

**City of Fort Worth  
 Comprehensive Solid Waste Management Plan  
 DRAFT Public Involvement Plan  
 Updated: October 6, 2014**

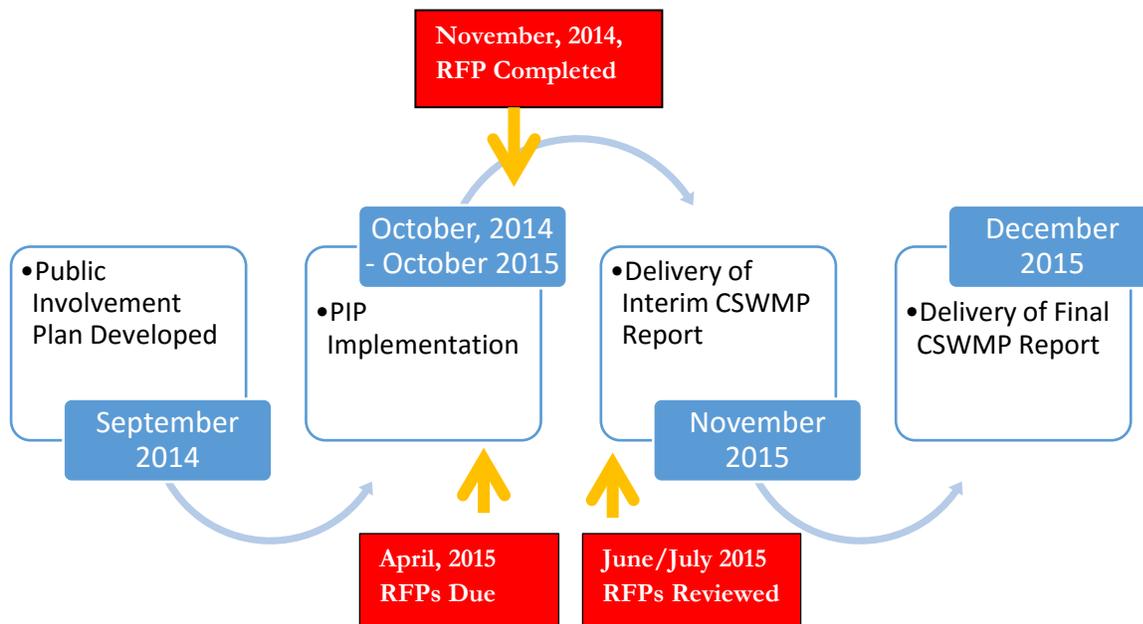
**GOAL**

A process for enabling effective and meaningful public involvement to ensure an understanding among a broad swath of stakeholders, their issues, attitudes, and expectations, so that the SWMP may accurately reflect and incorporate community values and ideas.

**CITY'S CORE BELIEFS/KEY MESSAGES**

Landfilling our nation's valuable resources after use is not a sustainable method of solid waste management. Fort Worth must continue to implement new and innovative programs to increase landfill diversion and resource recovery.

**SCHEDULE**



**KEY AUDIENCES/CRITICAL STAKEHOLDERS**

There are a number of diverse groups of audiences, or stakeholders, we will want to engage with throughout this process. Each group has, likely, different interests, concerns and ideas when it comes to the long-term, sustainable management of solid waste and the costs (both economic and noneconomic)

Gershman, Brickner & Bratton, Inc.

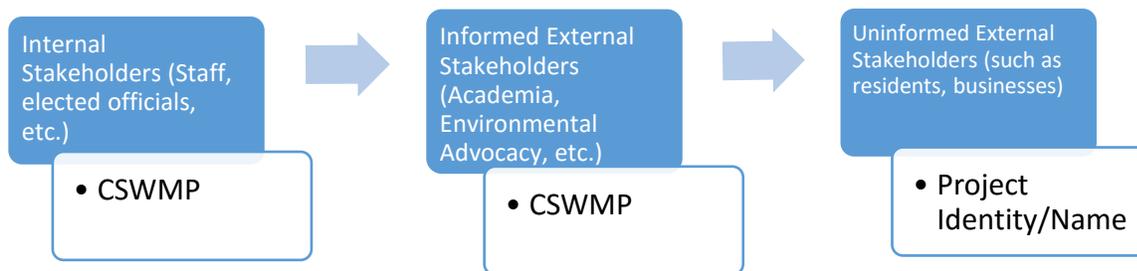
associated with it. Here is a list of the many groups of stakeholders we will need to engage throughout the process, in priority order:

- The City’s Elected Officials and Decision Makers – Brandon Bennett
- City Staff, as owners and ambassadors of the Plan
- Local Media, to ensure they have the facts they need to help tell the story
- Private waste, recycling companies and haulers – Kim, Val, Debbie
- 1. Large Commercial Customers – Brandon Bennett
  - Lockheed Martin, Bell Helicopter
- 1. Commercial Property Managers – Brandon Bennett
  - Tarrant County Apartment Association, apartment management associations, shopping center managers
- 2. Small businesses that generate reusable commodities
- 3. Chambers of Commerce (economic development perspective and businesses)
- Residents
  - Single-Family and Townhome Residents
  - Apartment and Condominium Residents
- 4. Other Governmental Entities
  - FWISD, NCTCOG, surrounding small communities (inter local agreements with Environmental Collection Center) Brandon and Kim
- 5. Environmental Advocacy Groups
- 6. Members of academia, local university - Brandon

**NAME/IDENTITY FOR PROJECT**

Formal name: Comprehensive Solid Waste Management Plan (2015-2035)

Project name: Re-thinking Waste – A Greener Fort Worth



**PLAN STRATEGIC ELEMENTS**

Fort Worth’s Public Involvement Plan for its CSWMP will follow Industry Best Practice and include Planning, Research, Implementation and Evaluation. This document constitutes the Planning for this project, and lays out a roadmap of the steps we’re to take to ensure a successful and cost-effective effort is executed. During the Research phase, Fort Worth will gauge current knowledge, attitudes, questions and concerns among key audiences about solid waste management for the City. The information obtained through this effort will inform and shape some of the elements in its CSWMP, as well as how it communicates with stakeholders about it through the proposed Resource Recovery Services Request for Proposals (RFP) process, CWSMP development, and beyond.

**Research**

Research, to be conducted during the fall of 2014 and start of winter 2015, will be completed in a variety of ways to elicit the best, most quality information from each of the diverse groups of stakeholders. The research strategies we recommend for each audience are as follows:

RESEARCH METHOD	AUDIENCE	RATIONALE
90-Minute Workshops (formerly referred to as focus groups), separate for each group. (6 meetings)	<ul style="list-style-type: none"> <li>• Commercial Customers</li> <li>• Commercial Property Managers</li> <li>• Small Businesses</li> <li>• Chambers of Commerce</li> <li>• Government Entities</li> <li>• Environmental Advocacy Groups</li> <li>• Academia</li> </ul>	Provides a facilitated discussion environment, among homogenous groups, that enables deep exploration into concerns and issues early on.
Facebook Polling	General Public	Provides an easy way to, in real-time, grab a snapshot of knowledge/attitudes among a very geographically targeted group of invested public (Keep Fort Worth Beautiful Facebook) and non-invested public (City Facebook).

RESEARCH METHOD	AUDIENCE	RATIONALE
Email Survey (Constant Contact)	Residents	Provides a way to obtain some less anecdotal, more quantitative feedback among a <i>select and not random</i> group of residents.
Intercept Interviews	General Public	Provides a way to obtain some less anecdotal, more quantitative feedback among a <i>random</i> group of residents.
VIP, One-on-One Interviews (12 with City leaders/elected officials, 8 with Haulers)	<ul style="list-style-type: none"> <li>• City Leaders</li> <li>• Elected Officials</li> <li>• Solid Waste and Recycling Companies</li> </ul>	Provides a way to obtain less anecdotal, more quantitative, feedback from key decision makers in a format that is less likely to influence their comments and opinions.

### Plan Implementation

Throughout this phase, to be conducted from October, 2014 – October, 2015, the point of our efforts will be to sharing intermediary information that we have and continue to obtain feedback from the general population, our external audiences. A mix of strategies and tactics will be employed to reach Fort Worth’s diverse stakeholders as follows:

ACTIVITY	AUDIENCE TARGET	RATIONALE	TIMING
Open House	General Public	To introduce and kickoff the project; to inform the Fort Worth Community what’s happening and lay out the plan.	November/December 2014
Fort Worth Website	General Public	Serves as “Home base” for all information about the project, fact sheets, glossary of terms, shareable information.	<ul style="list-style-type: none"> <li>• Review and Initial Updates, October, 2014</li> <li>• Continued updates through October 2015</li> </ul>
Fort Worth Facebook Posts and Advertising	General Public	To ensure the conversation stays “top of mind”; to monitor conversation and address myths/rumors quickly.	Throughout the year
Fact Sheet (s)	General Public	To explain the need for the project, impacts of status quo; To explain technologies and their	First one, October/Nov. 2014

ACTIVITY	AUDIENCE TARGET	RATIONALE	TIMING
		influence/impact on resident's lives	Second one, August, September, 2015
Media Relations (sending releases/pitching local media)	Media and General Public	To ensure the conversation stays "top of mind" and to ensure the public is well informed of their opportunity to engage	Throughout the year
Advertising	General Public	To ensure the conversation stays "top of mind" and to ensure the public is well informed of their opportunity to engage	Throughout the year and, as budget permits.

