

**Monroe  
Solid Waste  
Needs Assessment  
2010**

**Item # 1 Demographic Information**

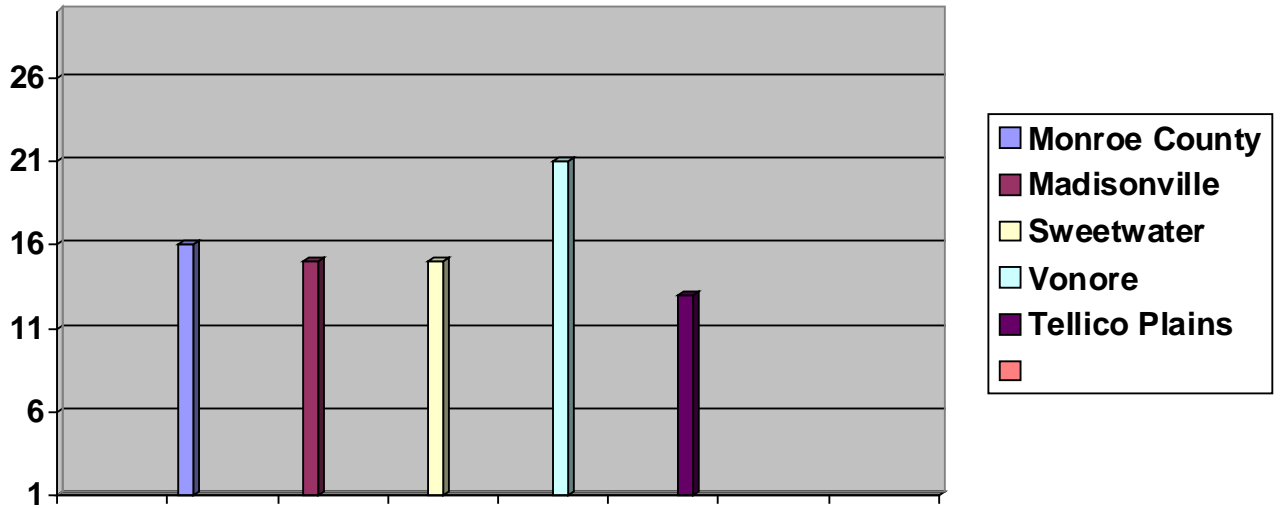
The following table and charts illustrate the population trends of the region, which includes respective municipalities, total municipal residents and county only residents. The 2010 and 2015 projects are based on existing trends for each jurisdiction as well as knowledge of the area.

The county as a whole is expected to continue to increase in population between 2000 and 2015. Monroe County has continued to see modest growth and a large part of that growth is due to tourism. Such amenities as Cherokee National Forest and winery and cheese making facilities, illustrates that Monroe County will continue to see steady growth based on tourism. Unlike other counties where farms are being sold as fast as they can to produce subdivisions, Monroe County has seen very little activities in the selling of farm land. Experts at U.T. are showing that the County will have a slight increase over the States growth in the next five year solid waste needs assessment. The entities of the region will see the following growth. Madisonville will continue to see growth and if the economy comes back, their commercial growth will dictate their residential growth in the area. Sweetwater will also see a modest growth and has no large one industry that could affect the growth or decline in the area. Vonore has the industrial park that has catered to the boating industry. The economy has hit the industry hard and that could effect the growth of Vonore in the future. Tellico Plains will also see modest growth and relies upon tourism dollars for any growth. The mindset of the community is to keep it small and that will dictate the growth in the future. The region of Monroe County is not going to see large increase in population in the future unless economic amenities are apparent, such as a new industrial plant that will affect population spurts. Such growth will be shown in the single family dwellings. The rate of growth will vary depending on a host of local, regional, and national trends, as well as the employment of management tools that can affect this rate. These trends will impact countywide land use, housing, transportation and solid waste decisions. Based on past history, Monroe County should not see any large increases that would affect their waste stream to the extent of making it un-manageable.

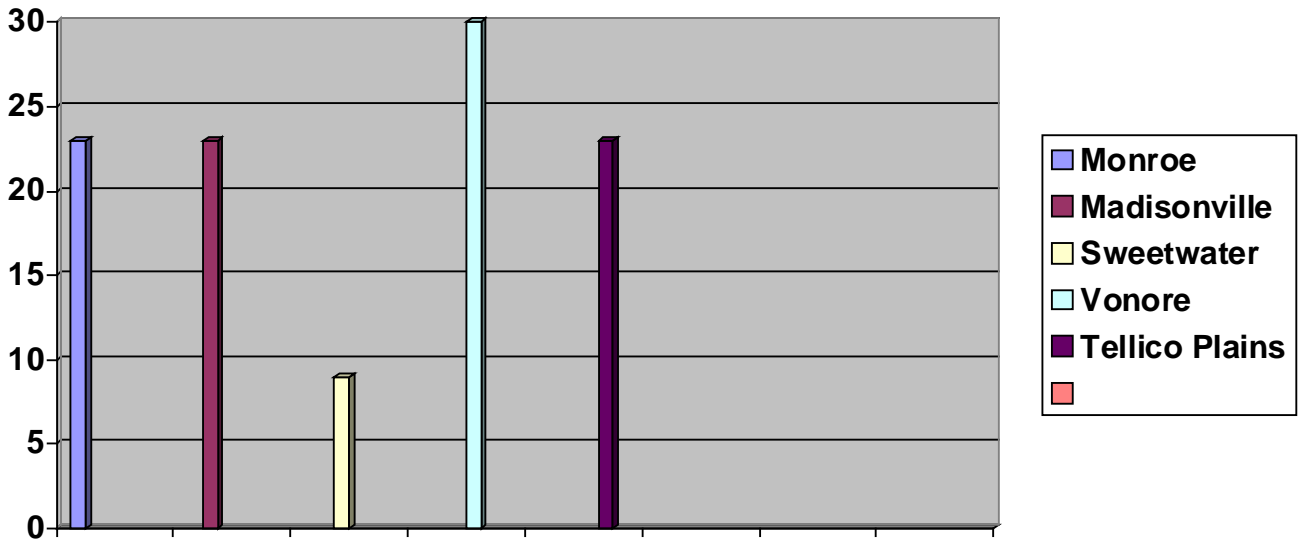
Jurisdiction	1990	2000/% change	2010 / %	2015 / %
Monroe County	21,192	27,417/23%	32,645 / 16%	36,972 / 12%
Madisonville	3,033	3,939/23%	4,613 / 15%	5,181 / 11%
Sweetwater	5,054	5,585 / 9%	6,551 / 15%	7,303/ 10%
Vonore	605	1,161 / 48%	1,468 / 21%	1,641 / 10%
Tellico Plains	657	859 / 23%	986 / 13%	1,097 / 10%

**Monroe County and Cities**

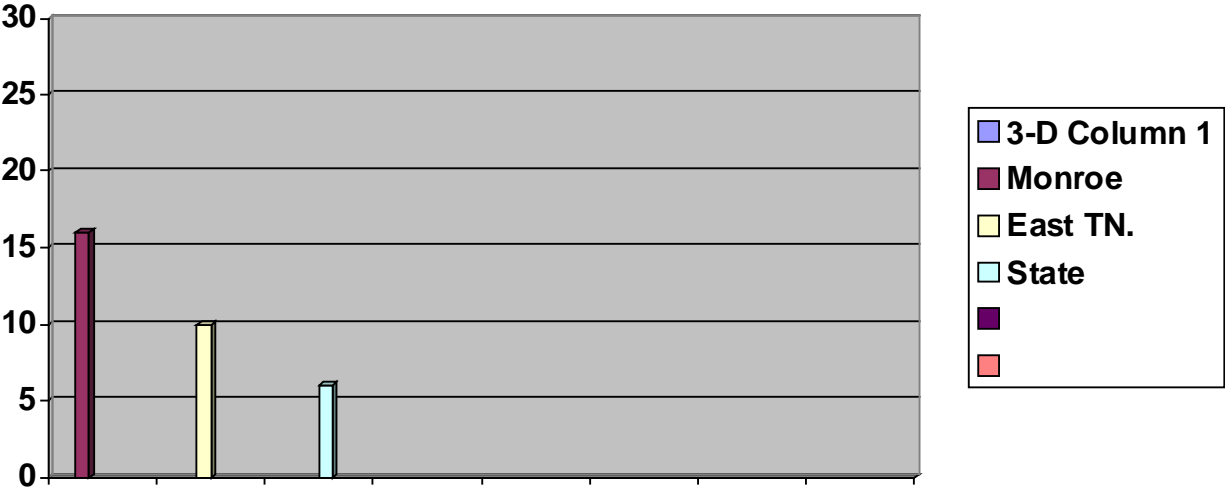
**Population Growth Percentage: 2000 - 2010**



**Population Growth: 1990-2000**



# Population Growth: 2000 - 2010



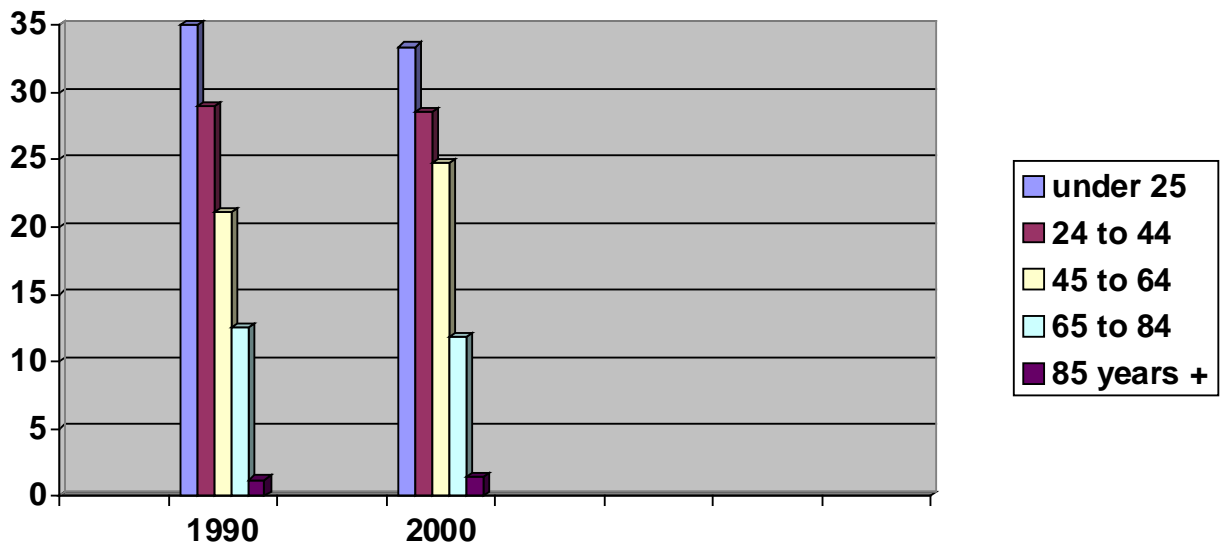
## Item 2 Region Economies

The following table and charts show the per capita incomes for the county and each municipality in 1989 and 1999 and estimates for 2007, 2010 and 2015. The existing trends are expected to continue for each municipality and the county, though increases will likely be smaller in the future for most municipalities.

