



CITY OF SAN ANTONIO
SOLID WASTE MANAGEMENT

Recycling and Resource Recovery Plan 2013 Update

60%
Recycling Rate
by 2025

2013
31%

2014

2015

2016

2017

2018

2019

2020

2021

2022



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EXECUTIVE SUMMARY

Executive Summary

The purpose of this document is twofold: update City Council on changes made to the City of San Antonio's (City) *Recycling and Resource Recovery Plan: A Pathway to Zero Waste* (Plan) approved by Council in FY 2010 and describe the progress and vision towards achieving the resource recovery goals outlined in the Plan.

Since approval of the Plan, the Department has received direction from Council to make the following changes:

- Extend the timeline to reduce residential waste by 60% by 2020 to 2025
- Change the Organics Curbside Collection from a citywide service to a subscription-based program
- Construct four bulky material waste drop-off centers in FY 2013
- Add an additional bulky material curbside collection
- Examine how residents manage waste other than through Department provided programs

The City's recycling and resource recovery goals are guided by the City's drive to ultimately become a zero waste community. Zero waste is a change in perception; a change in how businesses create products, how people use products, and how the solid waste management industry processes discarded materials. The goal of zero waste is that all discarded materials are re-used or recycled back into nature or the production cycle. Achieving zero waste in San Antonio is guided by three fundamental vision statements:

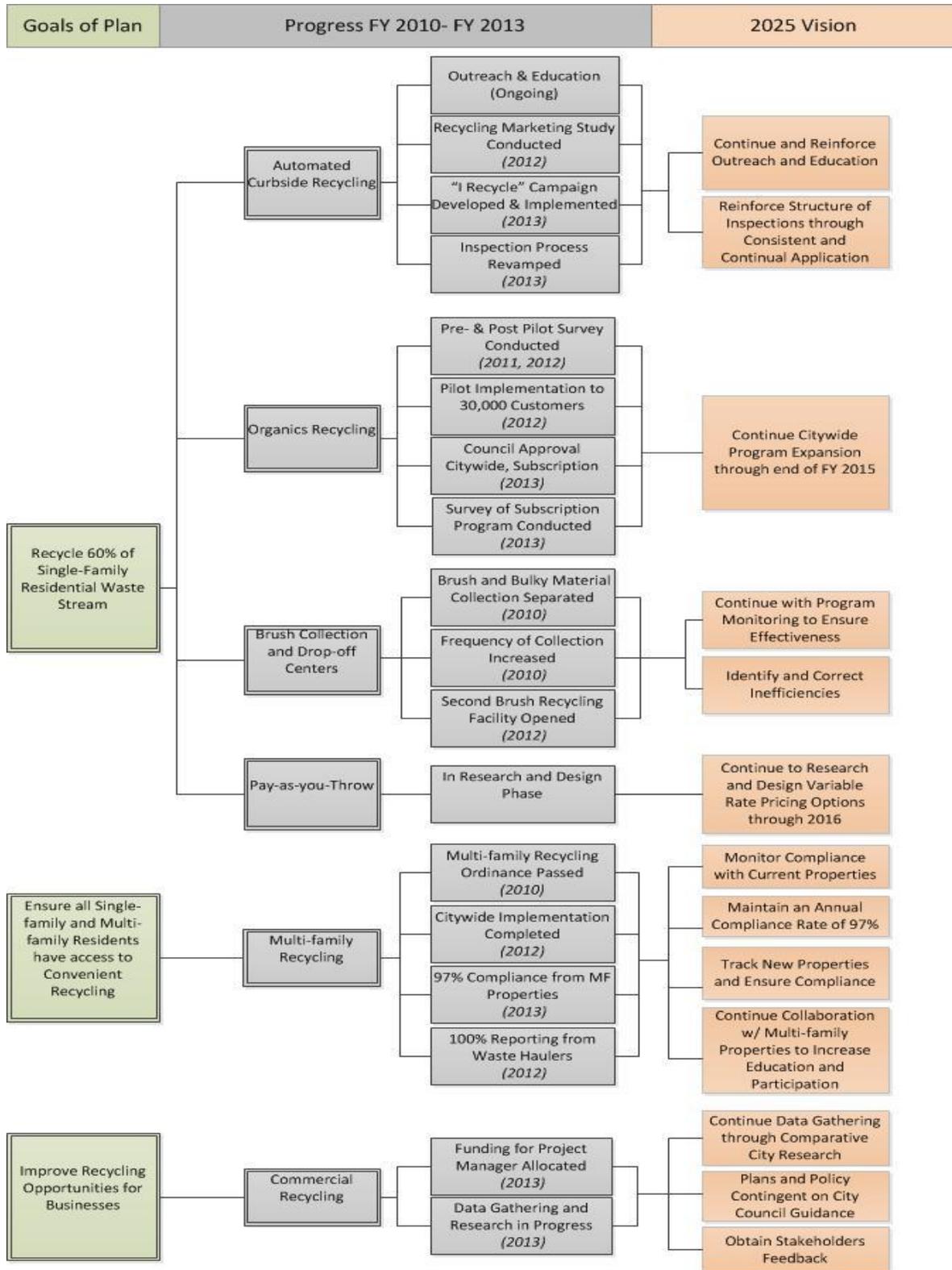
- Establish a culture where discarded materials are viewed as resources instead of waste
- Ensure residents and businesses benefit from reducing waste and recycling used material
- Ensure residents and businesses have convenient access to recycling programs

