GREEN BUSINESS PROGRAM

East Texas Council of Governments

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The Green Business Program is intended for businesses, governmental entities, schools, non-profits, and any other entity interested in reducing waste generation and increasing recycling. Businesses may receive benefits for participating in the program, such as reduced waste management cost, reduced risk and liability, business recognition, and waste reduction.

This document was created by the East Texas Council of Governments (ETCOG) in Partnership with Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell), through a grant from the Texas Commission on Environmental Quality (TCEQ).

If the user has questions about the Green Business Program or while filling out any of the tables in this document, please contact ETCOG at 903-218-6400 and ask for the Solid Waste Coordinator.

1.0 Green Business Program Overview

The goal of the ETCOG Green Business Program is to provide participants with tools and resources to reduce waste generation and increase recycling in their operations. In addition, the ETCOG Green Business Program is designed to recognize and promote participants who volunteer to operate in a more environmentally responsible manner through sustainable actions. Businesses may receive benefits for participating in the program, such as waste management cost reduction, reduced risk and liability, business recognition, and waste reduction. The specific goals of the program, in accordance with the 2022 ETCOG Regional Municipal Solid Waste Management Plan, are to:

- Reduce the amount of waste generated and requiring disposal through source reduction, reuse, and recycling
- Create local recovered materials markets
- Develop specific strategies for recovering organics from the waste stream
- Increase landfill diversion awareness

Overview of Report

An overview of the Green Business Program and the Waste Reduction and Recycling Toolkits is presented in this report. Throughout the report, toolkits required for consideration in the Green Business Program are stated as such. The following sections also introduce an additional Excel-based Waste Reduction and Recycling Toolkit that may be completed if participants want to increase waste reduction and recycling efforts further. The intention is to encourage participants to start with the entry-level tools and then move to the Excel-based toolkit to continue to improve waste reduction and recycling over time and continue to apply to the Green Business Program.

Waste Reduction and Recycling Benefits

Implementing waste reduction and recycling programs is a powerful way for businesses to reduce their environmental footprint, reduce waste disposal costs, conserve landfill space, avoid greenhouse gas emissions, create nutrient compost, and demonstrate a commitment to sustainability.

Starting from scratch doesn't have to be overwhelming, whether for a small office or a large industrial facility. The content in this report outlines a practical plan with strategic steps to support effective, easy-to-maintain waste reduction and recycling programs.

Waste reduction is the act of identifying waste that may be minimized through purchasing decisions, operational changes, process changes, and reuse. For example, purchasing decisions may reduce the amount of materials or packaging needed for a product. Operational and process changes may be available to reduce or eliminate waste byproducts. Reuse can also give materials a second life rather than heading straight to the landfill.

Recycling is a process of collecting and processing materials into feedstocks for new manufacturing processes. Recycling includes many material types, including common recyclables such as cardboard, paper, plastics, glass, and metal. Organic materials, such as food waste, yard waste, wood pallets, and biosolids, can also be recycled via composting processes.

This program focuses on the collection aspects of recycling—assisting businesses and other property types in increasing recycling collection and therefore reducing waste sent to landfills. **Section 7.2** provides additional waste reduction and recycling program development strategies and resources.

Business Types

While any business may produce any or all of the various types of recyclable materials (e.g., paper, plastic, metal, electronics, organic waste), the primary types of recyclable materials generated by a business will differ based on whether that business falls into the commercial, industrial, or institutional sector.

The Green Business Program is designed to be compatible with all businesses, governmental entities, schools, non-profits, and any other entity interested in reducing waste generation and increasing recycling. While there are some differences between types of business operations that can be incorporated when engaging in the program, there are many consistencies across types of business operations.

Commercial Businesses

Commercial entities include businesses operating in sectors such as retail trade, wholesale trade, finance and insurance, hospitality, recreation and entertainment, technology, and media. For example, businesses in the retail trade and wholesale trade sectors will generally have recyclable materials associated with packing and shipping, including cardboard and plastics. Businesses in the hospitality sector, such as restaurants and hotels, will typically have food waste as their largest quantity of recyclable material. Common areas of waste generation at these business types may include the following:

- Employee-centric spaces: workstations, staff lounges or kitchens, meeting rooms
- Customer or client interaction zones: reception desks and waiting areas, retail counters and display areas, dining or service areas
- Operational logistics zones: storage rooms and inventory areas, shipping and receiving areas, maintenance closets or utility rooms
- Sector-specific or specialized spaces: studios, labs, production rooms, guest rooms, and fitness or recreation facilities

Industrial Businesses

Industrial businesses primarily operate in sectors that involve large-scale production, infrastructure, and specialized services. This includes manufacturing, facilities and repair services, construction and specialty contracting, transportation and warehousing, professional, scientific, and technical services, telecommunications and broadcasting, and utilities and energy. Typical recyclable materials that businesses in this sector may generate include scrap metal, electronics, and appliances. Common areas of waste generation at these business types may include the following:

- Production and fabrication zones: manufacturing floors, assembly lines, repair bays and maintenance shops

- Materials handling and storage: warehouses and stockrooms, loading docks
- Technical and specialized workspaces: laboratories and testing facilities, broadcast or telecom equipment rooms
- Field and mobile work areas: construction sites, utility service vehicles and mobile units
- Administrative and support areas, offices and break rooms, and meeting rooms and common areas

Institutional Businesses

Institutional entities are organizations that serve public, social, or civic functions. These include sectors such as healthcare and social assistance, education, government and public administration, and religious, advocacy, and cultural organizations. Recyclable materials generated by these entities are likely primarily paper associated with recordkeeping and may also include medical and biohazard waste and chemical waste. Common areas of waste generation at these business types may include the following:

- Administrative and office spaces: offices and workstations, meeting rooms and conference areas, reception and public service desks
- Healthcare and social assistance facilities: patient rooms and exam areas, labs, pharmacies and supply closets
- Educational institutions: classrooms and lecture halls, libraries and study areas, cafeterias and dining halls
- Government and civic buildings: public service counters, archives and records rooms, break rooms and staff kitchens
- Religious, advocacy, and cultural spaces: worship halls and gathering spaces, community rooms and event spaces, and storage and maintenance areas

Report Structure

This Green Business Overview document is organized into the following sections:

- **Section 1.1** – Green Business Program Structure. This section outlines the two components of the Green Business Program: the Waste Reduction and Recycling Toolkits and the Green Business Program Awards.
- **Section 1.2** – Waste Reduction and Recycling Toolkits. This section introduces the various toolkits.
- **Section 1.3** – Green Business Program Awards. This section provides the information necessary to understand the Green Business Program and how to apply.
- **Section 1.4** – Award Application. This section represents the application to be filled out and submitted for consideration in the Green Business Program.
- **Section 2.0** – Waste Evaluation Toolkit. This toolkit includes the tools that must be completed to apply to the Green Business Program (Facility Survey, Observation Checklist, and Waste Composition Form).
- **Sections 3.0**, **4.0**, and **5.0** – Cost-Benefit Calculator, Job Creation Calculator, and Monthly Tracker Tool. These sections include tools beyond the minimum that are not required to apply to the Green Business Program, but can aid in waste reduction and recycling.
- **Section 6.0** – Program Startup Toolkit. This toolkit includes How to Start a Program, S.M.A.R.T. Goals, and a Template Action Plan.
- **Section 7.0** – Additional Resources Toolkit. This toolkit includes ETCOG area case studies and additional online resources.

- **Section 8.0** – Frequently Asked Questions. This section includes Frequently Asked Questions regarding the Green Business Program.
- **Section 9.0** – Disclaimer. This section includes a disclaimer regarding participation in the Green Business Program.
- **Appendix A** – Advanced Waste Composition Form. This form serves as a more advanced version of the Waste Composition Form in **Section 2.3**.
- **Appendix B** – Excel-based Waste Reduction and Recycling Toolkit Quick Start Guide. This guide serves as an introduction to using the Excel-based toolkit.

1.1 GREEN BUSINESS PROGRAM STRUCTURE

The Green Business Program consists of two primary components:

- Waste Reduction and Recycling Toolkits (Toolkits)
- Green Business Program Awards (Awards)

The Green Business Program is designed so that participants can utilize the Toolkits to reduce waste, increase recycling, and use the Toolkit information to apply for the Green Business Program. The Toolkits can be used as stand-alone tools with or without the intention of applying to the Green Business Program. The Toolkits and Awards can also be used together comprehensively.

Waste Reduction and Recycling Toolkits

The Toolkits provide participants with specific toolkits, including the following:

- Waste Evaluation Toolkit (introduced further in **Section 1.2.1**). This includes a Facility Survey, Observation Checklist, and Waste Composition Form that are required to be completed to apply to the Green Business Program.
- Cost Evaluation Toolkit (introduced further in **Section 1.2.2**)
- Waste Management Tracking Toolkit (introduced further in **Section 1.2.3**)
- Program Startup Toolkit (introduced further in **Section 1.2.4**)
- Additional Resources Toolkit (introduced further in **Section 1.2.5**)
- Excel-based Waste Reduction and Recycling Toolkit (introduced further in **Section 1.2.6**). The Excel-based toolkit includes more in-depth versions of several of the tools above and tools unique to the Excel version.

The Waste Evaluation Toolkit is provided within this document as the first step to reduce waste, increase recycling, and generate the information required to apply to the Green Business Program. The Waste Evaluation Toolkit includes a Facility Survey, Observation Checklist, and Waste Composition Form. Select tools from the remaining toolkits above are also provided in this document. These toolkits are entry-level tools conducive to printing and carrying into the field. An Advanced Waste Composition Form is provided in **Appendix A** that serves as an intermediate level of difficulty that the user may use to estimate their waste composition more accurately.

This document also provides a link to an Excel-based Toolkit if a participant wants to increase waste reduction and recycling efforts further. The Excel-based Toolkit includes a more in-depth version of the Waste Evaluation Toolkit with a more precise Waste Composition Form than the Advanced Waste Composition Form, among other tools. The information the user fills out on the Advanced Waste Composition Form can be transferred to the Waste Composition tab of the Excel-based toolkit as a first step to using the Excel-based toolkit. The intention is to encourage participants to start with the entry-level tools and then move to the Excel-based toolkit to continue to improve waste reduction and recycling over time and continue to apply for the Green Business Program.

The Waste Reduction and Recycling Toolkits that are integrated into the Excel-based toolkit are provided here:

www.etcog.org/green-business

A Quick Start Guide that outlines the steps the user needs to take to begin using the Excel-based toolkit is provided in **Appendix B**. A summary of which tools are required to complete to apply to the Green Business Program is provided in **Section 1.2** and in the box below.

Summary of Waste Reduction and Recycling Toolkits

1) This document includes the application to the Green Business Program (**Section 1.3**) and the toolkits that must be filled out to apply to the Green Business Program (**Section 2.0**). This includes the Facility Survey, Observation Checklist, and Waste Composition Form.