**Plan Implementation - Continued**

ACTIVITY	TARGET AUDIENCES	RATIONAL	TIMING
Workshop Series (6 total, approx. 90 minutes in length)	<ul style="list-style-type: none"> <li>• Public Officials (Sustainability Team, Water, PACs, Purchasing and Policy Aids)</li> <li>• Business Community</li> <li>• Property/Commercial Management</li> <li>• Other Govt Entities/Planners (NCTCOG)</li> <li>• Academia</li> <li>• Advocacy Groups</li> </ul>	To share information known/learned to date on technologies proposed and to ask for additional feedback, concerns and ideas for inclusion in the CSWMP.	Following review of proposals, estimated to be Aug/Sept. 2015
Open House	General Public		September 2015
PowerPoint Presentation	Business, advocacy and other groups, as requested	To share latest information, explain proposed technologies and obtain latest ideas, input.	September 2015

**Evaluation**

After approximately a year’s time, throughout which the City, with assistance from its consultants, will have expended considerably time and resources to engage a diverse group of stakeholders in the process of the development of the CWSMP, it will have obtained a tremendous understanding of the concerns and ideas its community members have about the long-term, sustainable management of the City’s waste.

At this point, consultants will be reviewing all information that was gathered and incorporating it, as appropriate, into the Interim CSWMP to be delivered in November 2015. Then, based on City staff feedback, a final report that includes all findings and recommendations obtained from the community, will be submitted to the City staff, and presented to City Council, as appropriate, in December of 2015.

## PUBLIC INVOLVEMENT PLAN DELIVERABLES

ORIGINAL CONTRACT DELIVERABLE	SUGGESTED SUBSTITUTIONS	FINANCIAL IMPACT CHANGE
<ul style="list-style-type: none"> <li>Draft and Final Public Involvement Plan in Word format</li> </ul>		<ul style="list-style-type: none"> <li>None</li> </ul>
<ul style="list-style-type: none"> <li>A statistically significant public survey to garner stakeholder attitudes, knowledge and behaviors with respect to solid waste and recycling services, operations, and rates.</li> </ul>	<ul style="list-style-type: none"> <li>Series of 3 Workshops, with facilitation guide</li> <li>Facebook Polling</li> <li>Constant Contact Surveys</li> <li>Intercept Interviews</li> <li>VIP One-on-Ones</li> </ul>	<ul style="list-style-type: none"> <li>Estimated at (\$5000)</li> </ul>
<ul style="list-style-type: none"> <li>A web-ready fact sheet explaining the process and ultimate goals for the City's website.</li> </ul>	<ul style="list-style-type: none"> <li>In addition, other materials will be needed to promote the process and opportunities to participate, such as:               <ul style="list-style-type: none"> <li>Web Page Update</li> <li>A Second Fact Sheet</li> <li>Newspaper ads</li> <li>Facebook ads</li> <li>Transit Ads</li> <li>Media Relations</li> <li>Social media strategy</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Estimated at \$5000 (not including ad buys)</li> </ul>
<ul style="list-style-type: none"> <li>A series of six (6) Workshops to bring a very diverse group of key stakeholders together and arrive at joint ownership of ideas, recommendations and solutions. Stakeholders will include: public officials, officials of other governmental entities (such as school districts), academic members, local and regional planners, policy makers, industry representatives, business representatives, interested general public.</li> </ul>		<ul style="list-style-type: none"> <li>No Change</li> </ul>
<ul style="list-style-type: none"> <li>Two (2) Open Houses will be offered to the general public to convey information and gather input, once at the start and once toward the end of the PIP.</li> </ul>		<ul style="list-style-type: none"> <li>No Change</li> </ul>
<ul style="list-style-type: none"> <li>A minimum of eight (8) one-on-one meetings with solid waste and recycling company representatives to determine their interest and key issues.</li> </ul>		<ul style="list-style-type: none"> <li>No Change</li> </ul>
<ul style="list-style-type: none"> <li>A minimum of three (3) public presentations before City Council during the development of the Plan, to include a presentation of the proposed public involvement process, an interim draft CSWMP report and a final draft CSWMP.</li> </ul>		<ul style="list-style-type: none"> <li>No Change</li> </ul>
<ul style="list-style-type: none"> <li>At least one (1) public hearing prior to the adoption of the CSWMP</li> </ul>		<ul style="list-style-type: none"> <li>No Change</li> </ul>

# Online Survey Results March 9, 2015

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*This survey was administered online using the SurveyMonkey service. It was promoted to “friends” of the City of Fort Worth and other individuals who had signed up their email addresses to receive information from the City.*

## Questions and Responses

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**1. In your opinion, what are the most important environmental issues facing Fort Worth? (Respondents were asked to rank their #1, #2, and #3 priorities)**

- The issue most often identified as a #1 priority was “clean air/reducing auto emissions” (19.5% ranked it as their #1 priority)

*The issues next most frequently ranked #1 were Litter followed by water conservation*

- The issue most often identified as a #2 priority was Recycling (25% ranked it as a #2 priority)

*The issues next most frequently ranked #2 were Litter followed by water quality*

- The issue most often identified as a #3 priority was also Recycling (25% ranked it as a #3 priority)

*The issues next most frequently ranked #3 were Litter and clean air/emissions*

There were 511 total responses to this question

**2. On average, each household in Fort Worth generates about a ton and a half of garbage and recycling each year that the City collects and manages. How important is it to our City’s future to manage this material in the most environmentally responsible manner? (Scale of 1 to 5 with 5 being critical and 1 being not at all important)**

1. Not Important – 6%
2. A little Important – 2%
3. Important – 3%
4. Very Important – 18%
5. Critical – 71%

**3. If you were in charge of the City’s recycling program which of the following ideas do you think should be done to increase recycling? Please select your top 3 –**

1. Place more recycling bins in public areas like parks – 66%

2. Promote more recycling at businesses – 76%
3. Encourage more recycling by making the larger garbage carts more expensive to use – 21%
4. Collecting and composting food waste – 35%
5. Continue monthly bulk collection but alternate each month between big junk and large brush collections. Large brush can then be mulched and kept from landfill disposal – 35%
6. Add more material to what can be collected at the curb –53%

**4. If the City decided to offer residential curbside collection of food waste in a separate container so that food scraps do not end up in the landfill, would you be willing to participate?**

Yes – 62%          No – 38%

**5. There several emerging trends in solid waste management currently. These include –**

1. Waste-to-Energy – Is an operation where materials not collected as recycling are incinerated as a fuel to generate electricity at a specially designed facility. Energy generated is sold back into the power grid. 96% Favorable
2. Zero Waste – Is a concept where organizations and municipalities commit to finding ways to divert the majority of waste from disposal in a landfill. It includes expanding traditional collection methods and maximizing recycling, diversion of organics such as yard and food waste for composting, and finding uses for the remaining materials preventing disposal. 92% Favorable
3. One Cart collection - Where all garbage and recycling is placed in one cart at households, collected by the city then taken to a mixed waste processing facility where as much material is pulled out as possible for recycling, composting or handled through other processes to minimize disposal in a landfill. 96% Favorable

**6. The ideas we’ve talked about (such as construction of a waste-to-energy facility, construction of a recycling facility that can sort all-in-one trash and recycling, or even adopting the concept of Zero Waste) might result in an increase to garbage collection fees charged to City residents. The current price ranges from \$12.50 to \$22.75 per cart per month.**

How much of an increase do you think you could tolerate if it meant one or more of the ideas above could be implemented for a real, measurable improvement to our environment?

1. Less than one dollar – 21%
2. \$1-5 – 58%
3. \$6-10 – 21%

**7. What are your top 3 sources for local news, including apps/websites? List top 3 in order.**

1. Fort Worth Star Telegram (18%)  
Local TV and Local Radio were 2nd and 3rd
2. Fort Worth Star Telegram (26%) (named Star-Telegram or “local paper”)  
Local TV rated 2nd; and News Website/Facebook tied for 3rd
3. Local TV (12%)  
Local talk radio and “Other\*” were 2nd and 3rd

A total of 533 answered this question. "Other" included City emails, water bill, city newsletters, brochure mailings, etc.

# Intercept Interview Results March 9, 2015

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*This survey was administered to people at a busy shopping center who were screened only to verify that they were Fort Worth residents.*

## Questions and Responses

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### 1. In your opinion, what are the most important *environmental* issues facing Fort Worth?