With this vision in mind, staff established the first three goals for the City:

Goal	Status
Recycle 60% of the single-family residential waste stream by 2025	31% recycling rate in FY 2013, over halfway to 2025 goal
Ensure all single-family and multi-family residents have access to convenient recycling	In 2010, ordinance passed requiring all multi-family properties to provide recycling collection Fully implemented as of December 2012 Maintaining 97% compliance rate
Improve recycling opportunities for businesses	Staff gathering research to draft commercial recycling program options to present to City Council

EXECUTIVE SUMMARY

The diagram below illustrates the three key goals, progress to date, and action steps for the envisioned future to ensure established goals are realized.



1.0 CHANGES REQUESTED BY CITY COUNCIL

1.0 Changes Requested by City Council

Since approval of the Plan by City Council in 2010, the Department has received direction from Council to implement the following changes to the Plan:

60% Waste Reduction by 2025

Council requested for the 2020 target date for reaching a 60% single-family residential recycling rate to be extended to 2025. Progress is measured each month by dividing the total tons of material collected through all recycling programs by the total tons of material collected through all residential recycling and disposal programs.

Table 1: Residential Recycling and Disposal Programs

Recycling Programs	Disposal Programs
Curbside Recycling Collection	Curbside Refuse Collection
Organics Recycling Collection	Curbside Bulky-Item Collection
Curbside Brush Collection	Contamination from Curbside Recycling
Brush Drop-off Centers	
HHW Centers & Mobile Events	

$$\text{Recycling Rate} = \frac{\text{Recycling Programs Total Tonnage}}{\text{Recycling Programs Total Tonnage} + \text{Disposal Programs Total Tonnage}}$$

The following participation from existing and proposed programs is required to achieve a 60% recycling rate by 2025.

Table 2: Core Recycling Initiatives' Contributions to Single-family Residential Recycling Rate

Recycling Initiative	Estimated Additional Annual Costs	Estimated Additional One Time Costs	Current Contribution FY 2013	Total Contribution by 2025
Outreach Curbside Recycling*	Completed FY 2013		13% (71,000 tons)	13% (78,000 tons)
Brush	Completed FY 2012		17% (88,000 tons)	17% (102,000 tons)
Organics	\$ 8.8 M	\$ 29.2 M	1% (3,000 tons)	15%* (90,000 tons)
Variable Rate Pricing	\$ 0.7 M	\$ 12.9 M	0%	15% (90,000 tons)
Residential Recycling Rate			31%	60%

* Net recyclables from the automated curbside recycling program. Number discounts contaminated tonnages.

1.0 CHANGES REQUESTED BY CITY COUNCIL

Subscription-based Organics Program

In January of FY 2013, Council voted to transition a proposed citywide organics recycling program to a subscription-based program where residents have the option to receive curbside organics collection for a \$3.00 monthly service fee.

Bulky Waste Drop-off Centers and Additional Collection

In FY 2013, Council requested for the Department to construct four bulky waste drop-off centers to meet customer demand and convenience. Although the Department continues to seek ways to capture more of this bulky material through recycling items such as wood and metal, the majority of bulky items are disposed of in landfills. The Department currently tracks tonnages received from the bulky drop-off centers separately from the residential recycling rate.

