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Solid Waste Planning in Tennessee

Tennessee Department of Environment &
Conservation



Agenda

Introduction to The Plan

Existing Conditions

Benchmarking Best Practices & Technologies

Recommendations & Actions

Tools & Resources

Next Step, Regional Planning

Q&A



Introduction to The Plan

2025-2035 Statewide Integrated Solid Waste Management Plan

The Plan: What It Is, Why We Need It

TN

T.C.A. 68-211-603

Requires TDEC to develop a statewide solid waste management plan

- Required under Tennessee law (TCA)
- Supports consistent, compliant planning across Tennessee
- Establishes statewide direction for solid waste management
- Guides regional plans and local implementation

Going beyond regulatory compliance, planning is how we prepare for long-term solid waste system challenges

1

Population growth and regional variation

2

Infrastructure and capacity needs

3

Financial and operational pressures

4

Evolving waste streams

Setting the Direction for Tennessee's Future

Vision Statement

"Working together, we will protect our environment and conserve critical natural resources for future generations while we make Tennessee an even better place to live, work, and play"

1

Ensure Long-term
Environmentally
Protective Disposal
Capacity

2

Advance Material
Processing
Infrastructure and
Market Development

3

Increase Diversion
of Organic Waste

4

Strengthen Goals and
Data-Driven
Performance Metrics

5

Manage Problematic
or Hard-to-Manage
Waste

6

Disaster Debris
Management

7

Expand and Focus
Education and
Outreach

8

Develop Sustainable
Finding Sources for
Municipal Solid
Waste Management
Programs

Roles and Responsibilities

- The Plan establishes a general framework for each of the following regarding each participants roles and responsibilities:
 - TDEC
 - Solid Waste Planning Regions
 - Local Governments
 - Other Stakeholders:
 - Private Industry
 - NGO(s)
 - Academic Institutions
 - Individual Citizens

2. ROLES AND RESPONSIBILITIES FOR IMPLEMENTATION

Implementation of the 2035 Plan is the shared responsibility among the state government, regional entities, and local stakeholders. TDEC, through the DLP, serves as the lead agency, with statutory authority and enforcement powers granted under the Solid Waste Management Act of 1991 (TCA §68-211-801).

2.1 State Government

TDEC is responsible for:

- Developing and maintaining the statewide plan in accordance with TCA §68-211-814 and §68-211-815, ensuring alignment with state goals and regulatory requirements;
- Providing statewide guidance, oversight, technical assistance, and regulatory enforcement to support regional and local planning efforts;
- Administering grants, setting waste reduction goals (TCA §68-211-861), and conducting enforcement actions;
- Reviewing and approving or disapproving regional solid waste plans within 90 days of receipt per TCA §68-211-814; and
- Regulating the siting, permitting, operation, and closure of solid waste facilities, including landfills, transfer stations, convenience centers, recovered material processing facilities (RMPFs), material recovery facilities (MRFs), and composting facilities.

2.1.1 Enforcement Authority

TDEC is vested with comprehensive enforcement authority under the Solid Waste Management Act of 1991 and related statutes. This authority ensures that all entities, state, regional, and local, comply with the requirements of the 2035 Plan and the broader statutory framework.

2.1.1.1 Monitoring and Compliance

TDEC monitors compliance through inspections, audits, and reviews of regional solid waste plans, facility operations, and grant-funded programs. When deficiencies or violations are identified, the Commissioner may initiate enforcement actions to ensure corrective measures are taken.

2.1.1.2 Graduated Sanctions for Noncompliance

Under TCA §68-211-816, the Commissioner has the authority to impose a range of graduated sanctions, including:

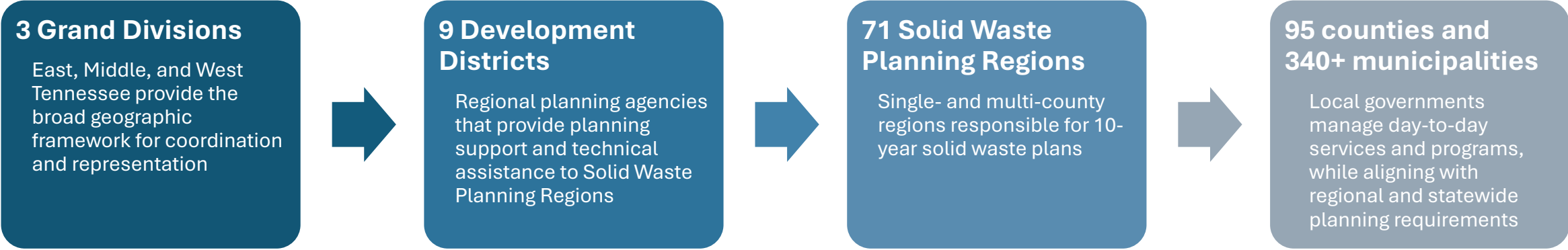
- **Formal Warning Letters:** Issued to notify entities of noncompliance and required corrective actions.
- **Suspension of Grant Eligibility:** If noncompliance persists beyond 30 days, the entity may become ineligible for Solid Waste Management Fund (SWMF) grants.