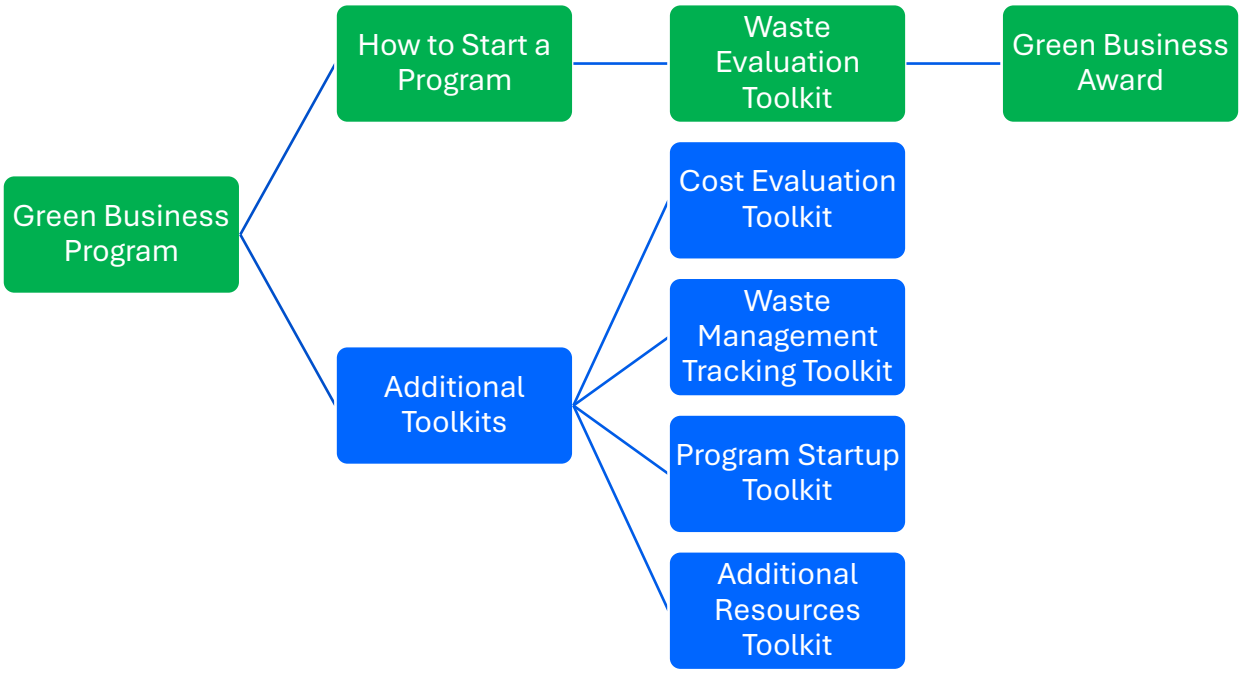
2) **Appendix A** provides an Advanced Waste Composition Form if the user would like to estimate their waste composition with more accuracy.

3) The Excel-based toolkit allows users to further increase their waste reduction and recycling efforts is linked here: www.etcog.org/green-business

Green Business Awards

This document provides information on the Green Business Program, the application process, and the application itself. **Figure 1-1** graphically communicates the structure of the Green Business Program, including the Toolkits and the Awards. The green pathway represents the minimum tools that must be completed to apply to the Green Business Program. The remaining additional toolkits provided in the Excel-based toolkit are represented in blue.

Figure 1-1: Green Business Program Overview



1.2 WASTE REDUCTION AND RECYCLING TOOLKITS

As discussed in **Section 1.1**, only the Waste Evaluation Toolkit provided in this document (discussed further in **Section 1.2.1** and provided in **Section 2.0**) is required to be completed to be eligible for the Green Business Program. This section summarizes the capabilities of each tool provided in this document and in the Excel-based Waste Reduction and Recycling Toolkit for participants who choose to conduct a more in-depth evaluation of their waste and recycling management program. Completing the Advanced Waste Composition Form in **Appendix A** is recommended prior to using the Excel-based toolkit. The information from the Advanced Waste Composition Form can be transferred to the Waste Composition tab of the Excel-based toolkit. Completing the Waste Composition tab of the Excel-based toolkit automatically populates most of the remaining tools, meaning they require little to no user input beyond what is entered in the Waste Composition tab. A Quick Start Guide that outlines the steps the user needs to take to begin using the Excel-based toolkit is provided in **Appendix B**.

Figure 1-2 provides a graphic summary of all of the Waste Reduction and Recycling Toolkits. The green pathway represents the minimum that must be completed to apply for the Green Business Program.

Figure 1-2: Waste Reduction and Recycling Toolkits

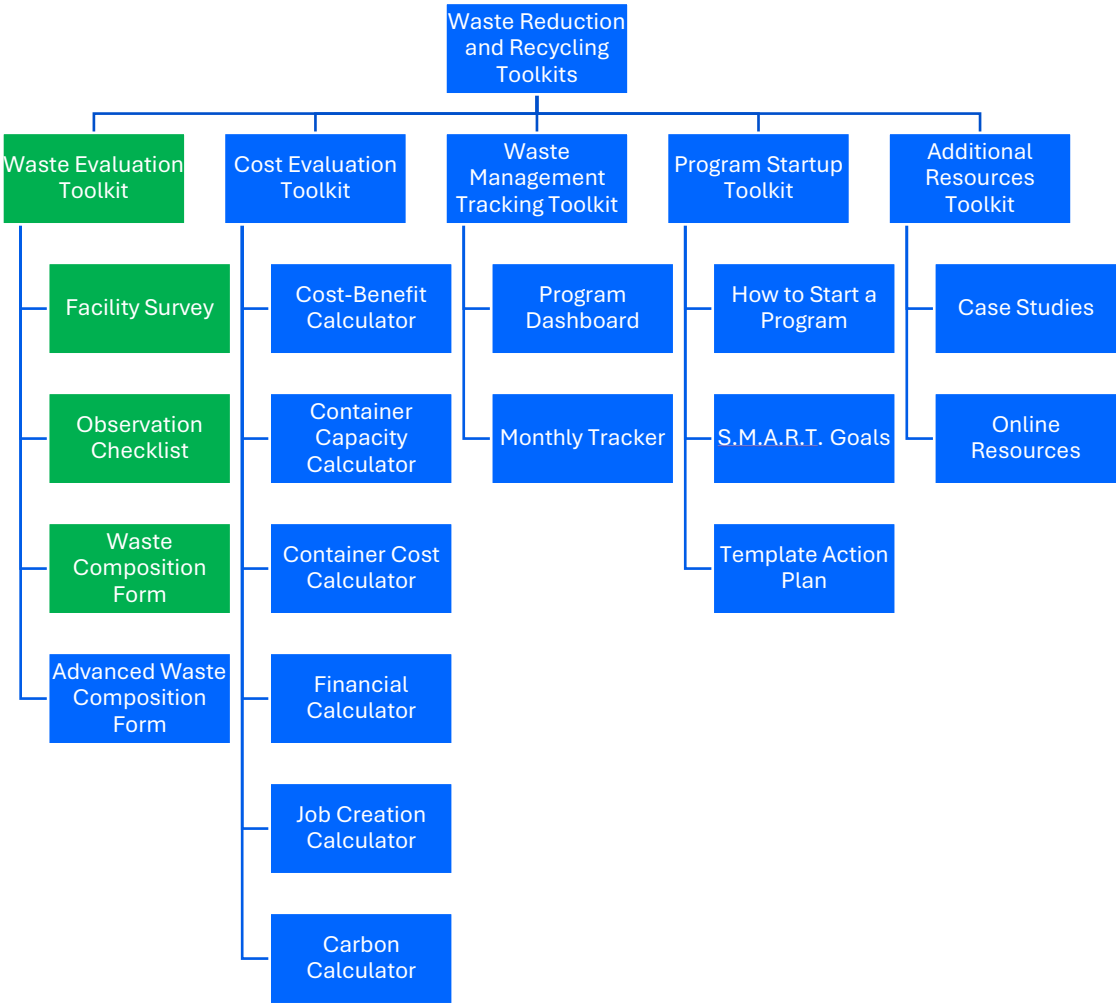


Table 1-1 summarizes which tools are included in this document, which tools have more in-depth versions available in the Excel-based toolkit, and which tools are required to complete to apply to the Green Business Program.

Table 1-1: Summary of Tools

Tool	Entry-Level Version of Tool in this Document?	Entry-Level Version of Tool Required to Apply to Green Business Program?
Facility Survey	Yes (**Section 2.1**)	Yes
Observation Checklist	Yes (**Section 2.2**)	Yes
Waste Composition[1]	Yes (**Section 2.3**)	Yes
Container Capacity Calculator	No	N/A
Container Cost Calculator	No	N/A
Financial Calculator[1]	Yes (**Section 3.0**)	No
Job Creation Calculator[1]	Yes (**Section 4.0**)	No
Carbon Calculator	No	N/A
Monthly Tracker[1]	Yes (**Section 5.0**)	No

[1] Indicates a more in-depth version of this tool is available in the Excel-based toolkit.

A brief description of all of the Waste Reduction and Recycling Toolkits is provided below.

1.2.1 Waste Evaluation Toolkit

The Waste Evaluation Toolkit includes the Facility Survey, Observation Checklist, and Waste Composition Form, which are discussed further below.

Required to Apply to the Green Business Program:

1. **Facility Survey (Section 2.1).**The facility survey is intended to identify what types of materials are generated in each physical area of the user's business, as well as potential waste reduction strategies for each material type. **Filling out the Facility Survey is required to be eligible for the Green Business Program.**
2. **Observation Checklist (Section 2.2)**. The Observation Checklist is intended to identify whether any waste management aspects of the user's business are sufficient or deficient and to implement corrective action with the responsible individuals. **Filling out the Observation Checklist is required to be eligible for the Green Business Program.**
3. **Waste Composition Form (Section 2.3)**. The Waste Composition Form summarizes the material types, quantities, and composition percentages observed in the Facility Survey and estimates current and potential waste reduction and recycling activities. **Filling out the version of the Waste Composition Form in Section 2.3 is required to be eligible for the Green Business Program.**

Optional (Not Required to Apply to the Green Business Program):

4. **Advanced Waste Composition Form (Appendix A)**. If the user would like to take the next step in analyzing their current waste and recycling practices and perform a more detailed waste composition analysis, a more in-depth version of the Waste Composition Form is provided in **Appendix A** that involves estimating the percentage of each material in the waste stream. These percentages can then be entered into the Excel-based Waste Reduction and Recycling Toolkit spreadsheet file to give the user a more precise breakdown of their current and potential waste reduction and recycling practices.

1.2.2 Cost Evaluation Toolkit

The Cost Evaluation Toolkit includes the Cost-Benefit Calculator, Container Capacity Calculator, Container Cost Calculator, Financial Calculator, Job Creation Calculator, and Carbon Calculator. Completion of these tools is not required to apply to the Green Business Program.

1. **Cost-Benefit Calculator (Section 3.0).** The Cost-Benefit Calculator provides a basic template to calculate potential waste management cost reduction if shifting from landfill to recycling and organics collection service.
2. **Container Capacity Calculator (Online resource in the Excel-based toolkit)**. The Container Capacity Calculator uses information from the Waste Composition Form tab of the Excel-based toolkit to calculate the size of dumpsters needed for recycling and landfill materials. If the user does not complete the Waste Composition Form tab of the Excel-based toolkit first, users can manually enter current and potential/anticipated container volumes instead of using values automatically populated from the results of the Waste Composition Form tab. In either case, the volumes on the Container Capacity Calculator are used to calculate the results of the Container Cost Calculator.
3. **Container Cost Calculator (Online resource in the Excel-based toolkit)**. The Cost Calculator uses information from the Container Capacity Calculator to estimate the cost and potential cost reduction of dumpster size changes.
4. **Financial Calculator (Online resource in the Excel-based toolkit)**. The Financial Calculator summarizes cost increases or decreases based on waste reduction and recycling efforts. The Financial Calculator also includes an equipment return-on-investment calculator for recycling compaction equipment. Tables 1 and 2 of the Financial Calculator are designed to be standalone tables. Table 3 is populated from the results of the Waste Composition Form tab of the Excel-based toolkit and can only be used if the Waste Composition Form tab is completed.
5. **Job Creation Calculator (Simplified version in Section 4.0, advanced version in the Excel-based toolkit).** The Job Creation Calculator provides a basic template to calculate potential jobs created as a result of increased waste reduction and recycling. A more advanced version of the Job Creation Calculator uses recycling tonnage data from the Waste Composition Form tab of the Excel-based toolkit to calculate the number of jobs that could be created by increased recycling efforts. If the user does not complete the Waste Composition Form tab first, users can manually enter the current and potential/anticipated tons recycled instead of using values automatically populated from the results of the Waste Composition Form tab.
6. **Carbon Calculator (Online resource in the Excel-based toolkit).** The Carbon Calculator uses the EPA's Waste Reduction Model (WARM) tool and recycling tonnage data from the Waste Composition Form tab of the Excel-based toolkit to calculate the quantity of potential carbon avoidance (measured in Metric Tons of Carbon Dioxide Equivalents or $MTCO_2E$) due to waste reduction and recycling activities. This tool automatically populates from the results of the Waste Composition Form tab and can only be used if the Waste Composition Form tab is completed.