Residents' Waste Management Habits

In FY 2013, Council requested that the Department examine how residents dispose of materials not collected through the Department's current programs. This is valuable information to help the Department understand residents' waste management habits and consumption behaviors, a key point of knowledge for developing strategies to move San Antonio toward being a zero waste community. This research requires two key tools: a survey to determine resident waste management behaviors and a waste characterization study to understand what materials are landfilled.

2.0 RESIDENTIAL RECYCLING INITIATIVES

2.0 Residential Recycling Initiatives

2.1 CURBSIDE RECYCLING OUTREACH

The residential Curbside Recycling Program is the Department's central resource recovery program, recovering approximately 70,000 tons of recyclable material each year. Residential outreach continues to be the cornerstone for improvements to this program. In the past three years, the Department has influenced residents' recycling behaviors and attitudes by

- Developing a curbside recycling marketing study to gain an understanding of customer perceptions followed by the development of a marketing campaign
- Revamping the residential recycling inspection process to target common contamination issues and to provide more individualized information to residents
- Redesigning the Department website and redeveloping online tools

2.1.1 FY 2010 – FY 2013 Progress

Transition to Automation (FY 2010)

Between FY 2007 and FY 2010, the Department underwent a three-and-one-half-year long conversion process to increase recycling collection capacity provided to residents, expanding from 18-gallon to 96-gallon weekly collection. This led to an increase from 3 percentage point contribution in 2006 to a 13 percentage point contribution to the recycling rate in 2010.

Outreach Materials (FY 2011)

The FY 2011 Adopted Budget added one-time funding of \$470,000 for development of instructional materials to educate residents about recycling. The campaign included a variety of marketing resources, including video production, print materials for schools and homes, and advertising placed on solid waste collection trucks.

Marketing Study (FY 2012)

The Department completed a residential recycling marketing study that indicated residents have a general understanding of what is and is not recyclable through the City's Curbside Recycling Program. Customers also conveyed a desire to know more about other materials that can be recycled.

"I Recycle" Marketing Campaign (FY 2013)

As a result of the marketing study, an additional \$700,000 in one-time funding was approved for the Department to develop the "I Recycle" campaign, which carries a clear, concise, and

2.0 RESIDENTIAL RECYCLING INITIATIVES

easy-to-remember message. This campaign uses a wide range of mediums to reach the public including television commercials, billboards, a new recycling website, website banner ads, social media sites, a smartphone application, promotional news stories and media appearances, and messaging on recycling collection truck wraps.

Residential Recycling Inspection Process (FY 2013)

In order to reduce contamination and increase proper recycling habits, the Department also restructured the residential recycling inspection process to provide residents with information targeted to their needs. This new process expands the area inspectors previously covered, now providing assistance to over 28,000 residents each week. As a result, outreach and marketing investments in the Curbside Recycling Program have reduced contamination from 23% in FY 2010 to 19% in FY 2013.

Table 3: Curbside Recycling Program Changes and Results, FY 2010 – FY 2013

	FY 2010 (Base)	FY 2011	FY 2012	FY 2013 (Projected)
	Automation Completed	Marketing & Outreach	Marketing Study	Marketing Campaign
Tonnage Collected	70,016	67,609	70,937	70,758
% Change from Previous Year		-3%	+2%	+1%
Contamination Rate	23%	24%	21%	19%
% Change from Previous Year		+1%	-3%	-2%

2.1.2 Vision for 2025

The City's Curbside Recycling Program proves to be an effective program, comparable to existing single-family residential recycling programs of other major cities. The Department will continue efforts to improve program performance, lower contamination, and promote overall culture of zero waste through outreach and by increasing awareness through a variety of traditional and social media based marketing techniques. Additional improvements to the recycling rate will come as a result of other initiatives such as variable rate pricing.

2.2 BRUSH COLLECTION AND DROP-OFF CENTERS

The FY 2010 Plan also set a goal to increase the diversion rate of brush material from landfills.

2.2.1 FY 2010 – FY 2013 Progress

Brush diversion from landfills increased from 35,000 tons in FY 2010 to 88,000 tons in FY 2013. This 150% increase in diversion has contributed 10 percentage points to the City's residential recycling rate and was accomplished by

2.0 RESIDENTIAL RECYCLING INITIATIVES

- Changing from comingled collection of brush and bulky to separate collections for each type of material
- Increasing frequency of curbside brush recycling collection which increased participation and allowed for collection of entire neighborhoods at one time
- Opening a second brush recycling facility to increase service and convenience to residents throughout the City

Table 4: Brush Recycling Program Changes and Results, FY 2010 – FY 2013

	FY 2010 (Base)	FY 2011	FY 2012	FY 2013 (Projected)
Curbside Collections	2 Brush/Bulky Mixed	2 Brush & 1 Bulky	2 Brush & 1 Bulky	2 Brush & 2 Bulky
Drop-off Centers	1 (Bitters)	1 (Bitters)	2 (Bitters & Nelson)	2 (Bitters & Nelson)
Tonnage Collected	35,000	50,800	60,900	88,029
% Increase from Previous Year		45%	20%	28%

2.2.2 Vision for 2025

Over the following years, the Department will monitor the effectiveness of the brush recycling programs for continued improvements, including education and outreach to the community.