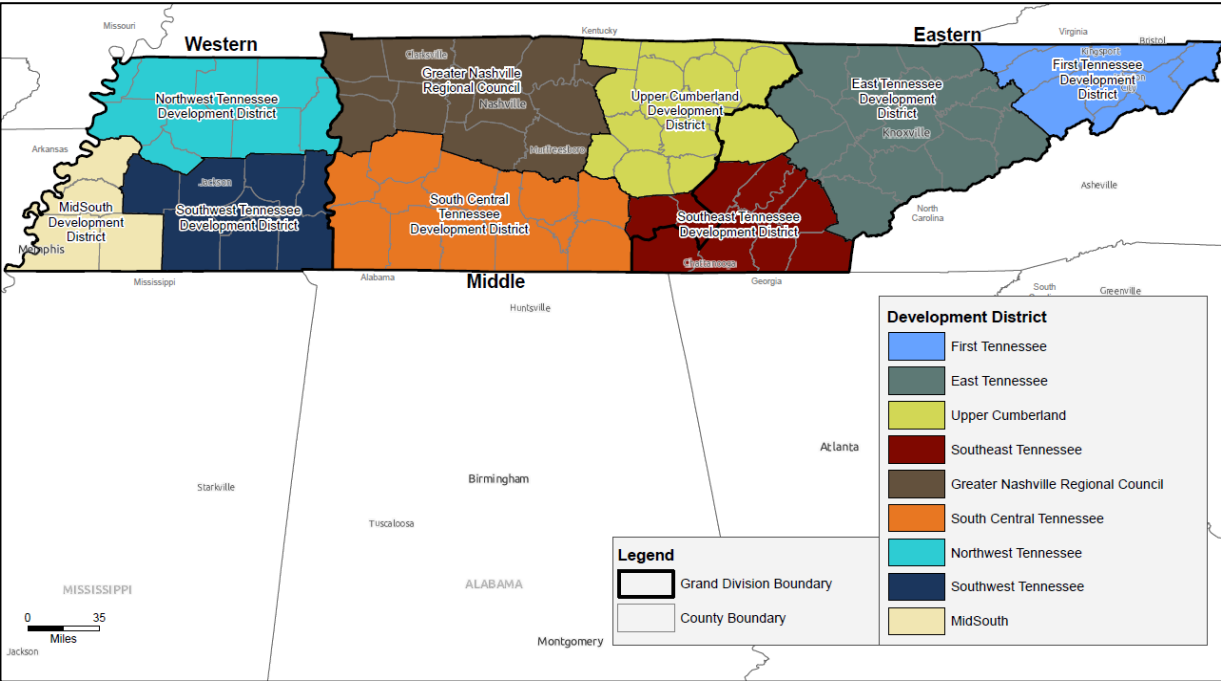
Existing Conditions

2025-2035 Statewide Integrated Solid Waste Management Plan

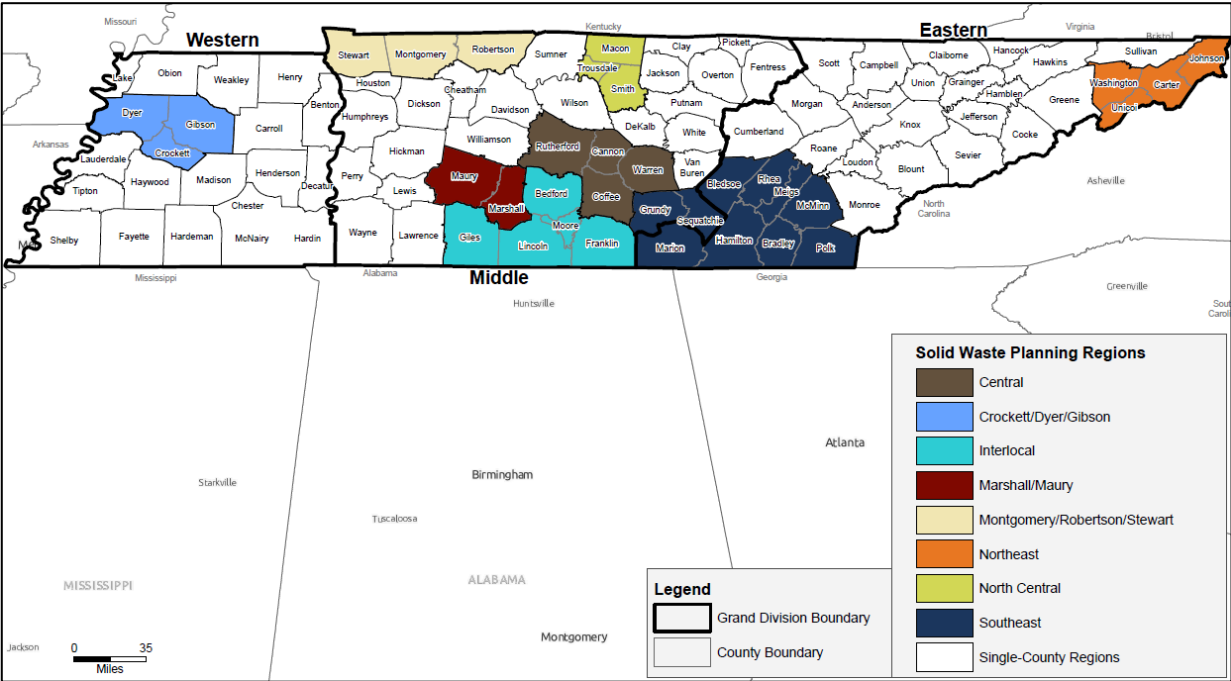
Tennessee's Solid Waste Planning Landscape