1.2.3 Waste Management Tracking Toolkit

The Waste Management Tracking Toolkit includes a Program Dashboard and a Monthly Tracker.

1. **Program Dashboard (Online resource in the Excel-based toolkit).** The Program Dashboard provides a snapshot of the toolkit's outputs, summarizing the business's current and potential

waste reduction and recycling efforts based on completion of the rest of the tools in the Excel-based Toolkit.

2. **Monthly Tracker (Simplified version in Section 5.0, advanced version in the Excel-based toolkit).** The Monthly Tracker tracks the Waste Evaluation and Cost Evaluation metrics for program performance management over time. A more advanced version of the Monthly Tracker uses information from the Waste Composition Form tab in the Excel-based toolkit. This tool works most effectively when used with the remaining Excel-based tools and when updated each month to track progress over time.

1.2.4 Program Startup Toolkit

The Program Startup Toolkit includes How to Start a Program, S.M.A.R.T. Goals, and a Template Action Plan.

1. **How to Start a Program (Section 6.1)**. The How to Start a Program tool provides step-by-step information on starting a waste reduction and recycling program.
2. **S.M.A.R.T. Goals (Section 6.2).** The S.M.A.R.T. Goals tool provides a framework for goal setting.
3. **Template Action Plan (Section 6.3).** The Template Action Plan provides a worksheet for developing an action plan with tasks, responsible parties, and timelines.

1.2.5 Additional Resources Toolkit

The Additional Resources Toolkit includes ETCOG Area Case Studies and Online Resources.

1. **Case Studies (Section 7.1).** Case study profiles of area businesses engaged in waste reduction and recycling programs.
2. **Online Resources (Section 7.2).** Additional resources for further research and support.

1.2.6 Excel-Based Waste Reduction and Recycling Toolkit

Several tools above are designated as being part of the Excel-based Waste Reduction and Recycling Toolkit. Each tool in the Excel-based toolkit includes detailed instructions on how to use that tool.

1.3 GREEN BUSINESS AWARDS PROGRAM

This section provides the information necessary to understand the Green Business Program and how to apply.

1.3.1 Reasons to Apply

Businesses participating in the Green Business Program may improve their operations, reduce waste management costs, boost brand visibility, and benefit the environment. Achieving Green Business recognition may result in business recognition, media exposure, business growth, customer appeal, and beautification appeal.

Specific benefits to businesses for participating in the Green Business Program are summarized in **Table 1-2**. Descriptions of each recognition level are provided in **Section 1.3.3.**

Table 1-2: Recognition Levels and Benefits

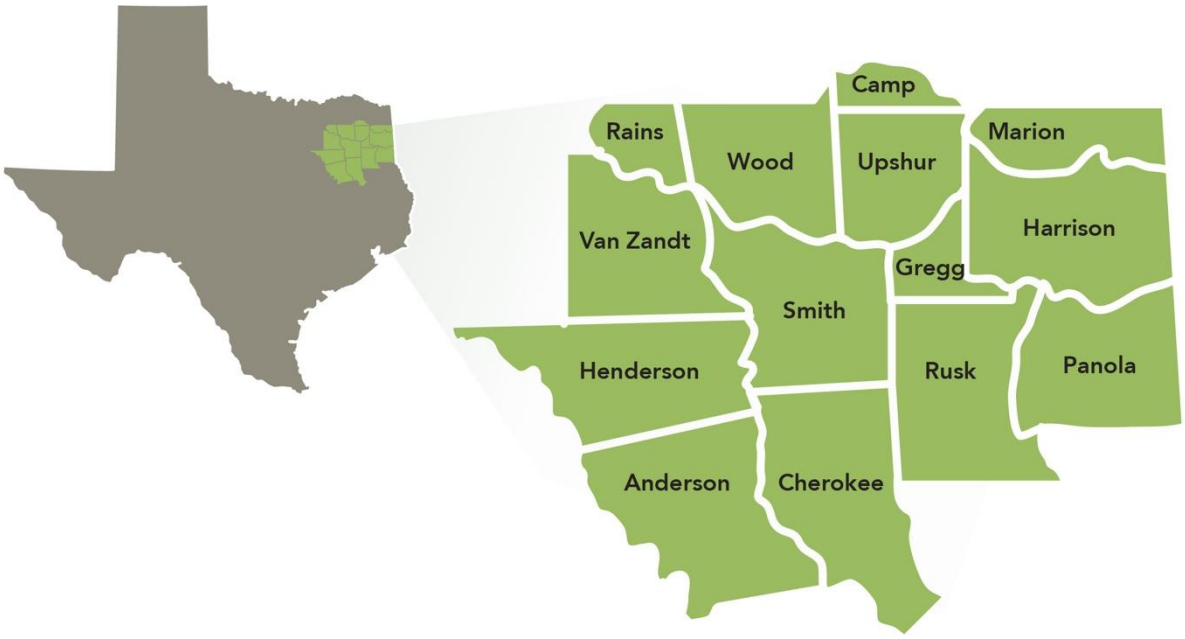
Recognition Level	Business Receives
Green Partner	Media/online exposure
	On-site recognition
Green Pioneer	Media/online exposure
	On-site recognition
	Eligible for Green Business of the Year Award (described in **Section 1.3.3**)
Green Business of the Year Award	Award event at the business location or a special recognition event

1.3.2 Program Eligibility

Businesses can apply to the Green Business Program at no cost. To be eligible for the Green Business Program, the user's business must:

- Be located within the ETCOG region, defined as Anderson, Camp, Cherokee, Gregg, Harrison, Henderson, Marion, Panola, Rains, Rusk, Smith, Upshur, Van Zandt, and Wood counties (see **Figure 1-3**)
- Achieve a minimum of 10 points based on action items on the Green Business Program Award Application (**Section 1.4**)
- Have a contract with a recycling or organics collection service, or self-haul recycling or organics
- Complete the Waste Evaluation Toolkit of the Waste Reduction and Recycling Toolkit, which includes the Facility Survey, Observation Checklist, and Waste Composition Form (**Section 2.0**).

Figure 1-3: Map of ETCOG Region



1.3.3 Recognition and Award Types

Green Business Partner and Pioneer Recognition

There are two tiers of Green Business Program recognition – Green Business Partner and Green Business Pioneer. Both recognitions last for one year.

Businesses that meet the program eligibility and minimum award criteria described above, including scoring 10 points on the Green Business Program Award Application, are recognized as a Green Business Partner. Green Business Partners may receive media/online exposure and on-site recognition in the form of a front door window sticker denoting Green Business Partner Status for the year awarded.

For Green Business Pioneer status, 20 points on the Green Business Program Award Application are required. Green Business Pioneers receive media/online exposure and on-site recognition in the form of a front entry door window sticker denoting Green Business Pioneer Status for the year awarded.

Green Business of the Year Award

Green Business Pioneers also receive eligibility for the "Green Business of the Year Award." This holistic award considers overall efforts to increase recycling and waste reduction and any innovative programs or policies related to recycling and waste reduction. The various recognitions and award types, along with the requirements to earn the level of recognition and the award are summarized in **Figure 1-4**.

Figure 1-4: Summary of Recognitions and Award Types

The Green Business of the Year Award is given in each business size category (small and medium/large) and each business type category (commercial, industrial, and institutional), as outlined in **Figure 1-5**, for a total of 6 awards given out each year. Businesses receiving the award are recognized by ETCOG at one of the businesses' events or a special recognition event. In addition, one of the six award recipients will be chosen to be put forward for the TCEQ Texas Environmental Excellence Awards application.

Figure 1-5: Green Business of the Year Award Categories

SMALL BUSINESS	LARGE BUSINESS
• Commercial	• Commercial
• Industrial	• Industrial
• Institutional	• Institutional

Business Size

Small businesses are defined as those with fewer than 150 employees. Medium/large businesses are defined as those with 150 or more employees.

Business Type

Examples of commercial, industrial, and institutional business types are provided in **Figure 1-6**.

Figure 1-6: Business Types and Examples

COMMERCIAL	INDUSTRIAL	INSTITUTIONAL
• Retail Trade • Wholesale Trade • Hospitality	• Manufacturing • Repair Services • Construction Contractors • Warehousing	• Healthcare • Education • Public Administration • Religious

1.3.4 Criteria

The recognition criteria are divided into four categories: waste diversion, collection services, policies and programs, and performance management. Below are additional details on the criteria for scoring points on the Green Business Program Award Application.

Waste Diversion (23 Possible Points)

The waste diversion criteria are intended to document what materials businesses are currently recycling and potential opportunities to add materials to their recycling program.

Points are awarded for recycling the following materials:

- Common recyclables (paper, cardboard, plastic, metal, glass)
- Organic materials (food and beverage materials, yard trimmings/brush and green waste, biosolids, other organics)
- Other materials (construction and demolition materials, electronic materials, batteries, paint, textiles, tires)

Note that if the user's business is recycling additional materials not included in this list, those materials can be included in the Green Business Program Award Application.

Collection Services (9 Possible Points)

The collection services criteria are intended to document how collection bins are currently set up and provide opportunities to improve bin setup to increase recycling. Points are awarded for the following:

- Contracted recycling or organics collection service, or self-haul recycling or organics (required)
- Each trash bin is paired with a recycling bin
- Organics bins are available
- Trash, recycling, and organics bins are color-coded consistently
- Trash, recycling, and organics bins are clearly labeled (bonus if multi-lingual)

Policies and Programs (25 Possible Points)

The policies and programs criteria are intended to encourage the implementation of everyday practices that increase recycling. Points are awarded for the following:

- Identification of a plan for one material type to reduce
- Waste reduction incentive/reuse program in place
- Paperless policy in place

- Recycled-content or Environmental Preferable Purchasing (EPP) policy in place
- Training program for employees on recycling and waste reduction practices
- High-efficiency hand dryers in place of paper towels
- Water fountains are provided instead of bottled water

Program Management (4 Possible Points)

Performance management criteria are intended to quantify the current recycling rate to provide businesses with a baseline understanding of how much waste is being diverted. Points are awarded for the following:

- Completion of the Waste Evaluation Toolkit as discussed in **Section 1.2.1** (required).

1.3.5 How to Apply

1. Print and fill out the Green Business Program Award Application in **Section 1.4** and check the actions the user's business is currently taking.
1. Print and fill out the Waste Evaluation Toolkit in **Section 2.0**.
2. Submit the completed Green Business Program Award Application (**Section 1.4** and **Section 2.0**) by calling ETCOG at 903-218-6400 and asking for the Solid Waste Coordinator.
3. Provide verification of action items on the Green Business Program Award Application, which may include the following:
    a. Proof of recycling or organics collection service
    b. Photos of collection containers
    c. Policy and program documentation
    d. Recycling rate
    e. Completed Waste Evaluation Toolkit

1.3.6 Application Timeline

The application timeline is summarized below and in **Figure 1-7**.

