



Guidance Document

Municipal Solid Waste Regional Plans

Division of Solid Waste Management
Materials Management Program
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Introduction

General Planning Requirements

The Solid Waste Management Act of 1991 required the development of Municipal Solid Waste Regional Plans. The original plans were 10-year plans, and per T.C.A. § 68-211-813, each county and region is to follow the existing approved plan until new or revised plans are approved by the Department. Before submitting a plan, each municipal solid waste region shall hold a public hearing on the revised plan. A region's plan may be revised at any time to reflect subsequent developments in the region. Each revised plan shall be submitted to, reviewed by and approved or disapproved by the Department in the same manner as the initial plan. If a plan is disapproved, the Department shall state in detail the reasons for the disapproval. The Region shall review any disapproved plan and resubmit a plan which corrects all deficiencies to the Department within 60 days of receiving the letter of disapproval.

Each municipal solid waste region shall submit an annual progress report to the department covering the next ten (10) years that includes, at a minimum, the information contained in T.C.A. § 68-211-815(b). T.C.A. § 68-211-815 describes the plan submittal and approval process.

According to T.C.A. § 68-211-815, each plan/revised plan submitted by a municipal solid waste region ("Region") shall be consistent with the state solid waste plan, with T.C.A. § 68-211-815, and with all other Rules promulgated by the Department. At a minimum, each plan shall include:

- 1) Demographic information;
- 2) A current system analysis of:
 - a. Waste streams, including data concerning types and amounts generated;
 - b. Collection capability, including data detailing the different types of collection systems and the populations and areas which receive and do not receive such services;
 - c. Disposal capability, including an analysis of the remaining life expectancy of landfills or other disposal facilities utilized by the region, its residents, and businesses;
 - d. Costs, using a full-cost accounting model developed by the commissioner, including costs of collection, disposal, maintenance, contracts and other costs; and
 - e. Revenues, including cost reimbursement fees, appropriations and other revenue sources;
- 3) Adoption of the uniform financial accounting system required by T.C.A. § 68-211-874;
- 4) Anticipated growth trends for the next 10-year period;
- 5) Anticipated waste capacity needs;
- 6) Planned capacity assurance, including descriptions of planned or needed facilities;
- 7) A recycling plan, including a description of current public and private recycling tactics and planned strategies to enhance recycling within the county or region;
- 8) A plan for the disposal of household hazardous wastes;
- 9) Adoption of uniform reporting requirements as required by this part;
- 10) A description of waste reduction and recycling activities designed to attain the goal required by T.C.A. § 68-211-861;
- 11) A description of education initiatives aimed at businesses, industries, schools, citizens and others, which addresses recycling waste reduction, collection and other goals of T.C.A. § 68-211-815;

- 12) An evaluation of multi-county region options with an explanation of the reasons for adopting or failing to adopt a multi-county regional approach;
- 13) A timetable for implementation of the plan;
- 14) A description of the responsibilities of the various participating jurisdictions;
- 15) If the region is a one-county region, the full responsibility for implementation resides with the county. The regional plan should be formally adopted by the resolution of the Regional Administrative Board, and signed by its Chairman. The plan should also be adopted by the county commission, to acknowledge the county's commitment to support and fund the plan. A copy of the adoption resolution should be included with the submittal letter.
- 16) If the region consists of more than one county, then the regional plan should assign specific responsibilities for implementing specific elements of the plan to specific jurisdictions. The regional plan should be formally adopted by the resolution of the Regional Administrative Board, and signed by its Chairman. To demonstrate concurrence with the plan, each county commission should ratify the plan, thereby acknowledging its future responsibility as a part of the region. A copy of the adoption resolution and minutes of each county commission meeting ratifying the plan should be included with the submittal letter.
- 17) A plan for managing solid waste generated as a result of disasters or emergencies; and
- 18) Any other information the commissioner may deem relevant to the implementation of T.C.A. § 68-211 et seq.

The Tennessee Department of Environment and Conservation (TDEC, or "the Department,") provides an online reporting tool for Regions to facilitate the submission of the Annual Progress Reports (APRs). The reporting tool is also used by the Regions to update their 10-Year Plans. Reporting sustainable materials management information and Plan updates to TDEC is important because it:

- Assists with sustainable materials management **planning**;
- Provides the Department with information that can indicate community **grant needs**; and
- Helps track **progress**.

More specifically annual reports and plans help the Department and the Region identify programmatic and policy needs, as well as infrastructure to manage solid waste and recycled materials. The planning process is a tool that Regions can use to give thoughtful consideration to anticipated changes in the community that may influence programs, policies, and facilities needed to provision safe, adequate solid waste and materials management services to the citizens of the Region.

Annual Progress Reports

Annual Progress Reports (APRs) are due on March 31st of each year. Data reported pertains to the calendar year that terminated that prior December. APRs are submitted via a web-based online tool. Data for the APR is generally obtained by the County or Solid Waste Region. The intent of the APR is to show progress toward meeting goals. It is considered to be an annual update to the region's most recent solid waste and materials management plan.

Ten-Year Plan Revisions

Since implementation of the original plans, the Department does not require regions to submit 10-year plans unless the Region changes in nature, such as either joining another county or counties, or separating from (or being separated from) other counties with whom they had previously formed a solid

waste region. Some jurisdictions, however, may desire to submit 10-Year plans for their own purposes, as systems and communities have changed significantly since the initial solid waste management plans were submitted. The requirements for such plans are as described above.

2015 - 2025 Solid Waste and Materials Management Plan

In 2015 the Department developed the 2015 – 2025 Solid Waste Materials and Management Plan. The Plan calls for considering the life cycle impacts of products and materials – not just their end-of-life management. Therefore, environmental considerations along the entire life of the product, from material extraction to end-of-life management, should be considered when businesses, organizations, and individuals make purchasing, use, and end-of-life management decisions for the products and packaging they use.

Concepts emphasized in the 2015-2025 Plan include:

- Growing Tennessee’s economy by fostering the processing and manufacturing of Tennessee-generated materials within the state.
- Implementing source reduction tactics, meaning avoiding generating waste in the first place.
- Considering beneficial reuse of materials such as on-site composting and alternative daily cover.
- Considering environmental impacts when making purchasing decisions, including packaging recyclability, packaging quantity, toxicity of product, longevity of product, etc.



The Plan focuses on eight core objectives, which are to be implemented using strategies and tactics implemented by both the state and local (county and municipal) governments, partnering with private businesses, non-government organizations, and others. These objectives include:

- Objective 1 – Update Goals and Measure Progress
- Objective 2 – Increase Access to and Participation in Recycling
- Objective 3 – Enhance Processing and End Markets
- Objective 4 – Increase Diversion of Organics
- Objective 5 – Support New Diversion Technology
- Objective 6 – Expand and Focus Education and Outreach
- Objective 7 – Ensure Sufficient and Environmentally Sound Disposal
- Objective 8 – Develop Funding Sources for Sustainable Materials Management Programs

About This Guidance Document

This document is intended to provide a guide for regions submitting Ten-Year Plans. The document is organized primarily around the objectives stated above. Appendices in the back of the document include additional information:

Appendix A: Definitions

Appendix B: Minimum Collection Requirements

Appendix C: Flow Control and Permit Review

Appendix D: Sample Budget Summary

Appendix E: Template for Plan Implementation Strategies & Tactics Summary

Appendix F: Methods for Estimating Diversion Rates

If you have any questions about how to complete a Plan, do not hesitate to contact the Division of Solid Waste Management. Additionally, Appendix A provides solid waste and materials management planning-related definitions.

Administrative/Contact Information

It is important for the Department to know who to contact in case questions arise, or to clarify information. Much of the administrative information about programs in the region also help the Department better understand how programs are operated in the County/Region.

The following administrative information must be provided in Ten-Year Plans:

1. **Plan author contact information:** Name, Title, Employer Address, Phone number, Email Address.
2. **Description of the Region's formation/description of changes in the structure of the Region:**
 - a. Describe the Region's reason for change in its structure (its decision to be either single- or multi-county), if applicable.
 - b. If the regional plan includes formation of a new regional solid waste authority. Describe in detail the schedule for creating the authority and delegating responsibility for Plan implementation to that authority.
3. **Public Hearings and Plan Review, Approval** -- Provide minutes of meetings/resolutions, formal adoptions of the Plan as required by authorities, and municipalities. Additionally, provide a copy of the minutes of the Region's Solid Waste Board meeting indicating the Plan had been submitted for their review, comment, and adoption before a final plan is submitted to the Department. (See "Reporting Requirements" section above.

Disaster Debris Planning

The 2015-2025 Solid Waste and Materials Management Plan calls for Solid Waste Management Regions to have a disaster debris plan in place. Having such a plan in place and updating it annually helps ensure that, in the face of an unexpected disaster, debris can be managed in such a way as to preserve human health and safety, and to the best, highest use. Also, T.C.A 68-211-815(b)(3)(16) requires that plans and plan updates include “a plan for managing solid waste generated as a result of disasters or emergencies.”

