

Conducting a Recycling Assessment

Know where you are
to know where
you are going...



*Georgia Department of Community Affairs
Regional Single Stream Recycling Hub Workshops
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Where You Are : Assess Your Existing Program

Typical Recycling Program Components

- Program Goals
- Generator
- Materials Collected
- Collection
- Transportation
- Processing
- Markets (End or Terminal)
- Public Education
- Revenues/Costs

Where You Are Going: Formulating Program Goals

- Establish a team of community representatives to:
 - Identify goals for your program
 - Assess the existing program focusing on all of the typical program components
 - Determine if your existing program meets your goals or what resources are needed to meet them

Where You Are Going: Typical Program Goals to Consider

Goals:

- Start a new program - curbside recycling
- Increase participation rate
- Increase materials recovery
- Decrease collection costs
- Reduce your carbon footprint

Overall....

- Minimize overall costs for your solid waste program
- Maximize revenue
- Increase efficiency

Program Component : Generators



Generator : A person, business, organization who creates solid waste or recyclable materials

Program Component: Generators

- Commercial vs. Residential
 - Determine who is generating the materials you want to target for recycling
 - Identify existing recycling activities - is there room for growth
- Identify Performance Standards
 - Determine your “Set-out Rate”
 - Determine your “Participation Rate”

Program Component : Generators

What is your Community Profile?

- Population & Demographics
 - Number of households
 - Housing density
 - Type & Size of Businesses
-
- Knowing your profile will influence the materials you target and the type of collection and education programs you promote

Program Component : Materials

■ Identify Materials to Recycle

- How much is generated?
- How much is currently being disposed?
- How much is currently recovered?



- **Recovered Materials** : are materials which have known use, reuse, or recycling potential; and have been diverted from the solid waste stream for sale, use, reuse, recycling, whether or not requiring subsequent separation and processing.

Program Component : Materials

- What materials are currently being collected?



Paper : OCC, ONP, Office, Magazines, Mixed

Glass: Clear, Green, Amber, Mixed

Metals: Aluminum & Steel Cans, Other Ferrous

Plastics: #1 PET, #2 HDPE, Other Plastics #3-7

- What other materials are Processors or Markets accepting in your region?

Program Component : Collection

The method of Collection has a significant impact on participation and recycling rates.

■ Who collects the materials?

♻️ Public or Private

- Need to track critical data
- Ability to adapt program

■ Type of Program

♻️ Mandatory, Voluntary, Incentive based

Program Component : Collection

- Who currently has collection services?
 - Curbside Services: Residential, Multi-Family
 - Drop-off Services: Residential & Commercial
 - Commercial Collection: Roll-off/dumpster
 - What is the participation rate?
 - What is the “capture” rate?
 - Is there room for increased participation and capture?

Program Component : Collection

- How are materials collected?

Source separated : the sorting of recyclable materials for placement in separate containers

Single-Stream : a mixture of several recyclable materials within one container



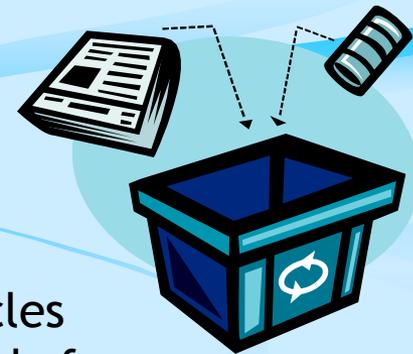
Program Component : Collection Trade-offs

■ *Source Separated*

- Generators sort materials (eg. glass from newspaper, etc)
- Costly to collect materials separately
- Typically higher price for materials from Processors or Markets
- Lower Participation Rates

■ *Single Stream*

- Less effort and space on generator = increased participation
- Lower collection costs - often use existing vehicles
- Cost to sort materials or lower price for materials from Processors or Markets
- No need for specialized collection containers or equipment



Program Component : Collection - Drop-off

- What type?
 - Transfer Station / Convenience Centers
 - Green Boxes
 - Staffed/Un-Staffed

- What equipment is used?
 - Compactors / Balers
 - Open Roll-off bins
 - Closed Roll-off Bins
 - Single Stream Containers
 - Igloos



Program Component : Collection - Curbside

- If Curbside, what is the frequency?
 - Weekly
 - Bi-Weekly
 - Monthly

- What equipment is used?
 - Containers
 - 18, 32, 65, 95 gallon bins
 - Collection Vehicles
 - Packer Truck
 - Automated or Manual Pick-up
 - Front end-loader Truck
 - Roll-off Truck

