

# Memorandum



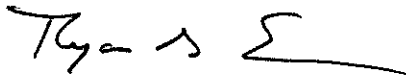
DATE June 10, 2011

TO Honorable Mayor and Members of the City Council

SUBJECT **The Green Path from Trash to Treasure Follow-up Information to the June 1, 2011 Briefing**

On June 1, 2011, Sanitation Services briefed you on the subject of "The Green Path from Trash to Treasure". During the presentation, several topics of discussion were initiated. The attached briefing for June 15 will provide you with information to address those topics.

Please let me know if you have any questions.



Ryan S. Evans  
First Assistant City Manager

## Attachment

C: Mary K. Suhm, City Manager  
Deborah A. Watkins, City Secretary  
Thomas P. Perkins, Jr., City Attorney  
Craig D. Kinton, City Auditor  
Judge C. Victor Lander, Administrative Judge  
Jill A. Jordan, P.E., Assistant City Manager  
A.C. Gonzalez, Assistant City Manager  
Forest E. Turner, Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Mary Nix, Director, Sanitation Services  
Helena Stevens-Thompson, Assistant to the City Manager



**The Green Path from Trash to Treasure**  
**Follow-Up Information**  
to the June 1 Briefing

**Briefing to City Council**  
**June 15, 2011**

# Topics of Discussion from the June 1, 2011 Briefing

- (1) Long-Term Vision for Resource Flow Control
- (2) Surrounding area
- (3) Truck traffic
- (4) Air quality and litter
- (5) Financial summary
- (6) Other issues
- (7) Short-term and Long-term benefits

# **(1) *Long-Term Vision*** **for Resource Flow Control**

- **Critical step to initiating green energy production from city resources**
  - Dallas' resource stream becomes attractive to entrepreneurs of waste-to-energy technologies
  - **Steps up schedule to build Resource Recovery facilities across the city**
    - No longer 20 years away – but can start in next 2-5 years
    - Can use all transfer sites and landfill
    - Creates jobs, manages our resources, secures our own energy
    - Provides excellent base for environmental curricula at Dallas campuses
- **Broadly extends Dallas' green profile**
  - State-of-the-art technology puts Dallas at leading edge of green practices nationally
  - **Ultimately, eliminates need for landfilling**