The following information pertaining to disaster debris management must be included in Ten-Year Plans:

1. For each jurisdiction in the Region:

- a. Provide contact information for the person(s) responsible for disaster debris management (Name, title, phone, cell phone, email)
- b. Include a TEMA approved disaster debris plan for managing debris from disasters and emergencies within the region. At a minimum, include the following:
 - i. How materials from public property will be collected;
 - ii. List or map staging areas for debris (there may be different sites for different types of debris).
 - iii. Description of how debris will be managed after collection (at a minimum, describe plans for MSW, C&D, tree trimmings)
 - iv. Listing of pre-event contracts that are in place to manage debris, disposal/processing;
 - v. Listing of jurisdiction staff, other service provider (public and private) contact information, and their roles/responsibilities with respect to disaster debris management.
 - vi. Description of how disaster-related activities will be documented, which is critical to obtaining reimbursement of costs, if eligible.
 - vii. Provide assurance that all key personnel, jurisdictions, and agencies have a printed copy of the plan, including contact list, in an easily accessible location in case of power outage during a disaster event.
 - viii. Description of how this information will be reviewed and updated/re-distributed annually.
 - ix. Describe how waste minimization, composting, and recycling of disaster debris will be accomplished.

Appendix C of the 2015-2025 Solid Waste and Materials Management Plan provides guidance on how to develop a disaster debris plan.

Demographic/General Information

Demographic information helps provide a context for progress in solid waste and materials management, adequacy of infrastructure, and changing needs as demographics change over time.

The following demographic information must be provided in Ten-Year Plans:

1. Identify the Region by name, and list counties and municipalities that comprise the Region.

2. Broadly describe the Region in general, geographical and demographic terms.

(Example: X is a one county Region. Most commercial activity centers around Pleasantville, the county seat and near the geographic center of the county. The State Park and lake dominate the north end of the county. The Zenon Widget Company is the county's major employer. A great percentage of our young people attend the community college.)

Population Data

One source for population data (including projections) is the University of Tennessee's Boyd Center for Business and Economic Research (CBER). Data can be found at:

<http://tndata.utk.edu/sdcdemographics.htm>

Population projections are available at:

<http://cber.haslam.utk.edu/popproj.htm>

3. Indicate the total population of Region (list by county; provide source of information and year). Also indicate the estimated total number of households (occupied) in each jurisdiction (county and municipality). Estimate the percentage of households that are multi-family (MF). A suggested table format is provided below. Provide information about part-time/seasonal populations, if applicable.

Table 1: Example Current Population Table

County name	Municipality name	Population	Estimated total HH/% multi-family	Year	Data source
County A	NA	Total County A Population			
	Municipality A1	Population Municipality A1			
	Municipality A2	Population Municipality A2			
County B	NA	Total County B Population			
	Municipality B1	Population Municipality B1			
	Municipality B2	Population Municipality B2			
Region		Total Region population (use caution to avoid double counting municipality populations)			

- Provide population projections for each county and municipality within the Region for at least 10 years. It is recommended that population projections be examined for the next 15 years to better accommodate facility and infrastructure needs in later years of the planning horizon.

Table 2: Example Population Projection Table

County or Municipality	Population – Year (Indicate Each Year)														
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15
County A															
Municipality A1															
Municipality A2															
County B															
Municipality B1															
Municipality B2															
Total Region Population (Do not Double Count Municipality Population)															
Data Source:															

5. Describe the square miles and population densities for each of the counties and municipalities in the region and how population density impacts sustainable materials management activities in the jurisdiction. For example, the degree to which the population is rural or urban may impact the cost-effectiveness, feasibility and need for materials management services including certain types of recycling and yard trimming diversion programs.

Population density is estimated by dividing population by number of square miles (land), to yield population per square mile. The U.S. Census provides an estimate of population density for counties and municipalities.
6. Indicate any major changes in industry/commerce that has occurred in the past few years, and anticipated into the next 15 years, and the impact on sustainable materials management. Examples: Additional companies/industries from which recycling reports will be requested, potential consumers/processors of recovered materials, or impacts on the local economy.

Current Waste and Recycling Infrastructure and Services

The information requested below provides an overview of existing solid waste and processing facilities and programs in the Region. Information is requested by waste/facility type, including solid waste disposal, recycling and composting, and problem wastes.

Much of the information requested in this Section is available in the Needs Assessments for Counties, completed by Development Districts on a county-by-county basis. These assessments should be completed every five years and will aid in the Region's planning.

Solid Waste Disposal and Transfer Facilities

The following information pertaining to waste disposal must be provided in Ten-Year Plans:

1. Provide a Regional System map that indicates the location of solid waste disposal facilities located in the Region, and clearly identifies each. Include Class I and Class III/IV disposal facilities, transfer stations, and convenience centers accepting these types of waste. A map can be combined with other Regional System maps requested, or provided separately.
2. List the solid waste disposal facilities in the Region, and all of the landfills (Class I and Class III/IV, disposal facilities and transfer stations) that accept these waste types in the Region. For each facility, indicate:
 - Name and physical address of facility
 - County of facility
 - Facility owner/operator
 - Facility operator/contact information (Email address, Mailing address, if different than physical, Phone number, Title of contact)
 - Classification of landfill/facility
 - Materials accepted; Limitations
 - Tipping fee per ton (list all known fee amounts, if additional fees besides tipping fee, and if they vary by material type. Include special wastes, if applicable.)

- Permit number
- Does the facility produce energy?
- Jurisdictions served (Identify by name)
- If transfer station: From where is waste collected and to where is it delivered?
- Number of years of planned capacity assurance for each landfill.
- For publicly owned Class I disposal facilities, is the facility accounting for financial activities in an enterprise fund as required by law?

The Solid Waste Management Act grants Regional Solid Waste Boards certain rights and responsibilities with regard to controlling the flow of waste into and out of the Region, and with regard to the review of permits for potential new solid waste facilities in the Region. Flow control and permit reviews are complex topics and Regional Boards acting in these areas should seek legal counsel. Information regarding flow control and permit review is provided in Appendix C.

3. Indicate the landfills to which **Class I and Class III/IV waste is exported annually from your Region to other in-state and out-of-state regions**, using the most recent year available. Some of this data may be obtained from the Department.

Table 3: Example Waste Disposed Outside of Region Table

Name of out-of-region landfill receiving waste	City, county, state of landfill	Estimated annual tonnage exported to facility from Region	What is known about where waste is generated (e.g., % from each City/County within your Region)	Explain why waste is disposed out of Region vs. in-Region (e.g., hauler owns LF, less costly, closer, etc.)
Class I MSW				
Subtotal Class I MSW Exported				
Class III/IV Waste				
Subtotal Class III/IV Waste				
TOTAL TONS				

Name of out-of-region landfill receiving waste	City, county, state of landfill	Estimated annual tonnage exported to facility from Region	What is known about where waste is generated (e.g., % from each City/County within your Region)	Explain why waste is disposed out of Region vs. in-Region (e.g., hauler owns LF, less costly, closer, etc.)
Exported Out of Region				
Data Source and Year to Which Data Pertains:				
Does this include only waste under municipal control?				

4. Indicate if the amount of waste disposed at out-of-region landfills described is atypical, and whether it is expected to change in the future. Changes might occur due to facility closures, new facilities opening, or changes in the amount of waste generated, for example. Describe as completely as possible.
5. Does the Region or do any jurisdictions within the Region make any attempt to control the flow of waste? If yes, explain.
6. Do any responsible parties within the Region foresee any outstanding issues with regard to permit review or flow control? If yes, explain.

Appendix C provides a fact sheet regarding flow control and permit review as described in the Solid Waste Management Act [T.C.A. § 68-211-814(b)].

Solid Waste Services (Collected for Disposal)

1. List all **residential collection and drop-off services for MSW** (for disposal) available in the Region. Indicate who pays for the service (e.g., municipality, county, or individual household) and include a description of the program. Indicate whether service is provided to all households, or only those who choose to have service provided (i.e., subscription service). If possible, indicate percentage of households in the jurisdiction that receive service, and tons collected per program during the most recent year. Table 4 on Page 14 can serve as a template. The text box below provides additional guidance regarding information to include.

Name of Jurisdiction – The municipality, county, or Region for which the service described is available.

MSW Collection and Drop-Off Service – Type of service, such as curbside collection, green boxes and convenience centers. Green boxes can be listed in one row and convenience centers in another, per jurisdiction, indicating the number of each type per jurisdiction (no need to list each separately). Include curbside collection as a separate type of service, by jurisdiction, as applicable.

Available to – Who receives the service in the first column. For example, “City of x,” or “customers who subscribe.” List each municipally provided program separately. Indicate whether service is available to all households (HH) or only single-family households.

Paid for by – Who pays for the service? Does the city or county provide municipal solid waste collection directly or by contract? Or do individual households contract directly with a subscription service?

Description – Indicate name of hauler, if service provided by private hauler, and whether by contract, municipal crews or subscription. For convenience centers and green boxes, broadly indicate location of sites, e.g., three in the north end, 2 in the south.

Estimated Percentage of Participating HH in Jurisdiction – Indicate the portion of households that are eligible to use the service that do so on a regular basis.

(Total number of participating HH)

(Total of HH in Jurisdiction)

Table 4: Example MSW Collection Services in Region

Name of jurisdiction	MSW collection and drop-off service	Available to	Paid for by	Description	Estimated percent of participating households in jurisdiction	Tons collected annually
Total Tons Collected Annually from Region:						
Data Source and Year to Which Data Pertains:						
Does this data pertain only to MSW under municipal control?						

2. Describe how each county in the Region meets the **Collection Assurance Requirements** mandated in the Solid Waste Management Act of 1991 (T.C.A. § 68-211-851). (See Appendix B for information on Collection Assurance Requirements)
3. Describe any current **MSW collection/transportation needs** in the Region, or anticipated needs during the next 15 years based on expected demographic, programmatic, and facility changes. Include any issues with inadequate service, whether by region or sector, or lack of cleanliness at convenience centers or green boxes. Describe how these needs will be addressed.