In looking at per capita incomes one must realize that this purchasing power is largely affected by the in-migration of working-age people, 25 to 64 years of age. Conversely, the higher proportions of young and old people are often associated with lower rates of per capita income growth. The median age in Monroe County has increased every census year from 1980, 30.4 to 1990, 34.6 and 2000, 36.8. As the region gets older, one could suggest that more recycling will be done in the future that will help to reduce the amount of waste that is going into the landfill. Also, the amount of waste per household will also go down as families get older and children move out of the home.

Ages	1990 Number of People	Percent	2000 Number of People	Percent
Under 25	11,031	36.1	13,018	33.4
25 to 44	8,865	29.0	11,128	28.6
45 to 64	6,456	21.1	9,672	24.8
65 to 84	3,812	12.5	4,579	11.8
85 years and older	377	1.2	564	1.4

**Age Distribution**

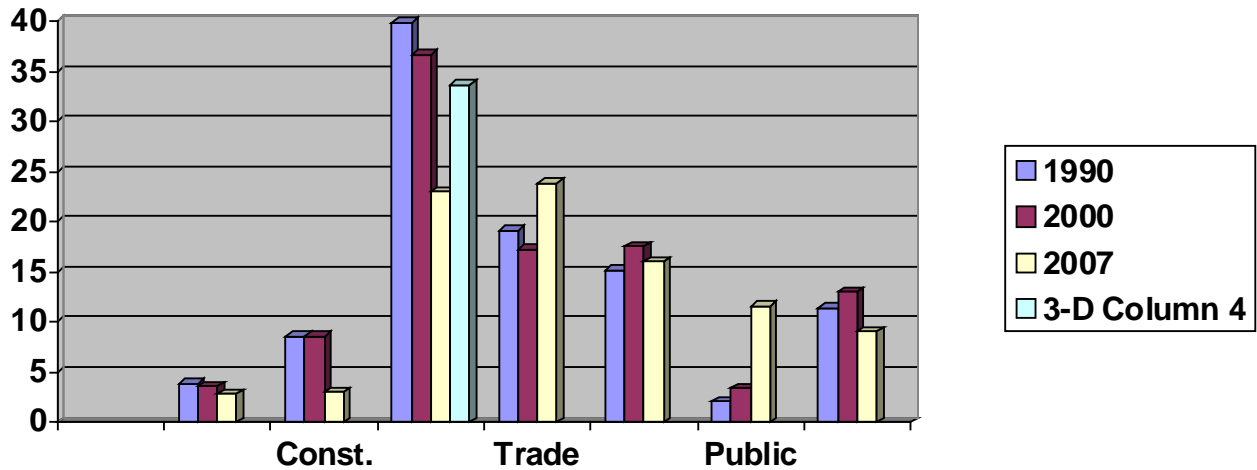


The estimates for the current per capita incomes show that most all entities have experienced an increase in the purchasing power of their residents. Most residents are likely to use this increased purchasing power to spend more monies in the future. This is likely to mean an overall increase in solid waste generated by economic growth. However, this increase in solid waste will be from the consumer industries and not large industries that have the potential to create problem waste. The region of Monroe has seen its per capita increase to 61% in the last ten years. This increase is compared to the State increase of 43%. One could suggest that the County has been able to attract the higher paying jobs that the rest of the State has seen. Knowledge of the area would suggest that the region has been able to attract more retirement communities that have brought residents into the area that have made their monies in the more affluent Northern regions of the country. The Chart below further validates that assumption in that the two highest entities in terms of per capita are the County and Vonore and both have more extensive areas along the lake and the mountains.

Jurisdiction	1989	1999	2010	2015
Monroe County	\$9,080	\$14,951	\$24,486	\$28,252
Madisonville	\$9,911	\$16,468	\$20,394	\$23,634
Sweetwater	\$10,061	\$16,746	\$20,748	\$24,065
Tellico Plains	\$8,023	\$13,234	\$16,977	\$19,692
Vonore	\$8,484	\$19,613	\$25,160	\$29,175
Tennessee	\$12,255	\$21,587	\$23,418	\$27,165

The following table takes a look at the types of business in Monroe County that can have an effect in the amount of solid waste being generated. The table looks at the percentage of each classified work from 1990, 2000 & 2007. As the table shows manufacturing continues to be the leading industry in the region. This basically results in less garbage that is produced in terms of large volume. The manufacturing jobs will generally produce a lot of cardboard, paper and glass that can be recycled. Also, the professional industry that has always been the leader in the region will continue to be the main emphasis on jobs. The waste from these jobs is mostly paper and will not put any extra burden on the waste stream in the future. Jobs have increased during every census from 13,059 (1990) to 16,219 (2000), but has shown a decline in 2009 due to the economy 15,760 (2009) for Monroe County.

Industry	1990	2000	2007
Agriculture, Forestry, Fisheries, Mining	3.8%	3.6%	2.8%
Construction	8.6%	8.6%	3%
Manufacturing	39.8%	36.7%	33.7%
Trade and Finance	19.1%	17.2%	23.9%
Professional Services	15.2%	17.5%	16.0
Public Administration	2.1%	3.4%	11.6%
Other (consumer industry)	11.4%	13%	9.0%

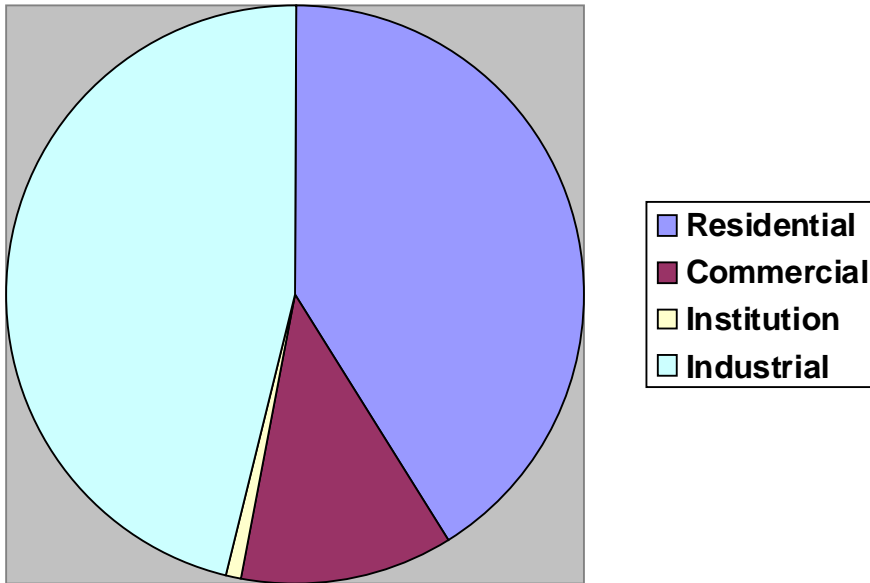


In looking at the job patterns for the region, one can see that there has been more of a shift from the labor intensive jobs to the white collar jobs in the region. Public administration jobs have seen the largest increase from 2000 to 2007. Manufacturing jobs have leveled off and those kinds of jobs are becoming more warehouse type jobs rather than the sewing operations. The numbers above show that Monroe is a bedroom community that has the mobility to shop in Knoxville and Chattanooga, which reflects on the retail trade in the area. Construction numbers have come to a halt, which emulates the economy where no new houses are being built. The Region of Monroe County will continue to experience a large increase in retirees along the lakes that will shift some of the taxes being spent to more environmental programs that will create more opportunities to divert waste from Class I landfills. The next needs assessment should see a slight increase in waste from residents due to population increases and that should not adversely affect the waste stream or cause a financial burden on the region.

### Item # 3 Region Waste Stream

Monroe County solid waste stream is shown below.

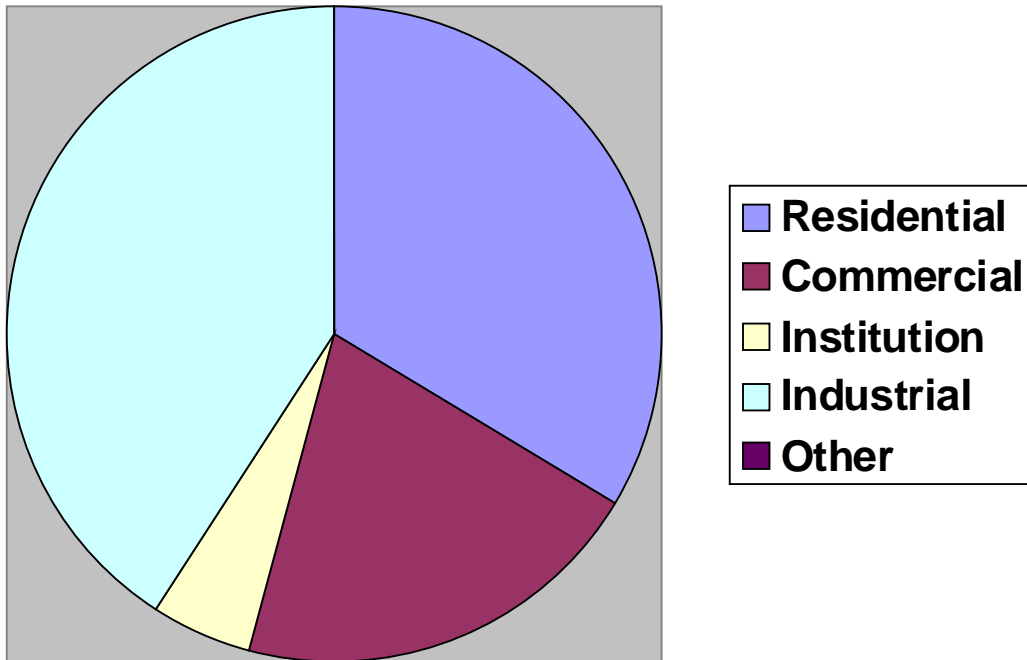
Residential 41%  
Commercial 12%  
Institution 1%  
Industrial 46%





The waste stream during the last needs assessment looked like the following.