2.3 ORGANICS RECYCLING

The goal of the Organics Recycling Program is to maximize the diversion of organic materials from the landfill, which comprises approximately one-third of municipal solid waste in landfills.¹ Therefore, the Department offers a comprehensive organics program that accepts all compostable items including yard waste, food, and food-soiled paper. This collection service is expected to contribute up to 15 percentage points towards the City’s recycling rate by 2025. It constitutes a significant component of the City’s recycling goals and sets the stage for other major initiatives of the Plan such as variable rate pricing.

¹ United States Environmental Protection Agency, 2010 Municipal solid Waste Characterization Report, page 4, figure 5, Dec. 2011., http://www.epa.gov/osw/nonhaz/municipal/pubs/msw_2010_rev_factsheet.pdf.

2.0 RESIDENTIAL RECYCLING INITIATIVES

2.3.1 FY 2010 – FY 2013 Progress

Pre-Pilot Survey (FY 2011)

The Department conducted a survey prior to rolling out the pilot program. Nearly 49% of the respondents said they would use the Organics Program's green cart every week, and nearly 32% said they would use it occasionally. Therefore, 81% of the respondents said they would use the organics cart and an additional 10% were not sure if they would participate in the program.

Pilot Design and Implementation (FY 2010-2011)

In FY 2010, the Department developed and designed the Organics Pilot Program that was implemented from September through November 2011. Approximately 30,000 homes in the northeast and southeast regions of the City in Council Districts 3, 4, 5, and 9 received an organics recycling cart. Over 98% of residents in the pilot group received and kept the cart. Only 300 residents requested cart removal after the roll out.

Pilot Results (FY 2012)

Throughout FY 2012, the pilot group diverted 5,322 tons of material from the landfill, increasing the City's residential recycling rate by 1.1 percentage points, meeting expectations. Seasonality and rain had a significant impact on the amount of material collected. Collection peaked in March and April of 2013 with over 1,500 tons of material. The average annual pounds-per-household was over 400 lbs., and projected to increase to 650 lbs. per household upon full implementation of the subscription-based program.

Post-Pilot Survey (FY 2013)

Over 90% of respondents stated using the organics cart requires little to no effort. Approximately 80% stated they place their cart out weekly or every other week. A majority of respondents did not have any issues with odors, rodents, or space constraints. A vast majority of respondents used the carts for yard waste.

Council Approval (FY 2013)

Following meetings to discuss the results of the Organics Pilot Program and the future plan, Council approved an organics subscription-based program on January 31, 2013. During February and March, roughly 27% of residents in the piloted area subscribed to the program. Among the 16 pilot organics routes, subscription rates ranged from as low as 12% to as high as 43%.

Subscription Program Survey (FY 2013)

St. Mary's University conducted a survey to determine the citywide demand of the program, including people's willingness to pay \$3 for the service. Results showed that 23% of the

2.0 RESIDENTIAL RECYCLING INITIATIVES

residents are likely to subscribe to the program with more demand in the northern parts of the City. More than half of the respondents indicated they were not aware of the program. Those who had heard about it listed the news as a primary source for obtaining information about the program. Those who had prior knowledge of the program were twice as likely to subscribe, compared to those who had no prior knowledge. Results indicate that with expanded education and outreach efforts, more residents will learn about the program and its importance over time, and the number of residents opting to participate in the program will likely increase around the City.

2.3.2 Vision for 2025

The Department will expand the organics program beyond the initial pilot area starting in late FY 2013. Expansion beyond the established routes will target areas likely to generate the most demand for the program and is contingent upon available resources. To meet the programs goals, an estimated 75% to 80% of solid waste customers will need to subscribe to the program.