Recycling and Organics Management Facilities and Services

The following information is to provide the Department with an update/overview of existing recycling and organics management facilities and programs in the Region. [Note: HHW, BOPAE and tires are discussed later in the Plan.]

The following information must be included in Ten-Year Plans:

If collection sites for recyclables are not otherwise available, each county must provide at least one collection site for recyclables, per T.C.A. § 68-211-863.

1. Provide a Regional System map that identifies all recycling collection (i.e., drop-off) site locations, baling facilities, and recovered materials processing facilities (RMPFs). This map can be combined with other Regional system maps requested, or can be provided separate.
2. Using Table 5 on Page 16, list all residential collection services (curbside and drop-off) for recyclables.
3. List baling facilities and RMPFs located in the Region. For each facility indicate:
 - Facility name
 - Facility owner/operator
 - Contact name/title
 - Contact phone number
 - Contact email address
 - Facility address
 - Facility county
 - Mailing address (if different from facility address)
 - Population/geographic region served by facility
 - Types of materials processed
 - Tons per year processed
 - Tip fee for materials, by material type, if known
 - Description of facility/process

Table 5: Example Recycling Collection Services Table

Name of jurisdiction	Type of recycling service (curbside drop-off)	Available to	Paid for by	Description	Estimated % of participating HH in jurisdiction	Annual tons recyclables collected through program
Total Tons Recyclables Collected Annually in Region						
Data Source and Year to Which Data Pertains:						
Does data in this table pertain to only materials under municipal control?						

4. Provide a Regional System map that shows all organics collection (i.e., drop-off) locations and organics management facilities, including composting, mulching, anaerobic digestion and other sites. This map can be combined with other Regional System maps requested, or can be separate.
5. Using Table 6 on Page 18, list all residential collection services (curbside and drop-off) for organics.
6. List organics management facilities in the Region. For each facility indicate:
 - Facility name
 - Facility owner/operator
 - Contact name/title
 - Contact phone number
 - Contact email address
 - Facility address
 - Facility county
 - Mailing address (if different from facility address)
 - Population/geographic region served by facility
 - Types of materials processed
 - Tons per year processed
 - Tip fees by material type, if known
 - Brief description of facility/process
 - End use of material (Whether sold, given away, used for municipal or county projects for no cost, etc.)

7. Describe how biosolids are currently managed in the Region. If managed in multiple ways, estimate portion managed by each method (e.g., 65% landfilled, 35% land applied). Are there any changes being considered in the Region in the way biosolids are managed? If yes, explain why.

Table 6: Example Organics Collection Services Table

Name of jurisdiction	Type of organics collection service (curbside drop-off)	Available to:	Paid for by	Description	Estimated % of participating HH in jurisdiction	Annual tons organics collected through program
Total Tons Organics Collected Annually in Region						
Data Source and Year to Which Data Pertains:						
Does the data in the table pertain only to organics under municipal control?						

8. Provide a Regional System map that identifies all C&D collection (i.e., drop-off) locations and C&D processing facilities. This map can be combined with other Regional system maps requested, or can be provided separately.
9. Using Table 7 on Page 19 list all collection services (curbside and drop-off) for C&D Material.
10. List all C&D collection locations and processing facilities in your Region. Include the following information:

- Facility name
- Facility owner/operator
- Contact name/title
- Contact phone number
- Contact email address
- Facility address
- Mailing address (if different from facility address)
- Population/geographic region served by facility
- Types of materials processed
- Tons per year processed
- Tip fees by material type, if known
- Description of facility/process
- Disposition of residue, if known

Convenience Centers – any area which is staffed and fenced that has waste receptacles on site that are open to the public, when an attendant is present, to receive household waste, municipal solid waste and recyclable materials.

Green Box – Unstaffed, county public collection system, usually consisting of one or two dumpsters, located in various publically accessible areas for the use of collecting the garbage of residents in the area.

Recycling Drop Off – A staffed or unstaffed facility where source separated recyclables can be delivered.

Recycled Materials Processing Facility (RMPF) - a facility engaged solely in the storage, processing and resale or reuse of recovered materials. A RMPF is not a solid waste processing facility.

Table 7: Example Class III/IV waste Collection Services Table

Name of jurisdiction	Curbside or drop-off Class III/IV waste collection	Available to	Paid for by	Description	Percent % participating jurisdiction	Annual tons Class III/IV waste collected through program
Total tons Class III/IV waste collected annually in region						
Data source and year to which data pertains:						
Does the data in the table pertain only to Class III/IV waste under municipal control?						

Problem Wastes (BOPAE, Tires, and HHW)

Ensuring that problem wastes are not landfilled is of particular importance, as these materials can pose risk to landfills. T.C.A § 68-211-866(b) states that each county in Tennessee must provide, either directly or by contract, at least one collection site for waste tires, used automotive fluids, lead acid batteries and used oil, if collection sites are not otherwise available. T.C.A § 68-211-815(b) also states that each Plan will include a strategy for the management and disposal of HHW.

TDEC uses the term BOPAE to describe problem wastes beyond tires and HHW. BOPAE includes batteries, used motor oil, paint, antifreeze and electronics.

The following information regarding problem waste facilities and programs must be included in Ten-Year Plans:

1. Provide a Regional Systems Map that includes collection sites for HHW (if permanent locations exist in Region), tires and BOPAE, clearly identifying each type of site. This map can be the same or a separate Regional Systems Map than the others requested.
2. Indicate any permanent BOPAE/HHW collection centers located in the Region. Provide the following information:
 - Facility address; County
 - Facility owner/operator
 - Contact name, title
 - Disposal/Recycling contractors (Name, phone number)
 - Days and hours of operation
 - Service available (i.e., types of materials collected, other services provided)
 - Tons of material collected during the past year, by type
 - Whether an agreement is in place for multiple counties to use the HHW facility (describe)
3. Describe the Region’s strategies or tactics to ensure that the **waste tire collection assurance** is met with at least one public or private tire collection location per county available to local citizens. List the sites available in each county within the jurisdictions. Describe how tires are managed once collected.

Table 8: Example Tire Collection Site Table

Name of County	Location of tire collection site(s)	How tires are managed after collection (e.g., sent for beneficial end use or processed and disposed)

- Describe the Region’s strategies or tactics to ensure that **oil and automobile fluids collection site and lead acid battery collection requirements are met** according to T.C.A § 68-211-866. List the sites available in each county within the jurisdictions.

Objective 1 – Waste Reduction and Recycling Goals and Measure Progress

The Department has established a statewide waste reduction and diversion goal of 25%. It is anticipated that this statewide goal will be adjusted over time. Source reduction (avoiding generating waste in the first place), reuse, and recycling will all help move the state closer to achieving its goals. The data provided by the regions will help the Department assess progress statewide, and identify counties and municipalities that need additional assistance, or that may serve as models for other jurisdictions. Data within this section pertains to **waste generated in the jurisdiction being described** (Region, county) which may include waste sent to and processed at facilities located outside of the jurisdiction.

The following information pertaining to Objective 1, Waste Reduction and Recycling Goals and Measure Progress, must be included in Ten-Year Plans:

- Based on the most recent APRs, describe the Region’s progress to date in reaching the state’s 25% waste reduction and diversion goal. This can be measured using the base year. Another option is to analyze “real time” data, comparing tons of waste diverted relative to tons of waste generated in the most recent year. Briefly describe the reason for selecting the base year or the “real time” method. Include calculations for the Jurisdictions and Region as a whole. Appendix F provides some guidance in how diversion can be estimated.
- Describe any **challenges, limitations or barriers in the Region** to achieving the state waste reduction and diversion goal.

Beneficial use – Reusing materials with minimal processing, usually in a low-value use, instead of disposal. Examples include alternative daily cover, fill material, aggregate, or reintroduced in manufacturing process.

Recycling – The series of activities by which discarded materials are collected, sorted, processed, and converted into raw material and returned to the economic mainstream by being used in the production of new products. Does not include the use of these materials as a fuel substitute or for energy production (Modification of U.S. EPA 1997).¹

Source Reduction – The practice of designing, manufacturing, purchasing, or using materials in ways that reduce the amount or toxicity of trash created. Reusing items is another way to stop waste at the source because it delays or avoids that item’s entry in the waste collection and disposal system. Examples include: selling for reuse, donating for reuse, double-sided copying, etc. (U.S. EPA WasteWise).¹ Reducing waste so it is not generated in the first place.

Waste Diversion – The prevention and reduction of generated waste through source reduction, recycling, reuse, or composting. In Tennessee, waste is considered to be diverted if it avoids being disposed in a Class I landfill.

Waste to Energy – Energy produced from the combustion of post-recycled municipal solid waste, animal waste or animal byproducts, biogas, landfill methane, or other biomass that has been diverted from or separated from other waste out of a municipal waste stream. Also known as Energy Recover.

3. Describe any **local recycling or solid waste diversion goals** that are in place in your Region, such as citywide, countywide or public-sector (e.g., city/county buildings and facilities). Describe progress to date in achieving those goals.
4. Describe any plans within the Region to implement or update **local diversion or recycling goals** on a citywide, countywide, or public-sector (e.g., city/county buildings and facilities) basis.

Objective 2 – Increase Recycling Access and Participation

Objective 2 is to increase the breadth of recycling programs in Tennessee, as well as participation by residents, businesses and institutions. This part of the report helps provide information regarding progress being made to expand recycling activities, recycling access, successful means to increase participation, and to gain an understanding of the barriers that impede recycling expansion and participation in the region. This objective also includes increasing participation in other diversion activities, such as source reduction and reuse initiatives.