Grand Divisions and Development Districts



Tennessee Solid Waste Planning Regions



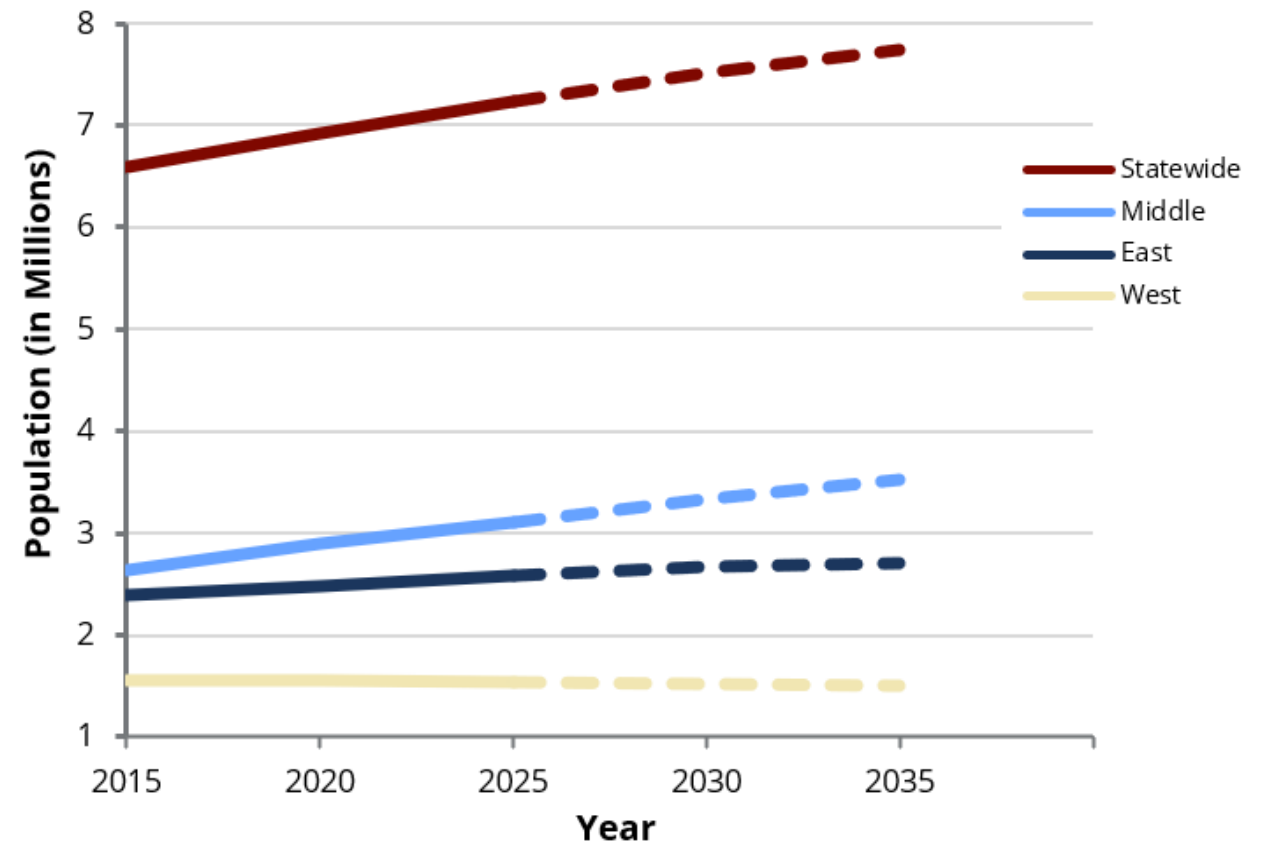
Population & Growth

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- Tennessee population grew ~10% (2015–2025) and is projected to reach ~7.7M by 2035 (~6.9% growth)
 - Growth concentrated in Middle and East Tennessee
 - West Tennessee projected to decline in some rural areas
 - Population trends drive differences in system needs statewide
- Solid waste generation is expected to increase proportionally with population growth (+8%)

Additional waste volumes will place pressure on collection systems, transfer infrastructure, recycling programs, processing capacity, and landfill disposal facilities.