1. Litter/pollution (36%)  
*Trash/hauling/recycling management and Air pollution were 2<sup>nd</sup> and 3<sup>rd</sup>*
2. Litter/pollution (17%)  
*Trash/hauling/recycling management was 2<sup>nd</sup>*
3. Trash/hauling/recycling management (7%)

There were 88 respondents to this question

### 2. On average, each household in Fort Worth generates about a ton and a half of garbage and recycling each year that the City collects and manages. How important is it to our City's future to manage this material in the most environmentally responsible manner? (Scale of 1 to 5 with 5 being critical and 1 being not at all important)

- 1 Not Important – 1%
- 2 A little Important – 1%
- 3 Important – 5%
- 4 Very Important – 24%
- 5 Critical – 71%

### 3. If you were in charge of the City's recycling program which of the following ideas do you think should be done to increase recycling? Please select your top 3 –

- a. Place more recycling bins in public areas like parks – 82%
- b. Promote more recycling at businesses – 72%
- c. Continue monthly bulk collection but alternate each month between big junk and large brush collections. Large brush can then be mulched and kept from landfill disposal – 45%
- d. Add more material to what can be collected at the curb – 32%  
*Is there something that you have in mind? No one said anything.*
- e. Encourage more recycling by making the larger garbage carts more expensive to use – 29%
- f. Collecting and composting food waste – 26%

### 4. If the City decided to offer residential curbside collection of food waste in a separate container so that food scraps do not end up in the landfill, would you be willing to participate?

Yes – 66%      No – 34%

**If no: Why not?**

- There's no market for it
- Attracts animals
- Odors
- Too expensive
- I don't have time/too much trouble
- I don't have room

**If yes: What if there were a cost involved?** 60% (40 out of 67) said okay

**5. There several emerging trends in solid waste management currently. These include –**

- Waste-to-Energy** – Is an operation where materials not collected as recycling are incinerated as a fuel to generate electricity at a specially designed facility. Energy generated is sold back into the power grid. 38% Favorable
- Zero Waste** – Is a concept where organizations and municipalities commit to finding ways to divert the majority of waste from disposal in a landfill. It includes expanding traditional collection methods and maximizing recycling, diversion of organics such as yard and food waste for composting, and finding uses for the remaining materials preventing disposal. 8% Favorable
- One Cart collection** - Where all garbage and recycling is placed in one cart at households, collected by the city then taken to a mixed waste processing facility where as much material is pulled out as possible for recycling, composting or handled through other processes to minimize disposal in a landfill. 18% Favorable

**How do you feel about Fort Worth look into these for its solid waste management?**

- 41 responded favorably to this idea in the general sense – and this may overlap a preference for one of the items above.
- 1 responded generally unfavorable to these ideas, citing expense.

**6. The ideas we've talked about (such as construction of a waste-to-energy facility, construction of a recycling facility that can sort all-in-one trash and recycling, or even adopting the concept of Zero Waste) might result in an increase to garbage collection fees charged to City residents. The current price ranges from \$12.50 to \$22.75 per cart per month.**

**How much of an increase do you think you could tolerate if it meant one or more of the ideas above could be implemented for a real, measurable improvement to our environment?**

- Less than one dollar – 20%
- \$1-5 – 64%
- \$6-10 – 12%
- How much would be reasonable? 5% indicated no increase would be tolerable.

**7. What are your top 3 sources for local news, including apps/websites? List top 3 in order.**

1. Internet (general) (21%)  
*TV and Fox 4, specifically, were 2nd and 3rd*

2. Internet (general) (13%)  
*Radio was 2nd*
3. Fort Worth Star Telegram (11%)

**Among Specific Internet Responses**

- Facebook – 11
- Twitter – 8
- Social media (general) – 5
- Google – 2
- School website – 1
- Fort Worth City website – 1
- The Salon – 1
- Reddit – 1
- Reuters – 1
- Tumblr – 1
- Yahoo – 1

**Among Specific TV Responses**

- Fox 4 – 27
- NBC – 20
- CNN – 19
- CBS Channel 11 and 21 – 9
- ABC Channel 8 (WFAA) – 6

**BUSINESS (Focus Groups)**      Restaurants and Commercial Tenants

Time Frame: 90 minutes

Group Size: 9-10

Three groups: Commercial Tenants, Restaurants, Commercial Property Managers

**Introduction:**

Good Evening (Afternoon). My name is Cynthia White with Open Channels Group. I have been asked to assist the City in the development of a comprehensive solid waste plan, so that Fort Worth can plan a sustainable future and do better things with waste than dump it in a landfill.

Businesses in Fort Worth have a huge stake in the City's success, as they generate two thirds of its waste. So we have invited you here today (tonight) to help us understand better what you know as a group, what you don't know (so we can message appropriately) and how you feel about some of the possible ways Fort Worth can do better things with its waste.

With me is (introduce your note taker) who will be recording this session (just audio) and also taking notes so we can compile a report for the City, which will inform the decisions they make on this journey.

A few ground rules here tonight (today) are:

- Please wait until I recognize you to speak, so we can be sure everyone is heard.
- When it's your turn, please speak clearly and project so everyone can hear.
- It's important there are no side conversations. We want to capture all your thoughts and ideas and it's hard to do when there are more than one conversations happening.

Just so you are aware we are conducting three groups like this. Yours is the Commercial Tenants Group. We are also going to meet with a Restaurant Group and Commercial Property Owners. We tried to group you by similar challenges.

Are there any questions before we begin?

## **Section 1: 30 minutes GENERAL KNOWLEDGE**

So, first I am going to ask you about general knowledge about City solid waste and recycling.

- What, if anything, do you know about recycling requirements and goals in Fort Worth?
- Do you recycle at your business? Why or why not?
- What are the top 2 or 3 items you generate that can be recycled?
- Are you recycling these items?
- Who oversees recycling and trash collection at your business? Are employees involved? How so?
- If it's not you who oversees, how often is recycling/trash info communicated to you and by whom?
- How effective is that communication?

## **Section 2: 30 minutes ATTITUDES**

This next section is about your attitudes and feelings about recycling and trash.

- Is managing proper disposal of your trash important to you? Why or why not?
- Is recycling important? Why or why not?
- How do you feel about composting, separating food out of your trash for separate disposal?
- Is recycling at your business easy for employees? Why or Why not?
- What's the hardest thing about recycling at your business?
- Do you think there is (or how is there) a connection between waste management and the City's economy?
- Is there a connection between how you manage waste at your workplace/property and your (a) bottom line (b) reputation (c) employee/tenant satisfaction/morale? Explain.
- Would a one-bin system, collecting all trash and recyclables in one container to be separated and processed later at a facility that can do it for you, be a good idea? Why or why not?
- What should cost more, recycling (because it costs more to process, though a revenue is generated back) or trash disposal (because it harms the environment)?

- What would help your business/workplace/property recycle more? A tool or assistance from the City? Signage? Financial carrot or stick?

**Section 3: 30 minutes Behaviors with respect to recycling and waste disposal**

- Are you able to reuse anything before throwing away? What?
- How do you handle electronics you no longer want or need?
- What do you do with bulky items like furniture or appliances?
- What's the best way the City can interact and engage you and business like yours in the kinds of behaviors that benefit the environment?
- What's the best way for the City to communicate with you?
- Is the person who handles your invoices the same as the person who makes decisions about trash and recycling? If not, do they talk often?

Are there any comments you would like to make about business recycling or trash management that we haven't already covered?

## **BUSINESS (Focus Groups) Commercial Property Owners**

Time Frame: 90 minutes

Group Size: 9-10

Three groups: Commercial Tenants, Restaurants, Commercial Property Managers

### **Introduction:**

Good Evening (Afternoon). My name is Cynthia White with Open Channels Group. I have been asked to assist the City in the development of a comprehensive solid waste plan, so that Fort Worth can plan a sustainable future and do better things with waste than dump it in a landfill.

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With me is (introduce your note taker) who will be recording this session (just audio) and also taking notes so we can compile a report for the City, which will inform the decisions they make on this journey.

A few ground rules here tonight (today) are:

- Please wait until I recognize you to speak, so we can be sure everyone is heard.
- When it's your turn, please speak clearly and project so everyone can hear.
- It's important there are no side conversations. We want to capture all your thoughts and ideas and it's hard to do when there are more than one conversations happening.

Just so you are aware we are conducting three groups like this. Yours is the Commercial Property Owners group. We are also going to meet with a Restaurant Group and Commercial Tenants Group. We tried to group you by similar challenges.

Are there any questions before we begin?

## **Section 1: 30 minutes GENERAL KNOWLEDGE**

So, first I am going to ask you about general knowledge about City solid waste and recycling.

- What, if anything, do you know about recycling requirements and goals in Fort Worth?
- Do you offer recycling to your tenants? Why or why not?
- What are the top 2 or 3 items you believe your tenants generate that can be recycled?
- Are these materials being collected for recycling?
- Who oversees recycling and trash collection for your tenants? Are your own employees involved? How so?
- If it's not you who oversees, how often is recycling/trash collection info communicated to you and by whom?
- How effective is that communication?

## **Section 2: 30 minutes ATTITUDES**

This next section is about your attitudes and feelings about recycling and trash.