The following information pertaining to Objective 2, Increasing Recycling Access and Participation, must be included in Ten-Year Plans: (Note: Recycling education and organics are discussed later, as a separate objectives.)

1. Indicate counties and municipalities in the Region that have policies in place that **essentially require all single-family residents to pay for** (either directly in fees, or indirectly through the tax base) **curbside collection of recyclables**. Examples include:
 - Collection of recyclables at all single-family households by city crews (paid for with portion of property tax or other obligatory tax/fee);
 - Collection of recyclables by contract to all single-family households (all households included);
 - City or county policy that requires solid waste haulers to offer collection of recyclables.

The table below provides an example of how this information can be presented.

Table 9: Example Mandatory Provision of Service Table

City or county	Program or policy description

2. Are there other jurisdictions within the Region **considering implementing such policies/programs** described in #1 above during the planning horizon? Describe.
3. Are there any cities or counties in the Region (or private haulers) that currently have or are considering implementing **pay-as-you-throw curbside garbage collection service**, whereby residents pay based on the quantity of trash that they generate , and do not pay extra to recycle (recycling services are included in the base fee)? Describe. Include any known information about costs to implement the program, how these costs will be funded, and any anticipated collaborative efforts.

4. Are there any cities or counties in the jurisdiction that currently have or are considering implementing **pay-as-you-throw drop-off garbage collection service**, and allow residents to deliver recyclables to the facility (or another) at no cost? Describe.
5. Describe any other plans within the Region, by jurisdiction, to **expand access to recycling in the Region**, including **expanding recycling in public spaces, requiring recycling at public events/festivals, and adding additional materials to curbside and drop-off recycling programs**. Include known information about costs associated with this effort, how these costs will be funded, and any anticipated collaborative efforts.
6. Are there cities or counties in the Region that include **building code requirements** for new apartment buildings and commercial buildings to **have adequate space for recycling**? If so, describe. If not, are any jurisdictions in the Region considering implementing such a policy?
7. Are there jurisdictions within the Region that have **disposal bans** on certain materials? If not, are there any plans to implement such bans during the planning horizon?
8. Are there jurisdictions within the Region that partner with or **require all schools to recycle certain materials**? If so, describe. Are there any jurisdictions in the Region considering implementing such a policy in the planning horizon?
9. For multi-county Regions, list any counties within the Region that have not hosted **HHW collection events** (and that do not have a permanent facility) in the past two years. Indicate the barriers to hosting such events. Are there efforts in the planning horizon for these counties to host HHW collection events in these counties?
10. Describe plans to increase **access to HHW, waste tires and BOPAE** collection programs within the Region during the planning horizon. Include any known information about costs to implement the program, how these costs will be funded, and any anticipated collaborative efforts.
11. Describe plans to increase access to **commercial, institutional, and industrial recycling and source reduction** during the planning horizon. Include any known information about costs to implement the program, how these costs will be funded, and any anticipated collaborative efforts.

Objective 3 – Promote Material Processing and End Use in Tennessee

The intent of Objective 3 is to strengthen processing and end markets in Tennessee, such that there is demand for recovered materials and the economic and resource benefits can support the local economy.

The following information pertaining to Objective 3, Promote Material Processing and End Use in Tennessee, must be included in Ten-Year Plans:

1. Describe any existing or future plans for **hub and spoke programs** in the Region.
2. Describe any **gaps in processing infrastructure** (for any material type) that exists in the Region. Describe the impact this is having on recycling programs.
3. Describe any plans to establish **additional processing capacity** in the Region, and whether this would be public or private.

4. Describe any **public/private partnerships or collaboration with other regions or non-profits** to advance processing and end markets or beneficial end uses for materials generated in the Region. Are there any plans to **establish such partnerships** in the planning horizon?
5. Are there any businesses in or near the Region that could potentially **use recovered materials** in their manufacturing or secondary processing? If so, describe.
6. Are there jurisdictions within the Region that are planning to **update their purchasing policies** to further encourage the use of sustainable materials or plan to beneficially reuse materials? This could include city, county, or institutional purchasing/material use decisions. Describe.
7. Describe existing policies, ordinances or statutes that discourage the use/purchase of sustainable materials in the Region? What strategies or tactics will be taken to amend these policies?

Environmentally Preferable Purchasing

might include the following:

- Banning the purchase of bottled water using public funds
- Requiring certain products to be made of a minimum percentage of post-consumer material
- Requiring certain products to be repairable/recyclable.
- Requiring low or no toxicity cleaning products.
- Allowing a price preferential for environmentally preferable products.

Objective 4 – Increase Diversion of Organics

This objective is aimed at ensuring that organics are diverted from the landfill. Organics create methane when landfilled, a greenhouse gas. It is estimated that organics comprise roughly 33 percent of MSW disposed. Organics can be composted, mulched, or processed using other technologies, retaining a higher value use for the resources. The most commonly generated organics are yard trimmings and food.

The following information pertaining to Objective 4, Increase Diversion of Organics, must be reported in Ten-Year Plans:

1. If the region listed any composting programs and facilities in the “Infrastructure and Programs” Section, describe any **plans to expand existing programs or implement new organics collection or processing programs or facilities**. Include costs, funding sources, and any partnerships.
2. Describe any plans to implement a pilot or demonstration project for organics processing in the Region, or describe any currently in existence. Include responsible party, benefits of program, technology to be used, feedstock to be used, and markets.
3. Describe any plans to change the way **biosolids** are managed in the Region.
4. Are there any **large-scale generators of food waste or other organics** in the Region? (Large-scale generators of food waste typically include food manufacturers, food processors, grocery stores, cafeterias, caterers, institutions, and restaurants). The tonnage that constitutes “large-scale” may vary within the Region. Focus should be on the largest generators in the Region. List the generators, what they do, and where they are located. Information can be summarized in a table such as Table

10 provided below. Indicate any alternative strategies to manage organics they employ or are considering implementing.

Table 10: Example Large-Scale Food Waste/Organics Generator Table

Company name/ business type	Location municipality, county	Organics produced	Current management method	Potential alternative management strategy	Estimated tons per year organics generated, if known

Objective 5 – Support New Waste Reduction and Recycling Technology

The intent of this objective is to help foster (or avoid hindering) the development and adoption of new technologies, as appropriate, to manage materials. Alternative technologies may provide the opportunity to cost-effectively recover greater resource value. New technologies may be emerging technologies, or established but new to the jurisdiction.

The following information pertaining to Objective 5, Support New Waste Reduction and Recycling Technology, must be provided in Ten-Year Plans: (Note: Education and outreach activities are addressed in Objective 6)

1. Describe any **new policies or ordinances or updates to existing policies and ordinances** that will be implemented in the Region to support the use of new technologies in the planning horizon. This may include a review and update of existing solid waste and recycling ordinances to ensure potential new technologies are not discouraged or excluded. Include jurisdiction, responsible party, when review/revision/new ordinance development is expected to occur, and the nature of the change.
2. Describe any **partnerships** (e.g., among businesses, universities, local governments, non-profits) that exist or are being pursued to explore the adoption of new waste reduction and recycling technologies in the Region.
3. Describe any **modifications/enhancements to recycling programs, composting programs, and processing facilities** that are expected to take place in the Region in the planning horizon that will improve sustainable materials management. Describe the change, its expected impact, and jurisdictions that will be affected.
4. Describe any **new technologies that will be implemented**, even if as a demonstration or pilot project, in the planning horizon that will help advance sustainable materials management (SMM) in the Region. Describe the technology, its expected impact, and jurisdictions that will be affected.

5. Describe **any longer-term ideas** being broadly considered in the Region to advance SMM using new technology.

Objective 6 – Expand and Focus Education and Outreach

Education and outreach is vital to advancing sustainable materials management, but is often only done when a new program is introduced or major changes are made. Education and outreach should be continuous, although different campaigns will serve distinct purposes. Every community's education and outreach needs are distinct.

The following information pertaining to Objective 6, Expand and Focus Education and Outreach, must be provided in Ten-Year Plans:

1. Indicate any current source reduction/recycling/composting education and outreach strategies or tactics in the Region. For each strategy or tactic indicate:
 - Jurisdiction
 - Description of strategy or tactic (including target audience, message, and means of conveying message)
 - Sponsors/partners of strategy or tactic and their roles
 - Timeframe of strategy or tactic
 - Expected impacts of strategy or tactic (include material types expected to be impacted, as well as jurisdiction and any other information)
 - How strategy or tactic will be/is funded
 - If strategy or tactic has been undertaken in the past, describe its effectiveness, and how effectiveness is assessed.

Information could be presented using Table 14 below. Costs should include staffing costs associated with developing and implementing education and outreach strategies or tactics, as well as other costs incurred such as printing and media costs.

Recycling education and outreach can serve many purposes and can be intended for a broad or specific audience. Examples include:

- Reminding all residents to recycle common recyclable packaging materials.
- Providing specific instructions for preparing material to be recycled or notifying them of a program change
- Making people aware of the benefits of recycling or setting the expectation that recycling is an expected social norm
- Informing citizens of ways to reduce the material they generate (source reduction)
- Providing students and teachers guidance for implementing a school recycling program
- Informing public employees about purchasing requirements to advance environmentally preferable purchasing.
- Provide feedback to a household that they included non-recyclables in the recycling cart.