Statewide Projected Population

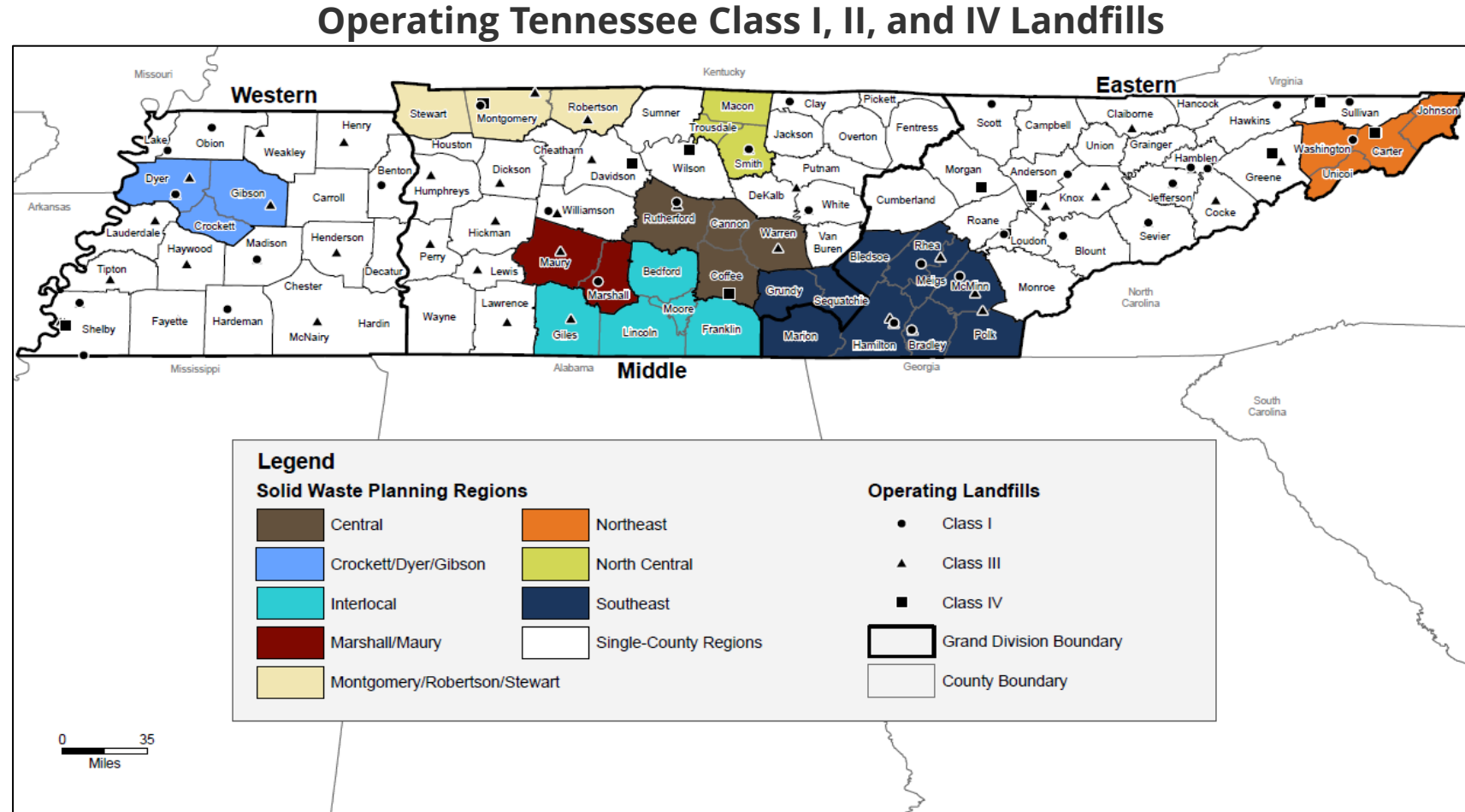


Solid Waste System Infrastructure

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- Extensive statewide system; Approximately 1,800+ permitted facilities, ~900 operational statewide
- Landfills unevenly distributed across regions
- Infrastructure challenges vary:
 - Siting constraints (Middle TN)
 - Limited assets outside urban hubs (West TN)
 - Reliance on convenience centers (East TN)