- Is managing proper disposal of your trash at your properties important to you? Why or why not?
- Is recycling important? Why or why not?
- How do you feel about composting, which is the separating out of food from trash for beneficial use elsewhere?
- Do you foresee any issues with composting?
- Is offering recycling collection at your properties easy? Why or Why not?
- What's the hardest thing about offering recycling at your business?
- Do you think there is (or how is there) a connection between waste management and the City's economy?
- Is there a connection between how you manage waste at your properties and your (a) bottom line (b) reputation (c) employee/tenant satisfaction/morale? Explain.
- Would a one-bin system, collecting all trash and recyclables in one container to be separated and processed later at a facility that can do it for you, be a good idea? Why or why not?

- What should cost more, recycling (because it costs more to process – though you get revenue from the material) or trash disposal (because it harms the environment)?
- What do you think would help your tenants recycle more? A tool or assistance from the City? Signage? Financial carrot or stick?
- What kind of role would you be willing to play in making that happen?

**Section 3: 30 minutes Behaviors with respect to recycling and waste disposal**

- Is there anything you collect from tenants for reuse rather than haul away for trash or recycling?
- How do you/haulers handle electronics left behind?
- What do you do with bulky items like furniture or appliances that are left behind?
- What's the best way the City can interact and engage you and business like yours in the kinds of behaviors that benefit the environment?
- What's the best way for the City to communicate with you?
- Is the person who handles your invoices/mail from City the same as the person who makes decisions about trash and recycling? If not, do they talk often?

Are there any comments you would like to make about business recycling or trash management that we haven't already covered?

**CITY OF FORT WORTH  
VIP INTERVIEW  
QUESTIONS**

As you know, Fort Worth is growing and this poses a considerable challenge when it comes to managing the city's solid waste. We are developing a new 20-year comprehensive solid waste management plan to ensure that the material handling and resource recovery is done in a manageable, and cost efficient manner. The City is therefore engaging residents, businesses, institutions, and some of its influential leaders to share their insight into how we can best meet these challenges, and this interview is part of that process. So, let's begin.

1. The City currently controls one third of the total MSW – its residential component – and influences somewhat the management of the other two thirds – the so called ICI waste. It is the intent of the Comprehensive Solid Waste Management Plan for the City to participate more directly in the management of the ICI, for instance, through ordinances. What are your thoughts?
2. The City's landfill has a projected life of 24-46 years, depending on projected volumes of municipal solid waste and compaction rates. One of the most logical next steps to meaningfully decrease what's disposed in the landfill, and consequently extend its life, would be to capture the organic waste (mainly food) for composting (which some municipalities nationwide are successfully doing). What are your thoughts and concerns on the City collecting residential food waste for composting?
3. What are your thoughts/concerns on encouraging or requiring businesses to collect and recycle their organic waste (food waste and landscape waste)?
4. What are your thoughts/concerns on composting all (or part of) the Wastewater Treatment Plant's biosolids, similar to the methods used by the City of Denton?
5. Presently, City residents can place up to 10 cubic yards of bulk waste at the curb for collection each month. But, often bulk items are placed in the same pile with large brush, rendering the brush contaminated for mulching/composting and resulting in all of the material being landfilled. What are your thoughts on requiring separation of residential bulk from brush? Depending on how it is done, such a separation may either decrease or increase the level of service to residents; no matter what, it will increase the volume of material diverted (perhaps by 8-10%) from the landfill. What are your thoughts?

6. There are several emerging trends in the solid waste management currently.

Some of these are –

- a. Waste-to-Energy – where materials not collected as recycling are incinerated as a fuel to generate electricity at a specially designed facility. Energy generated is sold back into the power grid.
- b. Zero Waste – where organizations and municipalities commit to diverting the vast majority or all of waste from disposal in a landfill. It requires expanding traditional collection methods and maximizing recycling, diversion of organics such as yard and food waste for composting, and finding uses for the remaining materials preventing disposal. The City of Austin is currently working on the implementation of this concept.
- c. One Cart collection – where all residential garbage and recycling is placed in one cart at households, collected by the city and then taken to a mixed waste processing facility where as much material is pulled out as possible for recycling, composting or handled through other processes to minimize disposal in a landfill. This is a concept currently under study by the City of Houston.

What are your thoughts about the City pursuing some of the emerging recovery technologies just discussed, which will be costlier to the City, but may prove to be beneficial to Fort Worth in the future? With the goal of increased landfill diversion and capacity of future disposal needs, how open would you/council be to fee structure changes? For instance Fort Worth has a \$5 differential between our three garbage cart sizes, but Austin has more than a \$20 difference from smallest garbage cart to largest.

7. Managed or franchised collection systems may result in lower overall costs to consumers. In addition, recycling rates are typically higher in organized systems. How do you view the possible franchising of Fort Worth's current open commercial hauler market?
8. What are your thoughts on the development of a public-private eco-business park in Fort Worth capable of absorbing the extra recycled material generated locally, possibly creating new recycling markets, while generating new revenue streams and creating local jobs?
9. Is there any other idea, concern or question related to solid waste management you want to express that we haven't already discussed?

# RE-THINKING WASTE A GREENER FORT WORTH

# CREATING SUSTAINABLE PRACTICES FOR A HEALTHY ENVIRONMENT

Fort Worth is a vibrant community where residents participate in a number of green initiatives. The latest initiative, 'Re-thinking Waste – A Greener Fort Worth,' is one of the largest green initiatives yet.

- We are developing a comprehensive solid waste management plan that will guide the city 20 years into the future.
- We hope to capture the best and most appropriate innovations and technology for our waste management.
- Please join us in an interactive community-wide effort to and make a greener Fort Worth.

## Then and Now

A good plan considers the past and the present to determine a greener future.

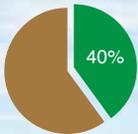


Our business and industry generates two-thirds of our waste.

## Current Diversion Rate



## Goal Diversion Rate



We need to reach beyond 40% as we plan for the next 20 years.



## Increase Diversions

The City of Fort Worth is committed to responsible management of all solid waste. One of our goals is to increase the amount of solid waste that we keep out of the landfill. We've made progress, but more can be done. Help us plan a future that considers growth, innovation and technology so we can reach our goal.

## Your Voice is Important

Responsible management of solid waste by all of us will help protect quality of life and create a healthy environment all residents can enjoy now and into the future. We want to know what you think. Call email, or connect with us online using the information below.

For more information:  
Call 817.392.1234  
[www.FortWorthTexas.gov/SolidWaste](http://www.FortWorthTexas.gov/SolidWaste)



CityofFortWorth





The City of Fort Worth is undertaking one of the largest green initiatives yet with the development of a comprehensive solid waste management plan.

Watch an update from Solid Waste Services Assistant Director Kim Mote.

## Public Outreach

The city has conducted public outreach to collect information about Fort Worth residents interest in solid waste and other environmental issues.

[View the summary](#)

The plan will serve as a blueprint for how waste is handled and managed in Cowtown for the next 20 years. The previous plan – created in 1995 – addressed a number of issues, including ensuring adequate landfill space. This time around, the city is looking to involve all residents of Fort Worth to answer tougher questions:

- What is waste, and what part of waste is a resource?
- Which resources can we recapture for value, and what's the best way to do that?
- What behaviors are Fort Worth residents and businesses willing to adopt to make a greener city?

Watch this page and City News for opportunities to give your input on the plan.

## Just the facts

### Fort Worth is growing

- It's grown by 50 percent over the last 20 years.
- Residential waste only comprises about one third of all of the waste generated within the city.
- Industrial, commercial and institutional waste comprises the remaining two-thirds.

## Making progress

*The city's goal is to divert **40 percent** of residential waste away from the landfill through recycling and other programs.*

- Prior to 2003, the city diverted **7 percent** of waste.
- In 2013, the city diverted **24 percent**. See what kinds of [waste are making their way to the landfill](#).

## Goals

- Evaluate and address all waste produced within the City not just the residential waste.
- Consider emerging technologies and sustainable practices in managing our solid waste as both practices and technologies have changed significantly since 1995.
- Determine if the city has the best available technology in place.
- Move beyond traditional waste management programs and find the best material management solutions for the city's future.

## Updates

---

- [Comprehensive Solid Waste Management Plan on track for City Council presentation this summer](#) (May 20, 2016)

*Stay in the loop on the city's Comprehensive Solid Waste Plan and learn how to give your feedback.*

Subscribe

## Presentations

---

- [Update on Comprehensive Solid Waste Plan](#) (Feb. 5, 2015)
- [Comprehensive Solid Waste Plan kickoff presentation](#) (Jan. 8, 2013).

## Resources

---

- [Re-thinking Waste Fact Sheet](#) 



**Questions?**

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**SOLID WASTE  
MANAGEMENT  
CONSULTANTS**

**City of Fort Worth Comprehensive Solid Waste Management Plan  
Public Outreach Summary  
October 2015**

As part of the update to the City’s Comprehensive Solid Waste Management Plan (CSWMP) process, the City has conducted extensive public outreach for the purpose of garnering opinions and insight regarding the interest of residents of Fort Worth in solid waste and other environmental issues.