Table 11: Example Current Education and Outreach Annual Costs Table

Education strategy/tactic	Jurisdiction(s)	Description of strategy/tactic	Target audience(s)	Annual cost (Include estimated labor cost)	Funding source	Timeframe of strategy/tactic
Total Current Annual Estimated Education and Outreach Costs in Region						
Total Households in Region						
Total Annual Cost per Household						

2. Provide a projection of annual education and outreach costs by jurisdiction. Explain the basis for changes in annual costs.

Table 12: Example Projected Annual Education and Outreach Costs by Jurisdiction Table

Jurisdiction	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total region annual education and outreach costs										

3. Describe any source reduction/recycling/composting education and outreach strategies or tactics in the Region that **are expected to be discontinued**.
4. Describe any **new source reduction/recycling/composting education and outreach strategies or tactics, or changes to existing strategies/tactics that will be implemented in the Region** during the next 10 years. Describe costs, potential partners, how the strategies or tactics will be funded, and expected impact of strategies or tactics.
5. Describe **priority education and outreach strategies or tactics** in the Region, and **barriers to implementing adequate education and outreach** programs.
6. Are there any changes expected in the demographics of the Region, or any policy or programmatic changes expected? Indicate jurisdictions within the Region that will need to account for such changes in their education and outreach programs. Describe the education and outreach needs and how they will be addressed in the planning horizon.

Objective 7 – Ensure Sufficient and Environmentally Sound Disposal

Tennesseans are expected to rely on disposal for a portion of the waste they generate. Therefore it is important that each Region ensure that there is sufficient and environmentally sound disposal capacity, until recycling, other diversion, and composting programs expand.

The following information pertaining to Objective 7, Ensure Sufficient and Environmentally Sound Disposal must be included in Ten-Year Plans:

1. Summarize the most recent Solid Waste Needs Assessment that has been conducted for your region. For multi-county regions, the most recent Needs Assessments that has been conducted for each of the counties in the Region should be used. Describe the basic findings (e.g., disposal capacity is adequate, disposal capacity is not adequate, price is expected to increase, etc.). Also provide feedback regarding those findings (whether they appear to be accurate, etc.). Information can be summarized in a table such as the following:

Development Districts provide some solid waste planning services, and are responsible for completing Districtwide **Solid Waste Needs Assessments** every five years.

Table 13: Example Needs Assessment Findings Table

County	Most recent Needs Assessment	Basic findings	Comments on findings

- Project **estimated annual quantity of MSW generated in the Region that will be disposed over the next 10 to 15 years** (10 years is required, however 15 years is recommended). This information can be provided in a graph or table format. Describe the assumptions made in developing these estimates.

A sample table in which the information can be presented is provided below.

Table 14: Example MSW Disposal Capacity Needs Projection Table

	A	B	C	D	E
Year (indicate year)	Regional population projection	Projected tons MSW generated	Projected tons MSW recycled/ composted/d iverted	Projected tons MSW disposed = B-C	Per-capita annual disposal (pounds) =(E*2000)/A
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

- Based on all available data plus the most recent Needs Assessments, evaluate disposal needs in the Region. Is sufficient **MSW disposal capacity** available for the 10-year planning horizon? 15 years? Will the Region need to export waste to meet its disposal needs? Is it expected that increased quantities of waste will be imported into the Region for disposal? Considering anticipated growth, disposal requirements, and changing disposal costs, what changes should be contemplated? Solid waste disposal information for Tennessee Class I landfills may be obtained from the Department.

4. Indicate if there are any changes anticipated to the disposal facilities where the region’s waste is disposed (e.g., closures, expansions, etc.). Remaining life surveys and permit information for landfills may be obtained from the Department.
5. Describe how **Class III/IV waste is managed in your region**. Project disposal rates at Class III/IV landfills over the next 10 to 15 years. Is capacity is expected to be adequate? Describe reasoning behind assumptions. Information can be summarized in a table such as Table 15 provided below. Solid waste disposal information for Tennessee Class III/IV landfills may be obtained from the Department.

Table 15: Example Class III/IV Disposal Needs Projections Table

	A	B	C	D	E
Year (indicate year)	Regional population projection	Projected tons Class III/IV generated	Projected tons Class III/IV composted/d iverted	Projected tons Class III/IV disposed = B-C	Per-capita annual disposal (pounds) =(E*2000)/A
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

6. Is **illegal dumping** an issue in the Region? Illegal dumping may indicate inadequate disposal options and should be reviewed during the planning process. If yes, indicate where illegal dumps exist, the material types in the dumps, and why, in your estimation, these materials are not properly disposed. Indicate any plans to address illegal dumping. A table like Table 16 below can be used to summarize this information.

Table 16 Example Summary of Illegal Dump Site Table

Location of illegal disposal site	Estimated tons disposed at site	Material type(s) disposed at site	Anticipated cleanup date	Estimated cleanup cost	Sources of funds	Entity responsible for cleanup

7. Based on the above information, is there **adequate disposal capacity** in the Region for the next 10-15 years? Describe.
8. Based on the above projections, do you foresee any issues regarding **adequate recyclables processing capacity in the region for** in the next 10-15 years? Describe.

Objective 8 – Develop Sustainable Funding Sources for Sustainable Materials Management

The disposal, recycling, and other processing of waste is not without cost. The Department wants to ensure, to the greatest extent possible, that Regions plan to have adequate sustainable funding sources in place to provide programs and services to achieve goals.

The following information about Objective 8, Sustainable Funding Sources for Sustainable Materials Management, must be provided in Ten-Year Plans:

1. Provide a proposed Regional Budget for the planning horizon. The budget is not binding; it is a projection based on current data and trends for all jurisdictions in the Region. Only costs and revenues that are accrued by, borne by, or “go through” the jurisdictions (such as through direct provision of service or contracts with service providers) need be included. Services residents procure directly are not included (unless they result in revenues to the jurisdiction). Any assumptions should be fully explained. Costs should equal revenues. A sample budget summary form is presented in Appendix D. Current annual information and projected budget information could be summarized in tables such as those presented below.

According to T.C.A. § 68-211-874(a), any county, solid waste authority, or municipality that operates a Class I landfill or incinerator shall account for financial activities related specifically to that facility in an enterprise fund. A uniform solid waste financial accounting system and chart of accounts developed by the comptroller of the treasury shall be used.
2. Describe any **anticipated changes in funding** that will occur in the Region to provide planned solid waste and materials management over the course of the planning horizon. This could include funding increases, or implementation of new funding mechanisms.

3. Describe any current or anticipated budgetary issues being faced in the Region that is currently or may in the planning horizon affect the provision of solid waste and materials management programs and facilities.

Table 17: Example Current Year Program Costs in Region Table

Jurisdiction	MSW collection costs	MSW disposal costs	Recyclables collection/processing costs	Organics collection/processing costs	Education/outreach costs	Other	Total
Total Annual Costs in Region							

Table 18: Example Current Annual Revenues Table

Jurisdiction	Annual revenues	Revenue source(s)	Total annual revenues
Total Annual Revenues in Region			

Table 19: Sample Total Ten-Year Budget Projections by Jurisdiction Table

Jurisdiction	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Region										

Appendices

Appendix A: Definitions

Unless otherwise noted, these definitions are from T.C.A. § 68-211-103 through § 68-213-102, Chapter 0400-11-01-.01: "Solid Waste Processing and Disposal" (Previously numbered 1200-01-07), the U.S. EPA/States Collaborative Measurement Project, U.S. EPA WasteWise, or the Solid Waste Association of North America (SWANA).

The definitions below are for terms used in this Guidance document and or apply to this year's reporting process. Note that definitional changes may occur in subsequent years under implementation of the State Plan. If you have a question regarding the meaning of a term not listed here or how to interpret a term used in the reporting process, contact your APR Territory Contact.

Alternative Daily Cover (ADC): soil or ADC is used to cover exposed solid waste in a sanitary landfill. ADC is cover other than soil, such as spray slurries, tarps, foams, vegetative waste and ash. Daily cover is cover applied at the end of each sanitary landfill operating day. Final cover or cap is cover comprised of layers of impermeable materials such as compacted clay, drainage materials, topsoil and vegetation applied over the top of a closed cell of a sanitary landfill to minimize the infiltration of rainwater and the production of leachate.

Authority: or "solid waste authority" means any public instrumentality organized pursuant to Part 9 of Chapter 211, Solid Waste Disposal.

Automotive Fluid Collection Center: a facility, including, without limitation, a fixed location, tank, truck, and container, that accepts used oil or any other automotive fluid from DIYers.

Automotive Oil: any oil classified for use in an internal combustion engine, crankcase, transmission, gear box or differential for an automobile, bus or truck, lawnmower, or household power equipment.

Beneficial Use: includes the use of solid waste as an ingredient in a manufacturing process, or as an effective substitute for natural or commercial products, in a manner that does not pose a threat to human health or to the environment. Avoidance of processing or disposal cost alone does not constitute beneficial use.

Biosolids: Nutrient-rich organic materials resulting from the treatment of sewage sludge (the name for the solid, semisolid or liquid untreated residue generated during the treatment of domestic sewage in a treatment facility). When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth (U.S. EPA WasteWater Website).

Board: unless otherwise indicated, the Underground Storage Tanks and Solid Waste Disposal Control Board (UST-SWDCB) created in T.C.A. § 68-211-111

Commissioner: the commissioner of Environment and Conservation or the Commissioner's authorized representative

Composting: the process by which biological decomposition of organic solid waste is carried out under controlled aerobic conditions, and which stabilizes the organic fraction into a material which can easily and safely be stored, handled and used in an environmentally acceptable manner. The presence of anaerobic zones within the composting material will not cause the process to be classified as other than composting.