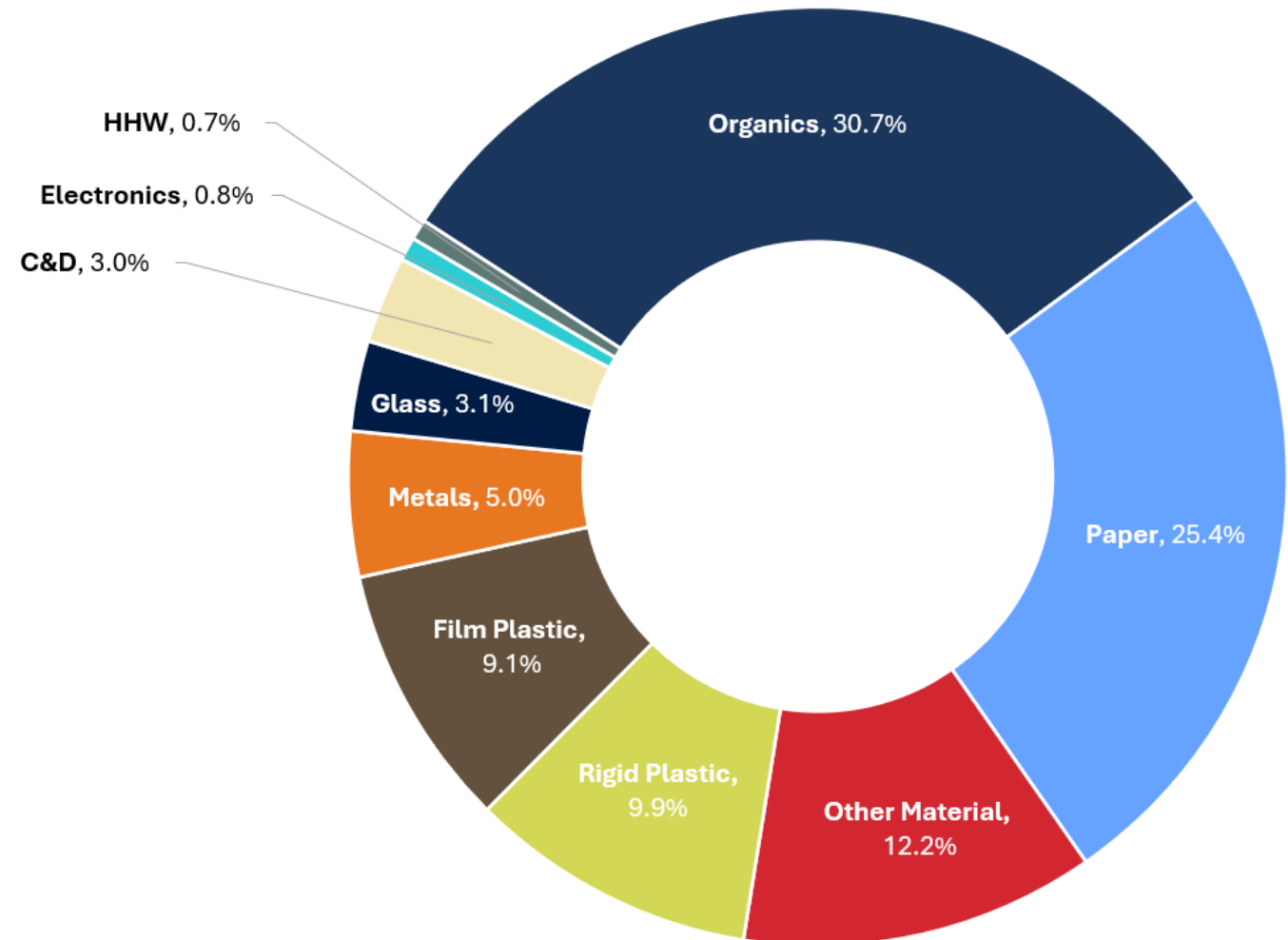
Tennessee's estimated Class I landfill capacity declines from approximately 30 years (FY2023) to 15-17 years by FY2035 without expansions or significant gains in diversion.



Waste Generation & Composition

- ~18 million tons of MSW generated annually
 - ~52% landfilled in Class I facilities
 - Includes residential + industrial/commercial sources
- Waste generation increasing, especially in urban areas with population growth (Nashville, Knoxville, Memphis)
- Waste stream dominated by:
 - Organics (~30%)
 - Paper (~25%)
- 70–75% of landfilled waste is potentially recyclable or compostable

Overall Waste Composition Summary





Benchmarking Best Practices & Technologies

2025-2035 Statewide Integrated Solid Waste Management Plan

Benchmarking Approach



Recommendations in The Plan were informed by a comprehensive review of best practices, technologies, and successful programs from Tennessee and local communities.