- Applications are due April 1 of each year
- ETCOG reviews applications for the minimum criteria by June 1 each year
- Solid Waste Advisory Committee (SWAC) reviews applications by July 1 of each year
- Award winners are announced in July/August of each year

Figure 1-7: Application Timeline

1.4 AWARD APPLICATION

This section represents the application to be filled out and submitted for consideration in the Green Business Program.

AWARD CHECKLIST

Please fill out the checklist below based on actions the user's business is currently practicing, then total the points at the end. **Actions in orange or denoted with an asterisk (*) are required to be eligible for the program.**

SECTION A Waste Diversion

Please check all of the following materials the user's business recycles, composts, and/or is reducing waste generation of. Point values are shown in each category in **green.**

1 point each

- ☐ Cardboard
- ☐ Paper
- ☐ Metal
- ☐ Plastic
- ☐ Glass

2 points each

- ☐ Biosolids (sludge)
- ☐ Food waste
- ☐ Other organics
- ☐ Batteries
- ☐ Construction & demolition materials
- ☐ Paint
- ☐ Textiles
- ☐ Tires
- ☐ Yard, brush & green waste

Other (+1 point per additional material): _____

SECTION A TOTAL: /23

SECTION B.1 Collection Services

Please check all of the following that apply to the user's business. Providing photos or other documentation is required to score points. The number of points awarded for each action is denoted in

REQUIRED: To be eligible for the Green Business Program, the user's business must have a contracted recycling OR organics service, or self-haul recycling or organics.*

TALLY YOUR POINTS HERE!

Contracted with a self-haul or collection service for organics.* ***2 points*** *If the user's business self-hauls organics, please provide photos of scale tickets. Please provide name of organics contractor, if applicable:*		Contracted with a self-haul or collection service for recycling.* ***1 point*** *If the user's business self-hauls recycling, please provide photos of scale tickets. Please provide name of recycling contractor, if applicable:*	
Organics bins are available. ***2 points*** *Please attach photos of collection containers.*		Waste collection bins are color-coded consistently (for example, all trash bins are black, all recycling bins are blue, and all organics bins are green). ***1 point*** *Note: This excludes exterior containers collected by haulers. Please attach photos of collection containers.*	
All trash bins are paired with a recycling bin. ***2 points*** *Please attach photos of collection containers.*		All trash, recycling, or organics bins are clearly labeled. ***1 point*** ***+1 point*** if labels are multi-lingual. *Please attach photos of collection containers.*	

SECTION B.1 SUBTOTAL: /9

SECTION B.2 Policies & Programs

Identify and plan to reduce generation of one type of material. ***3 points***

1. Identify one product that can be reduced (e.g., paper, cardboard, plastic, metal, glass): _____
2. Estimate the quantity of this product currently generated per week and identify the units: _____ *cubic yards / gallons*
3. Identify a plan to reduce generation of this product:

4. Estimate the quantity of this product to be reduced per week: _____ *cubic yards / gallons*

Please check all of the following that apply to the user's business. Providing photos, invoices, or other documentation is required to score points. The number of points awarded for each action is denoted in **green.**

Waste reduction incentive/reuse program in place. ***3 points*** *Please provide supporting photos, e.g., reusable containers/supplies, refill stations, sustainable packaging, or ways in which materials are being reused, such as upcycled furniture.*		Practice sustainable purchasing (e.g., 30% post-consumer recycled copy paper or 100% post-consumer recycled paper products such as paper towels or notepads). ***3 points*** *Please attach photos of sustainable items purchased.*	
Practice recycled-content or environmentally preferable (EPP) purchasing (e.g., buying products in bulk, using reusable containers dispensers). ***3 points*** *Please attach photos of reusable containers/ dispensers. Note: Additional information on implementing EPP Policies is provided in the Recycling and Waste Reduction Toolkit.*		High efficiency hand dryers in place of paper towels. ***2 points*** *Please attach photos of hand dryers.*	
Paperless policy implemented. ***3 points*** *Please attach documentation of the policy.*		Cartridge recycling program in place. ***2 points*** *Please attach photos of designated cartridge collection bins.*	
Employee training on recycling and waste reduction practices. ***3 points*** *Please attach proof of training documents/materials.*		Plastic bags and/or foam products are not provided. ***2 points*** *Please attach a recent invoice showing only compliant packaging materials (e.g., paper, compostable, or reusable alternatives).*	
		Water fountains provided instead of bottled water. ***1 point*** *Please attach photos of water fountains.*	

SECTION B.2 SUBTOTAL: /25

SECTION B.3 Performance Management

REQUIRED: Complete and submit the Facility Survey, Compliance Checklist, and Waste Composition Forms in Section 2.0.* ***4 points***

SECTION B.3 SUBTOTAL: /4

SECTION B TOTAL: /38

SECTION C Other Efforts

Attach or provide a brief overview of **any waste reduction efforts not covered above,** including any innovative programs or practices. This information will be considered for the Green Business of the Year Award.

POINTS SCORED

SECTION A TOTAL:		SECTION B TOTAL:		TOTAL POINTS:
/23	+	/38	=	/61

Signature of business representative:

By signing, the user acknowledges that they are authorized to represent their business and have filled out this form to the best of their knowledge.

Date: _____

FOR ETCOG USE ONLY

Green Business Partner 10 Points	Green Business Pioneer 20 Points
	
☐	☐

Recognition level to be awarded by ETCOG after review of application.

GREEN BUSINESS PROGRAM

2.0 Waste Evaluation Toolkit

The Waste Evaluation Toolkit includes the Facility Survey, Observation Checklist, and Waste Composition Form, which must be completed to be eligible for the Green Business Program.

The users should print the Facility Survey, Observation Checklist, and Waste Composition Form to take into the field. The user should walk through their entire operation using the Facility Survey and Waste Observation Checklist to evaluate waste management at their facility. As the user walks through the facility, they should document all waste materials and identify waste reduction opportunities (as discussed in **Section 1.0**).

After reviewing the operation with the Facility Survey and Observation Checklist, the user should take the printed Waste Composition Form to their on-site waste container locations, often located in dumpsters. The user should evaluate the container the day before service so that the containers are full. The Waste Composition Form is designed to be used as a visual inspection of the waste for safety purposes and ease of use. When at the collection container location, the user should look inside the containers to visually estimate and document the quantity of materials by the material type by percentage.

Each of these three tools is discussed further in the sections below.

2.1 FACILITY SURVEY

The Facility Survey is intended to identify what types of materials are generated in each physical area of the user's business, as well as potential waste reduction strategies for each material type. Steps to complete the Facility Survey are as follows:

STEP 1. The user should print and bring the form on the next (**Table 2-1**) while surveying their business.

STEP 2. Enter the user's name and the date at the top of the form.

STEP 3. In Column 1, fill in each distinct area of the user's business where trash, recycling, and/or organics are generated. For example, an office building might have cubicles, conference rooms, break rooms, restrooms, and lobbies.

STEP 4. In Column 2, identify the material types (trash, recycling, organics) that are generated in that area. Fill in one material type per line. Recycling materials can be broken down into plastics, paper, cardboard, glass, and other materials.

STEP 5. In Column 3, identify a waste reduction strategy for each material type identified in Column 2.

STEP 6. In Column 4, take a photo of each material type in each area identified in Columns 1 and 2.

STEP 7. Print additional pages of the Facility Survey as needed.

Table 2-1: Facility Survey

Waste Audit Personnel:			Date:
Column 1 Area	**Column 2 Material Type**	**Column 3 Waste Reduction Strategies**	**Column 4 Photo Taken?**

2.2 OBSERVATION CHECKLIST

The Observation Checklist is intended to identify whether any waste management aspects of the user's business are sufficient or deficient and to implement corrective action with the responsible individuals. Steps to complete the Observation Checklist are as follows:

STEP 1. The user should print and bring the checklist on the next page (**Table 2-2**) while surveying their business.

STEP 2. Enter the user's name and the date at the top of the checklist.

STEP 3. For each item description in the far-left column of the checklist, indicate whether that activity is sufficient or deficient (or is not applicable to the user's business).

STEP 4. Indicate any observations for each item description.

STEP 5. Identify the person responsible for helping to correct that item description.

STEP 6. Identify a due date to complete by.

STEP 7. Indicate whether the item has been corrected.

Table 2-2: Observation Checklist

Waste Audit Personnel:			Date:		
Item Description	**Yes / No / N/A**	**Observation**	**Responsible Person**	**Due Date**	**Corrected (Yes/No)**
Waste removal frequency on-site is adequate					
Waste removal container size is adequate					
Waste management plan in place					
Waste minimization program in place					
Waste separation and recycling program in place					
Bin locations clearly marked					
Sufficient bins provided for waste removal					
Lids for waste containers provided and used when necessary					
Waste removal schedule established and followed					
Ground and roof covering provided where appropriate					
Suitable waste indicators used to track changes					
Waste disposal companies contracted in writing and invoices retained as records for hazardous and non-hazardous waste					
Hazardous waste containers labeled according to standards					
Dedicated area(s) for hazardous waste storage					
Hazardous waste disposed of according to standards					
Records of hazardous and non-hazardous waste maintained					
Hazardous and non-hazardous waste stored separately					

2.3 WASTE COMPOSITION FORM

The Waste Composition Form is intended to estimate current and potential waste reduction and recycling activities.

If the user would like to take the next step in analyzing their current waste and recycling practices and perform a more detailed waste composition, a more in-depth version of the Waste Composition Form is provided in **Appendix A** that involves visually estimating the percentage of each material in the waste stream. Furthermore, an even more in-depth version of the Waste Composition tool is available within the Excel-based toolkit.

The waste composition exercise is intended to be a visual inspection. Please use good judgment regarding safety and do not touch the waste.

Steps to complete this Waste Composition Form are as follows:

STEP 1. Locate the facility's dumpsters. The user should evaluate the containers the day before they are serviced so that the containers are full.

STEP 2. Visually estimate the percentage of the current waste stream that is disposed of as recycling, organics, and landfilled in **Table 2-3**. Walking through the building with janitorial staff while talking through business activities can help identify the material types and quantities in the waste stream.

STEP 3. Estimate the potential percentage of the waste stream that could be recycled, diverted to organics, and landfilled after reading this document and going through this process of filling out the Waste Evaluation Toolkit in **Table 2-3**.

Table 2-3: Waste Composition Form

Stream	Current Percentage of Total Waste Stream	Potential Percentage of Total Waste Stream
Recycling		
Organics		
Landfill		

Examples of materials that can be recycled are provided in **Figure 2-1**. Confirm with the service provider what they can and cannot recycle.

Figure 2-1: Common Recyclable Materials

Examples of organic materials that can be composted are provided in **Figure 2-2**. Confirm with the service provider what they can and cannot accept as organics.

Figure 2-2: Common Compostable Materials

3.0 Cost-Benefit Calculator

The Cost-Benefit Calculator compares the user's current hauling costs for trash, recycling, and organics against potential costs after implementing waste reduction practices and increasing recycling. Completion of the Cost-Benefit Calculator is not required to apply to the Green Business Program.

If the user would like to take the next step in tracking their waste reduction and recycling practices over time, they may use the more advanced Financial Calculator in the Excel-based Waste Reduction and Recycling Toolkit.

Steps to complete this Cost Calculator are as follows:

STEP 1. Multiply the current waste management hauling costs per month for landfilled, recycled, and organic material by 12 months and enter in the "Current" column in **Table 3-1**.