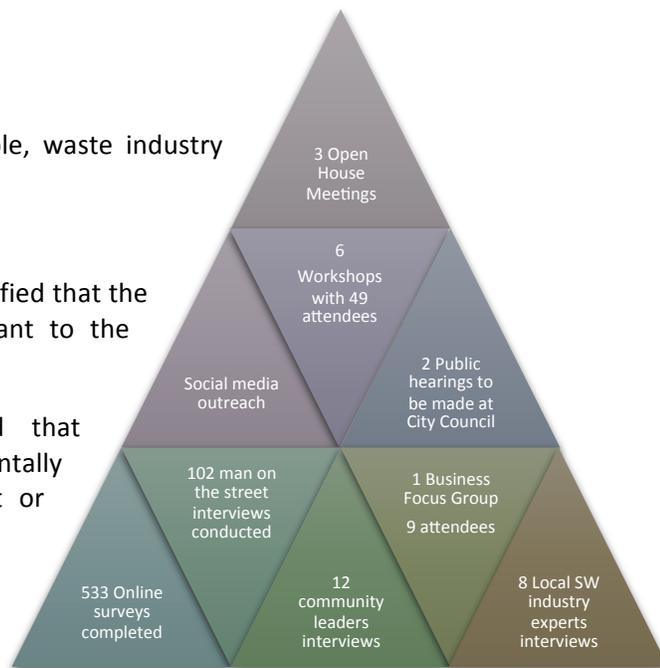
The City has used several different avenues and technologies to reach out to residents:

- News articles, advertisements, and social media;
- Online Survey of residents;
- “Man on the Street interviews;
- Public open house meetings;
- Business Focus Groups;
- Subject specific workshops; and,
- In-Depth Interviews with business people, waste industry experts, and community leaders.

**Priorities and Values**

In general, the public outreach process identified that the following topics are of interest or important to the residents of Fort Worth that we talked to:

- Nearly all of the residents agreed that “managing waste in the most environmentally responsible manner” is very important or critical to the City’s future.
- Most of the businesses felt that there is a connection between waste management and the City’s economy because it influences quality of life.

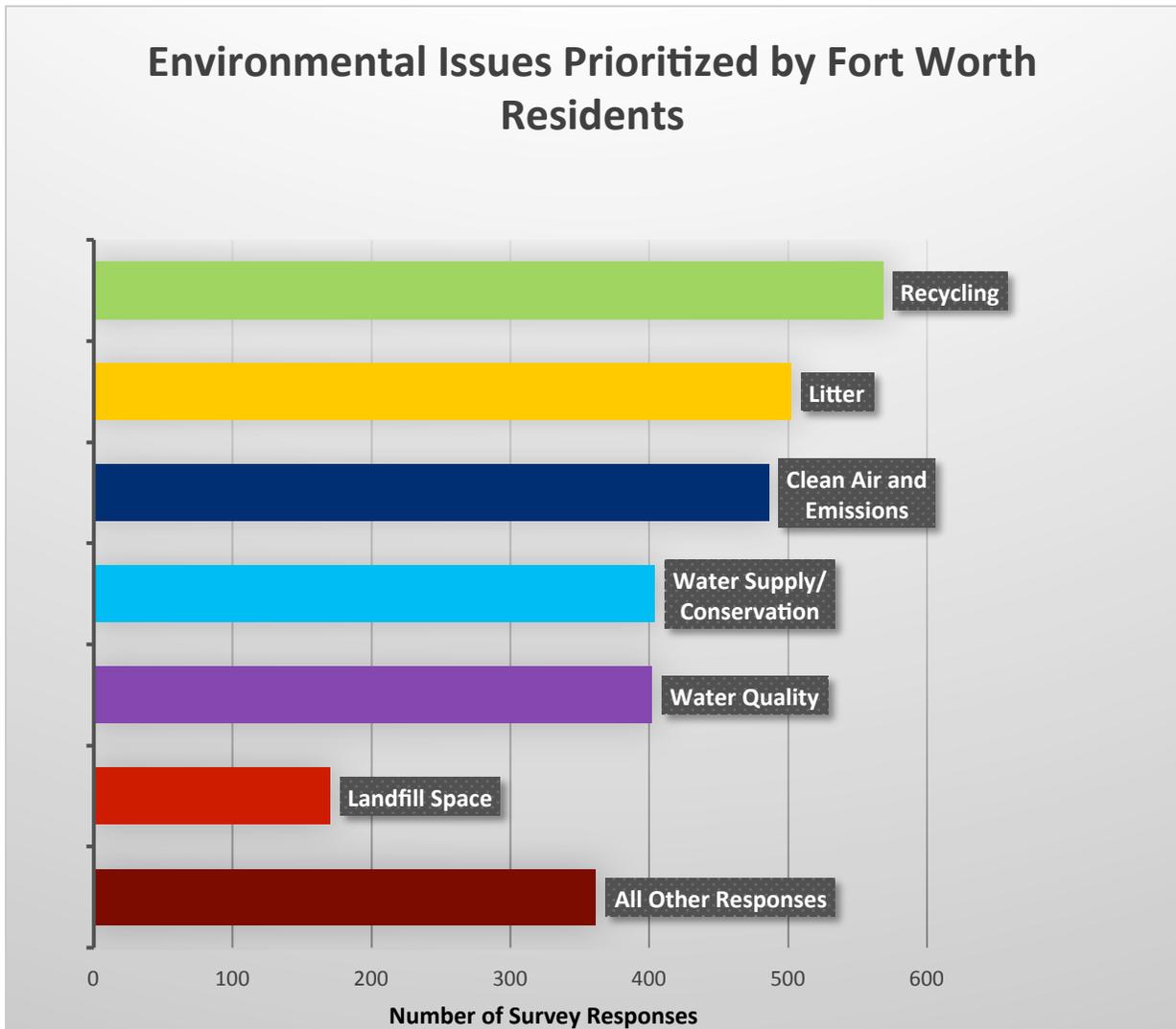


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- By almost 2-to-1, residents prioritized public space recycling bins and increased recycling efforts at businesses as tools to increase recycling overall. Half or less of residents prioritized changes to the curbside program that would encourage waste reduction, and lesser priority was given to food waste separation and further manipulating collection prices to discourage disposal.
- Recycling was the most-frequently prioritized environmental issue by the survey respondents. They also viewed litter, air quality, and water as pressing issues (see figure below). In open workshop discussions, residents expressed concern about recycling being a “value” for Fort Worth, and businesses talked about companies who have adopted “green” as a corporate tenet. Many people stressed the importance of recycling education at all age levels, especially the youth.



- Businesses said recycling was important, but qualified that many businesses are too busy to care or want an economic incentive to recycle.
- When asked what is the hardest thing about recycling at their locations, businesses lamented that “people don’t care,” and cited problems with implementing a system such as not having space for containers and having to rely on individuals to carry recycling to their homes due to lack of service. They also noted that turnover means education is a never-ending process, even for people who are engaged. In a later question, several of the businesses noted that recycling always gets “pushed down” below other priorities and demands on their time.
- Businesses indicated that the potentially-recyclable materials they were most likely to generate were batteries, cardboard, and paper.
- Although food waste collection and composting was prioritized by less than a third of the residents surveyed more than two-thirds indicated that “yes,” they would be interested in participating in such a program. Some of the reasons for responding “no” included fears regarding animals, odors, and costs. Smell and effort were also concerns expressed by business interviewees, although many of them agreed that food waste is a huge part of the commercial waste stream that really needs to be diverted.

## Attitudes and Interest

- Residents were provided descriptions about three advanced solid waste management techniques: zero waste, waste-to-energy, and mixed waste processing. Online surveys were exceptionally high in favorability toward the techniques, while the face-to-face interviews were less enthusiastic. Some residents at the workshops also wanted to discuss what they had heard about 1-bin systems from other cities. 1-bin is a collection system whereby recyclables and trash would be separated at a sorting facility rather than at the point of generation. Some thought it was interesting, others thought it would make people “disconnected” from waste.
- Most residents were willing to pay a small additional price per month if an advanced solid waste technique made a “real” difference. The most common acceptable price was \$1 to \$5, and the next most-common acceptable price was less than \$1.
- In interviews, business people were asked about recycling at commercial locations. Their responses indicate that there is a notable lack of knowledge about what is required of businesses, with many respondents saying that they know “not much” or “nothing” about such regulations.
- The businesses were specifically asked about a 1-bin or no-sort system. Some liked the idea, saying it “sounds easy;” however, just as many disparaged the idea, saying that such an effort “sounds expensive,” and did not like the idea of paying even more for such as service than the current source-separation method.
- Most of the businesses and property managers interviewed felt that having a recycling program in place adds prestige to a facility or company, which is positive for the firm. Several



noted that younger people expect to be able to recycle at work and express dismay when they cannot.

- Businesses and property managers said that a cost incentive would definitely help them implement recycling systems, even if such implementation took time and effort. Some residents felt this way, too.