What We Evaluated

Best Practices	Technologies
Source Reduction & Reuse	Collection Technologies
Collection Systems	Transfer & Processing Systems
Recycling Programs	Composting Systems
Organics Diversion	Recycling & Material Recovery
Problem Waste Management	Disposal Systems
Disaster Debris Management	Emerging Solutions
Education & Outreach	

Tennessee Success Stories

The Plan builds on proven programs already operating throughout Tennessee that demonstrate practical, scalable solutions for improving materials management.



Tennessee Materials Marketplace

- Connects material generators with end users
- Supports reuse and market development
- Reduces disposal of recoverable materials



Hub-and-Spoke Recycling Network

- Expands recycling access
- Supports rural communities
- Improves operational efficiency



Get Food Smart TN

- Promotes food waste prevention
- Supports organics diversion
- Expands public awareness



HHW Collection Network

- Permanent facilities
- Mobile collection events
- Increased statewide access



Sevier County Organics Processing / Composting

- Serves more than 39,000 households
- Accepts organic materials from commercial partners
- Demonstrates successful regional organics diversion and compost use



Sullivan County Regional MRF

- More than \$5 million invested in modernization
- Regional recycling hub for Upper East Tennessee
- Advanced sorting technology improving recycling efficiency



Williamson County CAPS Program

- Convenient, low-cost recycling drop-off system
- Allows residents to sort recyclables at collection sites
- Processes more than 600 tons of recyclables per month while reducing collection costs



Recommendations & Actions

2025-2035 Statewide Integrated Solid Waste Management Plan

Recommendations and Key Actions

- The recommendations follow the 8 objectives
- Each objective has a brief rationale, state recommendation, and key actions
- Recommendations address major system needs:
 - Capacity
 - Diversion access
 - Data
 - Disaster preparedness
 - Funding
- Actions are designed for collaborative implementation by state, regional, local, private-sector, institutional, and nonprofit partners





Tools & Resources

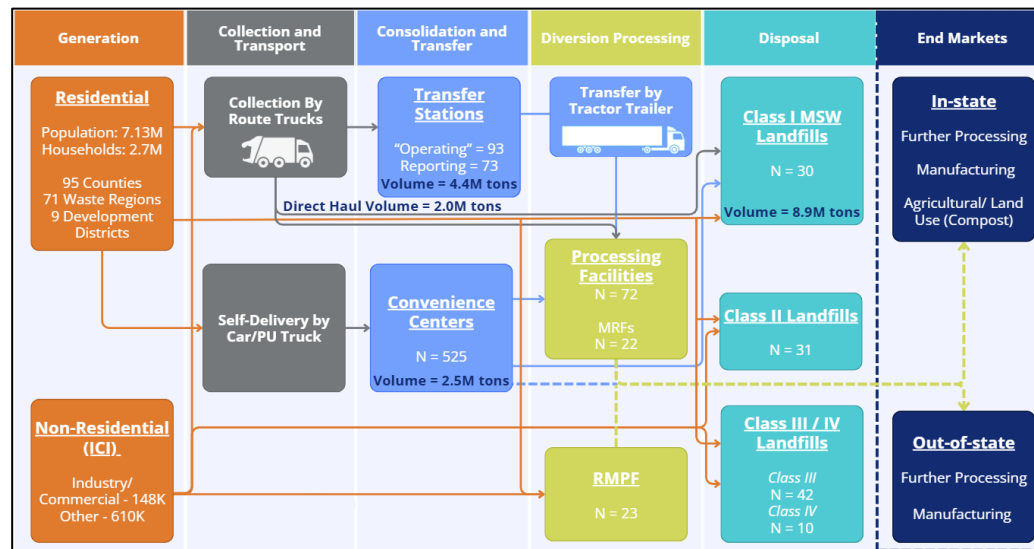
2025-2035 Statewide Integrated Solid Waste Management Plan

Economic Modeling & Planning Tool

TN

- Supports the evaluation of long-term financial sustainability, capital planning, and infrastructure decisions
- Allows for comparison of future scenarios
- Helps communities understand costs and funding needs
- Can be used to evaluate collection, transfer, disposal, and diversion strategies

Waste Flow Volume Map



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Today's Date: 7/24/2026

Input Type Key: Calculated or Linked Output Value
Hardcoded Input Value
Drop-down Menu

Project No.	ME2658A
Client	TDEC
Item	Economic Model and Guidance for "All-In" Solid Waste Management Costs
Purpose and Disclaimer	This pro forma is the work product of Geosyntec Consultants, Inc., and has been prepared for and on behalf of TDEC for their sole use.
Project Scope	Develop an economic model to illustrate the costs associated with managing municipal solid waste across Tennessee's three Grand Divisions. The model will focus on waste managed by the public sector, whether collected under contract with or by a municipality, directly by residents. Designed to support municipal planning, the model will provide a snapshot of current municipal management costs and include projections based on estimated Consumer Price Index (CPI) trends. These projections will help municipalities anticipate future budget needs and make informed decisions.