Composting Facility: a solid waste management facility where solid waste is processed using composting technology. Processing may include physical turning, windrowing, aeration or other mechanical handling of organic matter.

Construction and Demolition (C&D) Debris: waste that is generated during the construction, remodeling, repair, or demolition of buildings, bridges, pavements, and other structures. C&D debris includes concrete, asphalt, lumber, steel girders, steel rods, wiring, dry wall, carpets, window glass, metal and plastic piping, tree stumps, soil, and other miscellaneous items related to the activities listed above. This category also includes natural disaster debris (U.S. EPA, 1989, 1994d).

Convenience Center: any area which is staffed and fenced that has waste receptacles on site that are open to the public, when an attendant is present, to receive household waste, municipal solid waste and recyclable materials.

Department: unless otherwise indicated, means the Department of Environment and Conservation;

Development District: a development district organized pursuant to title 13, chapter 14; Reference - TCA § 13-14-102. Creation of districts - (a) From and after the time when the department of economic and community development has progressed to the stage of preparing a general plan for development of the state as provided for in § 13-16-203 -- 13-16-205, which includes at least a delineation of regions deemed viable to the economic development of the state, then the department is empowered, in cooperation with counties, municipalities and local development agencies, and in accordance with the conditions and procedures specified in this chapter, to create development districts for such regions, such districts to encompass one (1) or more counties or parts of counties, such that are conducive to efficient planning and orderly economic development of the state.

Enterprise Fund Accounting (Enterprise Fund): self-supporting method of funding solid waste management programs and operations through revenues generated from service charges and fees. Deposited and kept separate and distinct from local governments' general funds (Solid Waste Association of North America).

Governing body: the body in which the general legislative powers of a municipal corporation are vested and, in the case of counties, means the legislative body of the respective counties

Green Box: Unstaffed, county public collection system, usually consisting of one or two dumpsters, located in various publically accessible areas for the use of collecting the garbage of residents in the area (Region 4 Workgroup).

Hazardous waste: waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

(A) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible illness or incapacitating reversible illness; or

(B) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed;

Household Hazardous Waste (HHW): Hazardous products that are used and disposed of by residential, rather than industrial, consumers. These products include some paints, stains, varnishes, solvents, and pesticides, and other materials or products containing volatile chemicals that catch fire, react, explode under certain circumstances, or that are corrosive or toxic. HHW is derived from municipal solid waste

(MSW) with the exception of used oil which is excluded from the category of MSW. Examples of recycling include processing HHW components into new products after they have been diverted from the waste stream. Diversion from the waste stream does not constitute recycling through collection or drop-off programs (U.S. EPA, 1992, 1993b).

Household waste: any waste material, including garbage, trash and refuse, and yard waste derived from households. Households include single and multiple residences, campgrounds, picnic grounds and day-use recreation areas

Industrial Solid Waste: Solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste (Title 40 CFR part 258).

Jurisdiction: Refers to a local government – municipality or county.

Landfill: a facility where solid wastes are disposed of by burial in excavated pits or trenches or by placement on land and covering with soil or other approved material

(a) **Class I Disposal Facility** is a sanitary landfill which serves a municipal, institutional, and/or rural population and is used or to be used for disposal of domestic wastes, commercial wastes, institutional wastes, municipal solid wastes, bulky wastes, landscaping and land clearing wastes, industrial wastes, construction/demolition wastes, farming wastes, shredded automotive tires, dead animals, and special wastes.

(b) **Class II Disposal Facility** is a landfill which receives waste which is generated by one or more industrial or manufacturing plants and is used or to be used for the disposal of solid waste generated by such plants, which may include industrial wastes, commercial wastes, institutional wastes, farming wastes, bulky wastes, landscaping and land clearing wastes, construction/demolition wastes, and shredded automotive tires. Additionally a Class II disposal facility may also serve as a monofill for ash disposal from the incineration of municipal solid waste.

(c) **Class III Disposal Facility** is a landfill which is used or to be used for the disposal of farming wastes, landscaping and land clearing wastes, demolition/construction waste, shredded automotive tires, and/or certain wastes having similar characteristics and approved in writing by the Department.

(d) **Class IV Disposal Facility** is a landfill which is used or to be used for the disposal of demolition/construction wastes, shredded automotive tires, and certain wastes having similar characteristics and approved in writing by the Department. **Note:** Class IV facilities are no longer being issued permits. If they wish to continue operations after they've reach capacity, they are required to design the new landfill cells to comply with Class III permit requirements.

Landfill Capacity: The amount of available airspace volume a landfill has for disposal. Remaining capacity is based on the rate of materials being disposed in tons per year times a compaction rate of 2:1 (cubic yards of volume: tons) compared to the cubic yards of remaining airspace available for disposal in a landfill (Region 4 Workgroup).

Equation: Remaining Capacity in Years = (Remaining Cubic Yards of MSW Landfill Airspace (Statewide) / (2 Cubic Yards/ton Conversion Compacted MSW Waste) / (MSW Landfilled Tons of Material/Year))

Municipal Solid Waste (MSW): any garbage, refuse, industrial lunchroom or office waste, household waste, household hazardous waste, yard waste, and any other material resulting from the operation of residential, municipal, commercial or institutional establishments and from community activities; provided, that “municipal solid waste” does not include the following:

- a. Radioactive
- b. Hazardous waste as defined in T.C.A. § 68-212-104;
- c. Infectious waste;
- d. Materials that are being transported to a facility for reprocessing or reuse; provided further, that reprocessing or reuse does not include incineration or placement in a landfill; and
- e. Industrial waste which may include office, domestic or cafeteria waste, managed in a privately owned solid waste disposal system or resource recovery facility, if such waste is generated solely by the owner of the solid waste disposal system or resource recovery facility.

Organic Materials: the remains, residues or waste products of any organism that are recovered resources from solid waste disposal. Such materials may include, but not limited to: food residuals; yard debris; and wood, plant or paper products. This term does not include metals, glass, or petroleum based plastic (U.S. EPA National Measurement Workgroup, 2013).

Pay as You Throw: a system under which residents pay for municipal waste management services per unit of waste collected rather than through a fixed fee (U.S. EPA, 1994, Pay-As-You-Throw, Lessons Learned About Unit Pricing).

Problem wastes: include waste tires, used oil, batteries, anti-freeze, electronics and household hazardous wastes.

Public: Any solid waste management activities (collection, disposal, recycling, composting, diversion, etc.), directly operated by a government agency for the direct benefit of the public to meet the material management needs of their political subdivision. Material source may include commercial, industrial, institutional or residential sources (Region 4 Workgroup).

Private: Any solid waste management activities (collection, disposal, recycling, composting, diversion, etc.), directly operated and owned by a private individual, private corporation, conglomerate, partnership for consideration for the purposes of creating profit. Material source may include commercial, industrial, institutional or residential sources (Region 4 Workgroup).

Recovered Materials: those materials which have been diverted or removed from the solid waste stream for sale, use, reuse or recycling, whether or not requiring subsequent separation processing. Such recovered materials are not solid waste.

Recovered Material Facility – Also known as a Recovered Materials Processing Facility (RMPF)

Recovered Materials Processing Facility (RMPF): - a facility engaged solely in the storage, processing and resale or reuse of recovered materials. A RMPF is not a solid waste processing facility

Recovery: The diversion of materials from the municipal solid waste stream for the purpose of recycling or composting. Excludes reuse and source reduction activities such as yard trimmings diverted to backyard (onsite) composting, the repair of wood pallets, and the refilling of beverage containers (U.S. EPA 1996b).

Recycling: The series of activities by which discarded materials are collected, sorted, processed, and converted into raw material and returned to the economic mainstream by being used in the production of new products. Does not include the use of these materials as a fuel substitute or for energy production (Modification of U.S. EPA 1997).

Region: means a municipal solid waste region organized pursuant to T.C.A. § 68-211-813(a)

Reuse: The use of a product or component of municipal solid waste in its original form more than once. Examples include refilling glass or plastic bottles, repairing wood pallets, using corrugated or plastic containers for storage, and returning milk crates (U.S. EPA, 1994d).

Recycling: The process by which recovered materials are transformed into new products, including the collection, separation, processing, and reuse of recovered materials either directly or as raw materials for the manufacture of new products.

Resource recovery facility: land, rights in land, buildings, facilities and equipment suitable or necessary for the recovery or production of energy or energy producing materials in any form resulting from the controlled processing or disposal of solid waste or the systematic separation, extraction and recovery of recyclable materials from the solid waste stream, including facilities or systems for the storage, conversion or transportation thereof;

Reuse: Reusing an item in its current state.

Sector: Category of waste/material generator, such as:

- **Residential Sector**
 - Post-consumer recycling from inhabited dwellings
 - Materials directly managed by local governments as this is the most reliable
 - Materials generated by the general public at large
- **Commercial sector** -- Examples include big box stores, grocery stores, restaurants, storefront operations, etc. Events from sports arenas and stadiums that are repetitive would be considered retail sales. This includes government generated material that cannot be separated out and may be mixed with other commercially generated material.
 - Created from doing business in retail sales including supply chain
 - Materials from commercial office space from business complexes, and other office buildings
- **Industrial Sector**
 - Any material generated on site at a manufacturing plant

- Standard Industrial Code (SIC code) would be used to determine the appropriate sector, helping to differentiate between commercial and industrial sectors
- **Institutional Sector**
 - Government agencies at any level (federal, state, or local)
 - Government facilities (parks, government buildings, military bases, etc.)
 - Hospitals of all types
 - Educational institutions of all types and levels
 - Correctional facilities of all types
- **Other Sector**
 - Special event recycling from festivals or one time or once a year type events.
 - Examples include, music festivals, strawberry festivals, Memphis in May Barbeque, Dancing in the District.