Resource Recovery Facility  
in Bad Marienberg, Germany



Resource Recovery Facility  
in Roseville, CA

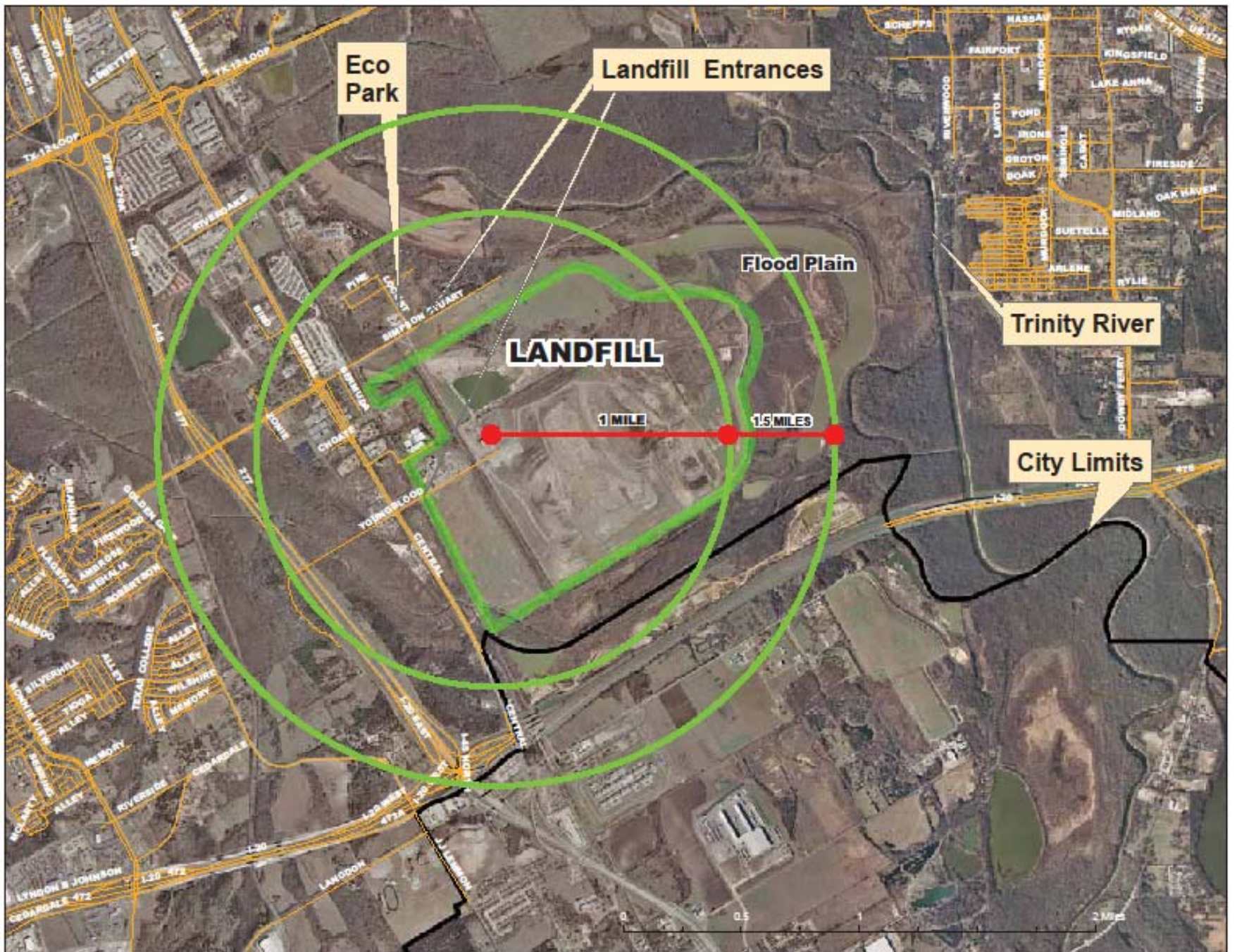


## (2) Surrounding Area

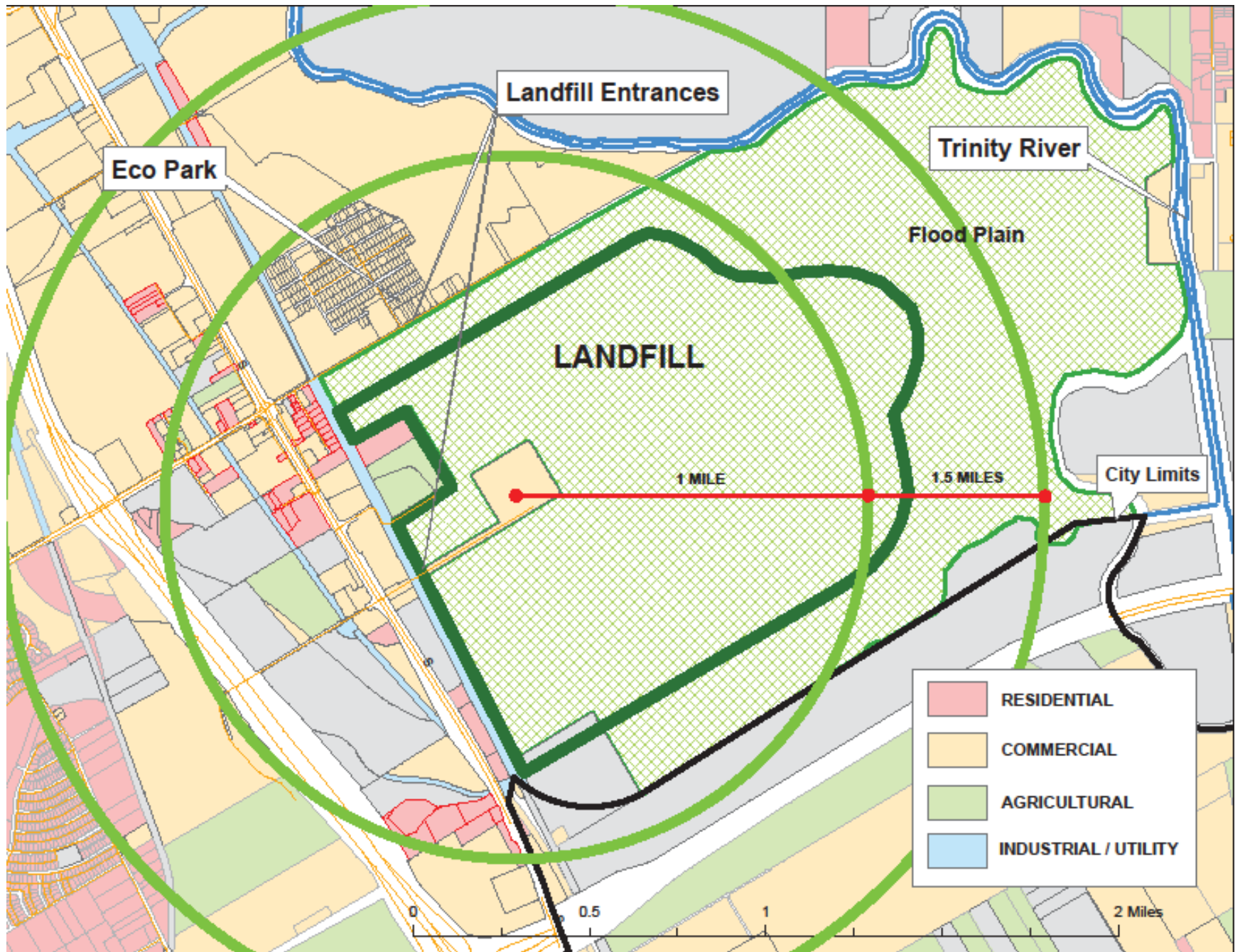
- **Primary land uses near landfill:**
  - Floodplain
  - Freeway right-of-way
  - EcoPark – *future center for education and for resource reuse facilities*
  - Various commercial and industrial uses
- **Secondary land use**
  - 16 residences\* within a mile of landfill
    - 10 are directly adjacent to landfill access road

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\* Figures are based on review of active utility accounts and visual survey of area within 1-mile radius