Workbook Tab	Description
Conceptual Analysis	Conceptual visual model of solid waste program management and subsectors
Economic Analysis	Summary matrix of conditions in each sector by grand division
Cost Table	High and low end cost assumption matrix, broken down by facility size or region category
Input-Output Model	Interactive Input-Output model
Model Test	Comparison matrix between model predicted expenditures and expenditures in provided county budgets
Facility List	Summary of known facilities and services
Grand Divisions	Counties and respective facility county by grand division and planning region
Population	County and grand division population and projections
Solid Waste CPI	Solid waste inflation factors, over 10 years

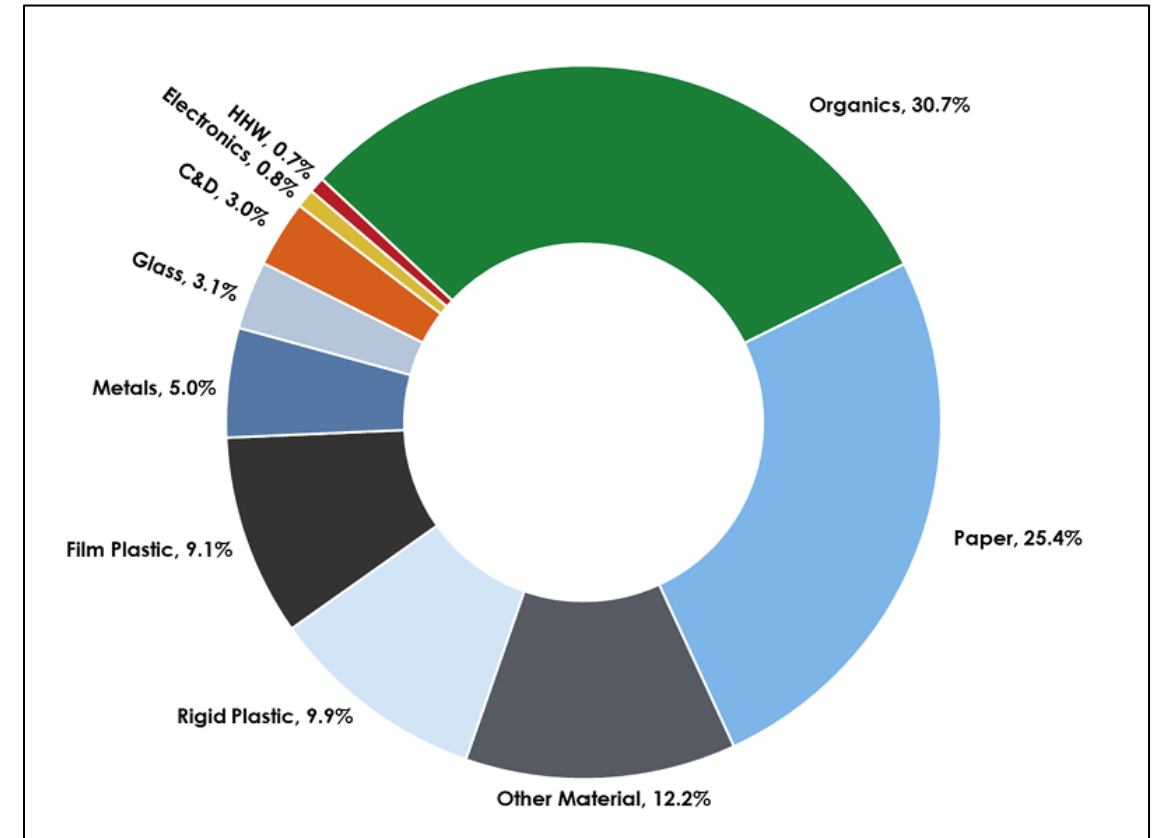
List of Acronyms	Description

Rural		Suburban	
Chester Total Expenditures Model Closest Total: DELTA	Planning Region Grand Division Population Density Type % of Population with Curbside Collection Is disposed included in collection contract? % of waste flowing through Transfer Stations % of Processed Recyclables Facility Profile Convenience Center Transfer Stations Composting Facilities MRFs Landfills	Camden Total Sanitation Management Total Convenience Centers Total Transfer Stations Total Other Waste Collection Total Recycling Center Total Other Waste Disposal Total Employee Benefits TOTAL: Model Closest Total: DELTA	Planning Region Grand Division Population Density Type % of Population with Curbside Collection Is disposed included in collection contract? % of waste flowing through Transfer Stations % of Processed Recyclables Facility Profile Convenience Center Transfer Stations Composting Facilities MRFs Landfills
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Hardin Total Sanitation Management Total Waste Pickup Total Convenience Center Total Landfill Operation and Maintenance Total Other Total Expenditures Model Closest Total: DELTA	Planning Region Grand Division Population Density Type % of Population with Curbside Collection Is disposed included in collection contract? % of waste flowing through Transfer Stations % of Processed Recyclables Facility Profile Convenience Center Transfer Stations Composting Facilities MRFs Landfills	Essex Total Solid Waste Budget Model Closest Total: DELTA	Planning Region Grand Division Population Density Type % of Population with Curbside Collection Is disposed included in collection contract? % of waste flowing through Transfer Stations % of Processed Recyclables Facility Profile Convenience Center Transfer Stations Composting Facilities MRFs Landfills
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Jackson Waste Pickup Convenience Centers Other Operations Total Expenditures Model Closest Total: DELTA	Planning Region Grand Division Population Density Type % of Population with Curbside Collection Is disposed included in collection contract? % of waste flowing through Transfer Stations % of Processed Recyclables Facility Profile Convenience Center Transfer Stations Composting Facilities MRFs Landfills	Tipton Litter and Trash Collection Model Closest Collection Cost: Delta	Planning Region Grand Division Population Density Type % of Population with Curbside Collection Is disposed included in collection contract? % of waste flowing through Transfer Stations % of Processed Recyclables Facility Profile Convenience Center Transfer Stations Composting Facilities MRFs Landfills
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Statewide Waste Characterization Study