STEP 2. Get a quote from the hauler to downsize the size of the landfill containers and add recycling and/or organics containers, multiply the monthly values by 12 months, and enter those values in the "Potential" column in **Table 3-1**.

STEP 3. Calculate the cost increase or decrease according to the formula below:

Potential Cost – Current Cost = Cost Increase or Decrease

A positive result indicates a net increase in costs, and a negative result indicates a net decrease in costs.

Table 3-1: Cost-Benefit Calculator

Stream	Current Annual Cost	Potential Annual Cost	Annual Cost Increase/ (Decrease)
Landfill Containers			
Recycling Containers			
Organics Containers			
Total Cost			

4.0 Job Creation Calculator

The Job Creation Calculator compares the current number of jobs created as a result of waste reduction, recycling and organics diversion practices against the potential number of jobs created after implementing waste reduction practices and increasing recycling. Completion of the Job Creation Calculator is not required to apply for the Green Business Program.

If the user would like to take the next step in tracking the number of jobs associated with recycling and organics diversion practices, they may use the more advanced Job Creation Calculator in the Excel-based Waste Reduction and Recycling Toolkit.

Steps to complete the Job Creation Calculator are as follows:

STEP 1. Enter the current quantity of material recycled annually in tons in the "Current" column in **Table 4-1**.

STEP 2. Divide this number by 1,000, then multiply by 1.17 to estimate the total jobs created from recycling. Enter this number in the "Current" column in **Table 4-1**.

STEP 3. Enter the current quantity of organic material diverted annually in tons in the "Current" column in **Table 4-1**.

STEP 4. Divide this number by 1,000, then multiply by 0.5 to estimate the total jobs created from organics diversion. Enter this number in the "Current" column in **Table 4-1.**

STEP 5. Add the total number of jobs created from recycling and organics diversion and enter the resulting number in the "Current" column of **Table 4-1.**

STEP 6. Repeat Steps 1-5 using the potential quantity of material recycled annually and organic material diverted annually and enter the resulting numbers in the "Potential" column in **Table 4-1.**

Table 4-1: Job Creation Calculator

	Current	Potential
Annual Tons Recycled		
Total Jobs Created from Recycling		
Annual Tons of Organics Diverted		
Total Jobs Created from Organics Diversion		
Total Jobs Created		

5.0 Monthly Tracker Tool

The Monthly Tracker provided in **Table 5-1** can be printed and used to enter the percentage by volume of recycling, organics, and landfilled material generated each month, as well as the monthly cost for each stream. This allows the user to track their progress over time. Completion of the Monthly Tracker Tool is not required to apply for the Green Business Program. If the user would like to take the next step in tracking their waste reduction and recycling practices over time, they may use the more advanced Monthly Tracker tool in the Excel-based Waste Reduction and Recycling Toolkit.

Table 5-1: Monthly Tracker

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Recycling Percentage												
Organics Diversion Percentage												
Landfill Percentage												
Total Percentage												
Recycling Cost												
Organics Cost												
Landfill Cost												
Total Cost												
Jobs Created												

6.0 Program Startup Toolkit

The Program Startup Toolkit provides participants with a How to Start a Program primer, S.M.A.R.T. Goals framework (Specific, Measurable, Achievable, Relevant, and Timeframe), and a Template Action Plan. Completion of the Program Startup Toolkit is not required to apply for the Green Business Program.

6.1 HOW TO START A PROGRAM

This section outlines a practical, step-by-step approach to launching an effective recycling program, from assessing the current waste stream to tracking progress and making continuous improvements. Compared with traditional recycling efforts, organics programs require a more tailored approach that accounts for the unique challenges of handling compostable materials. Steps below that are specific to implementing an organics program are denoted with green text.

1. **Evaluate the Current Waste Stream:**
    a. Identify what types of materials are generated in each physical area of the user's business by printing and filling out the Facility Survey (**Section 2.1**) and Observation Checklist (**Section 2.2**).
    b. Conduct a waste audit to identify what types of materials are being discarded by printing and filling out the Waste Composition Form (**Section 2.3**).
    c. Talk with janitorial staff about how waste is collected and managed. Collecting and managing new waste streams may need to be added to their contract if janitorial staff is outsourced.
    d. Use the S.M.A.R.T. Goals framework (**Section 6.2**) to establish what the user wants to achieve with these program efforts.
    e. Look for opportunities to reduce waste at the source, such as minimizing single-use items, switching to digital documents, or choosing products with less packaging.
2. **Make a Plan:**
    a. Based on Step 1, use the Template Action Plan (**Section 6.3**) to make a plan for how many, what size, and where collection containers are needed to collect materials before taking to the exterior dumpsters and other containers.
    b. Use the Template Action Plan to create a plan for collecting materials into containers, scheduling container emptying, and assigning responsibility for emptying containers.
    c. As the user plans, they should think through material flow including how materials will go from inside the building to the appropriate containers outside the building.
    d. Create a budget for the plan.
    e. Include waste reduction strategies in the plan, such as implementing double-sided printing, reusable office supplies, or ordering in bulk to reduce packaging waste.
3. **Purchase Appropriate Recycling and/or Organics Containers:**
    a. Choose bins that are clearly labeled and color-coded for different materials (e.g., blue for recycling, green for organics).
        i. Where appropriate, use bins with tight-fitting lids to control odors and pests.

b. Place containers in high-traffic and high-waste areas like breakrooms, copy stations, and loading docks. Consider centralized collection points to streamline pickup and reduce contamination.
    i. Consider indoor organics bins for kitchens and breakrooms, and larger outdoor organics carts for collection.
c. In each location, place bins in pairs (e.g., one trash bin with one recycling bin of the same size and shape).
d. Provide small "waste reduction" bins or stations for items like reusable cups, utensils, or scrap paper to encourage source reduction alongside recycling.

4. Contact a Recycling Hauler or Service Provider:

a. The Container Capacity Calculator and Container Cost Calculator tabs (**Section 1.2.2**) of the Waste Reduction and Recycling Toolkit can help decide what size container and service frequency are appropriate for the user's business.
b. Consider space constraints while deciding the size and number of containers needed for each waste stream. This includes the locations of collection containers outside the building or in loading docks, and where material inside the building will be consolidated for the new service providers. Keep this in mind when completing the Facility Survey (**Section 2.1**).
c. Research local recycling companies or municipal services that handle commercial recycling.
    i. Not all haulers accept organics, so confirm they service the area and deliver to a composting or anaerobic digestion facility.
d. Discuss pickup schedules, accepted materials, contamination policies, and costs.
e. Verify the hauler provides documentation or reporting on recycling volumes.
f. Ask the hauler for advice on waste reduction strategies, such as identifying materials that can be eliminated or minimized before they enter the waste stream.

5. Train Staff and Raise Awareness:

a. Educate employees on what can and cannot be recycled, and how to sort materials properly.
    i. For organics, educate employees on what qualifies as organic waste (e.g., "If it grows, it goes")
    ii. Train staff to avoid placing plastic bags, glass, or non-compostable items in organics bins.
    iii. Provide tips for odor control and organics bin cleanliness (e.g., using paper liners or baking soda).
b. Host kickoff meetings, share posters, and send out digital guides or videos
c. Encourage participation by explaining the environmental and economic benefits of the program.
d. Highlight both recycling and waste reduction successes to motivate ongoing engagement.

6. Measure, Track, and Improve:

a. Set baseline metrics from the initial waste audit and track progress monthly or quarterly. The Monthly Tracker tab (**Section 1.2.3**) of the Waste Reduction and Recycling Toolkit can help with this.
b. Monitor contamination rates and adjust training or bin placement as needed.
c. Share results with staff to celebrate milestones and encourage continued engagement.
d. Track waste reduction efforts, such as decreased paper usage or fewer disposable items, and use these metrics to refine the program over time.

6.2 S.M.A.R.T. GOALS

S.M.A.R.T. is an acronym used as a mnemonic device to establish criteria for effective goal-setting and objective development, as summarized in **Table 6-1**. Setting specific, measurable, achievable, relevant goals with discrete timeframes is crucial to increasing waste reduction and recycling.

Table 6-1: S.M.A.R.T. Goals

S.M.A.R.T				
SPECIFIC Describes what is to be done or how, and what is the outcome	**MEASURABLE** Achievement of objective is measurable	**ACHIEVABLE** Realistic for the group to accomplish	**RELEVANT** In line with the group's mission	**TIMEFRAME** Has a discrete timeframe
Expand recycling collection to all departments, introduce standardized signage, and conduct quarterly waste audits to reduce the total landfill-disposed waste from company operations.	*Reduce landfill waste by 20 percent compared to the 2025 baseline, verified through hauler reports and audit data.*	*The goal can be achieved using existing staff and vendor resources, employee engagement, and improved collection systems.*	*This goal supports the company's sustainability commitments, reduces disposal costs, and demonstrates environmental leadership.*	*Complete implementation and achieve the 20 percent reduction by December 2027.*

6.3 TEMPLATE ACTION PLAN

A Template Action Plan is provided in **Table 6-2** to aid in goal setting for waste reduction and recycling.

Table 6-2: Template Action Plan Table

Task	Responsible Party	Additional Supporters	Timeframe		Potential Barriers
			Start	End	
Sample: Order a recycling dumpster	*Ops Manager*	*General Manager*	*10/15*	*10/31*	*Cost, space constraints*

7.0 Additional Resources Toolkit

7.1 ETCOG AREA CASE STUDIES

This section includes case studies to highlight current waste reduction and recycling efforts that ETCOG area businesses are practicing. Information in the case studies was obtained by interviewing employees at the Northeast Texas Regional Materials Recovery Facility (NETX MRF), Skeeter Boats, John Soules Foods, and Hiland Dairy. While these businesses fall into the industrial category, businesses of all types may share some of the challenges, opportunities, and lessons learned.

7.1.1 Northeast Texas Regional Materials Recovery Facility (MRF)

Program Overview

The NETX MRF is a newly opened MRF that processes single-stream recyclables, including cardboard, paper, plastics #1–7, aluminum, and tin/steel cans. With advanced sorting technologies including a pre-sort station, cardboard screen, ballistic separator, eddy current, and cross-belt magnet, it efficiently separates recycling streams and bales up to 20 tons per hour. The NETX MRF accepts materials from local entities in the ETCOG area for recycling.

The NETX MRF accepts cardboard, paper, plastic containers and bottles, and aluminum and tin cans from the general public, provided they are sorted. These materials can be dropped off at unmanned outdoor receptacles outside the facility.

Cardboard makes up the largest volume of material at the NETX MRF, followed by white office paper. Currently, the NETX MRF ships approximately 22 tons of cardboard per shift (about one truckload). Major suppliers include Republic Services, Waste Connections, the City of Tyler, and the City of Longview. The City of Longview is currently the largest single-stream customer, while the City of Tyler represents a larger growth market. The NETX MRF is projected to handle 600–700 tons per month by the end of its first year, with capacity for more.

Getting Started

The facility opened in May 2025, leveraging a 50,000 square foot building that allows for flexible operations and storage before shipment. Operators have adapted quickly to community needs, finding ways to accept additional material streams as requested.

Challenges

- **Contamination:** Some residential recycling materials have been heavily contaminated with food and garbage, reducing throughput and increasing labor.
- **Market Volatility:** The shutdown of two regional paper mills destabilized fiber markets, lowering prices and revenue.

- **Unsorted Material:** The NETX MRF charges a tipping fee for single-stream and unsorted loads to help cover processing costs.

Opportunities

- **Business Engagement:** NETX reports seeing many trash dumpsters filled with cardboard, suggesting potential diversion if businesses separate recyclables.
- **Toolkit Development:** The Waste Reduction and Recycling Toolkit can help organizations understand how to start and sustain recycling efforts.
- **Growth Potential:** NETX MRF has sufficient capacity to accept more recycling.