Residential 33%  
Commercial 20%  
Institution 5%  
Industrial 40%



This can be further broken down into the following:

Recycling – 19,243 – 40.1%

Composting – 3.1 – .1%

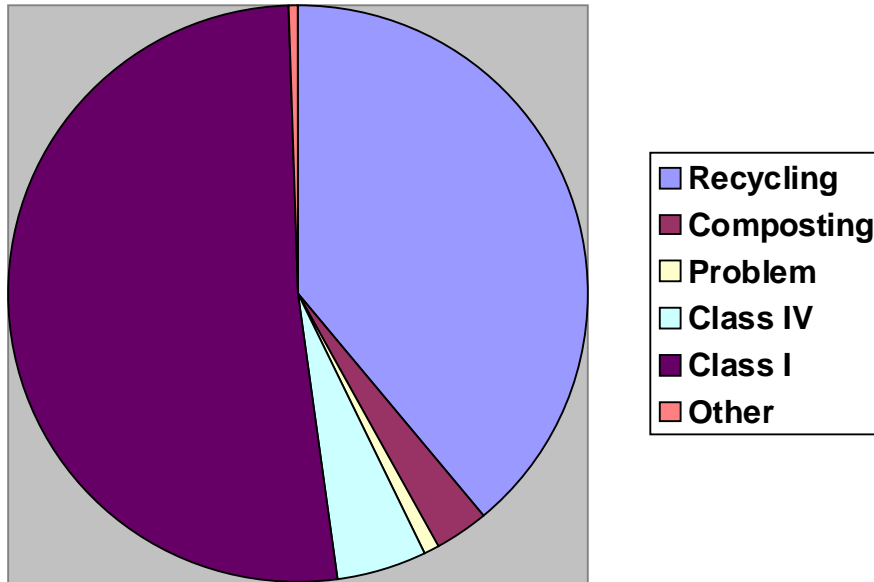
Industrial By-Product – 348 – .7%

Problem Waste – 498 – 1%

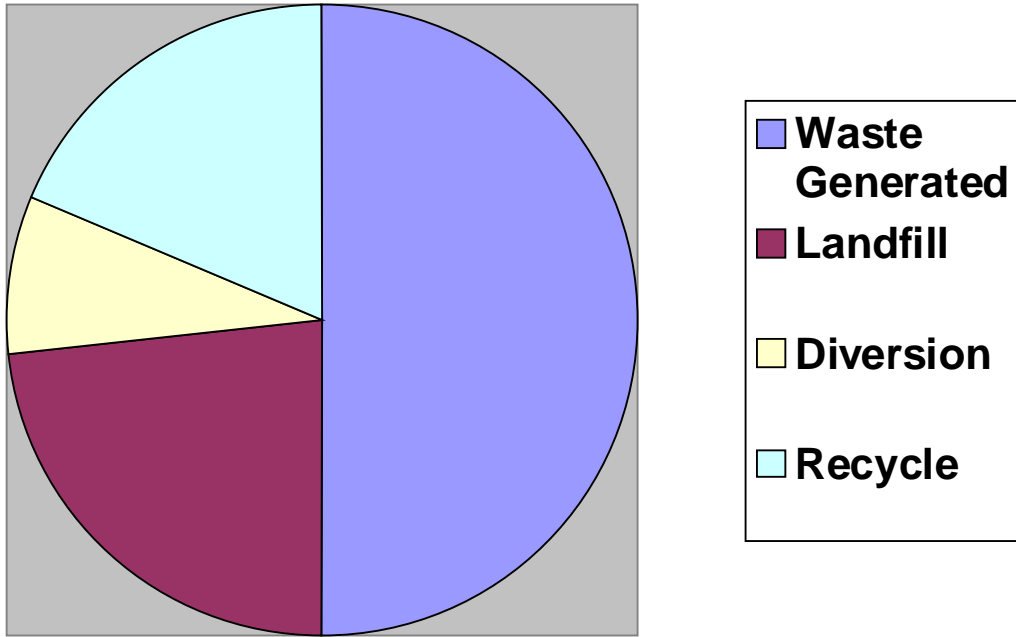
Class IV Waste – 2,415 – 5%

Class I Waste – 25,447 – 53.1%

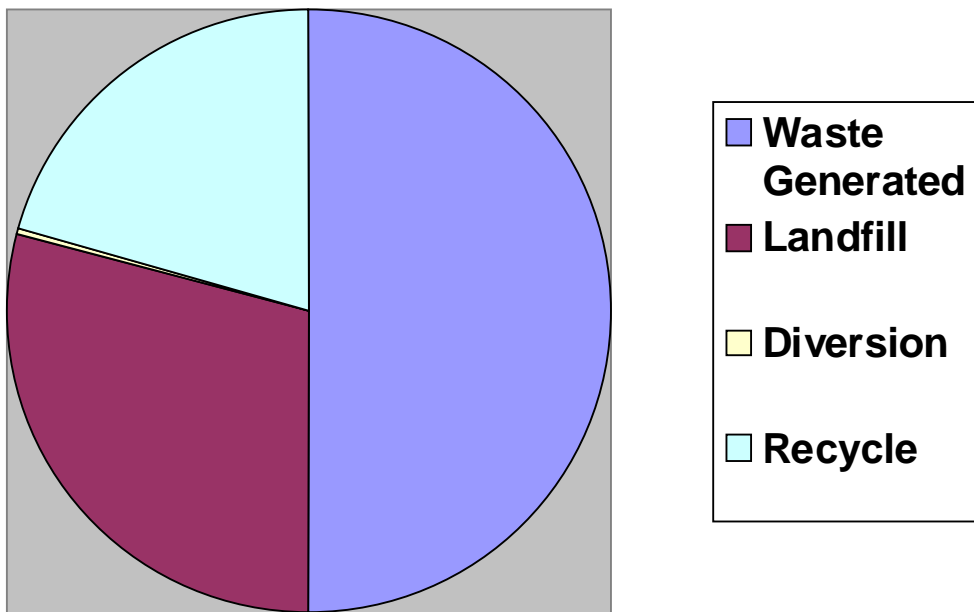
Total = 47,954 – 100%



**Waste Stream 1998 Totals**



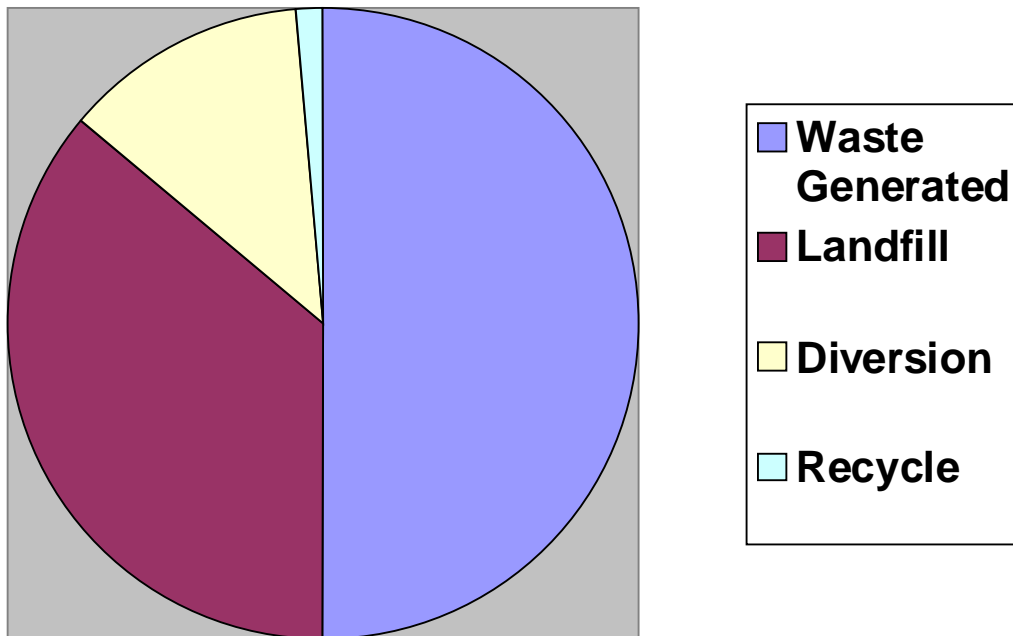
**Waste Stream 2009 Totals**



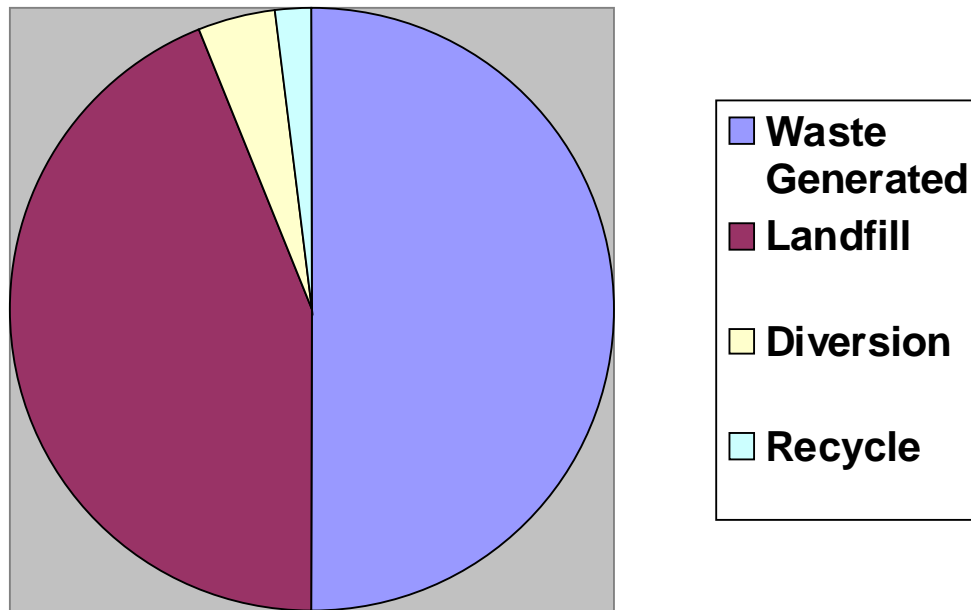
### Waste Stream 2009 Totals

\*\* Note in order to get a more accurate account of what is going on from one needs assessment to another. We must take out the industrial numbers for recycling on industrial by-products. The two largest industrial numbers form Carlex Glas and Havco Wood, don't show an accurate account of Monroe County Solid Waste due to the economy that affects the waste that these two industries produce and recycle. Below is a new chart that takes away the recycling numbers from all the industries.

### Waste Stream 1998 Totals



## Waste Stream 2009 Totals



The pie charts show the percentage of waste that has changed from the 1998 needs assessment to the current needs assessment. Class I Landfill waste was shown as 72% in 1998 and is now 88% of the waste. Diversion methods shown were Class IV landfill usage by the public and the numbers shown are 25% in 1998 are now shown as 8.3 %, Recycling efforts shown as 2.6% in 1998 are now shown as 3.7%. The chart shows that the generated waste has seen a decrease from 1998 to 2008 of 6,020 tons and that the tons per person has a decrease from .90 tons per to .62 tons per. The slight increase shows that the region has become more environmentally green in terms of recycling and waste diversion from other regions that usually show a greater disparity in the tons per person due to the increase in materials purchased. The State average is 1.2 tons per person. The region of Monroe County has room for growth in terms of providing more recycling efforts in the future.