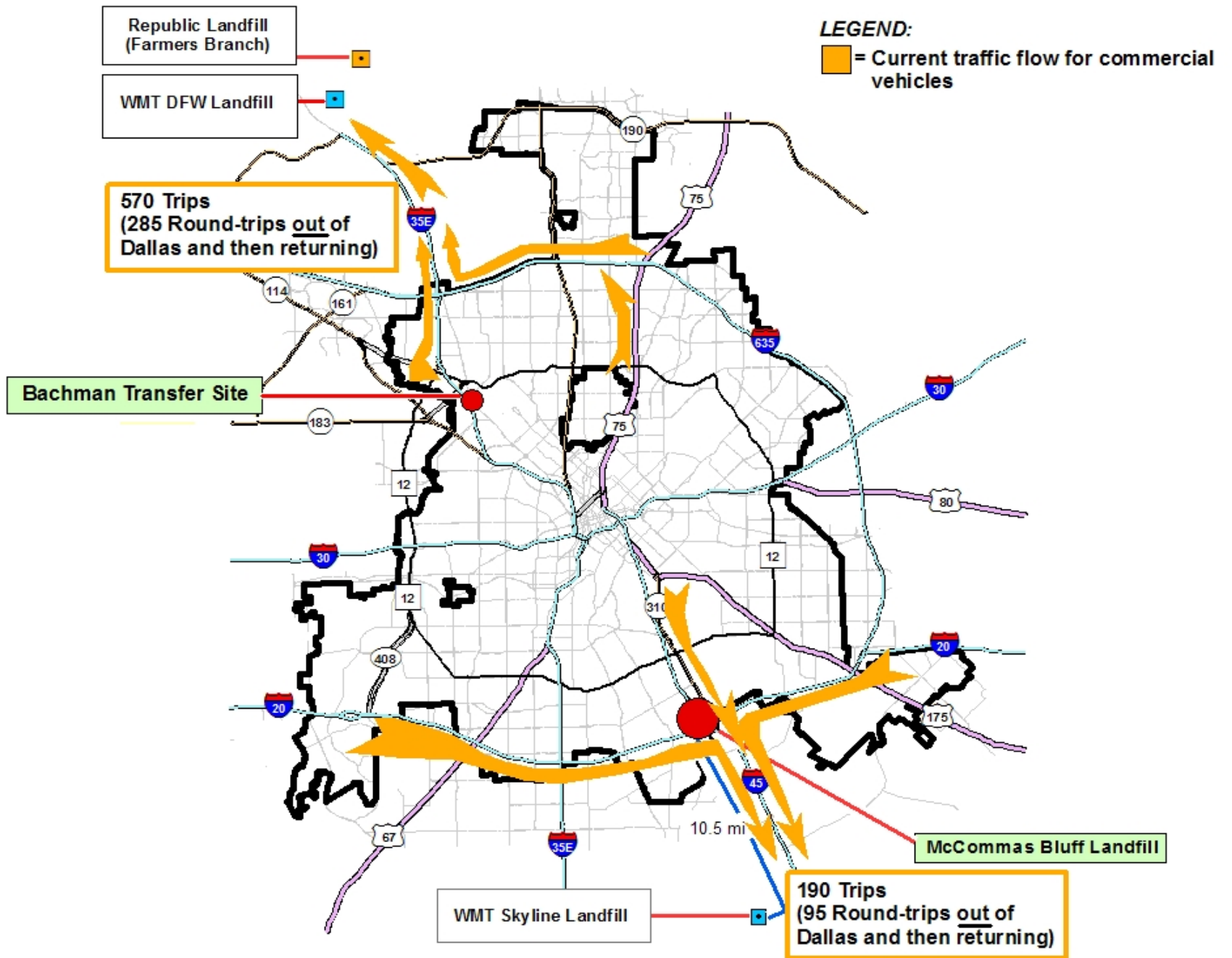


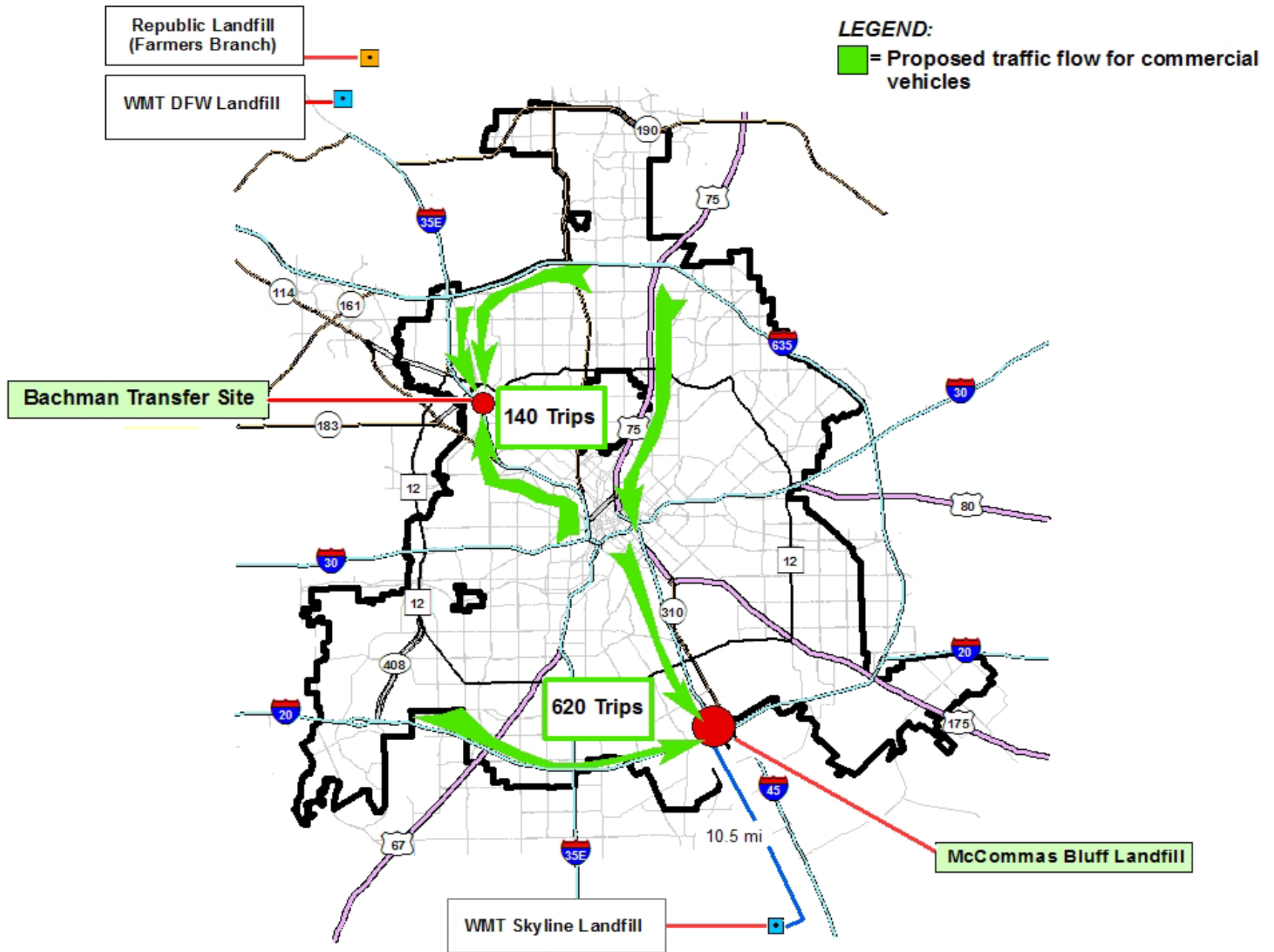
# (3) Truck traffic

- All trucks affected by ordinance are already operating in Dallas - no “new” truck trips are created
- Haulers (not currently using city landfill) will alter routes to start using city facilities
  - May change traffic count on freeways – but only one-tenth of 1%
- **Current** traffic at city facilities:
  - 2,000 truck-trips daily at McCommas - with capacity for twice that amount
  - 550 truck-trips daily at Bachman - with capacity for twice that amount
- **Projected** traffic changes under new ordinance
  - 86 trucks (that use non-city landfills) will now go to McCommas and Bachman
  - Equals 760\* truck-trips (or 380 round-trips) – as each truck makes 4-5 round-trips daily
    - 70 trucks are projected to use McCommas (for 620 trips)
    - 16 trucks are projected to use Bachman (for 140 trips)

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\* 380 round-trips (or 760 single trips) are based on 3,125 tons/day (= 900,000 tons per year) being hauled at a rate of 7-10 tons per truck load





# (4) Air Quality and Litter

- **Air quality is *regional* concern**
  - All vehicles affected by the ordinance are already operating in the region – none are added or eliminated
- **No change in vehicle emissions**
  - All 760 truck trips are and will continue to operate within the north Texas “air quality” region
  - Hauling distances should be unchanged – on balance
    - Two city facilities will be available to all waste haulers
    - Haul distances from anywhere in city will be 15 miles or less
      - McCommas Bluff to the south-southeast
      - Bachman Transfer to the northwest
  - Haulers may change their routing – some will decrease distances slightly, some will increase slightly

# (4) Air Quality and Litter, cont'd

- **Wind-blown litter**

- City code requires all haulers to secure their loads to prevent litter, particulates, or spills from escaping the vehicle. Penalties for failing to do so are specified in code.
- Haulers utilize enclosed trash hoppers, sealed containers and removable tarps as securing methods.
- Landfill and transfer sites use litter crews daily to pick up any errant litter along the roadways within two miles from the sites
- No history of chronic litter problems from trash vehicles