Program Component: Transportation

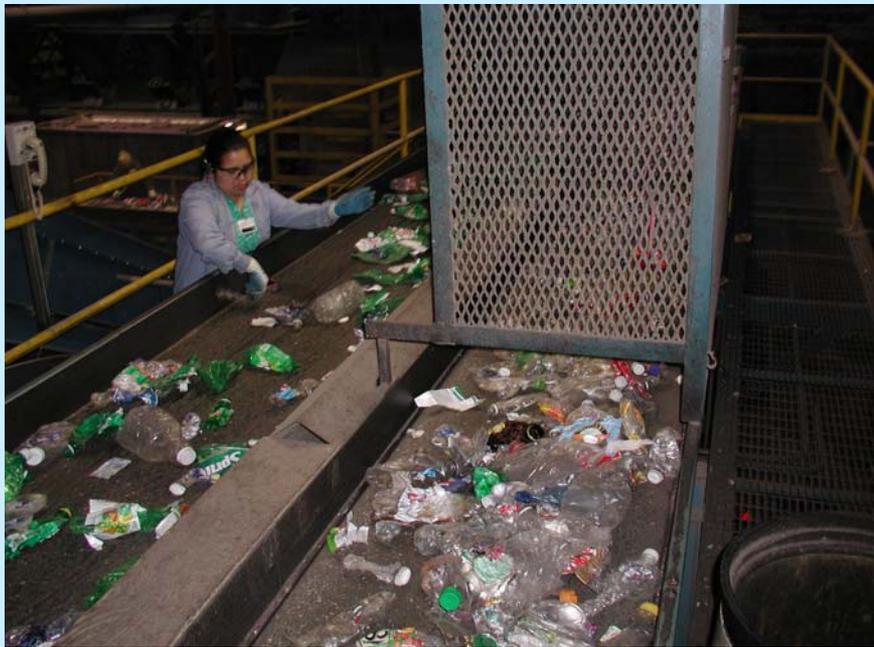
Transportation is movement of collected materials to:

- A Regional Recycling Collection Hub - a facility that accepts truckload quantities of recyclables and transfers them to long-haul transport vehicles;
- A Processor - a facility that will prepare, separate and/or bale the recovered materials for a market or user; or
- Market - a facility or user of the recovered materials

Program Component: Transportation

- Are the materials collected in your program limited by your access to existing markets?
- Proximity to recycling Processor/Markets
- Transportation costs to deliver source separated materials to Markets

Program Component: Processing



A processing facility is the connection between collection and end-users to prepare, process, transport, and market materials.

Recovered Materials Processing
Facility (RMPF)

Program Component: Processing

- What are the volume and type of materials being collected?
- Who is processing the collected materials?
 - Local government or private facility
 - Who owns & markets the processed materials?
 - Is there a revenue sharing agreement?
- Does your current processing facility have additional processing capacity?
 - Existing materials being collected
 - New/expanded list of materials
 - Material delivery requirements
- What are your processing/marketing costs?

Program Component: Marketing

Market - company that uses recovered materials as feedstock to manufacturer a new product or material

■ What are your Markets?

- Types of Markets - what materials and locations in your region
- How are the materials accepted - loose or baled
- Minimum quantities accepted
- Reliability - accepting materials when you need to ship
- Consistency in meeting market specifications - rejected loads
- Price paid

Program Component: Public Education

Education and awareness are critical to increasing your program participation rate.

- Changes in behavior will increase program success - know how to reach your target audience
- Changing Conditions:
 - Population
 - Program logistics
 - Recycling trends



Program Component: Public Education

- What is the recycling awareness level in your Community?
- What is your education/promotion program?
 - Budget & Staff
 - Annual Activities/Events
 - Outreach methods - newsletter, Web, direct mail, etc
- Who is responsible for the Program?
 - KAB Affiliate
 - Recycling Coordinator
 - Private Hauler

Program Component: Revenues/Costs

- Operational Funds
 - Collection
 - Processing
 - Transportation
 - Maintenance
 - Staff
 - Public Education

- Capital Funds
 - Vehicles
 - Containers
 - Site development
 - Building and equipment
 - Capital Replacement



Program Component: Revenues/Costs

■ Break-even levels

- The point, or level of operation, where the total cost of a recycling project (or an entire recycling program) equals the money saved in collection, transfer, and disposal costs.

■ Avoided costs as revenue

- Often the main revenue is the per-ton tipping fee saved at garbage disposal facilities by diverting recyclables out of the garbage can.

■ Revenue/Cost Trade-offs

- Total program costs and revenues need to be considered to minimize collection and transportation costs while maximizing participation rates and the volume of materials recovered.

Program Component: Revenues/Costs

■ Doing the math

- What are your break-even levels?
- What is your expected/desired payback period?
- What is the total cost of Solid Waste Management with and without recycling?

Program Component: Revenues/Costs

■ Beyond the math

- Energy Savings through Recycling
- Greenhouse gas reductions
- Water conservation
- Support for Georgia's economy
- Supports public expectations - "Green Movement"



Questions

Office of Environmental Management
Contact...

www.dca.state.ga.us