Single stream recycling (also referred to as **commingled recycling**): A system in which all recyclables, including newspaper, cardboard, plastic, aluminum, junk mail, etc., are placed in a single bin or cart for recycling (Container Recycling Institute).

Solid Waste: Garbage, trash, refuse, abandoned material, spent material, byproducts, scrap, ash, sludge, and all discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and agricultural operations, and from community activities. Solid waste includes, without limitation, recyclable material when it is discarded or when it is used in a manner constituting disposal.

“Solid Waste” does not include:

(i) Solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows, or industrial discharges that are point sources subject to permits under § 402 of the Federal Water Pollution Control Act, codified in 33 U.S.C. § 1342; or

(ii) Steel slag or mill scale that is an intended output or intended result of the use of an electric arc furnace to make steel; provided, that such steel slag or mill scale is sold and distributed in the stream of commerce for consumption, use, or further processing into another desired commodity and is managed as an item of commercial value in a controlled manner and not as a discarded material or in a manner constituting disposal;

Solid Waste Disposal: The process of permanently or indefinitely placing, confining, compacting, or covering solid waste.

Solid Waste Facility: land, rights in land, buildings, facilities and equipment suitable or necessary for collecting, receiving, transferring, placing, confining, compacting, treating or covering solid waste or for processing solid waste by, without limitation, incinerating, composting, separating, grinding, shredding, reducing or otherwise modifying the characteristics or properties thereof, including all property, real and personal, appurtenant thereto or connected with such work.

Solid Waste Processing: means any process that modifies the characteristics or properties of solid waste, including, but not limited to, treatment, incineration, composting, separation, grinding, shredding, and volume reduction; provided, that it does not include the grinding or shredding of landscaping or land clearing wastes or unpainted, unstained, and untreated wood into mulch or other useful products.

Solid Waste Stream: means the system through which solid waste and recoverable materials move from the point of discard to recovery or disposal.

Source Separated: Collecting recyclable materials which have been separated at the point of generation and keeping those materials separate from other collected solid waste in separate compartments of a single collection vehicle or through the use of separate collection vehicles (40 CFR 246.101).

Source Reduction (also known as waste prevention or waste avoidance): The practice of designing, manufacturing, purchasing, or using materials in ways that reduce the amount or toxicity of trash created. Reusing items is another way to stop waste at the source because it delays or avoids that item's entry in the waste collection and disposal system. Reducing waste so it is not generated in the first place. Examples include: selling for reuse, donating for reuse, double-sided copying, etc. (U.S. EPA WasteWise).

Special Revenue Fund: Used to account for the proceeds of specific revenue sources (other than trusts for individuals, private organizations, or other governments or for major capital projects) that are restricted or committed to expenditures for specified purposes other than debt service or capital projects (GAAP 80.20.35a).

Sustainable Materials Management: A systemic approach to using and reusing materials more productively over their entire lifecycles. It represents a change in how society thinks about the use of natural resources and environmental protection. SMM incorporates considering environmental impacts throughout the entire life of the product, from material extraction to transport to manufacturing to use, as well as end-of-life management SMM seeks to reduce toxics, use materials in the most productive way throughout their entire life cycle, and consume fewer resources.

Tipping Fee/Gate Charge: Fee charged for accepting recyclable materials or solid waste at a solid waste management facility such as a transfer station, solid waste combustor, MRF, IPC, compost facility or sanitary landfill (Solid Waste Association of North America).

Tires: Passenger car and light - and heavy - duty truck tires, high-speed industrial tires (from airplanes), bus tires, motorcycle tires, and special service tires, such as military, agricultural, off-road, and slow speed industrial tires (from construction vehicles). Examples of recycling include processing car and truck tires into new rubber products (trash cans, storage containers, and rubberized asphalt), and the use of whole tires for playground and reef construction (U.S. EPA National Measurement Workgroup).

Transfer Station: A facility where solid waste is transferred from collection vehicles to larger trucks or rail cars for longer distance transport (U.S. Congress, 1989).

Transporter: means a person engaged in the transportation of municipal solid waste collected or to be baled or processed, or disposed of in Tennessee by rail, highway or water, in significant amounts. The amounts deemed significant shall be determined by the board and established by regulation.

Used Oil: means any oil which has been refined from crude or synthetic, or recovered oil and, as a result of use, storage or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which may be suitable for further use and may be economically recycled or may be burned as fuel.

Waste Diversion: The prevention and reduction of generated waste through source reduction, recycling, reuse, or composting.

Waste tire: means a tire that is no longer suitable for its original intended purpose because of wear, damage or defect.

Waste Diversion: The prevention and reduction of generated waste through source reduction, recycling, reuse, or composting. In some states diversion includes waste processed at waste- to-energy facilities.

Waste to Energy: Energy produced from the combustion of post-recycled municipal solid waste, animal waste or animal byproducts, biogas, landfill methane, or other biomass that has been diverted from or separated from other waste out of a municipal waste stream. Existing waste-to-energy facilities must be in compliance with all applicable environmental regulations for new facilities within the applicable source category under the Clean Air Act (Clean Energy Standard Act of 2012).

Yard Trimmings: Grass, leaves, tree branches and brush, and tree stumps from residential, institutional, and commercial sources (U.S. EPA, 1996b).

Yard waste – Also known as yard trimmings.

Appendix B: Minimum Collection Requirements

Minimum Collection Requirements

Tennessee Department of Environment and Conservation,
Division of Solid Waste Management, Materials Management Programs

THE LAW: All Tennessee Counties must assure that one or more municipal solid waste collection and disposal systems are available to meet the needs of the residents of the county. The minimum level of service that the county shall assure is a system consisting of a network of convenience centers throughout the county, unless a higher level of service, such as household garbage pickup, is available to the residents. [The Solid Waste Management Act of 1991 - TCA 68-211-851(a)]

REGULATIONS ON MINIMUM LEVELS OF COLLECTION SERVICE PROMULGATED TO SUPPORT THE LAW [Rule 0400-11-01.10]

Convenience Centers: Each county shall have at least one convenience center unless a higher level of service is provided. The minimum number of centers shall be established as follows:

1. The service area in square miles divided by one hundred eighty square miles (180 mi²),

OR

2. The service area population divided by 12,000.

In either case, service area does not include cities covered by mandatory collection.

Higher Level of Service/Household Collection/ Alternate Systems - A county shall be deemed to have met the minimum level of service if **at least 90% of all residents have access to household collection**. If a county or solid waste planning Region proposes an alternative system (household collection or some combination with convenience centers), said system must be approved by the Commissioner. The proposed system must provide a higher level of service than convenience centers would.

Each county must report on collection progress annually. The progress reports shall consider: a survey of roadside dumps, citizen complaints, alternative systems available, and volume of waste received or collected by the existing systems. This report will be provided in the solid waste planning Region's annual progress report to be submitted to the Department in March. The Commissioner will use these reports and other information to evaluate collection systems.

COMMONLY ASKED QUESTIONS:

If a county chooses to develop convenience centers in order to assure collection to its citizens, what is the minimum action required?

The county should use either of two formulas (one based on area and the other on population described above) to determine how many convenience centers are required in the county. Then the county should develop as many as are required, following the Department's guidelines in Rule 0400-11-01.10 and seeing that the centers are conspicuous and available to all citizens.

This minimum level of convenience center service required by law and regulation will serve as a benchmark to evaluate any alternative systems. When evaluating house-to-house or hybrid collection systems, the Commissioner will look to see that the system in place is a higher level of service than the minimum number of required convenience centers would be.

Are counties allowed to build more than the number of convenience centers mandated by law and rule?

Yes, these rules only establish a minimum number of convenience centers required. Additional centers to enhance collection are encouraged. In fact, grant money to establish new convenience centers and to enhance existing convenience center systems has been made available from the Department.

What must a county choosing a higher level of service (like door to door curbside collection) over convenience centers do to meet the legal requirements?

Counties electing to assure a higher level of service than convenience centers must follow the guidelines set out in Rule 0400-11-01.10 for a higher level of service which states that 90% of all residents **must have access to** reasonably priced household collection. In addition, alternative systems must be evaluated annually by the Commissioner to see that a level of service higher than the minimum required by convenience centers is being achieved. Satisfaction with the service will be evaluated by the Region's annual progress report described above.

As a practical matter, what are some courses of action a county choosing the higher level of service option may take?

- 1. Collection Assurance Contracts:** In counties choosing to rely on the services of private curbside haulers, the Department would prefer enforceable, reasonable contracts for at least some consideration. These contracts, between the county and the hauler or haulers, may be, but do not have to be contracts for payment of the actual collection service. The contracts may be assurance contracts that guarantee collection availability at a reasonable price in exchange for a minimal fee. Should a citizen seek curbside collection at a reasonable price and be denied, then the county would have legal recourse against the hauler under the assurance contract. The Department recommends an assurance contract. However, such a contract may not be of practical use to all counties.
- 2. Curbside Collection in Addition to Minimally Required Convenience Centers:** If a county provides the minimum number of convenience centers required by rule, private haulers may operate in addition in the county and the county is not required to have an assurance arrangement with any haulers.