Monroe County must have their waste transported out of the region. There is very little incentive for the private contractor to help in recycling efforts. The more tons collected and transported, the more revenue is generated from the disposal of Class I waste. The 10 year contract will be up next year that will allow the region to take control of the transfer station that may allow for more collection of Class IV waste and the start of a composting program. The region does charge a tipping fee of \$48.52 for all Class I waste that is taken to the transfer station and 51.59 for all Class I waste collected at the convenience centers.

The components of solid waste are being handled the following way by the entities in the Monroe County Region.

**Class I waste** is being handled through a network of convenience centers that are serviced by Waste Connection a private company. A total of (4) four convenience centers are scattered throughout the county. Waste Connection also owns and operates a transfer station in Vonore that allows Class I waste to be collected. All of the convenience centers are manned with County employees and the containers are either owned by the County or the containers are rented by the County. The transfer station is manned by Waste Connection employees and the containers are owned by Waste Connection. When possible the Class I waste is taken directly to the landfill from the convenience centers that save on transportation cost. A lot of times on the week-end or after a holiday the waste must be hauled to the transfer station from the convenience centers and then transported to the landfill during operating hours. Most of the waste is hauled to a Class I regional landfill in McMinn County. The City of Sweetwater contracts out their waste to Waste Connection that provides door to door collection once a week. The City of Sweetwater also provides regular pickup through Waste Connection for the commercial establishments. However, any commercial establishment that is large enough to have their own cu.yd. container must provide their own pickup service. The City of Sweetwater currently does not charge the residents or the commercial establishment for the refuse collection. The City of Madisonville also provides door to door collection by way of a contract with Waste Connection. The City of Madisonville only provides the service for its residential customers and does charge a monthly fee of \$15.36 per household. The Town of Tellico Plains also provides weekly door to door collection of Class I waste for its residents and does charge a monthly fee of \$12.76. The Town of Vonore does not provide any door to door collection of Class I waste for its citizens. All waste that is collected in Monroe County is taken to the Class I landfill in McMinn County called Meadow Branch with an estimated 15 years left at the current site.

**C&D waste or Class IV waste** is currently not collected in the region for its residents and the Class IV waste that is shown on the annual report is from private companies. Class IV waste is hauled to a Class IV landfill, Popular View in Knoxville. Class IV waste does not have a separate tipping fee at the present time. Any Class IV waste that is picked up in small amounts by the cities is not being counted as Class IV waste because the waste is currently being taken and disposed of in a Class I waste. A total of 2,415 tons of waste was collected and diverted from the Class I landfill in 2009 reporting period.

**Waste Tires** are collected at the Little Notchy Creek Convenience Center site that is located at 570 Little Notchy Creek Road, Madisonville, Tennessee. Small amount of tires up to four per person are allowed at all of the convenience centers. These tires must be from a private individual, all other tires are sent to the Notchy Creek Convenience Center for drop off. None of the cities provide a weekly service for tires to be collected. The Town of Tellico Plains will provide a clean-up day once a year that will allow for the placement of tires at the curbside to be picked up and taken to Notchy Creek Convenience Center. City of Madisonville and City of Sweetwater will provide some small pickups on call in basis for the elderly or handicapped. The Town of Vonore does not provide pickups for residential tires. The County accepts tires from the commercial tire dealers as long as invoices on the tires are provided for that can be reimbursed under

the State program. The Monroe County region contracts out the collection and hauling of the tires. The private contractor sets up a transfer trailer at the Notchy Creek Convenience Center that allows for the placement of the tires into the trail. County employees will help residents that need assistance to avoid any personnel injuries. A total of 371 tons of tires were collected and diverted from the Class I landfill.

**Used Oil** is not collected at the convenience centers, but the region has about (8) private locations for such collection. The region also has a collection site at the Monroe County Highway Department and the Monroe County Airport. Both of these sites use the used oil collected to heat their buildings. The City of Sweetwater and the Towns of Tellico Plains and Vonore provide the collection of used oil for its citizens. The City of Sweetwater was using the oil for heat, but their burner has stopped working. Currently all of the Cities mentioned have a private company pick up the oil. There are no other public used oil collection sites in the region. A total of 115 tons of used oil was collected in 2009.

**E-Waste** is collected at all of the convenience center sites and is collected at the transfer station. The Waste that is collected at the convenience centers is taken to the transfer station by county employees and is picked up by a private company. All of the Cities will collect small amounts of e-waste from their citizens. An estimated total of 2 tons of electronic waste was collected in 2009.

**White Goods / metals** are collected at the convenience centers; the metal is collected in 40 cu.yard open top. All of the metals that are collected are taken to Seaton Iron in Athens, Tennessee. The City of Madisonville will collect small amount of white goods from citizens and will take the metals to the Convenience Center. The City of Sweetwater will collect metals and white goods from citizens and also has a drop off site at their public works compound. The metals that are collected by the City of Sweetwater are taken to Seaton Iron and revenue kept by the City of Sweetwater. The Town of Tellico Plains has a privately owned recycling center within the town limits that will collect small amounts and the material is sold by that private business. The Town of Vonore will collect some white goods on a call in basis and take the material to the transfer station. A total of 233 tons was collected in the Monroe County Region.

**Brush / Compost materials** are not collected at any of the convenience center sites. Any resident that has brush is directed to the transfer station. There is no fee to dispose of your brush at the transfer station. The brush is collected and burned at the transfer station. The City of Madisonville does provide a brush collection schedule and utilizes a brush chipper and a ton truck to perform the work with three employees. The brush is either chipped on site or taken back to the public works building for the community to use. The City of Sweetwater also has a brush collection service every other week. The City of Sweetwater does not have a chipper at the present time, so the brush is hauled back to the old city landfill loose. The City hires a company to come in and chip the brush at a cost of about \$40,000 a year. The chips are then sold to Bo-Waters for about \$20,000 a year. The larger material is left at the old landfill site for burning. The Town of Tellico Plains will collect brush when needed utilizing a brush chipper and ton truck. When possible the material is chipped on site. The rest is taken back to the public works building for use by the City. The Town of Vonore will also pick up brush when needed utilizing a ton truck and chipper. The Town takes the chips to the recreation complex for use by the

community. There was no compost material reported in the region of Monroe in 2009. The region will need to start getting a figure from the Cities on the next annual report. The county does not provide any service for the collection of leaves. The City of Madisonville and Sweetwater both provide a collection of leaves on a specified route during the fall. The leaves are collected and taken to the same designated site as the brush for use as a composting material. The Town of Vonore will pick up leaves, if they are in bags and take the material to the transfer station for disposal. The Town of Tellico Plains provides a collection of leaves on a call in basis.

**Sewer Sludge** is taken to the regional landfill in McMinn County by all of the utilities in the region.

**Paint** is currently not being accepted by the region of Monroe. Any paint that is collected has been placed in the Class I containers without knowledge of the attendants. None of the cities provide for the collection of paint. Monroe County will host a HHW event once a year for the collection of oil based paint at the Notchy Creek Convenience Center.

**Paper and cardboard** is collected at each convenience center utilizing a roll-off system and when full the county has a contract with APR of Knoxville to transports the waste to a processing center. The region does utilize a compactor at the Madisonville Center for paper and cardboard in order to keep the hauling from that center to a minimum. The Town of Tellico Plains has a privately owned and operated recycling center that provides for the collection of paper and cardboard. A total of 294 tons of paper and cardboard were collected and properly disposed of in 2009 by the region. An additional 1,201 tons of cardboard was baled and taken to the market place by commercial establishments.

**Plastic** is collected at each convenience center utilizing a roll-off system and when full the county has a contract with APR of Knoxville to transport the waste to a processing center. The plastic that is allowed is # 1 and # 2. The Town of Tellico Plains also collects plastic at the privately owned and operated recycling center and has it delivered to a processing center. The City of Sweetwater has some recycling containers at city hall for the collection of plastic bottles that are then taken to the convenience center. None of the other cities recycle plastic. A total of 31 tons was reported in 2009.

**Glass** is collected at the convenience centers utilizing a roll-off system and when full is taken to the processing center by APR of Knoxville. No glass is being collected by any of the cities at the present time. A total of 56 ton of glass was reported in 2009.

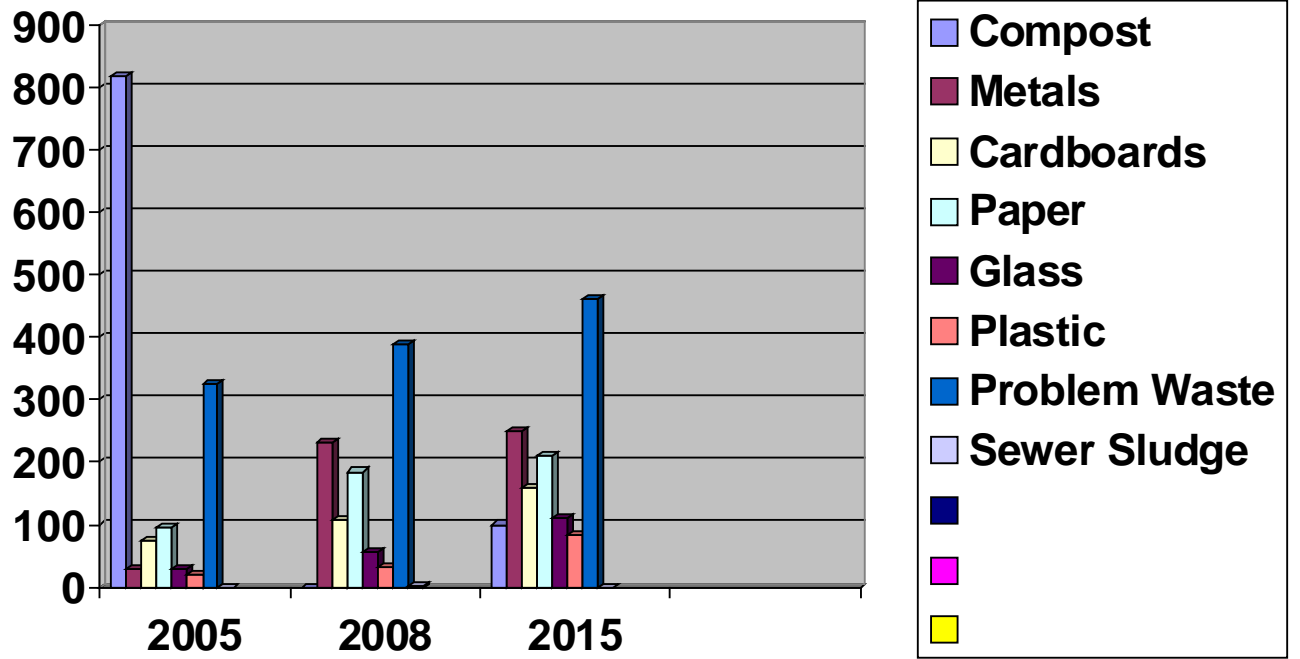
**Aluminum Cans** is collected at all of the convenience centers. Residents can bring the aluminum cans into the convenience centers and place into recycling containers. When the containers are full the county has APR transport and process the cans. The Town of Tellico Plains provides for the collection of cans at the privately owned and operated recycling center. The City of Sweetwater has containers at city hall for the collection of cans. Those cans are collected and taking to the convenience center. No other entities have an aluminum can recycling program. A total of 6 ton was reported in 2009.