2.4 VARIABLE RATE PRICING COLLECTION

With variable rate pricing, residents choose their monthly garbage rate based on optional cart sizes. Residents are then charged each month based on the size of the garbage cart. Residents reduce the amount of waste discarded as new programs, such as the organics program, allow them to reallocate their waste. Residents with less capacity required for garbage disposal can request a smaller garbage cart and, in turn, reduce their monthly solid waste fee. Those who recycle and divert waste from the landfills are rewarded with a lower solid waste fee.

2.4.1 FY2010 – FY 2013 Progress

The variable rate pricing program is currently in the research and design phase. It's scheduled to be implemented following the complete roll-out of the Organics Recycling Program in 2017. Department staff have contacted comparative cities with variable rate pricing and developed preliminary expenditure and solid waste fee rate forecasts. In January 2013, the Department presented preliminary monthly solid waste fees based on this rate structure to Council.

Table 5: Preliminary Variable Rate Pricing by Garbage Cart Size (in FY 2012 dollars)

Garbage Cart Size	Monthly Fee*	Optional Organics Cart Monthly Fee	Monthly Fee	
			w/o Organics Cart	Monthly Fee w/Organics Cart
32-Gallons	\$ 16.00	\$ 3.00	\$ 16.00	\$ 19.00
64-Gallons	\$ 21.00	\$ 3.00	\$ 21.00	\$ 24.00
96-Gallons	\$ 26.00	\$ 3.00	\$ 26.00	\$ 29.00

*Includes base monthly fee of \$11.00

2.0 RESIDENTIAL RECYCLING INITIATIVES

2.4.2 Vision for 2025

The Department will continue to design the variable rate pricing program through 2016. The preliminary program design includes providing residents with three cart size options for weekly garbage collection: 32-gallons, 64-gallons, and 96-gallons. The monthly rate fee structure would be designed following a per-gallon rate structure. The rate differential between the smallest and largest garbage cart options would increase through 2025 to further encourage recycling and waste reduction.

3.0 MULTI-FAMILY RECYCLING INITIATIVES

3.0 Multi-Family Recycling Initiatives

A major initiative of the Plan is to ensure that multi-family properties provide recycling collection services that are as convenient, accessible, and equivalent to services provided to single-family residents. As a result, City Council approved a Multi-family Recycling Ordinance in December 2010, requiring all multi-family properties to provide their residents with recycling collection services.

3.1 FY2010 – FY 2013 Progress

The Department designed the Multi-family Recycling Program with an emphasis on tenant education and outreach, collection flexibility for spatial constraints, and effective program delivery through performance measurement. During FY 2011 and FY 2012, the Department completed the initial implementation of the program by utilizing the following strategies

- Educating property owners, managers, and employees about recycling and the Multi-family Recycling Ordinance
- Providing onsite recycling training and program design services to property owners, managers, and employees to implement an individualized recycling plan
- Inspecting properties for compliance and to follow up on any issues or complaints

The FY 2011 Adopted Budget earmarked one-time funding of \$250,000 for outreach and educational materials. In FY 2012, multi-family residents gained access to a total of 225,291 cubic yards of recycling capacity according to reports rendered by recycling haulers. The Department calculated 1.8 cubic yards of annual recycling capacity (volume) was being provided to each residential unit. In FY 2013, the Program transitioned to a focus on ordinance compliance and maintenance. The process currently uses education, an annual inspection, and mandatory recycling hauler reporting to monitor compliance.

Table 6: Multi-family Recycling Program Changes and Results, FY 2010 – FY 2013

	FY 2010 (Base)	FY 2011	FY 2012	FY 2013 (YTD)
	Program Design	Implementation	Implementation	Enforcement
Multi-family Complexes Active	0	156	1,364	1,399*

**Number of properties added through May 2013*

3.2 Vision for 2025

Multi-family staff continue to work with property owners and managers to increase education, awareness, and program participation. As the program matures, staff anticipate the recycling-to-garbage ratio will improve. Staff currently use inspection results to measure program

3.0 MULTI-FAMILY RECYCLING INITIATIVES

success by calculating the compliance rate. The Department established a goal of maintaining an annual compliance rate of 97% for the program. Staff will continue to locate new properties to ensure that all multi-family residents within the City continue to have access to recycling.

4.0 Commercial Recycling Initiatives

Following the third goal set by the Plan, FY 2013 begins the transition of focus to increasing recycling opportunities for businesses in San Antonio. Policies and programs developed to meet these goals will take into account the best fit for San Antonio with its diversity, unique values, and culture.