- Commissioned by TDEC and conducted in partnership with SCS Engineers
- Funded through the EPA SWIFR Grant Program
- Included field events at 10 solid waste facilities across Tennessee's three Grand Divisions
- Approximately 50 samples collected per field event to develop a representative statewide dataset
- Identifies what is in Tennessee's waste stream and provides a statewide baseline
- Supports data-driven decision making
- Helps prioritize diversion opportunities
- Informs recycling and organics strategies

Tennessee Statewide Material Characterization & Recycling Study



Improved Data & Reporting Resources

TDEC has published the Annual Progress Report (APR) Dashboard, making solid waste data more accessible and helping local governments, regions, and stakeholders evaluate performance across Tennessee.

- View APR data through interactive charts and maps
- Track waste generation, diversion, recycling, and disposal trends
- Compare performance across communities, counties, and regions
- Access statewide metrics and benchmarking information
- Support planning, prioritization, and decision-making with consistent data



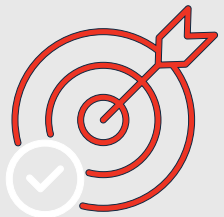


Next Step, Regional Planning

2025-2035 Statewide Integrated Solid Waste Management Plan

State Direction, Regional Implementation

TN



WHAT THIS MEANS

- The Plan sets direction
- Regional Plans must align with that framework
- Local decisions must be consistent with both

What This Means for Regions

Submit Plan

- Complete 10-year Regional Plan
- Must address TCA §68-211-815 requirements
- Submitted through MyTDECForms



30-Day Completeness Review

- TDEC verifies all required components
- Incomplete plans returned for revisions



120-Day Technical Review

- TDEC approves or disapproves plan
- Approval = process complete



If Disapproved

- Deficiencies identified
- Region has 60 days to resubmit

If Requirements Are Not Met

Warning

Formal warning letters identify noncompliance and required corrective actions.

30+ days

Suspension of SWMF grant eligibility may apply if noncompliance persists.

60+ days

Civil penalties may reach up to \$5,000 per day for continued violations.

Support for Regions

TDEC is providing tools and grants to support regions; however, regions are encouraged to utilize qualified consultants to reduce planning burdens and ensure a consistent, high-quality planning approach.



- **Solid Waste Master Planning Grant**
- **~\$3M total funding available**
- **90 counties are eligible for up to \$30,000 in grant funding**
- **Five largest applicant counties are eligible for up to \$60,000**



- **Planning templates and guidance documents**
- **Economic Modeling Tool for cost and system evaluation**
- **TDEC Materials Management APR Dashboard**
- **Data tables and waste characterization studies**



- **Training and technical assistance available**
- **Support for regional coordination and collaboration**
- **Ongoing engagement with TDEC during planning process**



Moving Forward Together

- The Plan provides a long-term roadmap for Tennessee's solid waste system
- Planning is both a requirement and a critical local responsibility
- Regions must be prepared to manage waste for the next 10 years
- Tools and funding are available to support implementation
- Success depends on state, regional, and local collaboration

“The 2035 Plan establishes a strategic framework to guide the development and support of solid waste management systems across Tennessee for the 10-year planning period 2025 through 2035.”



Questions?