Sealed and tarped trucks at landfill



Litter crews on roadways near landfill and transfer sites



# (5) Financial Summary

<b>Budget Detail: Resource Flow Control</b>			
<b><u>REVENUES</u></b>			
<b>Current Landfill Revenue</b>			
	Incoming tons	Full Year (12-month) Revenue	Partial Year (9-month) Revenue
R1) Contract Hauler Tons	390,001	\$ 7,344,137	\$ 5,508,103
R2) Non-contract hauler tons	472,776	\$ 10,164,680	\$ 7,623,510
<b>TOTAL <u>Current</u> Revenue Tons</b>	<b>862,777</b>	<b>\$ 17,508,817</b>	<b>\$ 13,131,612</b>
<b><u>New Revenue</u></b>			
Added funds from Resource Flow Control ordinance	900,000	\$ 18,807,104	\$ 14,105,328



# (5) Financial Summary, cont'd

<b>Budget Detail: Resource Flow Control</b>			
<b><u>EXPENSES</u></b>		Full Year (12-month) <b>Expenses</b>	Partial Year (9-month) <b>Expenses</b>
<b><u>E1) Landfill Ops</u></b>	<b><u>Units</u></b>		
Labor (with benefits, OT, misc)	20	\$ 1,001,281	\$ 750,961
Supplies (fuel, parts, communications)		\$ 1,689,901	\$ 1,436,416
Services (eq. maint., TCEQ fee, debt service for waste cells)		\$ 1,096,123	\$ 931,705
<b>Subtotal 1:</b>		<b>\$ 3,787,305</b>	<b>\$ 3,119,081</b>
<b><u>E2) Transfer Ops</u></b>			
Labor	9	\$ 432,456	\$ 324,342
Operation of transfer trucks	5	\$ 301,901	\$ 226,425
Purchase/payment on trucks	5	\$ 232,875	\$ 232,875
Additional heavy equipment		\$ 54,855	\$ 54,855
<b>Subtotal 2:</b>		<b>\$ 1,022,087</b>	<b>\$ 838,497</b>
<b><u>E3) Misc</u></b>			
Field Enforcement		\$ 109,200	\$ 81,900
Audit Management		\$ 65,000	\$ 65,000
<b>Subtotal 3:</b>		<b>\$ 174,200</b>	<b>\$ 146,900</b>
<b>TOTAL Expenses (related to ordinance)</b>		<b>\$ 4,983,592</b>	<b>\$ 4,104,479</b>
<b>NET Revenue (after Expenses):</b>		<b>\$ 13,823,512</b>	<b>\$ 10,000,849</b>

# (6) Other issues

- **Use of one transfer site only**

- Additional waste resource stream can be readily handled with McCommas and Bachman
  - Bachman has capacity to double its incoming stream
  - Other transfer sites are smaller; sized for use by city's residential collection trucks
- Both sites are easily accessible from highway (not side streets)
  - making them desirable to haulers for quick turnaround

- **Hours of operation**

- Current hours will meet new demand
  - Landfill: Mon-Fri.... 5:00am to 8:00pm  
Sat ..... 6:00am to 4:00pm  
Sun ..... closed
  - Bachman: Mon-Sat... 7:30 am – 5:00pm  
Sun ..... closed