Lessons Learned

- **Preparation:** Conducting a thorough market and volume analysis before construction is critical to make MRFs viable.
- **Capture:** Investment in infrastructure draws recyclable materials from both communities and haulers.

7.1.2 Skeeter Boats

Program Overview

Skeeter Boats, located in Kilgore, Texas, manufactures fiberglass boats. Their primary waste streams are fiberglass, chemical waste, and wood waste. Their primary recycling stream is cardboard, which is sent to a local recycler and ultimately to a paper mill. Skeeter boats also recycles plastic bottles, plastic film, and shrink wrap. Metals, including aluminum, copper wire, and small scrap pieces, are collected and taken to a scrap yard in Longview, Texas, and batteries from boats are also recycled. Wood pallets are sometimes recycled, though demand and prices are often low. Attempts have been made to recycle carpet and fiberglass waste, but no viable solutions have been identified.

Getting Started

Recycling efforts began with cardboard, which was initially handled through large bins and compactors. The addition of six cardboard balers has since allowed for greater efficiency, and employees are more willing to participate in cardboard recycling because the equipment is easy to use. Plastic recycling was more difficult to implement, requiring the collection, bagging, and baling of shrink wrap and bottles. Buy-in from employees has generally been strong when recycling avenues are convenient and when employees are shown data on how many pounds are being diverted from landfills.

Challenges

- **Pallets:** Limited value and demand make recycling difficult, worsened by tariffs and economic downturns.
- **Fiberglass:** No viable outlet has been found to recycle this primary waste stream.
- **Staff time:** Checking bins and managing recycling consistency requires time out of staff's day.
- **Infrastructure:** Closure of the Rivers Recycling facility reduced local recyclable processing options, though the NETX MRF has helped with this issue.

Opportunities

- **Employee buy-in:** Workers are motivated when recycling systems are simple and accessible.
- **Corporate goals:** Skeeter Boats' Parent company, Yamaha, supports sustainability initiatives.
- **Cost savings:** Reducing landfill waste lowers hauling costs and compactor hauling trips.

Lessons Learned

- **Universal value:** It is beneficial for any company that is not recycling to start recycling.
- **Start small:** Even one baler can have a meaningful impact for a business.
- **Dual benefits:** Recycling improves both environmental eyesores and business costs.
- **Accessibility:** Easy systems and visible results encourage employee participation.

7.1.3 John Soules Foods

Program Overview

John Soules Foods is a family-owned, Texas-based food company in Tyler, Texas, that produces fully cooked and ready-to-eat chicken and beef products. They have recycled cardboard for over four decades. In addition to recycling, they reuse waste heat from their operations to pre-heat wash water, reducing costs and improving efficiency. More recently, they purchased four balers to expand into plastic recycling, but have not yet found reliable buyers as of the date of this document.

Getting Started

John Soule's Foods began recycling decades ago with cardboard, which has become ingrained in their operations and employee culture. Buy-in from employees came naturally as cardboard recycling was straightforward and widely accepted. The company is interested in recycling plastics to capture the profit otherwise lost to landfills. They recognize that effective waste diversion is critical in their industry, where controlling waste costs can make or break profitability. Despite a slight learning curve among staff, separating plastic material has not been prohibitively challenging. Finding reliable plastics buyers remains the primary barrier.

Challenges

- **Markets:** There is a lack of reliable buyers for plastics.
- **Infrastructure:** A pyrolysis facility closure eliminated a key potential outlet.
- **Experience Gap:** Many businesses are new to recycling and lack established practices.

Opportunities

- **Profitability:** Recycling reduces waste costs and can generate revenue.
- **Awareness:** Rising concerns over microplastics and PFAS has created momentum for action.
- **Community:** Partnering with ETCOG and smaller towns can build regional pressure for broader participation.
- **Compost:** There is potential to sell compost in bulk container loads.
- **Education:** John Soules Foods expressed a willingness to present about the environmental and financial benefits of recycling.

Lessons Learned

- **Buyers Needed:** Recycling programs fail without end markets.
- **Financial Case:** Recycling pays for itself when done correctly.
- **Social Pressure:** Municipal and community buy-in strengthens participation.
- **Message:** Profitability and social responsibility both need to be emphasized.
- **Action:** Businesses should "just do it" because recycling is profitable.

7.1.4 Hiland Dairy

Program Overview

Hiland Dairy is a farmer-owned dairy company with major plants in Tyler and Conroe. The dairy currently recycles paper, cardboard, and some plastics. Once enough is accumulated for a trailer load, materials are baled and shipped. Hiland Dairy also uses a blow mold to recycle plastic on-site, blending the recovered material with virgin resin. The dairy aims to divert waste from landfills, reduce hauling costs, and promote environmental responsibility for the business and the community.

Getting Started

Early on, Hiland Dairy focused on identifying reliable outlets for materials after one option in Mesquite closed, which required haulers to take cardboard to Houston. The dairy's partnership with the NETX MRF has been key in overcoming challenges such as a lack of warehouse space and hauling logistics. The team has emphasized that small culture changes (e.g., sorting materials into different bins), that demonstrate both environmental and financial benefits, including reduced dumpster pickups and lower costs.

Challenges

- **Storage Space:** Limited warehouse capacity for staging recyclables.
- **Hauling Logistics:** Difficulty securing trailers and affordable hauling, especially after local outlets closed.
- **Market Demand:** Limited buyers for specific grades, especially colored plastics.
- **Cost Neutrality:** Striving to break even without adding extra expenses to the process.

Opportunities

- **Partnerships:** Strong support from the NETX MRF.
- **Employee Engagement:** Building culture change around cost savings, sustainability, and workplace pride.
- **Public Awareness:** Promoting programs like the Green Business Program.
- **Material Recovery:** Expanding beyond cardboard to plastics and compostable material.
- **Efficiency Gains:** Reducing dumpster pickups, saving money that can be reinvested in employees.

Lessons Learned

- **Culture Change:** Requires champions to communicate benefits and gain buy-in.
- **Small Wins:** Even simple actions (e.g., turning off lights, having different colored bins for trash and recycling) add to savings.

- **Logistics Matter:** Hauling, storage, and baling capacity are critical to success.
- **Visibility:** Advertising recycling capabilities (e.g., the NETX MRF) increases participation and credibility.

7.2 ONLINE RESOURCES

This section provides links to additional waste reduction and recycling resources for businesses seeking additional information, case studies, and tools. The resources provided are from various sources, including the U.S. EPA, the TCEQ, and several local governments.

7.2.1 Evaluation Tools

Waste Assessment Guide

The waste assessment guide provides a step-by-step guide on how to conduct a waste assessment, including why it's important, examining facility records, conducting a facility walk-through, staying safe during the waste sort, planning the waste sort, and waste sort methodology.

Instructions on Conducting Waste Assessments

These instructions outline how to conduct a records examination, a facility walkthrough, and a waste sort. They also include spreadsheets to record the data, details, and findings of each.

Metrics for Waste Reduction

This resource includes standard volume-to-weight conversion factors, a form to estimate waste removal costs and savings associated with waste reduction, and a material glossary.

Climate and Economic Justice Screening Tool

This tool shows census tracts that are marginalized by underinvestment and overburdened by pollution are highlighted as being disadvantaged on the map. Version 2 was released in Dec 2024. Although the tool remains unchanged, public access through the White House was discontinued on Jan 22, 2025. This version is publicly accessible.

Reducing Waste: What You Can Do | US EPA

This resource outlines what individuals can do to help make a difference in the environment every day whether at home, on the go, in the office, or at school, and provides tips to reduce, reuse, and recycle.

Recycling Resources - Texas Commission on Environmental Quality

This page contains recycling resources for individuals, businesses, and local governments including how to recycle common items, rules and resources for recycling organizations, recycling studies, and more.

Composting | US EPA

This page contains composting resources including the impacts of sending food and other organic materials to landfills, definitions, composting basics and approaches, benefits of composting and using compost, related policies and regulations, and more.

7.2.2 Tracking Tools

EPA Waste Reduction Model (WARM)

WARM is a tool that provides high-level comparative estimates of the potential GHG emissions, energy savings, and economic impacts of materials managed in baseline and alternative materials management practices, including source reduction, recycling, composting, anaerobic digestion, combustion, and landfilling. The model estimates emissions, energy units and economic factors across a wide range of material types commonly found in municipal solid waste and construction and demolition debris.

Policy and Program Impact Estimator - A Materials Recovery GHG Calculator for Communities

This estimator expands the WARM framework to include a community's existing waste stream and policy and program options. It is designed to help municipalities, counties, and Tribes estimate reductions in life cycle GHGs from implementing new or expanded solid waste policies and programs in their communities.

Using EPA's WARM version 14 emissions factors, the calculator generates projected results for annual and accumulative tons of waste diverted and GHGs reduced over a 10-year planning timeframe. The results can inform comparisons of the estimated GHG impact from implementing different policies and programs, consistent with user-entered assumptions.

Materials addressed by the calculator include metal, glass, plastic, paper, wood, food waste, yard trimmings, and various construction and demolition debris materials. The calculator may also serve to familiarize users with what type of local solid waste data is needed to estimate GHG reductions from recycling and composting programs.

7.2.3 National Case Studies

Success Stories in Reducing Waste

This resource is a searchable table that includes national and regional award winners' success stories. The success storing include descriptions of the winning organizations' waste management practices, quantitative results (e.g., money saved, tons prevented or diverted), most significant accomplishments, and lessons learned.

Model Recycling Program Toolkit

This toolkit offers a comprehensive collection of materials to help states, local governments, schools, and organizations create effective recycling programs. It includes case studies, training materials, and examples of consumer education materials to increase participation and reduce contamination in recycling programs. Communities can use this toolkit to develop and enhance their recycling initiatives by leveraging proven strategies and resources.

7.2.4 Impact Information

TCEQ Recycling Market Development Plan

The TCEQ Recycling Market Development Plan (RMDP) provides high-level comparisons of potential greenhouse gas emissions reductions, energy savings, and economic impacts when considering different

materials management practices, including source reduction, recycling, anaerobic digestion, combustion, composting, and landfilling.

Model Recycling Program Toolkit

This study was commissioned to evaluate the current economic impact of the recycling and reuse sector, along with areas of opportunity to develop and promote end-use markets for recycled materials.

7.2.5 Other Resources

Signate Creator

This tool creates custom campaign material files.

Resource Exchange Network for Eliminating Waste (RENEW)

The Resource Exchange Network for Eliminating Waste (RENEW) is a free materials-exchange network established by the Texas Legislature in 1987 to promote the reuse or recycling of industrial wastes. The network is a marketing channel for industries, businesses, and governmental units who wish to sell surplus materials, by-products, and wastes to those who will reclaim or reuse them.

Sustainable Purchasing Program Guidance: A Landscape Scan of Available Resources

This resource includes summary profiles of some of the leading sources of sustainable purchasing guidance around the globe based on a scan of the landscape.

Volume-to-Weight Conversion Factors

This resource includes a summary of volume to weight conversion factors for recyclable materials.