4.1 FY2010 – FY 2013 Progress

According to the U.S. Census Bureau's 2011 County Business Patterns Survey, San Antonio's metropolitan statistical area (MSA) includes over 40,500 businesses, employing more than 730,000 individuals. The majority of these businesses receive waste collection services from commercial waste haulers. Waste volumes for businesses are not reported to the City; however, estimates are provided in aggregate form to the Texas Commission of Environmental Quality each year.

Due to the volume and diversity of businesses in San Antonio as well as the lack of business-specific data on commercial waste, the Department has allocated funding for a commercial recycling project manager to initiate and facilitate the steps necessary for program development. Additionally, an analyst was transferred within the Department to conduct research, gather relevant data, and perform program option analysis. Staff identified three priorities to guide their initial investigations:

- Determine the value of commercial recycling for San Antonio
- Identify how commercial recycling helps San Antonio meet its goals in terms of waste reduction, recycling, and sustainability
- Conduct comparative and best practice research in order to evaluate program and policy options from the perspective of San Antonio

4.2 Vision for 2025

The comparative city research and best practices performed in FY 2013 and the recommended program options based on research findings will be presented to City Council. Input from City Council based on the presented research will influence and drive the policy and determine program direction. While policy development and program design depend upon the outcome of the FY 2013 investigations, both phases will closely involve stakeholder group meetings as well as business outreach and education to facilitate buy-in and success.

Development of the commercial recycling business plan will begin early FY 2014, based upon the completed FY 2013 research with guidance from City Council and other stakeholders.

COMMERCIAL RECYCLING INITIATIVES

Basic components are expected to include such items as public outreach and education. While the details of program implementation will be established after program development has been completed, it is anticipated that the implementation phase will not begin until FY 2016. This timeline allows for a year of policy development and a year of program development, with implementation efforts initiating once development is finalized.

PLAN TIMELINE

5.0 Plan Timeline

The timeline illustrated below list all programs and timeframe expected to complete each undertaking within each major initiative.

Program	Component	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020 to 2025
Single-family Recycling	Outreach / Marketing	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Multi-family Recycling (Private Sector)	Development / Implementation	◆	◆	◆									
	Outreach / Marketing			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Plastic Bags	Reduction & Recycling Pilot		◆	◆	◆								
Brush Recycling	Re-vamp of Brush & Bulky Collection		◆										
	Add 2nd Bulky Collection			◆									
	Add Nelson Brush Recycling Center			◆									
	Outreach / Marketing				◆	◆	◆	◆	◆	◆	◆	◆	◆
Drop-off Centers	Site Selection			◆	◆								
	Design / Construct / Open				◆	◆							
	Outreach / Marketing				◆	◆	◆	◆	◆	◆	◆	◆	◆
Organics Recycling	Development / Pilot		◆	◆	◆								
	Re-vamp for Subscription Based				◆								
	Implementation				◆	◆	◆						
	Outreach / Marketing				◆	◆	◆	◆	◆	◆	◆	◆	◆
Commercial Recycling (Private Sector)	Research & Development				◆	◆							
	Implementation						◆	◆	◆	◆			
	Outreach / Marketing								◆	◆	◆	◆	◆
Variable Rate Cart Pricing	Research & Development					◆	◆						
	Implementation								◆	◆			
	Outreach / Marketing								◆	◆	◆	◆	◆



6.0 IMPLEMENTATION AND MONITORING

6.0 Implementation and Monitoring

Equally critical to identifying the strategic priorities of the Department are the processes of implementation and monitoring. These processes will help secure that the Department not deviate from set goals or possibly need to reflect upon new data to better shape the details of the plan to meet goals in an effective and efficient manner. To maintain focus and adherence to the strategic priorities, the Plan will be assessed in terms of its set goals, whether they have been achieved or not. If objectives are achieved, progress will be documented; if objectives fail to be fulfilled, necessary adjustments and resources required to accommodate changes will be considered.

Changes and proposed programs will be implemented following a detail-specific business plan. Within each business plan will be additional public outreach initiatives, cost estimates, and timelines. The Department will present on an annual basis to the Infrastructure and Growth Committee. Staff will also publish an update to the Plan every three years. The Department recognizes that updates are contingent on various external factors and changes that may require Department staff to revisit the strategic plan at a time earlier than that proposed. If such a change is necessary, the Department will make certain to understand as well as report upon why deviation from the Plan is required and provide a comprehensive rationale on changes.