3. **Service Provided Directly by the County:** Counties that are willing to provide public collection services may fulfill the minimum collection requirements by assuring curbside collection at a reasonable price to all citizens upon request.
4. **Hybrid Systems:** Some counties may wish to use some type of hybrid system of convenience centers and curbside collection. Such a system might allow citizens some choice and flexibility. Again, in this case, the county must demonstrate to the Department that the service offered is a higher level of service than the minimum number of convenience centers would be and the Commissioner must approve the system.
5. **Conventional Contract for Services:** A contract for services between the county and private haulers is certainly permissible and effective.
6. **County Executive's Written Annual Assurance:** The County Executive may certify annually that **90% of county residents have access to collection services that are practical, reasonable, and legal.** These services may include, but are not limited to (a) the use of house-to-house collection services; (b) the use of registered convenience centers; or, (c) the use of a drop-off site at a Class I municipal solid waste landfill or incinerator. **Greenbox systems will not be considered in this evaluation.** The County Executive's certification letter along with information detailing the collection services attested to will be expected in the annual progress reports to the Department as required by statute [T.C.A. § 68-211-851(b) and 68-211-871(a) and Rule 0400-11-01-.10(4) (Previously numbered 1200-1-7-.10(4))].

Supplemental information submitted by the County Executive may include a listing of private haulers operating in the county or a letter from a hauler or haulers to the County Executive assuring him that all residents within a given area will be provided service for a reasonable fee upon request.

[NOTE: Bear in mind that all six of the above higher level of service options are subject to the Department's annual evaluation via each Region's annual progress report to be submitted in March of each year. If the Commissioner finds that actual collection in the county is not more effective than one might reasonably expect the minimum number of convenience centers to be, then the Department may insist on a more aggressive program.]

Does State law or policy mandate a 90% participation/subscription rate in counties where curbside collection is offered as the primary option?

No, a 90% participation rate is not mandated, but high participation is certainly encouraged. State regulations require that 90% of county citizens **have access to** collection. It is the State's purpose and intention to encourage collection by insisting that it be reasonably available to all citizens. Counties are given the flexibility to design collection plans that are best suited to their population, geography, and financial resources.

Are green boxes legal? Can green boxes be used by counties to assure collection?

In limited cases, counties are allowed to have green boxes. However, the county may not use the boxes to assure collection services. Green boxes may only supplement the minimum collection requirements. Only counties with green boxes in continuous use since January 1, 1996 who follow the proper reporting requirements will be allowed to continue to have green boxes [T.C.A. § 68-211-851(d)].

Appendix C: Fact Sheet – Flow Control and Permit Review

Flow Control and Permit Review

Tennessee Department of Environment and Conservation,
Division of Solid Waste Management, Materials Management Programs

As described in the Solid Waste Management Act [T.C.A. § 68-211-814(b)(1)(D)]:

1. The applicant must apply (in writing as he would to the Division of Solid Waste Management) to the Regional Solid Waste Board at or before the time the application process for technical review is initiated with the Division of Solid Waste Management.
2. Next, if the application is in order and the applicant wants to continue, the Board must hold a public hearing with proper notice and a written record of the proceedings.
3. When the Board votes on the application, they are not expected to examine the proposal for technical merit. They are expected to compare the project with the financial needs and disposal plans described in the Region's approved ten year plan and determine if the application is consistent with and/or complimentary to the plan's vision for the Region.
4. The Regional Board has 90 days after the receipt of an application to make a decision. Once a decision is made, it must be communicated in writing to the Commissioner of Environment and Conservation Robert J. Martineau, and cc: to Patrick J. Flood (Director of Solid Waste Management) and Larry Christley (Manager of the Materials Management Program).
5. A decision by the Region may be appealed in the Davidson (regardless of county board represents) County Chancery Court.

Flow Control and Constitutional Issues

Flow control within and among Regions has been the subject of a number of court cases in recent years. Of particular concern are the **Ft. Gratiot** case (which would seem to discourage out-of-Region bans) and the **Carbone** case (which cast doubt on laws allowing intra-Region flow control to support public facilities). The **Ft. Gratiot** case out of Michigan is of particular concern because the state supreme court ruled the State cannot avoid the applicability of the Commerce Clause by curtailing the movement of solid waste through subdivisions (like counties or Regions) of the state rather than the State itself.

Pressure has increased for federal action with regard to flow control law. Many official from Tennessee and other States have lobbied Congress to specifically allow out-of- state waste bans. Congressional authorization is the only sure way to circumvent the constitutional Commerce Clause argument, which generally asserts that States may not interfere with interstate commerce without the specific permission of Congress.

The Solid Waste Management Act of 1991 and the Solid Waste Authority Act of 1991 are Tennessee's attempt to provide local governments with the tools to control the flow of waste. While the provisions for flow control have not been stricken, problems with their enforcement do exist. The State will continue to defend these statutes and contend that these laws satisfy commerce clause problems. Strict procedures for imposing intra-Region flow control and out-of-Region

waste bans are included in the Solid Waste Management Act [TCA 68-211-814(b)(1)(A&B)] and the Solid Waste Authority Act [T.C.A. § 68-211-906 and 907]. Following these procedures and establishing a clear rationale for controlling the flow of waste is essential if Regions attempt to impose intra-Region flow control or out-Region bans.

Regions are reminded that other methods are available to control waste flow like the “market participant exception” (TCA 68-211-817 allowing public owners of landfills to serve their constituency only and ban others), and certain economic incentives.

Permit review is available to Regional boards (or Part 9 authorities if created). Permit review (or local veto) may be viewed as a means to control flow. Plans and plan updates can establish the nature and volume of waste disposal foreseen in a given Region. Regions or authorities may choose to plan for just enough volume to serve the Region or, in order to satisfy economic concerns associated with operating a facility, they may plan to import some waste. Permits for new facilities are accepted or rejected based on the disposal capacity assurance discussion in the plan.

Perhaps the best way to be certain of waste flow is through contracts with private entities and inter-local agreements (between local governments, authorities, etc.). Contracts are always recommended even with a flow control ordinance in place.

Appendix D: Sample Budget Summary Template

From the University of Tennessee, County Technical Assistance Service, Institute for Public Service

Local governments are a subdivision of state government; therefore the state has a vested interest in the operation of local governments. The state has a prescribed set of accounting codes (Chart of Accounts) in which the local governments use to budget and expense their cost of operations

In county government, each of the major operations—roads, education, and general government—operate under a separate fund maintained through the county trustees' office. These funds are like subsidiary businesses of a holding company. Each fund has its separate accounting and budgeting system and records. A budget is approved by fund and function with a property tax rate set for each fund that needs it. Tennessee counties usually operate under the following funds:

Fund Name	Fund Number
General Fund	#101
Solid Waste/Sanitation Fund	#116
Drug Fund	#122
Road and Bridge Fund	#131
General Purpose School Fund	#141
Federal Projects Fund	#142
Debt Service Fund	#151
Capital Projects Fund	#171
Other Optional Funds	

The links below will take you to more detailed charts and examples

County Uniform Chart of Accounts

<http://ctas-eli.ctas.tennessee.edu/sites/default/files/Chart%20of%20Accounts%202015.pdf#overlay-context=reference/chart-accounts>

Department Budget by Object Code (example)

<http://eli.ctas.tennessee.edu/reference/department-budget-object-code>

Appendix E: Template for Region’s Plan Implementation Strategies & Tactics Summary*

Jurisdiction	Responsible party	Description of strategy/tactic	Implementation start/end date	How strategy/tactic funded
Objective 1: Waste Reduction and Recycling Goals and Objectives				
Objective 2: Increase Recycling Access and Participation				
Objective 3: Promote Material Processing and End Use in Tennessee				
Objective 4: Promote Material Processing and End Use in Tennessee				
Objective 5: Support New Waste Reduction and Recycling Technology				
Objective 6: Expand and Focus on Education and Outreach				
Objective 7: Ensure Sufficient and Environmentally Sound Disposal Capacity				
Objective 8: Develop Sustainable Funding Sources for Strategic Materials Management				

* These Objectives align with the Department’s 2025 Plan, but this table is meant to show the timeline for implementation of the Region’s own 10-Year Plan.

Appendix F: Methods for Estimating Diversion Rates

Estimating Diversion Using Real-Time (All Current-Year) Data

Jurisdiction name	Jurisdiction portion of population in region	A	B	C	D	E	F
		Tons MSW generated = B+C+D	Tons MSW recycled/composted	Tons MSW otherwise diverted (describe)	Tons MSW disposed	Estimated recycling rate = B/A	Estimated diversion rate = (B+C)/A
County A	%A						
County B	%B						
County C	%C						
Etc.	Etc.						
Region	100%						= weighted average of diversion rates

The above essentially describes identifying a diversion rate for the Region, using a weighted average of population for each County in the region.

Estimating Diversion Using Base Year

Jurisdiction Name	Jurisdiction portion of population in region	A	B	C	D
		Tons per capita disposed in Class I landfills – base year	Tons per capita disposed in Class I landfills – current year	Reduction in per-capita MSW disposal	Estimated increase in diversion (weighted avg. by population)
County A	%A			A-B (County A)	
County B	%B			A-B (County B)	
County C	%C			A-B (County C)	
Etc.	Etc.				
Region	100%				= weighted average of reduction in per capita disposal rates

The above essentially describes identifying a diversion rate for the Region, using a weighted average of population for each County in the region.

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