# RETHINKING WASTE

For a Greener  
Fort Worth

On March 1, 2012, staff of the city's Solid Waste Division chose a random residential garbage truck and performed an audit of its contents. The purpose of the audit was to identify how much material that could have been recycled was actually tossed into the garbage rather than the blue recycling cart.

Remember: everything thrown into the brown cart heads directly to the landfill to be buried forever; items tossed into the blue recycling carts will be re-purposed and re-enter our market place.

## The Results

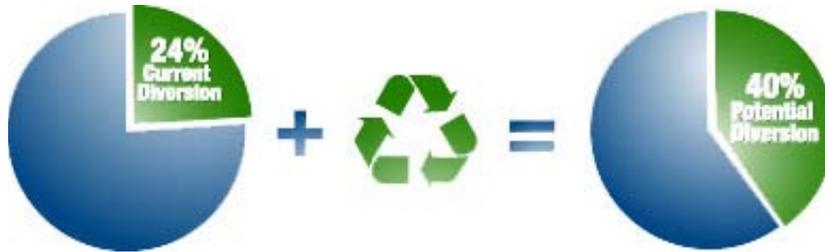
Nearly 30 percent of the debris on the truck was recyclable in Fort Worth's recycling program. Here's the breakdown of what was found in the truck:



- Compostables: 27%
- Mixed Paper: 12%
- Yard Waste: 11%
- Glass: 8%
- Bath & Diapers: 7%
- Garbage: 7%
- Mixed Plastic: 6%
- Textiles: 5%
  
- Remodel Waste: 5%
- Electronics: 4%
- Plastic Bags: 3%
- Aluminum: 2%
- Ferrous Metals: 2%
- Hangers: 1%

- Cartons: <1%

Fort Worth currently diverts 24 percent of residential waste from the landfill through recycling and yard waste collections.



If Fort Worth residents put all of their recycling in the blue cart to be recycled instead of wasting it as garbage, we could divert more than 40 percent away from landfill disposal.

## It all adds up



An estimate of the value of residential recycling materials that was landfilled in 2011 is \$12,744,816.03. These recycling materials were landfilled because many residents choose to use their garbage cart instead of their blue recycling cart.

## Updates

---

- [Comprehensive Solid Waste Management Plan on track for City Council presentation this summer](#) (May 20, 2016)

*Stay in the loop on the city's Comprehensive Solid Waste Plan and learn how to give your feedback.*

Subscribe

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## Resources

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- [Re-thinking Waste Fact Sheet](#) 

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# RETHINKING WASTE For a Greener Fort Worth

With two-thirds of the city's new [2015-2035 Comprehensive Solid Waste Management Plan \(CSWMP\)](#) complete, a City Council presentation for the draft plan is scheduled for Aug. 2.

Work on the plan -- one of the largest green initiatives undertaken in Fort Worth -- began in August 2014. With the planning nearing its public debut, here's a recap of what's happened since [November 2015](#) update and a preview of what's next.

## Public Meetings

Since the last update, eight one-on-one meetings with local solid waste industry members were conducted, and 32 interviews with influential city leaders took place -- 20 more than originally planned. The meetings included city management and City Council; all chambers of commerce; local businesses; educational and professional organizations.

## Disaster Debris Management Plan

During the last six months, the city has also prepared a Disaster Debris Management Plan (DDMP) -- an integral part of the CSWMP.

One of the critical services the city provides to its residents is the management of debris generated during a disaster -- be it natural or man-made. The DDMP establishes the protocols to be observed in responding to a disaster, identifying the roles and responsibilities of the various city departments and outside agencies. The city is currently wrapping up enhancements to the DDMP, which were funded by a grant from the Department of Homeland Security.

## Next Steps

Following the City Council presentation, both the draft CSWMP and final DDMP will be made available to all residents of Fort Worth for public review. The third and final public open house is scheduled to take place in September, providing the public and local businesses with an overview of the key recommendations of the plan and an opportunity to give direct feedback.

The comments and input received during creation of the plan is being compiled, reviewed and will be considered for inclusion in the Comprehensive Solid Waste Management Plan in its final version.

The Comprehensive Solid Waste Management Plan is currently scheduled for completion in late October or early November 2016.

## Updates

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# RETHINKING WASTE For a Greener Fort Worth

The city is currently half way into the development of its new 2015-2035 Comprehensive Solid Waste Management Plan (CSWMP).

Since the initial development working meeting in August 2014, the city has accomplished the following:

- [Created a webpage](#) and [email address](#) to receive public comments and [feedback on the CSWMP](#)
- Held a public open house meeting on Nov. 20, 2014, attended by more than 50 residents and other interested parties.
- Conducted 102 face-to-face resident interviews and an online survey with 533 responses. The preliminary tallied results of those interviews and survey are currently posted on the city's webpage.
- Held a business focus group with nine participants from local businesses.
- Developed an operational draft Disaster Debris Management Plan (an integral part of its Comprehensive Solid Waste Management Plan). The draft plan was reviewed by other city departments (Transportation & Public Works, Park & Recreation and the Emergency Management Office) and is to be finalized soon. Additional services are planned to expand and broaden the content developed. The additional services to the Disaster Debris Management Plan are to be completed before June of 2016.
- Held six workshops with:
  1. Environmental Advocacy groups
  2. Institutions (Independent School Districts, Universities, NCTCOG, Amon Carter Museum, etc.)
  3. Industrial/Commercial/Institutional large waste generators
  4. Members of the commercial mulching/composting industry
  5. Construction & Demolition generators and processors
  6. Academia – as researchers and innovators.
- Made a presentation on the development of the Comprehensive Solid Waste Management Plan to the Chamber of Commerce Environmental Committee.

- Held a second open house meeting on Sept. 1, 2015, attended by 37 residents and interested parties.

The comments and inputs the city continues to receive from individuals, businesses, institutions, and industry are being compiled, reviewed and will be considered for inclusion in the Comprehensive Solid Waste Management Plan as it is developed.

Public engagement sessions remaining include: interviews with at a minimum 12 influential city leaders; eight one-on-one meetings with local members of the solid waste industry; and two public hearings/presentations during future City Council meetings – the first of which is planned immediately prior to a preliminary draft preparation, and the second one before the completion of the CSWMP. A third and final public open house meeting is tentatively scheduled for mid-January 2016 after a first complete draft of the CSWMP is prepared.

The Comprehensive Solid Waste Management Plan is scheduled for completion by mid-2016.

## Updates

---

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# City of Fort Worth

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## Solid Waste Plan Feedback

Stay in the loop as the City of Fort Worth develops its Comprehensive Solid Waste Plan. Sign up for updates! Comments also may be emailed to [swplan@fortworthtexas.gov](mailto:swplan@fortworthtexas.gov) or submitted by phone at 817-392-1234.

### Name

First Last

### Email

### Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

### Check All That Apply

- I would like to receive updates on Comprehensive Solid Waste Plan development.
- I would like to receive weekly updates from the City of Fort Worth.
- I would like to give some initial thoughts on Fort Worth's solid waste program.

## Re-Thinking Waste: A Greener Fort Worth

An Update on the Development of the  
City's Comprehensive Solid Waste Management Plan




### Agenda

- ▶ Introduce Team
- ▶ Overview of Solid Waste Management Planning
- ▶ Current Program Highlights and Challenges
- ▶ Future Possibilities
- ▶ CSWMP Development Plan
- ▶ Public Involvement Opportunities
- ▶ Questions and Answers

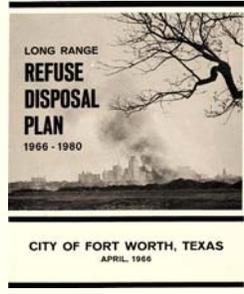



### Purpose of a Comprehensive Solid Waste Management Plan

- ▶ Provides a blueprint for how our waste should be managed for the next 20 years.
- ▶ Previous plan (1995), focused on landfill space but also recommended a Pay-as-You-Throw system, the use of carts and encouraged diversion.
- ▶ The current study seeks to address the following:
  - ▶ Should "waste" continue to be viewed as something to be discarded?
  - ▶ What is waste versus what is a resource or opportunity?
  - ▶ Which resources can we capture efficiently and economically?
- ▶ Input is needed from residents and businesses in plan development to help staff understand:
  - ▶ What is important to our residents and businesses?
  - ▶ What are we willing to do together to make us a greener city?