## (6) Other issues, cont'd

- **Financial impact to business customers**

- No changes likely – on balance
- McCommas gate fee to remain competitive with DFW market
  - Good for Dallas business customers
- Competitive nature of hauling business
  - Ordinance will “level the playing field” for all haulers who don’t own a landfill
  - Hauling services from one provider to another are typically within 5% of each other
  - Hauler with out-of-city landfill may tend to increase fees to Dallas customer – who may then seek (and find) a lower-priced competitor

- **Option to increase franchise fee**

- Franchise fee required to be based on cost to maintain infrastructure
- Haulers’ effect on infrastructure does not currently warrant a fee increase
- Any franchise fee increase is a cost borne by the Dallas business customer

# (7) Short and Long-Term Benefits

- **Short term: Years 1 to 2**
  - **10-20 new jobs at landfill, transfer sites**
  - **Secure the control of the resource stream**
    - Increased diversion of brush waste
    - New revenue stream to General Fund
  - **Storage of waste/resources at landfill until needed**
- **Mid-term: Years 2 to 5**
  - **Initiate pilots of Resource Recovery Facilities – at McCommas and Bachman**
    - Divert 20% of waste stream to expanded recycling capabilities
    - Add revenue-share from expanded recycling
    - Create 100 new jobs
  - **Start new educational curricula with area campuses for ecological studies**
  - **Determine ideal waste-to-energy option and strategy to implement**
- **Long-term: Years 5 to 20**
  - **Fully-implemented Resource Recovery Facilities – CITYWIDE**
    - Divert ALL of waste stream into green energy generation
    - Virtually eliminate need for landfill disposal
    - Mine old waste from landfill deposits as feedstock to Resource Recovery facilities
  - **Create up 500 new jobs – across city**
  - **Expand educational opportunities for “green energy”–related curricula**
  - **Partially offset city’s expenses for green fuels, renewable electricity, recycled resources**
  - **Generate “green” revenue from savings or sales of recovered resource products**
  - **Fuel Sanitation’s fleet with gas generated from landfill**
  - **Create new use for no-longer-needed landfill acreage**

# SUMMARY

- Landfill has ample life capacity
- Levels the playing field for waste haulers
- Cost to Dallas businesses unchanged
- Freeway traffic changes no more than one-tenth of 1%
- 16 residences within 1-mile of landfill, with 10 homes close enough to see traffic changes
- Multiple benefits – on short- and long-term
  - Supports production of bio-fuels, green energy, and product re-use
  - Creates an estimated 500 jobs over long-term
  - Simplifies residents' waste disposal with a ONE-cart, single-stream system
  - Encourages new environmental curricula for Dallas campuses
  - Ends needs for landfill – can find new use for this property

# Further Questions?

Appendix A  
Excerpt from City Code  
Chapter 18, Section 45  
Securing of Waste-Hauling Vehicles

## **SEC. 18-45. REQUIREMENTS FOR SOLID WASTE COLLECTION VEHICLES.**

(a) Any vehicle used for transporting dry solid waste material within the city must:

(1) be fitted with a substantial, tight-fitting enclosure that is free of any cracks or breaks and that has side boards and head boards of not less than 24 inches in height and a tail board of not less than 18 inches in height, to prevent waste material from being scattered or thrown onto the streets;

(2) be equipped with a closely fitting cover that must be used to prevent the escape of loose material or effluvia; and

(3) be equipped with any other equipment required to comply with all applicable federal and state motor vehicle safety standards.

(b) Any vehicle used for transporting wet solid waste material within the city must:

(1) be fitted with a substantial, tight-fitting enclosure, with the deck, sides, and ends of the bed constructed of sheet steel so that the vehicle may be easily cleaned and with the sides not less than 24 inches high and the tail board not less than 18 inches high;

(2) have a tight-fitting cover to prevent spillage;

(3) when carrying cans to transport wet solid waste material, use only cans equipped with tight-fitting lids and holding chains so that the cans will not turn over and spill;

(4) not have any drain holes in the sides of the vehicle and must have any drain holes in the deck of the vehicle capped to prevent spillage or leakage; and

(5) be equipped with any other equipment required to comply with all applicable federal and state motor vehicle safety standards. (Ord. Nos. 14219; 21058; 26480; 26608)



# Appendix B

## Draft Ordinance for Resource Flow Control

ORDINANCE NO. \_\_\_\_\_

An ordinance amending Section 18-10 of CHAPTER 18, "MUNICIPAL SOLID WASTES," of the Dallas City Code, as amended; requiring that all dry and wet solid waste generated, found, or collected in the city of Dallas be disposed of at a transfer station or landfill site owned or operated by the city; providing defenses; making certain semantic, grammatical, and structural changes; providing a penalty not to exceed \$2,000; providing a saving clause; providing a severability clause; and providing an effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Section 18-10, "Regulating the Processing and Disposal of Solid Waste Materials," of Article I, "Collection and Disposal," of CHAPTER 18, "MUNICIPAL SOLID WASTES," of the Dallas City Code, as amended, is amended to read as follows:

**"SEC. 18-10. REGULATING THE PROCESSING AND DISPOSAL OF SOLID WASTE MATERIALS.**

(a) General regulations.

(1) Waste flow controls.

(A) A person commits an offense if he disposes of dry or wet solid waste (or other waste materials) inside the city, other than at a location and in a manner approved by the director of sanitation as complying with federal, state, and local law regulating solid waste processing and disposal.

(B) A person commits an offense if, at any location other than a transfer station or landfill site owned or operated by the city, he disposes of any dry or wet solid waste (or other waste material) that has been generated, found, or collected inside the city. It is a defense to prosecution under this subparagraph that the particular waste was:

(i) not permitted or accepted at the transfer stations or landfill sites owned or operated by the city; or

(ii) composed solely of recyclable material.