The above information represents a good analogy of the public sector and how it takes care of its waste. As we attempted to provide an analysis for three 5 year periods. The numbers became skewed and after research we found that there are two large companies that affect those numbers. The glass numbers are affected by Carlex Glass Company and the other category represents industrial by-product that comes from Havco Wood Products. The economy will greatly affect those numbers and it has shown as the economy has slowed down, so has the numbers in these categories been less. For that reason the numbers showed below only represent the public entities.

Material	Material – 2005	Material –2009	Material –2015
Sanitation - Land filled	28,921	25,447	27,648
Metals / White Goods	28	233	250
Cardboard	74	109	160
Paper	96	185	210
Glass	28	56	112
Plastic	21	31	83
Problem Waste – tires, batteries, automotive fluid, e-waste, paint.	326	389	463
Sewer Sludge	0	1	0
Compost	817	0	100
Class III/IV	5,590	2,415	3,200
Other	29	62	132
Total Generated	35,930	28,928	32,358

The 2015 number for waste generated is based on the current .62 tons per person times the estimated population of 52,194. The line item numbers was estimated based on the current percentage that is being done in 2009. The per capita on waste per person is less than the State average of 1.2. This illustrates the amount of recycling efforts that the region has undertaken by the County and the Cities. The .62 tons per person should remain constant or go down slightly in the next needs assessment due to the increase efforts in recycling at the schools. As those students become adults the mindset of the importance to recycle and becoming good environmental stewards will have taken hold. The region has done a good job to make residents more aware of the need to divert as much waste from the landfill as possible. Below is the numbers for materials that are not being land filled in either Class I or Class IV.



#### **Item # 4: Waste Collection System and Life Cycle**

The Region of Monroe County utilizes (4) four convenience centers and a transfer station to collect Class I waste for Monroe County. The Cities of Madisonville, Sweetwater and Tellico Plains contract out their collection and disposal of their Class I waste. The Town of Vonore does not provide waste collection services for their residents. All of the waste is taken to the regional landfill in McMinn County that is owned and operated by Waste Connection. The landfill has at least 15 years left.

Class IV waste can be taken by residents of the region to the transfer station in Vonore. The Class IV waste that is collected at the transfer station is not being disposed of in a Class IV landfill, but is taken to the Class I landfill for disposal. All class IV waste that has been accounted for in the region comes from private companies and is being taken to the landfill in Knoxville Popular View. The Region does not provide collection sites for the disposal of Class IV waste. The cities do provide occasional collection of Class IV waste from residents during annual or semi-annual cleanups. The region of Monroe County currently does not have a separate charge for Class IV waste.

The citizens of Monroe County must take their brush and leaves to the transfer station in Vonore. Some of the material is used as compost, while the rest is burned. All of the cities collect and process their brush and provide the compost material to their citizens.

Tires are collected in a trailer at the Notchy Creek Convenience Center. The other convenience centers will allow up to four tires per person to be placed at those centers and are then transported to the Notchy Creek Center and placed in the trailer. When full the trailer is hauled to an end user by the contracted company. The Cities don't have any drop off sites for tires.

White Goods/metals are collected at all of the convenience centers and taken to an end user by APR a private contractor. The City of Sweetwater handles their own collection of metals and sells the material to a processing center. The other cities will collect small amount of white/goods from its citizens and then transport the material to the convenience centers for collection and transport to the processing center.

Recyclable items are collected at all of the convenience centers in Monroe County region. The items are transported by APR to a processing center and then to an end user. The Town of Tellico Plains has a privately owned and operated recycling center that collects items. The City of Sweetwater collects plastic bottles and cans at City Hall. The City of Madisonville and the Town of Vonore currently don't have any recycling programs.

Used oil is collected through a network of 8 private collection sites throughout the region. Used oil is not collected at the convenience centers. The region has two public sites that collect used oil and use the oil to heat buildings, Monroe County Highway Department and Monroe County Airport. The City of Sweetwater provides a collection site for its residents and currently has a private contractor collect the oil. The Towns of Tellico Plains and Vonore also provide a collection site for their citizens and have a private contractor collect the oil. The City of Madisonville does not provide for any collection at the present time.

E-Waste is collected at all of the convenience center sites and is collected at the transfer station. The Waste that is collected at the convenience centers is taken to the transfer station by county employees and is picked up by a private company. All of the Cities will collect small amounts of e-waste from their citizens.

Paint is not being collected in the region at the present time. The county has utilized the HHW event from the State to collect and transport paint. None of the cities provide for the collection of paint.

Sewer Sludge is being taken directly to the landfill by the utility companies.

## Section 5 – Monroe County Reduction Rate

Current Year Generation	Current Year Disposal	Base Year Disposal	Current Year Population	% Reduction compared to Base Year	Real Time Comparison
47,954	25,447	327,419	42,168	33%	47%

The Region of Monroe County currently meets the 25% waste reduction goal in 2009 as shown in the table above. Below is an illustration on what items are needed or in the process of starting that will help the Region to continue meeting the goal in the future. Initial review of last years annual report showed that no commercial establishments reported. Places like Wal-Mart in Madisonville will create recycling tons that need to be reported in the future. Based on other communities with a Wal-Mart another 300 tons a year in recyclable materials could be accounted for. .

Since the original solid waste plan was implemented the Region of Monroe County has not been inactive in the pursuit of providing recycling opportunities for their citizens. The region has added such items as white goods, cell phones; toner/printer cartridges; computers/electronics and plastic. These items are in addition to the glass, cardboard, mixed paper, metals and city based composting efforts that are available in the region. One change from the last needs assessment is that two large privately owned industries have been hit hard by the economy and their numbers in terms of recycling have significantly decreased. That is one area that the region has not been able to recover in terms of recycling numbers.

**Class I waste** in the region of Monroe County will be changed within the next four years when the contract with Waste Connection expires. The biggest change is that the transfer station will then belong to the County. When that takes place it is the wish of the County to provide more diversion opportunities at the site. The County also needs to look at two more convenience centers in the future, one to be located in the Citico area and the other outside of the City of Sweetwater.

**Class IV waste** has seen a decline in the last few years due to the fact that unless the waste is coming from a contractor there is no way to separate the Class IV waste and the waste is being taken to a Class I landfill. When the County takes control of the transfer station it will put in steps that will allow for all Class IV waste to be diverted from the Class I landfill. A cursory estimate would suggest that another **2000 tons** of Class IV waste could be collected that is now going to a Class I landfill. The region would probably need to start charging the residents for Class IV waste once the expansions are completed. Otherwise without a reduce rate there is no reason for a resident to take the trouble to separate Class IV from Class I waste.

**Waste Tires** are being handled efficiently by the region. No changes in the process are needed for the region. Monroe County Region is one of a few regions that allow commercial businesses to take their tires to the publicly owned site.

**Used Oil** drop offs have been made accessible to most residents in the region. The convenience centers are still an option for the County to provide additional services. The days of do it yourself oil changes are dwindling, so I don't know if providing the service at the convenience centers will ever be needed. The City of Sweetwater needs to purchase a new oil burner to make use of the oil that they are collecting. The City of Madisonville does not have an enclosed public works facility that could make use of the heat from used oil. Tellico Plains and Vonore do collect used oil at the public works facilities and have the used oil picked up when full. One can estimate an additional **2 tons** of waste that will be diverted from the landfill, if Madisonville would begin a used oil collection program.

**E-waste** will continue to increase in the future. The County has a very good program that can be expanded once the transfer station is turned over to the County. The cities provide some small pickup of e-waste and has clean up days that help to collect such waste. Don't see any deficiency in the program that could create more waste.

**White Goods / metals** are being collected at the convenience centers. The City of Sweetwater has used the collection of metals as a revenue source that other cities might want to look at in the future. No changes are needed at the present time.

**Brush / Compost** materials in the County are not being collected at the convenience centers. Such material can be taken to the transfer station in Vonore. The County may want to work out a program utilizing their brush chipper with Tellico Plains, Sweetwater and Madisonville that could allow for brush to be collected at the convenience centers and the cities mulch the material. The transfer station makes a great place to handle brush, but until the County takes over the transfer station there is no real incentive for private company to compost all of the material that is being collected. It is much easier for them to either burn the material or take it to the landfill. The Madisonville Convenience Center has the room to take brush and the County has actually tried to provide the service for its residents. However, until the region can provide a means to chip up the material the collection of brush at the center is not feasible. Discussion has been made with the City of Madisonville and the Highway Department to utilize their chippers, but the logistics have not been worked out at the present time. As a person looking at the program from the outside, my first thought is that the City of Sweetwater should purchase a brush chipper of their own that would save them from renting out the mulching of their materials. However, since that have a market for the mulching material with Bo-Waters, the need to provide a continuous supply may be easier for another company to handle the mulching. This keeps the city from having to pull their labor force from other jobs and it is one less equipment that they have to maintain. The system seems to be working quite efficient. All of the cities have brush collection and provides the by-product for its citizens to use. As changes in rules become stricter in terms of burning and being able to count certain items towards the 25% reduction, it will be very important for the region to provide composting as a means of diversion in the future. The transfer station will be able to provide the space needed once the County is able to take over the transfer station from Waste Connection. It is estimated that over 400 tons of compost

material is not being counted on the annual reports from the cities at the present time and that another **400 tons** could be counted in the future with the county starting a compost program.

**Paint** is one area that the region is lacking in providing a diversion from Class I waste. The County does provide a once a year HHW site using the States program. The region has the opportunity to utilize an abandon site across from the Little Notchy Creek Convenience Center that could be used to house the paint. One would estimate that an additional **45 tons** of waste could be diverted by the region. The development of the site would allow the convenience centers to take small amounts of paint from residents and have county employees take to the site. Other larger amounts can be directed to the site for disposal. The region could take the latex paint and empty the paint into buckets that would allow for full paint cans. The paint could then be reused by the county for projects such as painting the recycling containers, painting equipment at play grounds. The region could donate paint to Habitat for Humanity. Other regions that utilize this process report about 60% of the paint is white based. The oil based paint could also be accepted and the paint that can't be reused could be mixed in with brush chips to dry out the paint and then the paint could be landfilled.