### Methods Do Change (Thank Goodness)





### Requirement of our Comprehensive Solid Waste Management Plan

- ▶ Move from residential to global/all waste focus
- ▶ Understand and capitalize on emerging and sustainable technologies that fit our city
- ▶ Develop and implement strategies to foster market driven collection and diversion programs
- ▶ Foster collaborative public/private partnerships
- ▶ Develop capital funding plan for new technologies and future infrastructure





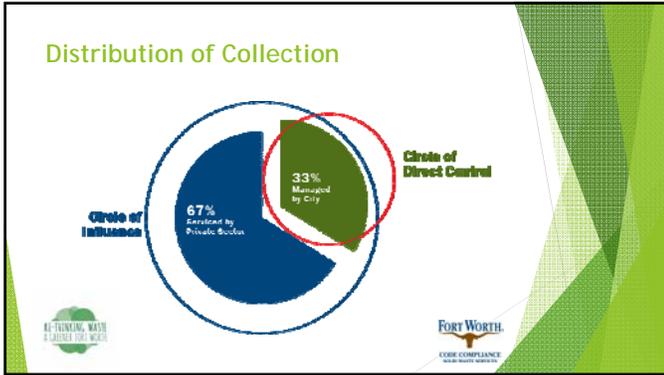
### How Waste is Currently Collected

- ▶ Once a week collections
  - ▶ Garbage (Pay As You Throw)
    - ▶ 3 sizes of carts - 32, 64 & 96 gallon
  - ▶ Recycling Single stream by 64/96 gallon cart
    - ▶ Not mandatory
  - ▶ Yard Waste
    - ▶ Bundled, Yard Bags, Optional Yard Cart & Loose Brush
- ▶ Monthly bulk waste collection
  - ▶ Set schedule based on geographic area
- ▶ Commercial/industrial is an open market









### How Waste is Currently Managed

- ▶ Material collected as Garbage is disposed of in landfills -
  - ▶ Residential Garbage - 234,584 Tons
  - ▶ Commercial - ??? Estimated to be about 2X as much as residential
- ▶ Material collected as Recycling is processed to return to the marketplace
  - ▶ Residential Recycling - 37,066 Tons diverted from disposal
  - ▶ Commercial Recycling - ??? Estimated to be about the same as residential

**FORT WORTH**  
CODE COMPLIANCE  
WASTE MANAGEMENT

### How Waste is Currently Managed

- ▶ Material collected as Yard Waste is mulched for commercial use
  - ▶ Residential Yard Waste - 27,171 Tons diverted from disposal
  - ▶ Commercial - ???
- ▶ Material collected as Bulk mostly disposed with some limited diversion
  - ▶ Residential Bulk - 33,235 tons
  - ▶ Commercial - N/A

**FORT WORTH**  
CODE COMPLIANCE  
WASTE MANAGEMENT

### Success Measures

- ▶ Diversion from landfill disposal - 21.5% - 23%
- ▶ 2010 Landfill expansion provides the City nearly 40 additional years
- ▶ Recycling (Blue Cart) Participation Rate - Over 65%
- ▶ Sanitation Rate Stability - No rate increase since 2006
- ▶ Service and Service Attempts each week - Nearly 675,000
- ▶ Missed Pickup - Both garbage and recycling about .0007%

**FORT WORTH**  
CODE COMPLIANCE  
WASTE MANAGEMENT

### Success Measures

- ▶ Over 74% of Budget is outsourced
- ▶ Reduction in Illegal Dumping - 12,610 tons in FY 2004; 2,752 tons in FY 2014
- ▶ Three existing Drop off Stations; Construction of fourth out for bid
  - ▶ Use of Drop off Stations - 199,403 individual visits in FY 2014
- ▶ Multi-Family (Apartment) recycling - 82.6% in compliance with new ordinance
  - ▶ 92 complexes either seeking a waiver or working on implementing program
- ▶ Business Smart Program
  - ▶ Outreach program to small and medium sized business

**FORT WORTH**  
CODE COMPLIANCE  
WASTE MANAGEMENT

### Exploration of Current Challenges

- ▶ Landfill audits = Nearly \$13 million loss with disposal of recyclables
- ▶ Increase residential diversion and reduce contamination
  - ▶ How to increase awareness and ownership
- ▶ Increase opportunities/requirements for multi-family recycling
- ▶ Greater encouragement of business sector to reexamine their waste
  - ▶ Two-thirds of waste generated in the city is from business sector
  - ▶ Business can often reduce expenses with proper recycling

**FORT WORTH**  
CODE COMPLIANCE  
WASTE MANAGEMENT

### Future Possibilities

- ▶ Currently in Process -
  - ▶ Recycle Processing Facility Request for Proposals
  - ▶ Compressed Natural Gas powered trucks
    - ▶ Waste Management/Knight Waste fleet
    - ▶ Public/private refueling locations
  - ▶ Landfill Gas Utilization







### Future Possibilities

- ▶ Increase waste diversion from disposal
  - ▶ Landfill audit results = Nearly \$13 million loss
  - ▶ Request for Proposals on material recovery facility
    - ▶ Is a Mixed Waste Processing or "Dirty MRF" an Option?
      - ▶ Recover additional recyclables
      - ▶ Compost putrescibles
      - ▶ Refuse derived fuels or bio fuels
  - ▶ Construction & Demolition Debris diversion
  - ▶ Bulk Waste collections
    - ▶ Change method of collection to capture more material
  - ▶ Yard Waste diversion
    - ▶ Increase diversion
    - ▶ Large scale composting
    - ▶ Collection of putrescibles / "Yuck" Factor

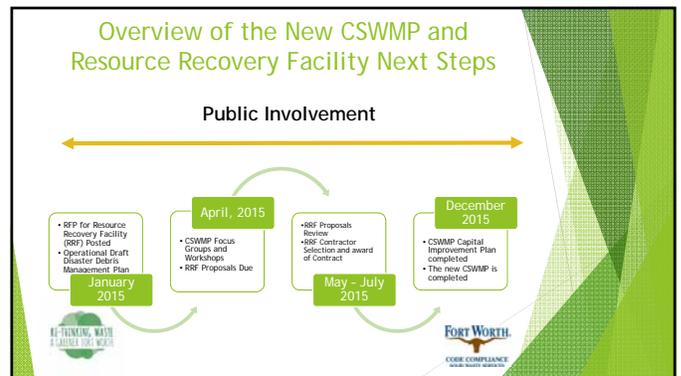




### Future Possibilities

- ▶ Implement greater cost differential in cart sizes
- ▶ Encourage re-use through donations
- ▶ Increase Pedestrian and Special Event recycling
- ▶ Encourage Green Purchasing in City departments and Business community
- ▶ Research and Development Opportunities
  - ▶ UTA/TCU Partnerships
  - ▶ Encourage innovation and future technologies
- ▶ Eco-Business Park
  - ▶ To develop further Resource Recovery opportunities





### Public Involvement Opportunities

- ▶ Open Houses, like today's
- ▶ Social media
- ▶ Electronic Survey
- ▶ Focus Groups
- ▶ Workshops
- ▶ Interviews
- ▶ Email: [swplan@fortworthtexas.com](mailto:swplan@fortworthtexas.com)
- ▶ Website: [www.fortworthtexas.gov/swplan](http://www.fortworthtexas.gov/swplan)




### Questions, Answers & Discussion



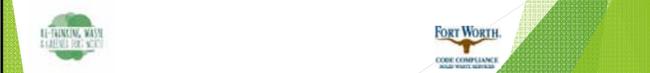

## Re-Thinking Waste: A Greener Fort Worth

An Update on the Development of the  
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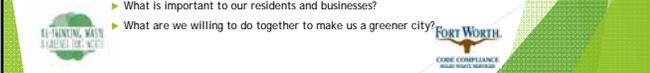
### Agenda

- ▶ Introduce Team
- ▶ Overview of Solid Waste Management Planning
- ▶ Current Program
- ▶ Future Possibilities & Waste in the News
- ▶ Public Involvement Feedback
- ▶ CSWMP Development Plan
- ▶ Questions and Answers

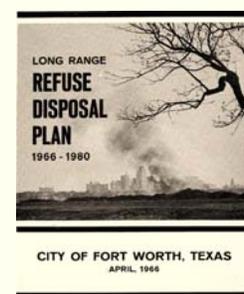
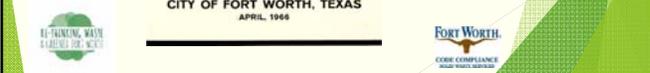


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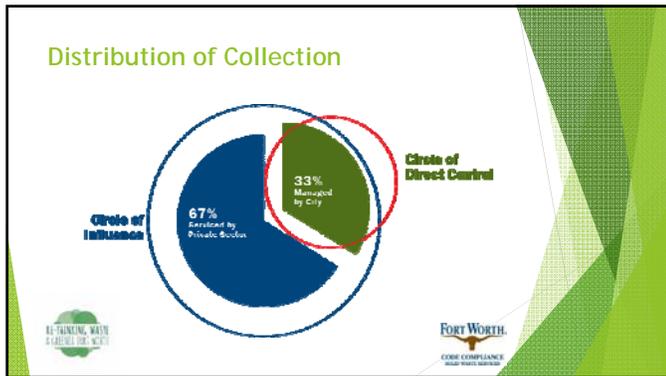



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- ▶ Commercial/industrial is an open market





### How Waste is Currently Managed

- ▶ Material collected as Garbage is disposed of in landfills -
  - ▶ Residential Garbage - 234,584 Tons
  - ▶ Commercial - ??? Estimated to be about 2X as much as residential
- ▶ Material collected as Recycling is processed to return to the marketplace
  - ▶ Residential Recycling - 37,066 Tons diverted from disposal
  - ▶ Commercial Recycling - ??? Estimated to be about the same as residential