(C) For purposes of Paragraphs (1)(A) and (1)(B) of this subsection, the [The] owner, occupant, or person in control of premises to which illegally-deposited solid waste is traced is presumed to have illegally disposed of or caused the illegal disposal of the solid waste. If a vehicle is used to illegally dispose of solid waste, the owner of the vehicle is presumed to have illegally disposed of or authorized the illegal disposal of the solid waste. Proof of ownership of a vehicle may be made by a computer-generated record of the registration of the vehicle with the Texas Department of Public Safety showing the name of the person to whom state license plates were issued. This proof is prima facie evidence of the ownership of the vehicle by the person to whom the certificate of registration was issued.

(2) The director of sanitation shall be responsible for determining disposal procedures, authorized users, and methods of operation at municipal transfer stations and landfill sites inside the city.

(3) The director of sanitation shall have authority to approve the establishment and make inspections of non-municipal landfill sites inside the city to ensure compliance with federal, state, and local law regulating the establishment and operation of landfill sites.

(4) The director of sanitation shall have authority to regulate traffic at the city's transfer stations and landfill sites. Designated employees of the department of sanitation services shall direct traffic by voice, hand, or signal at the transfer stations and landfill sites. A person commits an offense if he fails or refuses to comply with a traffic directive of a designated employee of the department of sanitation services. A designated employee of the department of sanitation services may cause the removal from a transfer station or landfill site of any person or vehicle in violation of this paragraph.

(b) Processing and disposal of solid waste materials by private persons.

(1) Processing and disposal of solid waste materials by private persons, firms, or corporations will be permitted only after application has been made to, and approved by, the director of sanitation as complying with all applicable city, county, state, and federal regulations pertaining to solid waste processing and disposal operations, and all fees required by this article have been paid.

(2) ~~(4)~~ The director of sanitation shall have authority to curtail, temporarily suspend, or permanently halt any solid waste processing or disposal operation being conducted by any private person, firm, or corporation that does not conform to the requirements of city, county, state, or federal regulations pertaining to solid waste processing and disposal operations or that in any manner jeopardizes the public health, safety, and welfare. The director of sanitation shall have authority to maintain curtailment or suspension restrictions until, in the director's judgment, adequate measures have been taken to ensure ~~assure~~ that removal of the restrictions will not jeopardize the public health, safety, or welfare.

(3) ~~(2)~~ The director of sanitation shall have authority to cause to be rejected for processing or disposal any material that, in the director's judgment, would create a nuisance by reason of emission or disagreeable odors or would operate to make the processing or disposal facilities unwholesome or adversely affect the public health, safety, and welfare.

(c) Processing and disposal of solid waste materials by the city.

(1) A person commits an offense if he takes, removes, or carries away from any processing or disposal facility owned or operated by the city any garbage, trash, or other solid waste material, article, thing, or object situated on the facility, whether or not the thing has monetary value, without prior written permission and approval of the director of sanitation. In prosecutions for this offense, it is not necessary to describe the thing taken, removed, or carried away other than as generally described in this subsection or as "article," "thing," or "item," and it is not necessary to allege that the thing had "value."

(2) The director of sanitation shall have authority to designate those processing or disposal sites owned or operated by the city that will be open to public access and those that will not be open to public access.

(3) The director of sanitation shall have authority to cause to be rejected for processing or disposal at any city-owned or operated processing or disposal facility any material that, in the director's judgment, would create a nuisance by reason of emission or disagreeable odors or would operate to make the facility unwholesome or adversely affect the public health, safety, and welfare."

SECTION 2. That a person violating a provision of this ordinance, upon conviction, is punishable by a fine not to exceed \$2,000.

SECTION 3. That CHAPTER 18 of the Dallas City Code, as amended, will remain in full force and effect, save and except as amended by this ordinance.

SECTION 4. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of CHAPTER 1 of the Dallas City Code, as amended.

SECTION 5. That this ordinance will take effect on (date to be inserted that is approximately six months after passage of ordinance), 2011, and it is accordingly so ordained.

APPROVED AS TO FORM:

THOMAS P. PERKINS, JR., City Attorney

By \_\_\_\_\_  
Assistant City Attorney

Passed \_\_\_\_\_

LC/DCC/00497A

# Appendix C

Briefing of 06/01/11

*“The Green Path from Trash to Treasure”*

# Memorandum



CITY OF DALLAS

DATE May 26, 2011

TO Honorable Mayor and Members of the City Council

SUBJECT **The Green Path from Trash to Treasure**

The City of Dallas has made remarkable strides in developing our environmental profile as a leading green city. On June 1, 2011, you will hear the attached briefing on the topic of fully utilizing the city's waste stream as an avenue for expanding our maturing green policies. It will show you how our waste stream can transition from "trash" to "valued resources".

This is one of those rare opportunities to both expand our environmental policy for the long term benefit of the community while garnering immediate benefit from the reuse of our resources. The Dallas waste stream is truly so valuable that it should not be left to others to exploit.

Attached are the briefing materials for your review.

Please let me know if you have any questions.

A handwritten signature in black ink, appearing to read 'Ryan S. Evans'.

Ryan S. Evans  
First Assistant City Manager

Attachment

C: Mary K. Suhm, City Manager  
Deborah A. Watkins, City Secretary  
Thomas P. Perkins, Jr., City Attorney  
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# **The Green Path from Trash to Treasure**

**Briefing to City Council**

**June 1, 2011**

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# Briefing contents

- Dallas' green initiatives
- Broaden our green policies into waste
  - Treating our trash as a *valued resource*
  - Making beneficial use and reuse of our solid waste resources
  - Preparing for new technology to replace landfilling
- Proposed ordinance for Council consideration