City of Tyler - Keep Tyler Beautiful Program

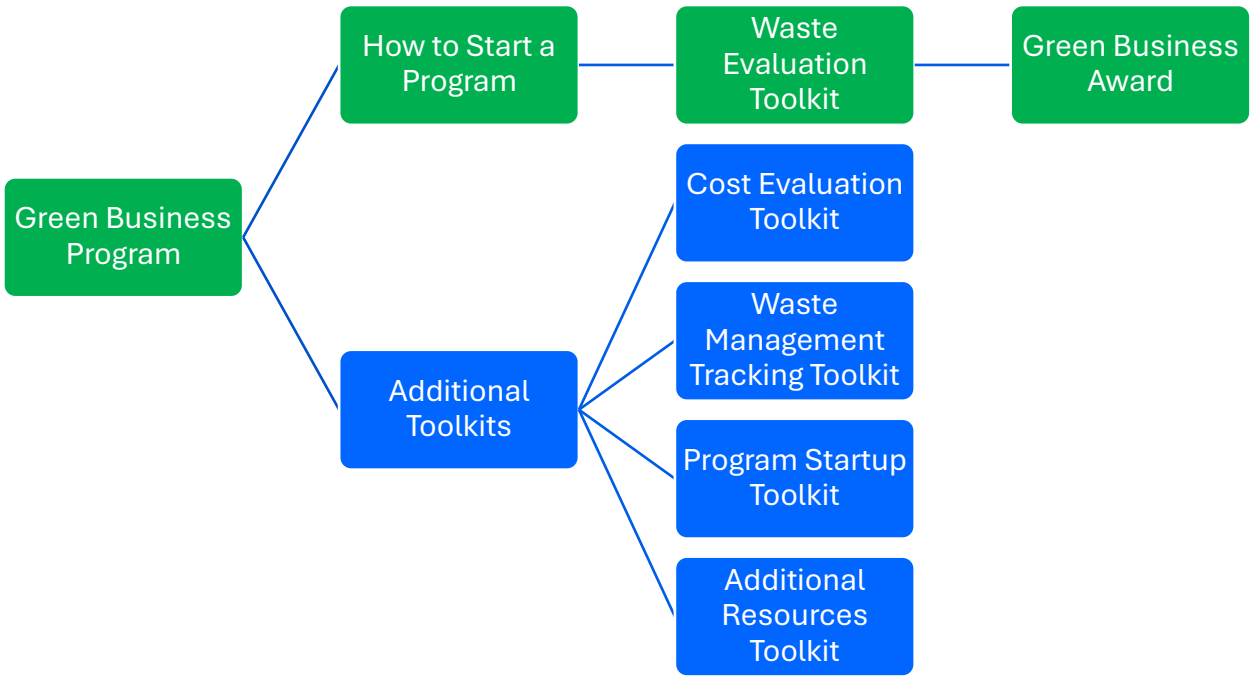
Keep Tyler Beautiful is a long-standing volunteer-based initiative founded in 1995. It is dedicated to enhancing Tyler, Texas, through beautification, litter prevention, environmental education, and community stewardship. As an official affiliate of Keep America Beautiful, Keep Texas Beautiful, and Bee City USA, Keep Tyler Beautiful supports civic pride and ecological sustainability throughout the region.

8.0 Frequently Asked Questions

Q: Does every tool in the Toolkit have to be used?

A: No, the user does not have to use every tool in the Toolkit. However, the toolkits are intended to be used together to take a comprehensive waste reduction and recycling approach. At a minimum, the user should complete the Waste Evaluation Toolkit, which is required to be eligible for the Green Business Program, as represented by the green path in **Figure 8-1**. The use of the other toolkits, represented in blue, is encouraged to provide area businesses with a clearer picture of their current and potential future waste management practices.

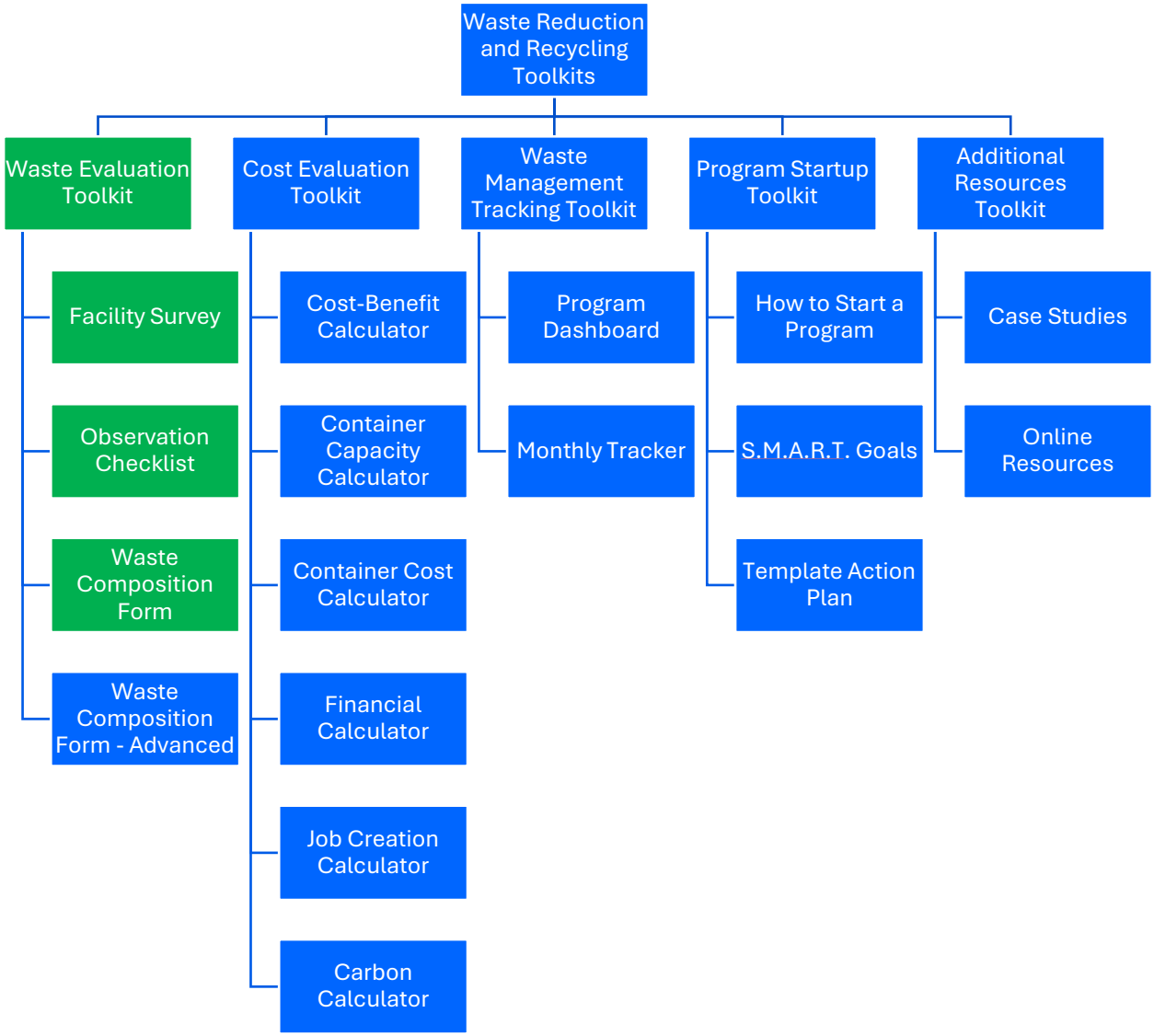
Figure 8-1: Green Business Program Overview



Q: What tools are included in each Toolkit?

A: The tools included in each toolkit are summarized in **Figure 8-2**. Tools required to be completed to be eligible for the Green Business Program are denoted in green, and additional tools are denoted in blue.

Figure 8-2: Breakdown of Toolkits



Q: Can I use any of these tools as standalone tools?

A: Each tool can be used as standalone toolkits. They can be used together and mixed and matched. The tools in the Waste Evaluation Toolkit are required to be completed to be eligible for the Green Business Program. When using the Excel-based toolkit, completing the Waste Composition Form tab automatically populates most of the remaining tools, meaning they require little to no user input beyond what is entered in the Waste Composition Form tab.

However, select tools can be completed without completing the Waste Evaluation Toolkit, as described below:

- **Container Capacity Calculator (in the Excel-based toolkit):** Users can manually enter current and potential/anticipated container volumes instead of using values automatically populated from the results of the Waste Composition Form tab of the Excel-based toolkit. In either case, the volumes

on the Container Capacity Calculator are used to calculate the results of the Container Cost Calculator.

- **Financial Calculator:** Tables 1 and 2 of the Financial Calculator are designed to be standalone tables. Table 3 is populated from the results of the Waste Composition Form tab of the Excel-based toolkit and can only be used if the Waste Composition Form tab is completed.
- **Job Creation Calculator:** Users can manually enter the current and potential/anticipated tons recycled instead of using values automatically populated from the results of the Waste Composition Form tab of the Excel-based toolkit.
- **Carbon Calculator:** This tool automatically populates from the results of the Waste Composition Form tab of the Excel-based toolkit and can only be used if the Waste Composition Form tab is completed.
- **Monthly Tracker:** This tool is most effective when used in conjunction with the remaining tools in the Excel-based toolkit and when updated each month to track progress over time.

9.0 Disclaimer

Participation in the Green Business Program and using the Waste Reduction and Recycling Toolkit is voluntary. While these resources are designed to support sustainable practices, specific outcomes related to waste reduction or increased recycling are not guaranteed. Continued use of the toolkit and implementation of waste reduction and recycling practices may improve results over time. By participating, the user consents to allow the ETCOG to use the information provided for program evaluation, reporting, and promotional purposes. No funding is associated with this awards program.

Estimates and projections based on this toolkit related to economic and environmental costs and benefits, operation and maintenance costs, inflation, equipment characteristics and performance, and operating results are based on Burns & McDonnell's experience, qualifications, and judgment as a consulting professional. Since Burns & McDonnell has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractor's procedures and methods, unavoidable delays, construction contractor's methods of determining prices, economic conditions, competitive bidding or market conditions, and other factors affecting such cost opinions or projections, Burns & McDonnell does not guarantee that actual rates, costs, performance, schedules, and related items will not vary from estimates and projections from this toolkit.

Appendix A – Advanced Waste Composition Form

GREEN BUSINESS PROGRAM

WASTE COMPOSITION FORM: LANDFILL CONTAINERS

WASTE COMPOSITION Overview

The Waste Composition form summarizes the material types, quantities, and composition percentages observed in the Waste Audit and calculates the current and potential waste reduction and recycling activities. The Waste Composition tab provides a form to be printed and taken into the field to conduct the survey. The Waste Composition process entails visually inspecting a facility's waste to estimate the material types and quantities. Identification of material types and quantities assists in evaluating waste reduction and recycling opportunities and forms the basis for the additional tools. The Waste Composition is based on visual inspection to capture the information with less effort and less safety risk than a hand sorted and weighed waste characterization.

Notes on Cubic Yards

Throughout this toolkit, volumes are often presented in cubic yards (CY). Imagine a large box that is 3 feet wide, 3 feet deep, and 3 feet tall. For context, a small washing machine is about 1 cubic yard.

Instructions

STEP 1 The user should print and bring this form while surveying their business. The user should evaluate the container the day before the container service so that the containers are full.

STEP 2 Enter the user's name and the date at the top of Table 1.

STEP 3 In Table 1, use visual inspection or information from the service provider to enter the total capacity (in cubic yards) of all of the user's business' landfill containers, how full the landfill containers are (as a percentage) when they are picked up, and how many times per week the landfill containers are picked up. Multiplied together, this represents the total quantity of landfill material currently disposed of per week. If the user does not know the size of the landfill containers, contact the service provider or look for a data plate attached to the container with model or size information to search online. Artificial intelligence may be able to identify a size if the user sends it a photo. The user may need to convert from gallons to CY if the bins are measured in gallons. To convert from gallons to CY, divide the number of gallons by 202.