**Sewer Sludge** in the region of Monroe is being taken to the Class I landfill for disposal. It should be noted that all of the utilities have stated that they have purchased dewatering system that provides source reduction in the amount of sludge that is being taken to the landfill. This saves the utilities money in terms of less tipping fee charges. This seems to be quite efficient and don't see any reason for the utilities to do anything different. There was a push in the past due to farmlands for wet applications for fertilizing, but recent regulations have made such applications harder to obtain.

**Paper and cardboard** is collected at each convenience center and transported and processed by a private hauler. The use of compactors for collection has made the process more efficient for County with a reduction in transportation. This is a program that other communities need to look at in the future. The Town of Tellico Plains is fortunate to have a privately owned and operated recycling center that provides for such collection for its residents. One would think that the other cities should be able to set up a recycling trailer within the city to handle such collection. It is estimated that an additional **150 tons** of waste could be diverted through this process. The County also has the potential for growth into the governmental offices for the collection of paper and cardboard and the schools. The problem right now is the ability to find funding to provide containers to be placed into these entities. All of the entities have agreed that they would participate, if such equipment can be obtained.

The region may want to look at what the Cocke County region has done in terms of recycling at the schools in the future. Their program although infant in its inception has done quite well. The Cocke County region has tied the recycling at the schools to an incentive program, where by the schools can receive monies that can be used for the classrooms. The region could possibly contract this out with a company like Goodwill Industries. Since the County does not own any of the equipment for collection it will make it harder to start the program overnight. However, the private contract with Waste Connection is up for renewal during the next needs assessment that will provide the region an opportunity to provide such recycling.

**Plastic** is collected at all of the convenience centers in same manner as cardboard and paper. The same impediments are also seen in the collection of plastic. The region provides the collection and transportation of plastic to an end user by utilizing a private contractor. In the future, the County may want to look at the school system changing over to plastic bottles for milk. That would provide more recycling opportunities at the schools. The Town of Tellico Plains also provides for the collection of plastic at the privately owned and operated recycling center. The City of Sweetwater provides for the collection of plastic bottles at City Hall. The other cities could provide drop off sites for plastic in order to increase the amount of plastic being diverted from the landfill. The only problem is that plastic takes up a lot of space in a container and has to be dumped more frequent. Until plastic becomes a high dollar commodity for recycling, very little else can and should be done in the region.

**Glass** is another item that is collected at the convenience centers and is handled by APR of Knoxville. The region does not need to make any changes on the way it handles glass at the convenience centers. If it ever becomes feasible for the cities to provide door to door recycling, the collection of glass will increase in the region. Such collection door to door should increase glass collection by about **75 tons** a year.

The Region of Monroe County has made great strides in providing new services to its residents in terms of recycling. The region of Monroe County needs to find ways to get the cities more involved in the future. Within the next four years a new contract will be needed with the collection of waste, the region needs to look at ways to develop the contract that will allow for more recycling opportunities.



**Item # 6: 10-Year Regional Disposal Assurance in Monroe County Region.**

Site Name	Annual Tons Disposed by Monroe County	SNL Permit #	Current Landfill Capacity (daily throughput)	Maximum capacity	Projected Life of Facility
Meadow Branch Landfill	25,447	SNL-54-0174	300 per day	Depends on compaction rate and Landfill Design and Operations Plan	15 years left

Site Name	Annual Tons Disposed by Monroe County	SNL Permit #	Current Landfill Capacity (daily throughput)	Maximum capacity	Projected Life of Facility
Popular View Class III Landfill	2,415	DML-47-0057	73 tons per day	2,555 per day	15 years remaining

Public and Private Collection Service in the Monroe County Region (class I waste)

Service Provider	Service Area	Frequency of Service	Estimated average annual tons collected	Type of Service
Monroe County	County Wide	Six Days a Week	20,239	Convenience Centers
Madisonville	City Limits	Once a Week	2,860	Door to Door Collection
Sweetwater	City Limits	Once a Week	4,062	Door to Door Collection
Tellico Plains	City Limits	Once a Week	611	Door to Door Collection
Vonore	City Limits	Six days a week	910	Does not provide service utilize Convenience Centers from the County

\*\* Estimated tonnage is based on .62 tons per person time's population of entity.

All commercial and industrial establishments contract out the collection of their waste with private haulers.

Public and Private Collection Service in the Monroe County Region (Recycling)

Service Provider	Service Area	Frequency of Service	Estimated average annual tons collected	Type of Service
Monroe County	County Wide	Six Days a Week	1,065	Convenience Centers ( recycling drop off sites)
Madisonville	City Limits	No Service	0	Small pickup of white goods; brush and leaf program.
Sweetwater	City Limits	No Service	0	Metals program with container; brush and leaf program.
Tellico Plains	City Limits	No Service	0	Recycling Center
Vonore	City Limits	No Service	0	Brush and Leaf program.

Monroe County has four registered convenience center that are scattered throughout the region. All of the Convenience Centers operate as recycling drop off site. The sites handle metal, paper, glass, plastic, textile and tires. The operating hours are 8:00 – 5:00; M-F and 8:00 – 12:00 Sa. The Town of Tellico Plains has a privately owned and operated recycling center with containers for plastic, paper, cardboard and glass. The City of Sweetwater has a container for metals on the public works compound.

Industries and Commercial establishments coordinate their own recycling efforts.

## Item # 7: Solid Waste Management Infrastructure

### Monroe County

Expenditures			
Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits	\$443,981	\$0	\$443,981
Transportation/hauling	\$1,025,000	\$0	\$1,025,000
Collection and Disposal Systems			
Equipment	\$120,000	\$55,000	\$175,000
Sites	\$0	\$0	\$0
Convenience Center	\$621,577	\$320,000	\$941,577
Transfer Station	\$0	\$0	\$0
Recycling Center	\$0	\$0	\$0
MRF	\$0	\$0	\$0
Landfills	\$0	\$0	\$0
Site	\$0	\$0	\$0
Operation	\$0	\$0	\$0
Closure – See total under post closure	\$0	\$0	\$0
Post Closure Care	\$29,000	\$0	\$29,000
Administration (supplies, communication cost, etc.)	\$91,856	\$0	\$91,856
Education	\$0	\$0	\$0
Public			
Continuing Education			
Capital Projects	\$0	\$0	\$0
<b>Total</b>	<b>\$2,331,414</b>	<b>\$365,000</b>	<b>\$2,706,414</b>
Revenue			
Host agreement fee	\$0	\$0	\$0
Tipping fees	\$850,000	\$0	\$850,000
Property taxes	\$1,088,072	\$0	\$1,088,072
Sales tax	\$0	\$0	\$0
Surcharges	\$0	\$0	\$0
Disposal fees	\$0	\$0	\$0
Collection charges			
Industrial or Commercial charges	\$0	\$0	\$0
Residential charges	\$0	\$0	\$0
Convenience Centers charges	\$0	\$0	\$0
Transfer Station charges	\$0	\$0	\$0
Sale of Recyclables	\$9,000	\$0	\$9,000
Other sources: (Grants, bonds, interest, sales, etc.)	\$224,556	\$0	\$224,556
<b>Total</b>	<b>\$2,171,628</b>	<b>\$0</b>	<b>\$2,171,628</b>

The Region of Monroe County will construct two new convenience centers with the help of grant funding and start a paint center in the near future.

City of Madisonville

Expenditures

Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits	\$46,471	\$0	\$46,471
Transportation/hauling	\$216,317	\$0	\$216,317
Collection and Disposal Systems			
Equipment	\$13,594	\$0	\$13,594
Sites	\$0	\$0	\$0
Convenience Center	\$0	\$0	\$0
Transfer Station	\$0	\$0	\$0
Recycling Drop Off Center	\$0	\$0	\$0
MRF	\$0	\$0	\$0
Landfills	\$16,650	\$0	\$16,650
Site	\$0	\$0	\$0
Operation	\$0	\$0	\$0
Closure – See total under post closure	\$0	\$0	\$0
Post Closure Care	\$0	\$0	\$0
Administration (supplies, communication cost, etc.)	\$0	\$0	\$0
Education	\$0	\$0	\$0
Public			
Continuing Education			
Capital Projects	\$0	\$0	\$0
Total	\$293,032	\$0	\$293,032
Revenue			
Host agreement fee	\$0	\$0	\$0
Tipping fees	\$0	\$0	\$0
Property taxes	\$0	\$0	\$0
Sales tax	\$0	\$0	\$0
Surcharges	\$0	\$0	\$0
Disposal fees	\$0	\$0	\$0
Collection charges			
Industrial or Commercial charges	\$0	\$0	\$0
Residential charges	\$279,009	\$0	\$279,009
Convenience Centers charges	\$0	\$0	\$0
Transfer Station charges	\$0	\$0	\$0
Sale of Methane Gas	\$0	\$0	\$0
Other sources: (Grants, bonds, interest, sales, etc.)	\$39,606	\$0	\$39,606
Total	\$318,615	\$0	\$318,615

All services are being met at the present time.

City of Sweetwater

Expenditures			
Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits	\$395,554	\$0	\$395,554
Transportation/hauling	\$320,000	\$0	\$320,000
Collection and Disposal Systems			
Equipment	\$0	\$15,000	\$15,000
Sites	\$0	\$0	\$0
Convenience Center	\$0	\$0	\$0
Transfer Station	\$0	\$0	\$0
Recycling Center	\$0	\$0	\$0
MRF	\$0	\$0	\$0
Landfills	\$34,000	\$0	\$34,000
Site	\$0	\$0	\$0
Operation	\$0	\$0	\$0
Closure – See total under post closure	\$0	\$0	\$0
Post Closure Care	\$0	\$0	\$0
Administration (supplies, communication cost, etc.)	\$0	\$0	\$0
Education	\$0	\$0	\$0
Public			
Continuing Education			
Capital Projects	\$0	\$0	\$0
<b>Total</b>	<b>\$749,554</b>	<b>\$15,000</b>	<b>\$764,554</b>
Revenue			
Host agreement fee	\$0	\$0	\$0
Tipping fees	\$0	\$0	\$0
Property taxes	\$749,554	\$0	\$749,554
Sales tax	\$0	\$0	\$0
Surcharges	\$0	\$0	\$0
Disposal fees	\$0	\$0	\$0
Collection charges			
Industrial or Commercial charges	\$0	\$0	\$0
Residential charges	\$0	\$0	\$0
Convenience Centers charges	\$0	\$0	\$0
Transfer Station charges	\$0	\$0	\$0
Sale of Methane Gas	\$0	\$0	\$0
Other sources: (Grants, bonds, interest, sales, etc.)	\$0	\$0	\$0
<b>Total</b>	<b>\$749,554</b>	<b>\$0</b>	<b>\$749,554</b>

The City of Sweetwater needs to purchase a new used oil burner to be used at the public works building.