# Dallas is a green city

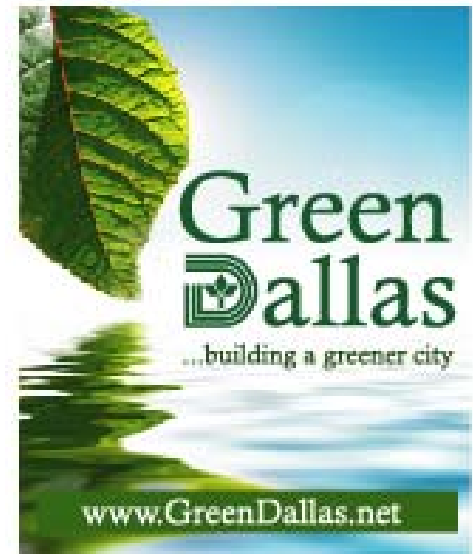
- **Council policies promote sustainability**
- **Our Green Accomplishments**
  - Dallas was the first city in nation with citywide ISO 14001 certification (environmental standards)
  - **We use 40% renewable power**
    - \$5.3m saved in energy costs
  - **Our fleet is 38% alternative-fueled**
  - **Water usage is down 35% since 1998**
  - **Recycling is up 136% since FY07**
    - Revenues of \$2.5m in FY10
  - **Landfill gas fuels 25,000 homes each year**
    - Over \$1.6m in royalties annually



# Dallas is a green city

## **Value gained** by maintaining sustainable focus

- **Cleaner environment**
- **Dallas as recognized leader**
- **People and businesses want to be here**
- **New revenue sources ... and savings**
- **Prudent resource management**



# The Evolving Story of Waste: The Past

1900

1925

1950

1975

2000

2025



**~ 20 years ago**

EPA modified federal regulations via Subtitle D (**1991**) of the Resource Conservation and Recovery Act of 1976 – creating standards still in place today.

**~ 30 years ago**

States passed laws requiring disposal facilities to be engineered, controlled, and monitored. Federal authorities standardized waste rules nationwide.

**~ 50 years ago**

Industrialization and urbanization forced communities to adopt specific plans for disposal



**> 100 years ago**

Rural populations typically disposed waste in a ditch out back on their own property **or** in small community dumps

# The Evolving Story of Waste: The Present



## ~ 20 years ago

EPA modified federal regulations via Subtitle D of the Resource Conservation and Recovery Act of 1976 – creating standards still in place today.

## ~ 30 years ago

States (including Texas) passed laws requiring disposal facilities to be engineered, controlled, and monitored. Federal authorities standardized waste rules nationwide.

## ~ 50 years ago

Industrialization and urbanization forced communities to adopt specific plans for disposal

## > 100 years ago

Rural populations typically disposed waste in a ditch out back on their own property or in small community dumps

Landfill Biotechnology

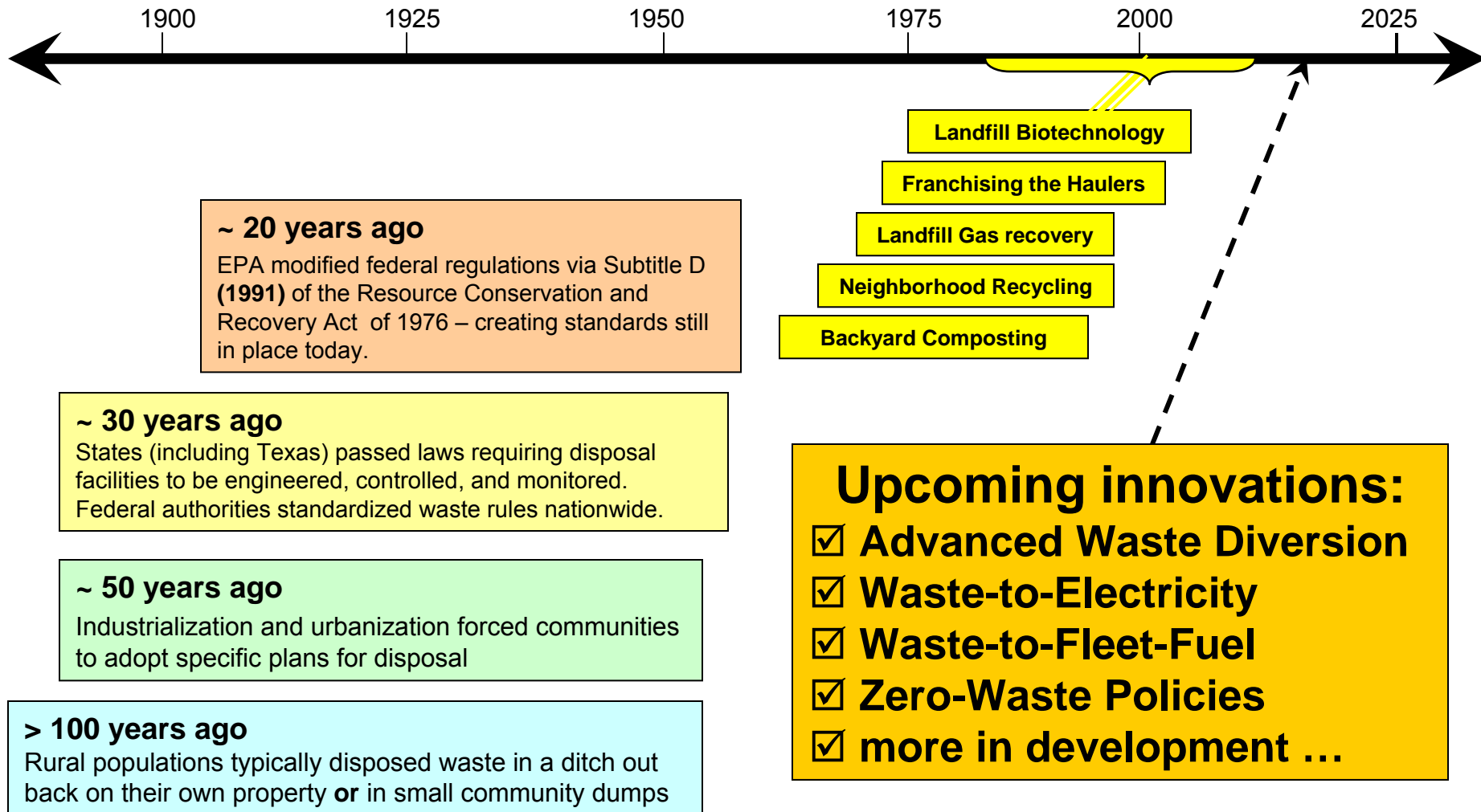
Franchising the Haulers

Landfill Gas recovery

Neighborhood Recycling

Backyard Composting

# The Evolving Story of Waste: The Future



# How Dallas manages its waste

- **Waste service is a fundamental City function**
  - Protection of public health and environment are paramount
- **Staying at the forefront of industry practices**
- **City's facility (McCommas Bluff) at cutting edge**
  - nationally-recognized for green initiatives
  - harvesting gas for re-use
  - alternate-fueled vehicles
  - diverting re-usable items