STEP 4 In Column A of Table 2, indicate the percentage of each material category relative to the total contents of the container. Make sure the percentages add to 100% (in Table 3). If the user has multiple containers, indicate the percentage of each material category relative to the total contents of all containers combined. Each material type would have a single percentage that reflects its share of the total waste across all containers.

STEP 5 In Column B of Table 2, indicate the percentage of each material category in the container that can be reduced (maximum of 100%) via a reduction in waste generation from the landfill stream.

Note that throughout the Waste Composition tool and this toolkit, wood pallets have been considered as recycling, not compost.

CONTINUED ON BACK

Table 1 - Existing Landfill Container Information		
Waste Audit Personnel:		Date:
Total Capacity of Landfill Containers (CY):	Average Percent Full Prior to Collection:	Number of Weekly Pickups:

Table 2 - Quantity of Divertible Materials in Landfill Containers		
Material Category	**Column A: Percentage of Waste Stream (% by Volume)**	**Column B: Waste Reduction Opportunity (% by Volume)**
Cardboard		
Mixed Paper		
Office Paper		
Plastic #1 PET		
Plastic #2 HDPE		
Plastic #5 PP		
Plastic #3-7 Mixed		
Plastic Film/Bags		
Plastic Foam		
Other Plastics		
Glass Containers		
Other Glass		
Aluminum Cans		
Steel/Tin Cans		
Ferrous Metal		
Non-Ferrous Metal		
Batteries		
Appliances		
Electronics		
Tires		
Textiles		
Other Recyclable Materials		
Wood Pallets		
Food Waste		
Yard Waste		
Other Organics		
No Diversion Opportunities Identified		
Landfill Waste		
Other Waste		

Table 3 - Column A Total Percentage (must be 100%)	
Total Waste:	

STEP 6 Once Columns A and B have been filled out, repeat this process for recycling containers (next page). Then, return to the Waste Composition Tab of the Waste Reduction and Recycling Toolkit spreadsheet file. Enter the values from Table 1 on this form in Table 1 of the Waste Composition Tool. Enter the values from Columns A and B on this form in Table 2, Columns 1 and 5 of the Waste Composition Tab.

GREEN BUSINESS PROGRAM

WASTE COMPOSITION FORM: RECYCLING CONTAINERS

RECYCLING

Empty bottles and cans

Aluminum foil

Cardboard & paper

Instructions

STEP 7 If the user's business has recycling containers, enter the user's name and the date at the top of Table 4.

STEP 8 In Table 4, use visual inspection or information from the service provider to enter the total capacity (in cubic yards) of all of the user's business' recycling containers, how full the recycling containers are (as a percentage) when they are picked up, and how many times per week the recycling containers are picked up. Multiplied together, this represents the total quantity of material currently recycled per week. If the user does not know the size of the recycling containers, contact the service provider or look for a data plate attached to the container with model or size information to search online. Artificial intelligence may be able to identify a size if the user sends it a photo. The user may need to convert from gallons to CY if the bins are measured in gallons. To convert from gallons to CY, divide the number of gallons by 202.

STEP 9 In Column C of Table 5, indicate the percentage of each material category relative to the total contents of the container. Make sure the percentages add to 100% (in Table 6). If the user has multiple containers, indicate the percentage of each material category relative to the total contents of all containers combined. Each material type would have a single percentage that reflects its share of the total waste across all containers.

STEP 10 In Column D of Table 5, indicate the percentage of each material category in the container that can be reduced (maximum of 100%) via a reduction in waste generation from the recycling stream.

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Table 4 - Existing Recycling Container Information		
Waste Audit Personnel:		Date:
Total Capacity of Recycling Containers (CY):	Average Percent Full Prior to Collection:	Number of Weekly Pickups:

Table 5 - Quantity of Divertible Materials in Recycling Containers		
Material Category	**Column C: Percentage of Waste Stream (% by Volume)**	**Column D: Waste Reduction Opportunity (% by Volume)**
Cardboard		
Mixed Paper		
Office Paper		
Plastic #1 PET		
Plastic #2 HDPE		
Plastic #5 PP		
Plastic #3-7 Mixed		
Plastic Film/Bags		
Plastic Foam		
Other Plastics		
Glass Containers		
Other Glass		
Aluminum Cans		
Steel/Tin Cans		
Ferrous Metal		
Non-Ferrous Metal		
Batteries		
Appliances		
Electronics		
Tires		
Textiles		
Other Recyclable Materials		
Wood Pallets		
Food Waste		
Yard Waste		
Other Organics		
No Diversion Opportunities Identified		
Landfill Waste		
Other Waste		

Table 6 - Column C Total Percentage (must be 100%)	
Total Waste:	

STEP 11 Once Columns C and D have been filled out, repeat this process for compost containers (next page). Then, return to the Waste Composition Tab of the Waste Reduction and Recycling Toolkit spreadsheet file. Enter the values from Table 4 on this form in Table 4 of the Waste Composition Tool. Enter the values from Columns C and D on this form in Table 5, Columns 1 and 5 of the Waste Composition Tab.

GREEN BUSINESS PROGRAM

WASTE COMPOSITION FORM: COMPOST CONTAINERS

COMPOST

Discarded food

Food-soiled paper

Plant debris

Instructions

STEP 12 If the user's business has compost containers, enter the user's name and the date at the top of Table 7.

STEP 13 In Table 7, use visual inspection or information from the service provider to enter the total capacity (in cubic yards) of all of the user's business' composting containers, how full the compost containers are (as a percentage) when they are picked up, and how many times per week the compost containers are picked up. Multiplied together, this represents the total quantity of material currently composted per week. If the user does not know the size of the compost containers, contact the service provider or look for a data plate attached to the container with model or size information to search online. Artificial intelligence may be able to identify a size if the user sends it a photo. The user may need to convert from gallons to CY if the bins are measured in gallons. To convert from gallons to CY, divide the number of gallons by 202.

STEP 14 In Column E of Table 8, indicate the percentage of each material category relative to the total contents of the container. Make sure the percentages add to 100% (in Table 9). If the user has multiple containers, indicate the percentage of each material category relative to the total contents of all containers combined. Each material type would have a single percentage that reflects its share of the total waste across all containers.

STEP 15 In Column F of Table 8, indicate the percentage of each material category in the container that can be reduced (maximum of 100%) via a reduction in waste generation from the compost stream.

CONTINUED ON BACK

Table 7 - Existing Compost Container Information		
Waste Audit Personnel:		Date:
Total Capacity of Compost Containers (CY):	Average Percent Full Prior to Collection:	Number of Weekly Pickups:

Table 8 - Quantity of Divertible Materials in Recycling Containers		
Material Category	**Column E: Percentage of Waste Stream (% by Volume)**	**Column F: Waste Reduction Opportunity (% by Volume)**
Cardboard		
Mixed Paper		
Office Paper		
Plastic #1 PET		
Plastic #2 HDPE		
Plastic #5 PP		
Plastic #3-7 Mixed		
Plastic Film/Bags		
Plastic Foam		
Other Plastics		
Glass Containers		
Other Glass		
Aluminum Cans		
Steel/Tin Cans		
Ferrous Metal		
Non-Ferrous Metal		
Batteries		
Appliances		
Electronics		
Tires		
Textiles		
Other Recyclable Materials		
Wood Pallets		
Food Waste		
Yard Waste		
Other Organics		
No Diversion Opportunities Identified		
Landfill Waste		
Other Waste		

Table 9 - Column E Total Percentage (must be 100%)	
Total Waste:	

STEP 16 Once Columns E and F have been filled out, return to the Waste Composition Tab of the Waste Reduction and Recycling Toolkit spreadsheet file. Enter the values from Table 7 on this form in Table 7 of the Waste Composition Tool. Enter the values from Columns E and F on this form in Table 8, Columns 1 and 5 of the Waste Composition Tab.

STEP 17 Repeat this exercise for all three streams each month after implementing waste reduction efforts by printing and filling out these forms, creating a copy of the Waste Reduction and Recycling Toolkit, and filling out Tables 1-9. Compare the recycling rate and compost rate each month to the initial recycling and compost rates.

Appendix B – Excel-Based Waste Reduction and Recycling Toolkit Quick Start Guide

Excel-Based Toolkit Quick Start Guide

The Excel-based Waste Reduction and Recycling Toolkit helps businesses track and reduce waste by collecting data in the field and entering it into an Excel-based tool. The user will identify waste types, estimate volumes, and use calculators to plan cost-saving and sustainable waste strategies.

This Quick Start Guide outlines the steps the user needs to take to begin using the Excel-based toolkit to track and improve upon waste reduction and recycling practices. For more detailed instructions, visit the "User Manual" tab.

Tabs Explained

Tab	Description
User Manual	Includes more detailed instructions on how to use this spreadsheet
FAQ	Frequently Asked Questions
Program Dashboard	Snapshot of key outputs and results
Monthly Tracker	Tracks monthly trash, recycling, and organics volumes
Facility Survey	Identifies materials and reduction strategies by area
Observation Checklist	Flags whether current activities are sufficient or deficient and assigns follow-up tasks
Waste Composition Tool	Field tool for estimating material types and volumes
Container Capacity Calculator	Helps size dumpsters based on current and future needs
Container Cost Calculator	Shows cost impacts of container size/frequency changes
Financial Calculator	Estimates ROI on waste equipment (e.g., balers)
Job Creation Calculator	Estimates jobs created by recycling efforts
Carbon Calculator	Estimates carbon savings from waste diversion and recycling

Important Notes

Complete These First:

- **Facility Survey**
- **Observation Checklist**
- **Waste Composition Tool**

After that, results from the Waste Composition Tool feed into the other tools.

Color Legend (Excel Cells)

Color	Meaning
Blue	User input required
Green	Default values (can be changed)
White	Calculated outputs (not able to be edited)
Gray	Not applicable

1. Before Starting

Review the Toolkit:

- Read through the entire Excel file to understand all parts of the toolkit
- Print the following forms to take into the field:
  - **Facility Survey**
  - **Observation Checklist**
  - **Waste Composition Tool**

2. Conduct a Facility Walkthrough

What to do:

- Walk through the user's entire facility using the **Facility Survey** and **Observation Checklist**.
- Document:
  - Types of waste produced
  - Where waste is generated
  - Opportunities to reduce waste

3. Perform a Waste Observation (Visual Audit)

Using the Waste Composition Tool:

- Go to onsite waste containers (typically dumpsters) **the day before pickup**, so they are full.
- Visually inspect the contents - **do not touch waste** (for safety).
- Estimate and record:
  - Type of material (e.g., cardboard, food waste, plastic)
  - Volume of each material type (**as a percentage**)

⚠ This becomes the **baseline data** for all other tools.

4. Enter Data in the Toolkit (Excel)

- Input the collected field data into the appropriate Excel tabs.
- The user will get an overview of:
  - How much waste is produced (landfill, recycling, and organics)
  - Opportunities to improve

5. Use the Toolkit Calculators

These tools help the user analyze their data and plan improvements:

Tool	Purpose
Container Capacity Calculator	Determines if the user's dumpsters are the right size and collected at the right frequency
Container Cost Calculator	Estimates cost impacts of changing container size or service frequency
Financial Calculator	Calculates potential savings and ROI from waste-reduction equipment (e.g., balers, compactors)
Job Creation Calculator	Estimates how recycling may create jobs
Carbon Calculator	Uses EPA's WARM tool to estimate carbon savings from waste diversion

6. Review Results and Track Progress

- Log monthly waste data in the **Monthly Tracker**
- View overall waste and savings in the **Summary Dashboard**
- Use results to plan and implement:
  - Waste reduction strategies
  - Landfill diversion efforts
  - Cost-saving initiatives

Repeat this process monthly to monitor improvements and savings.