Town of Tellico Plains

Expenditures			
Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits	\$72,000	\$0	\$72,000
Transportation/hauling	\$0	\$0	\$0
Collection and Disposal Systems	\$0	\$0	\$0
Equipment	\$7,500	\$0	\$0
Sites	\$0	\$0	\$0
Convenience Center	\$0	\$0	\$0
Transfer Station	\$0	\$0	\$0
Recycling Center	\$0	\$0	\$0
MRF	\$0	\$0	\$0
Landfills	\$0	\$0	\$0
Site	\$0	\$0	\$0
Operation	\$0	\$0	\$0
Closure – See total under post closure	\$0	\$0	\$0
Post Closure Care	\$0	\$0	\$0
Administration (supplies, communication cost, etc.)	\$12,000	\$0	\$12,000
Education	\$0	\$0	\$0
Public			
Continuing Education			
Capital Projects	\$0	\$0	\$0
Total	\$91,500	\$0	\$91,500
Revenue			
Host agreement fee	\$0	\$0	\$0
Tipping fees	\$0	\$0	\$0
Property taxes	\$91,500	\$0	\$91,500
Sales tax	\$0	\$0	\$0
Surcharges	\$0	\$0	\$0
Disposal fees	\$0	\$0	\$0
Collection charges			
Industrial or Commercial charges	\$0	\$0	\$0
Residential charges	\$0	\$0	\$0
Convenience Centers charges	\$0	\$0	\$0
Transfer Station charges	\$0	\$0	\$0
Sale of Methane Gas	\$0	\$0	\$0
Other sources: (Grants, bonds, interest, sales, etc.)	\$0	\$0	\$0
Total	\$91,500	\$0	\$91,500

All needs are being met in the present and future.

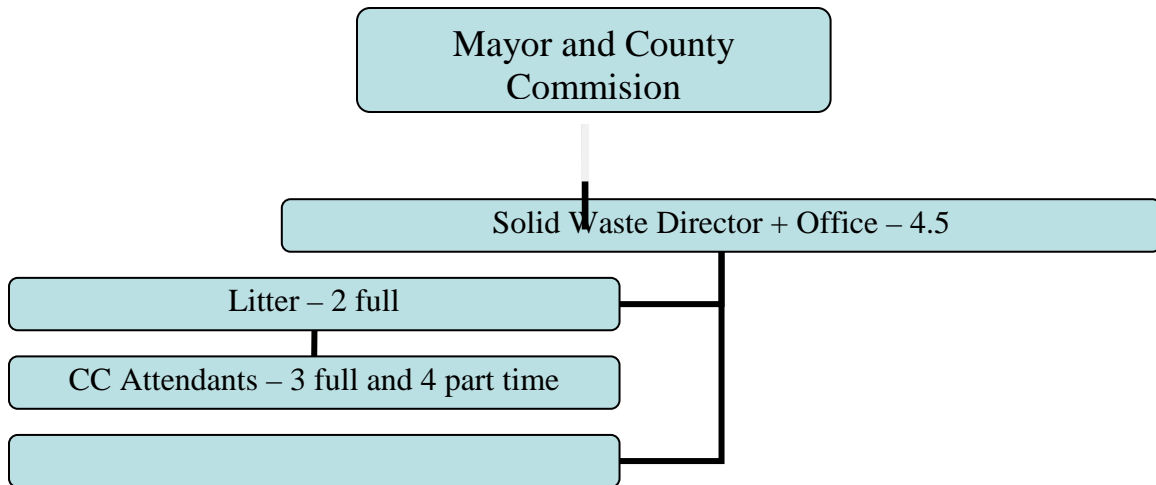
Town of Vonore

Expenditures			
Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits	\$120,000	\$0	\$120,000
Transportation/hauling	\$0	\$0	\$0
Collection and Disposal Systems			
Equipment	\$15,000	\$0	\$15,000
Sites	\$0	\$0	\$0
Convenience Center	\$0	\$0	\$0
Transfer Station	\$0	\$0	\$0
Recycling Center	\$0	\$0	\$0
MRF	\$0	\$0	\$0
Landfills	\$0	\$0	\$0
Site	\$0	\$0	\$0
Operation	\$0	\$0	\$0
Closure – See total under post closure	\$0	\$0	\$0
Post Closure Care	\$0	\$0	\$0
Administration (supplies, communication cost, etc.)	\$5,600	\$0	\$5,600
Education	\$0	\$0	\$0
Public			
Continuing Education			
Capital Projects	\$0	\$0	\$0
Total	\$140,600	\$0	\$140,600
Revenue			
Host agreement fee	\$0	\$0	\$0
Tipping fees	\$0	\$0	\$0
Property taxes	\$140,600	\$0	\$140,600
Sales tax	\$0	\$0	\$0
Surcharges	\$0	\$0	\$0
Disposal fees	\$0	\$0	\$0
Collection charges			
Industrial or Commercial charges	\$0	\$0	\$0
Residential charges	\$0	\$0	\$0
Convenience Centers charges	\$0	\$0	\$0
Transfer Station charges	\$0	\$0	\$0
Sale of Methane Gas	\$0	\$0	\$0
Other sources: (Grants, bonds, interest, sales, etc.)	\$0	\$0	\$0
Total	\$140,600	\$0	\$140,600

All needs are being met in the present and future.

**Item # 8: Solid Waste Department Organization and Location**

Monroe County



Monroe County has four convenience centers with the following locations:

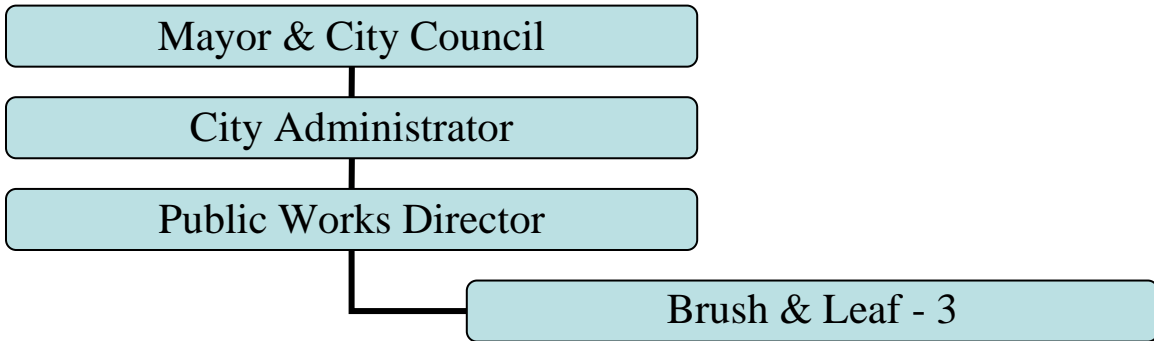
1. Madisonville – 288 Industrial Park Road, Madisonville, 37354
2. Sweetwater – 2194 Hiwasse Road, Sweetwater, 37874
3. Tellico Plains – 8825 Hwy 68, Tellico Plains, 37385
4. Little Notchy Creek – 570 Little Notchy Creek Road, Madisonville, 37354

Monroe County has one transfer station with the following location:

1. Vonore Transfer Station – Tellico Port Road, Niles Ferry Industrial Park, Vonore, TN. 37885



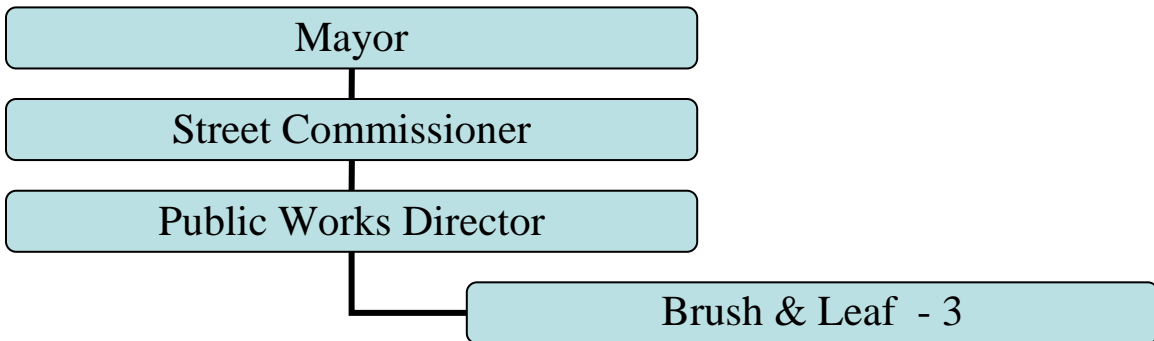
City of Madisonville



The Madisonville Public Works Compound is located at the following location:

1. 400 College Street, Madisonville, 37354

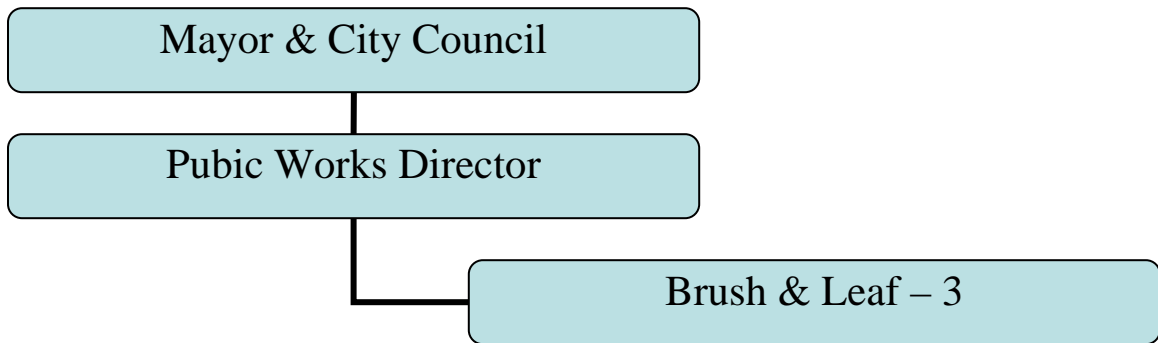
City of Sweetwater



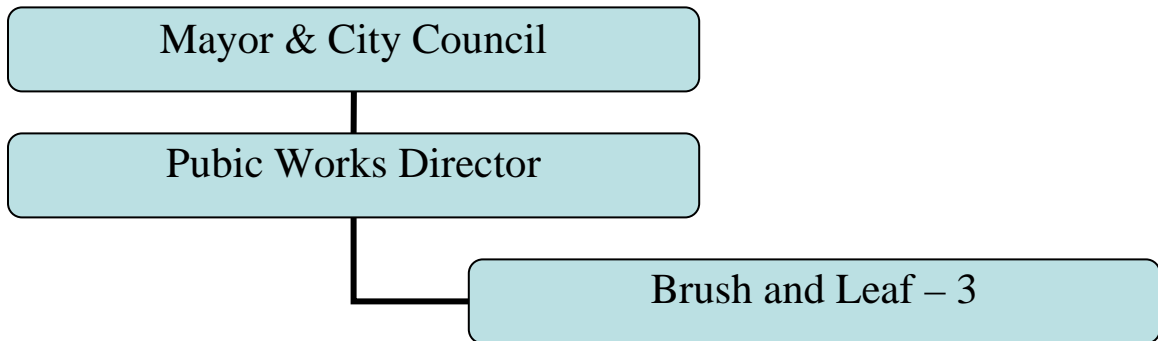
The Sweetwater Public Works Compound is located at the following location:

1. 321 South High Street, Sweetwater, 37874

Town of Tellico Plains



Town of Vonore



The Town of Vonore Public Works Compound is located at the following location:

1. 613 Church Street, Vonore, 37885

## Item # 9: Future Waste Management Needs

### Monroe County Region

#### Collection

Equipment	Operational Use	Estimated Cost	Potential Revenue Source	Entity
4 cu. Yd containers	Paint	\$10,000	County General Fund	Monroe County
Brush Chipper	Brush	\$20,000	Grant	Monroe County
Roll-Off Container/compactor	Convenience Centers	\$10,000	County General Fund	Monroe County
Containers for the school	Recycling	\$15,000	Grant	Monroe County
Used Oil Burner	Recycling	\$15,000	Grant	Sweetwater

#### Disposal

Equipment	Operational Use	Estimated Cost	Potential Revenue Source	Entity
Convenience Centers (2)	Collection	\$320,000	County General Fund	Monroe County

The Region of Monroe County has equipment needs as shown above that will take time to purchase on their own. Monroe County will also need to start looking at constructing two new convenience centers to better serve the residents in the region. The region has identified the need for a paint collection system and with grant help should be able to have it in place within the next two years. The convenience centers that are needed are in the Citico area of the county and another one outside of Sweetwater. The convenience centers can only be constructed with additional funding from other sources than the County. If the region is ever going to start a composting program it needs to purchase equipment that will be able to chip the brush. The region has tried to utilize other entities equipment, but the logistic make it hard to develop and maintain a constant system of chipping so as not to have the site become unmanageable. The region has also identified a site that can be used for a paint program across the street from the Little Notchy Creek Center. In order to develop the site, the region will need to purchase some equipment to make the program feasible. The City of Sweetwater needs to purchase a new oil burner that can use heat one of the public works buildings. The old burner is no longer useable and the oil that is being collected is being taken to an end user, but is not providing the savings that the burner can provide in terms of heat savings.

## **Item # 10: Residents Attitude and Participation**

No formalized surveys have been done to measure the public's attitude of Monroe County residents concerning support for environmental programs. The mindset of the people is changing as the population gets older as illustrated by the decrease in the tons per person in the region from .90 to .62. Although, modest in number the size of the population of Monroe County has made a significant drop in waste being diverted from the landfill. Most residents that were casually asked about recycling agree that it is a good way to help do their part in saving the environment. However, most are not willing to go out of their way to recycle. The word convenience tends to come in mind towards the reaction towards recycling. Most feel it is the government's job to provide recycling opportunities and that it should be left up to that person to choose to do so. Most feel that stringent regulations should not be passed that force residents to recycle. As the school age children become older and they are use to recycling items at school a habit of recycling will dictate the increase in pubic participation in the future, which is why it is important to start a recycling program in the schools. Recycling rates have increased in the region and the percentage of waste being disposed of in a Class I landfill has decreased versus the amount of waste generated. The region utilizes Waste Connection for the collection and disposal of their waste, which includes the County and the Cities. The contract will need to be renewed in another four years. Waste Connection has worked with other regions to start door to door collection of recycling and the region will be able to negotiate such collection. None of the cities provide recycling opportunities for their residents at the present time. That being said there has not been an outcry by the residents demanding collection of recyclables within the city limits. The region of Monroe County has the resources available to grow with the public in terms of recycling, when they take over the transfer station from Waste Connection within the next four years.

## **Item # 11: Regional Solid Waste Plan / Executive Summary**

The Monroe County Region's plan for the next five years is to continue to find ways to expand services within their recycling program. As part of the needs assessment, I will take a look at every area of the solid waste stream to give my thoughts on the needs in those areas.

Class I waste is currently being handled in the region by a network of convenience centers that also operate as recycling drop off sites. The Region contracts out the collection of the waste and the transportation of the waste to a regional landfill. As shown on the attach map the convenience centers have been strategically placed throughout the region. A five mile radius shows that every section of the county can be reached by a convenience center. The region has been very proactive in building convenience centers around growth areas in the past. The region will need to look at two other convenience centers in the future that will take care of county residents in Citico and Sweetwater area. These final two convenience centers will provide the entire region with convenient collection opportunities. The lack of any major dumps in the area illustrates that the current convenience centers are taking care of the need for Class I disposal. The other two will allow the region to be proactive before a dumping problem becomes prominent in the Citico area. The Cities of Madisonville, Sweetwater and Tellico Plains provide house to house collection of Class I waste. The Cities also utilize Waste Connection to provide this collection. The Town of Vonore provides no collection services for its citizens. The transfer station is located within their city limits and seems to be adequately taking care of the citizens of Vonore. The region will have an opportunity to reexamine their collection system within the next four years with a new contract. I don't see how it could be feasible to look at doing the collection in-house and they will need to work out a new collection contract with a private company.

Class IV waste is an area that the region needs to provide in the future. The current contract makes it hard to do much with Class IV collection. However, when the current contract expires, the region will take over the transfer station. The region will need to expand the transfer station to allow for the collection of Class IV waste. The region will need to provide containers for the collection of the waste and will need to provide an audit to determine if it is cheaper to provide their own transportation or to contract out that transportation.

Waste Tires are being handled efficiently by the staff of Monroe County. The region has a contract with a private company to dispose of the tires when a trailer load is collected. The State probably needs to provide more funding for this program, but other than that there is no reason to change what is being done for the collection of waste tires.

Used oil collection sites are scattered throughout the region and seem to be operating quite efficiently. The City of Sweetwater needs a new burner to replace the old one that is no longer in use. The cities of Tellico Plains and Vonore have small, but effective programs for their residents. The City of Madisonville needs to look at the benefits of providing the service to its residents and if it would save them money by using the oil for heat; otherwise it is not needed in the region. The region is adequately covered with used oil collection centers by having the collection of used oil at all of their convenience centers.

E waste is something that the region has added in the past year and seems to be working quite well. E waste is collected at the convenience centers. The region has a contract for the disposal of the waste. The Cities do provide for small pickups of such waste during annual clean-up days. No changes to the program are needed at the present time.

White Goods and metals are collected at all the convenience centers. The method of handling the metals is working quite well for the County. The cities also provide for the collection of metal with special day pickups or a collection site in the case of Sweetwater. The collection sites are there for people to use and see no way that the region could increase such collection.

Brush/Compost is one area that the region needs to address in the future. The changing of ownership at the transfer station from private to County in the next four years will provide the room needed to start a composting program in the region. Trends in environmental laws may also suggest the need to start a composting program in the region. The practice of burning brush is becoming more and more scrutinized by the State as being environmentally unacceptable. The Cities in the region have done a good job in providing the collection of brush and leaves for its residents and providing the material for mulching.

The handling of sewer sludge has become more of a source reduction rather than a recycling effort. All of the plants now have some kind of de-watering system that helps reduce the amount of waste that is being taken to the landfill. This in turn saves money on tipping fees for the utility. Land application is becoming harder to get permitted and right now see no strong push by any of the utilities to provide such application.

The collection of paint is something that the region needs to improve upon during the next needs assessment. In talking with the solid waste director paint is an item that the region will be working on within the next year. The region has secured a site for the collection of the paint and will be able to store paint that will allow them to mix and reuse paint for various projects within the region. Latex paint that can be disposed of in the landfill. The region needs to construct a building to store paint that will allow them to mix paints for reuse. The region will need to pay close attention to the labor intensive side of operating a paint reuse center. The region will probably need to experiment on different scenarios to find the most efficient way to handle the paint. Other regions in East Tennessee have been able to utilize prison labor that helps to offset the personnel cost involved in operating a paint recycling center.

Paper and cardboard have always been collected at the convenience centers in the region. Tellico Plains is fortunate to have privately owned and operated recycling center that handles the collection of paper and cardboard. The cities all utilize waste connection for the disposal of their Class I waste door to door with the exception of Vonore that provides no service to its citizens. Other cities that utilize Waste Connection have also started door to door collection as part of their contract. When the contract is up in the region this will be something for the cities to examine. The region has also expressed an interest in starting a recycling program in the schools. The leaders of the schools are more then willing to start the program. The region will need to secure funding for equipment in the future to start the program. The region might want to look at an incentive program at the schools where some of the proceeds go back to the classrooms as a way to increase participation.

The region collects glass at the convenience centers and there are certain avenues that can be looked at to increase recycling numbers in the future. The market will dictate if the region should make such steps to increase the collection of glass in the future. When a new contract is signed for the collection of Class I landfill material, some type of house to house collection of recyclables will need to be looked at that would include the collection of glass. Glass may become more of a viable option, if meeting tonnage diversion becomes a problem in the future.

In summary, the region has met the 25% waste reduction goal that is mandated by the State. The region does receive some numbers from area businesses and should continue to expand on getting more industrial numbers in the future. The region as illustrated has made steps to improve the collection of recyclables since the last needs assessment. The regions has growth potential in terms of more diversion by having the cities become more active in recycling and have the potential to develop more recycling opportunities at the transfer station when the County takes ownership in the next four years. As is the case in all regions there are still things that can be done to further enhance the diversion of waste from a Class I landfill. The economy has slowed down those changes and will place more of a cost benefit analysis on future programs during the next needs assessment period. The region has come along way since the last needs assessment and will continue to reach their goal of having one of the most comprehensive recycling programs in the East Tennessee Region.

**Sources:**

**Monroe County Solid Waste Department**  
**Monroe County Home Page**  
**U.S. Census Bureau**  
**City of Madisonville**  
**City of Sweetwater**  
**Town of Tellico Plains**  
**Town of Vonore**  
**Tennessee Division of Solid Waste Management**  
**www. City-data.com**



