with local industry and business members to their waste diversion efforts. Also, quarterly meetings are held with county and city government officials to keep them apprised of the solid waste program's activities. Recycling is promoted in the school system by way of periodic flyers and poster contests, and having recycling containers located in the schools to collect paper. Regular meetings are held with members of local civic organizations to inform them of local efforts in recycling. Throughout these efforts, emphasis is focused on *landfill cost avoidance* as a way to relieve the cost of operating a recycling program.

LEWIS COUNTY recorded a 32.96% cross sector Real Time diversion rate in 2007. It also has had a consistent, low per capita disposal rate over the past ten years.

The county operates one (1) convenience center and transfer station in Hohenwald, the county seat, which is both the population and geographic center of the county. This convenience center is operated full-time, 8:00 AM-5:00 PM Monday-Friday, and 8:00-2:00 Saturday and accepts most recyclable materials. In addition to the one permanent convenience center, the county operates a mobile center which moves about the county to nine (9) different locations during each week. The route is well established and convenient to the residents. There are three trailers dedicated to corrugated cardboard recycling that are rotated around the county at designated collection sites. Lewis County also operates a Class III-IV landfill and utilizes materials diversion, along with recycling, in order to reach its reduction goal. Some recyclables are marketed locally but most are handled by RMCT. The City of Hohenwald provides curbside waste pick-up service with the cost covered by a solid waste disposal fee billed directly to the residents. For those residents who prefer, there are a couple of private haulers who still offer back-door waste collection service.

The county's solid waste educational program is designed to improve recycling and diversion methods, educate the public on the available facilities in the county, and improve the collection and management of problem/hazardous waste.

Qualitative Equivalency

As stated earlier, TCA § 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. Van Buren's failure to realize this goal caused the Department to objectively assess Van Buren County'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.

During a qualitative assessment visit to Van Buren County by Department staff, several areas were determined to be **not qualitatively equivalent** to those of the comparative counties:

- Accessibility to collection facilities, including expanded hours of operation.
- Awareness of residents and businesses regarding the proper disposal of solid waste.
- Partnership between county and its municipality in solid waste and recycling matters.
- Support of schools, institutions, and local businesses in county's recycling efforts.
- Active leadership from the region's solid waste planning board.
- Maximum efforts to gather all waste disposal and diversion numbers for inclusion in the Annual Progress Report.

These areas are discussed further in the *Recommendations for Improvement* Section.

Needs Assessment

T.C.A. §68-211-811 required the development districts to submit a *district needs assessment* for each county in the district by September 30, 1992. These needs assessments, to be conducted by the development district staff, shall be revised to reflect subsequent developments in the district by April 1, 1999, and every five (5) years thereafter. Van Buren County's Needs Assessment was completed by the Upper Cumberland Development District. The Van Buren County Needs Assessment, revised for 2007, reports that the county's economy has been, and remains, relatively weak with unemployment averaging 8% (as of Jan. 2008) and residents having to seek available jobs in surrounding counties. Local governments, including Van Buren, are left evaluating alternative funding mechanisms to cover the increasing costs of important services such as developing public works infrastructure to support population growth. Also, questions are raised about the extent to which in-migrant retirees (IMRs) will be supportive or appreciative of necessary public services: local public infrastructure for environmental protection, schools, law enforcement, or manufacturing recruitment for the resident labor force in the County. What remains to be seen is whether Van Buren County can tip the balance to the positive side by leveraging what IMRs bring to the community to foster broader-based economic development and more higher-paying jobs. Can new businesses be attracted by (1) investing the increased fiscal capacity in education, healthcare, business development strategies and public works infrastructure, (2) touting the enhanced quality of life in the community, or (3) tapping the financial assets or professional expertise of IMRs?

Some 20% of the land in Van Buren County is occupied by state parks and recreational facilities. Fall Creek Falls State Park covers 30,000+ acres in the county and FCR Park extends into adjoining Bledsoe County. Van Buren County has been successful in recruiting tourists from all across the country due to its unique natural resources. However, these resources have to be protected and maintained in order to sustain the tourism interests. This community is among sixty (60) communities in the U.S. on a drought watch list. Water shortage has been a problem during the past two years and is expected to continue and, perhaps, grow worse in the coming years. This will slow population expansion in the area, which could adversely affect tourism.

The Needs Assessment Report suggests that total waste generation percentages in Van Buren County are consistent with national data, with residential at 63% and commercial at 37%. The county's Class I disposal numbers have been somewhat erratic over the past ten years, as indicated by the Annual Progress Reports. During this period, the county contracted with a private waste hauler to service its solid waste needs. In 2007, the county resumed operation of the solid waste system with added improvements including a new recycling center. The county presently operates three convenience centers spread across the northern portion of the county. And, should the county increase population in the southern part beyond current projections of 'In-Migration of Retirees' (IMR's), it would be necessary to add another facility to support that growth. Van Buren County is using the "Pay-As-You-Throw" system, charging eleven (11) cents per pound (\$220/ton) for household waste and three (3) cents per pound (\$60/ton) for high-volume haulers, with no charge to residents or businesses for recyclable materials. Five-year projections for waste generation in the county call for 1% annual increase in household waste based on a estimated 1% increase in population. More difficult to predict is the amount of waste that will be generated by tourism and commercial entities. The Needs Assessment Report

projects that the region's total waste stream will continue to be managed over the next five (5) years with little, if any, change in structure: solid waste collection with three (3) convenience centers available to all residents in the county; a Materials Recycling Facility; and a waste disposal contract with Smith County Landfill for both Class I and III/IV wastes. However, the report does provide lists of potential equipment and facilities for continued and expanded operation of the integrated solid waste management program:

<u>Equipment</u>	<u>Facilities</u>
Collection containers (4)	Planned Additional Convenience Center
Forklift	Upgrades to existing centers
Latex paint recovery containers (3)	Multi-purpose Waste Mgmt Facility
Recycling collection vehicle	
Roll-off compactor	
Roll-off compactor containers (2)	

Even though Van Buren County has the Pay-As-You-Throw (PAYT) fee system, which charges customers according to the amount of solid waste generated, general funds have also been used to cover the increasing costs of managing the solid waste collection, recycling, and disposal services. The toughest part of such a system change-over is getting citizens to realize that they are not necessarily paying more than before; it's just that they now have some degree of control over what they spend to dispose of wastes. With waste collection charges embedded in property taxes, citizens don't realize what they are paying and have less incentive to reduce or recycle. The county continues to promote recycling through all available venues and support is evident as shown by increasing activity at the recycling center.



Figure 6. Scale Where Waste is Weighed and Fees Collected from Residents.

The county utilizes a hybrid system of fees and property tax to fund the solid waste program and, with other local programs competing for the limited amount of resources, must continually be on the lookout for new revenue sources such as user fees. To address the future costs of expanding Van Buren's solid waste management program, the county has adapted Florida's *full cost accounting* model to: determine the cost of solid waste management services; adopt a more business-like approach to these services; improve methods of evaluating privatization initiatives; determine an appropriate mix of solid waste services for the future; and establish rates and user charges to fund services in the future.

Environmental Field Office Report

A telephone call to Barry Atnip at the Cookeville Environmental Field Office disclosed that no notices of violation (NOVs) are pending for Van Buren County.

Recommendations for Improvement

Van Buren's reported Class I solid waste disposal tonnage has been very erratic with the per capita rate widely varied over the past ten years. The tons disposed fluctuated from 402 tons in 2005 to 2,237 tons in 2007 and the Real-Time diversion rate went from 37% in 2006 to 17% in 2007. This wide variance suggests a flaw in records gathering and reporting. During the department staff's meeting with County Mayor Kelly Dishman, he admitted that part of the problem stemmed from his not listing materials that were handled outside the county's solid waste system, e.g., Best Disposal Service (BDS), Cumberland Waste Disposal, and Acument Global Technologies plant. Combined, these sources generate more tonnage than is handled and reported by the county's system. Mayor Dishman was advised that all waste generated in the county must be reported and that it was the county's responsibility to contact all generators and list their numbers for land filled waste and diversion, including recycling. Following are department recommendations to help Van Buren County reach and maintain its waste reduction goal:

1. Beginning early in the year following the reporting year, collect information from all generators of waste and everyone involved in recycling to obtain their numbers for inclusion in the Annual Progress Report. These contacts will also help the county stay up-dated on businesses and personnel that sometimes have a fairly rapid turn-over.
2. Increase the public's awareness of all three solid waste collection sites and their recycling opportunities, while training the solid waste staff to educate the public about proper recycling and disposal behaviors, and how to minimize the contamination of recyclable materials for greater marketing value.
3. Keep Districts 3 and 5 convenience centers open the maximum number of hours possible to provide convenient waste disposal and recycling opportunity for residents in those areas.



Figure 7. Hours For District #3 & Bone Cave Convenience Centers

4. Pursue clean-up of existing illegal dump sites, and work with local agencies to prevent their reoccurrence.
5. Work with local schools and institutions to increase source separation of high dollar commodities such as paper products and food & beverage containers.
6. The region's solid waste planning board needs to take a much more active part in the county's waste management effort, as provided by T.C.A. §68-211-813(a)(4)(b)(1).
7. This office recommends that the City of Spencer be encouraged to establish a partnership with the county and its program to provide recycling collection sites and educational opportunities within the community. Many decisions will need to be made as to how this program should be facilitated. The University of Tennessee's County Technical Assistance Service consultants can assist with a program design and site selection.
8. Work with local business and industry to provide, at a minimum, OCC collection from any high volume generators. Additionally, these commercial and industrial entities need to report their waste disposal and recycling efforts to the county for inclusion in the county's Annual Progress Report.

Conclusion

Van Buren County has the potential for a successful solid waste reduction and recycling program. It has a new materials recovery facility (MRF), three well maintained and equipped convenience centers, albeit the hours of operation at two of the CCs should be extended. Staffing needs include adding sufficient convenience center operators to man the two centers where the open hours need to be expanded and back-up workers available as needed. With some modification, there should be little problem achieving the waste reduction goal. The need for community interest and acceptance of the program will be the main catalyst. The program needs to be "sold" to the residents and promoted vigorously and continuously.