RE-THINKING WASTE & LABELING THE WASTE

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WASTE MANAGEMENT

### How Waste is Currently Managed

- ▶ Material collected as Yard Waste is mulched for commercial use
  - ▶ Residential Yard Waste - 27,171 Tons diverted from disposal
  - ▶ Commercial - ???
- ▶ Material collected as Bulk mostly disposed with some limited diversion
  - ▶ Residential Bulk - 33,235 tons
  - ▶ Commercial - N/A

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### Success Measures

- ▶ Diversion from landfill disposal - 21.5% - 23%
- ▶ 2010 Landfill expansion provides the City nearly 40 additional years
- ▶ Recycling (Blue Cart) Participation Rate - Over 65%
- ▶ Sanitation Rate Stability - No rate increase since 2006
- ▶ Service and Service Attempts each week - Nearly 675,000
- ▶ Missed Pickup - Both garbage and recycling about .0007%

RE-THINKING WASTE & LABELING THE WASTE

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### Success Measures

- ▶ Over 74% of Budget is outsourced
- ▶ Reduction in Illegal Dumping - 12,610 tons in FY 2004; 2,752 tons in FY 2014
- ▶ Three existing Drop off Stations; Construction of fourth out for bid
  - ▶ Use of Drop off Stations - 199,403 individual visits in FY 2014
- ▶ Multi-Family (Apartment) recycling - 82.6% in compliance with new ordinance
  - ▶ 92 complexes either seeking a waiver or working on implementing program
- ▶ Business Smart Program
  - ▶ Outreach program to small and medium sized business

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### Exploration of Current Challenges

- ▶ Landfill audits = Nearly \$13 million loss with disposal of recyclables
- ▶ Increase residential diversion and reduce contamination
  - ▶ How to increase awareness and ownership
- ▶ Increase opportunities/requirements for multi-family recycling
- ▶ Greater encouragement of business sector to reexamine their waste
  - ▶ Two-thirds of waste generated in the city is from business sector
  - ▶ Business can often reduce expenses with proper recycling

RE-THINKING WASTE & LABELING THE WASTE

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### Future Possibilities

- ▶ Recycle Processing Facility Request for Proposals
- ▶ Compressed Natural Gas powered trucks for contractors
- ▶ Landfill Gas Utilization
- ▶ Change method of Bulk Waste collection collections to capture more material
- ▶ Encourage Green Purchasing in City departments and Business community
- ▶ Research and Development Opportunities
  - ▶ UTA/TCU Partnerships
  - ▶ Encourage innovation and future technologies




### Future Possibilities

- ▶ Increase waste diversion from disposal and recover additional recyclables
  - ▶ Construction & Demolition Debris diversion
  - ▶ Increase diversion of yard waste, possibly with large scale composting
  - ▶ Perhaps a Mixed Waste Processing or "Dirty MRF"
    - ▶ Compost putrescibles and create refuse-derived fuels or biofuels
  - ▶ Implement greater cost differential in cart sizes
  - ▶ Encourage re-use through donations
  - ▶ Increase Pedestrian and Special Event recycling
  - ▶ Eco-Business Park to develop further Resource Recovery opportunities




### Industry Influences

Things you might have heard or read about



### 1-bin systems and mixed waste processing

- ▶ 1-bin is a system where generators do not source-separate recyclables from garbage, and put everything together in one large bin.
- ▶ The switch must be accompanied by implementation of a mixed-waste processing facility which can sort through the material and divert different types of waste to their best use
  - ▶ Metals, plastic, organics, possibly other materials, and garbage to be disposed are sorted using various technologies and manual labor
  - ▶ Optimally there is some recovery of energy, either through digestion or combustion
  - ▶ Yard waste like brush and bulky items may still be collected separately
  - ▶ This system is sometimes called a "dirty MRF," particularly by detractors.



### Yes, this is what Houston has been considering

- Houston had a 19% recycling rate
- One estimate was that 55% diversion was possible in the first year
  - Even if that was HALF right, they would see a 8.5% increase




### The industry is divided on the issue

**WASTE & RECYCLING**

Guest column: Houston's One Bin: It's no 'dirty MRF'

**WASTE & RECYCLING**

Guest column: Houston's One Bin: It's a 'dirty MRF'

**WASTE & RECYCLING**

Guest Column: Call it a 'dirty MRF' or not, a single-bin system can work

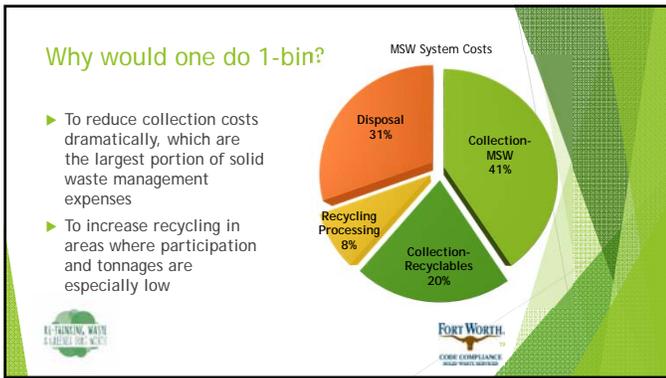
**RRS** | HISTORICAL ECONOMIC RISKS MWPF

**RIP**

1. Few operating as intended
2. Quality and quantity of recyclables resultant available revenue offset
3. Human factor sorting MRF
4. Overstatement of recovery potential
5. Attempts to control wastes
6. Cheaper options
7. MRF/Landfill/Market watchdogs aligned against full MRFPS

RIP Slide From: Michael Timpane Presentation at the NERC Conference in Wilmington, DE on April 8, 2015





### The Evolving Ton: US MSW Composition

Material	1994	2009	Difference
Paper	32.9%	16.1%	-51.1%
Plastic	11.8%	17.2%	45.8%
Metals	6.3%	8.5%	34.9%
Glass	6.4%	5.5%	-14.1%
Organics	31.5%	37.6%	19.4%

Source: USEPA, Municipal Solid Waste Generation, Recycling, and Disposal in the United States, 1995 and 2011

### Fort Worthians and their feedback

During this process, the City has administered a Survey Monkey online survey, conducted intercept interviews "on the street," held workshops like this one, and has conducted in-depth interviews with business people, waste industry experts, and community leaders.

**1** Public hearing  
**00** Workshop attendees  
**00** Social media shares  
**00** media articles  
**00** Intercept interviews conducted  
**00** Business interviews recorded  
**00** Online surveys completed  
**00** Community leaders interviewed  
**00** Industry experts interviewed

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### Fort Worthians and their feedback

## Online Surveys

<b>Most pressing environmental issues</b> <ul style="list-style-type: none"> <li>• Most frequent #1 Air quality</li> <li>• Most frequent #2 recycling</li> <li>• Most frequent #3 recycling</li> </ul>	<b>Most frequently prioritized ideas to increase recycling</b> <ul style="list-style-type: none"> <li>• 76% Promote to businesses</li> <li>• 66% more bins in public areas</li> <li>• 35% Alternate bulk and brush collection</li> <li>• 35% Collect &amp; compost food waste</li> </ul>	<b>Would you participate in curbside food waste collection</b> <ul style="list-style-type: none"> <li>• 62% Yes</li> <li>• 38% No</li> </ul>
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### Fort Worthians and their feedback

## Intercept Interviews

<b>Most pressing environmental issues</b> <ul style="list-style-type: none"> <li>• Most frequent #1 Air Quality</li> <li>• Most frequent #2 Recycling</li> <li>• Most frequent #3 Recycling</li> </ul>	<b>Most frequently prioritized ideas to increase recycling</b> <ul style="list-style-type: none"> <li>• 82% More bins in public areas</li> <li>• 72% Promote to businesses</li> <li>• 45% Alternate bulky and brush collection</li> </ul>	<b>Would you participate in curbside food waste collection</b> <ul style="list-style-type: none"> <li>• 66% Yes</li> <li>• 34% No</li> </ul>
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### Fort Worthians and their feedback

## Business Interviews

<b>What do you know about business recycling requirements in Fort Worth?</b> <ul style="list-style-type: none"> <li>• Not much</li> <li>• Not sure</li> <li>• Nothing</li> </ul>	<b>What's the hardest thing about offering recycling at businesses?</b> <ul style="list-style-type: none"> <li>• People don't care</li> <li>• No space for the containers</li> <li>• Relying on people to volunteer or carry it home</li> </ul>	<b>Do you think a 1-bin system is a good idea?</b> <ul style="list-style-type: none"> <li>• Yes, it sounds easy</li> <li>• No, it sounds expensive</li> </ul>
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### Overview of the New CSWMP and Resource Recovery Facility Next Steps

**Public Involvement**

**Summer - Fall 2015**

- RRF Proposals Review
- RRF Contractor Selection and award of Contract

**Fall 2015**

- Workshop
- VIP Interviews
- Creation of recommendations

**December 2015**

- CSWMP Capital Improvement Plan completed
- The new CSWMP is completed

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### Questions, Answers & Discussion

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