# How Dallas manages its waste

## **There are alternatives to our waste service practices**

### **– Keep all services in-house and city-operated**

- City could collect BOTH residential and business
- City could own and operate landfill and transfer sites
- City could manage recycling, composting facilities, and special wastes

### **– Privatize some or all services above**

### **– Preserve facility space**

- Use single-stream recycling in carts, bag, bins, drop-off sites
- Exclude non-Dallas waste from the landfill
- Utilize waste-compaction equipment; employ biotechnology practices

### **– Franchise waste haulers**

- Allow only one franchisee for all of city waste collection
- Issue multiple franchises, as open market policy



# How Dallas manages its waste

## Approaches that Dallas has explored:

### – Privatize the waste collection ?

- City collects all single-family residences
  - Tried privatizing in late 1980's – failed to meet customers' needs
  - City service ranks in "Top 5" in the **2009 Dallas Community Survey**
  - In case of contractor failure (i.e., poor service, contract dispute), City must rapidly rebuild staff and equipment to meet its obligations
- All business (including multi-family) are privatized, currently
- 189 private solid waste haulers are franchised
- Considered issuing just one "exclusive" franchise
  - Harmful to the open market – eliminates 188 Dallas hauling firms

# How Dallas manages its waste

## Alternatives that Dallas has considered:

### – Privatize the landfill, **NO!**

- Huge city asset
  - Secure, stable depository for decades to come
  - Value is more than \$1billion over its life – and increasing
- Privatize certain functions, **Yes!**
  - Equipment repair, construction projects, environmental monitoring

# How Dallas manages its waste

## Alternatives that Dallas has considered:

### – Recycle select materials – or all

- Selected “single-stream” recycling in blue roll carts
- Privatized the sorting and processing
- Progressively adding more to the “recyclable” list
- Expanded E-wastes and “household hazardous” materials
- Multi-family recycling through drop-off and pilot programs

**Dallas’ choices for managing the waste stream look beyond the immediate benefits and consider the long-term value to the community**

# The future

- More changes coming – and fast
- Stronger focus on **sustainability**
- Trash is seen as a valued **resource**
- Emerging technologies are creating alternative uses
  - Energy
  - Fuels
  - Reusable products
- Each waste item has value
- Landfills become obsolete



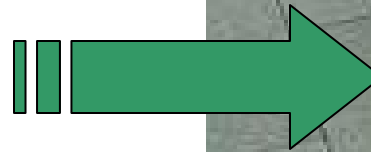
# We're ready

- Already keeping pace with progressive practices
- Here's three ways .....

## Promotes recycling and reuse of “resources”

1

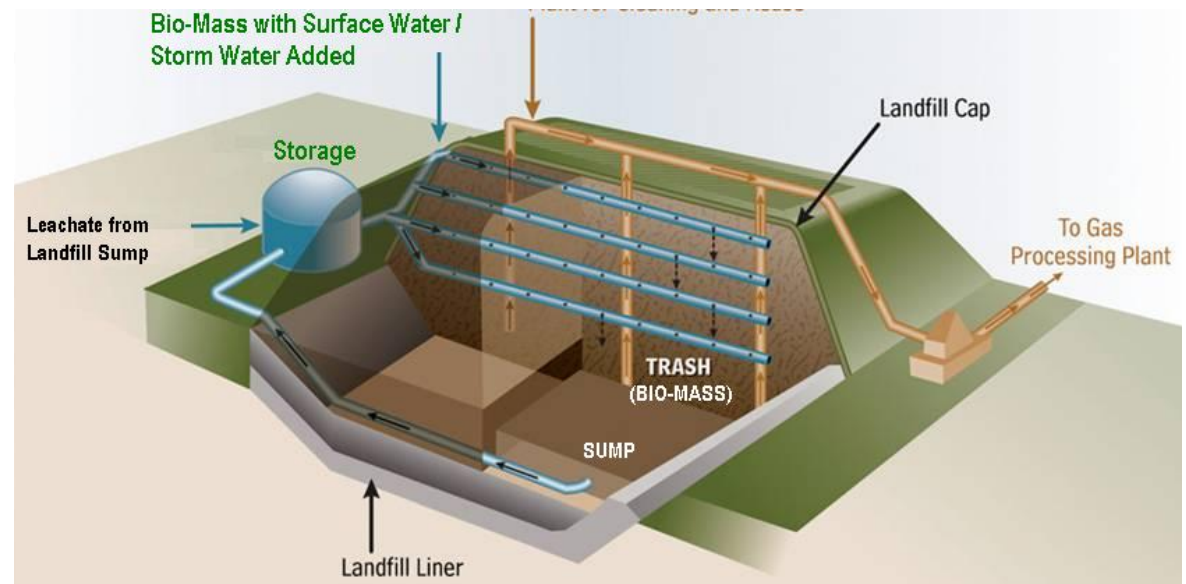
- 136,250 tons diverted FY10
- Old pavement
- Tree limbs & brush
- Scrap tires



# We're ready

- Already keeping pace with progressive practices
  - Applies biotechnology practices
    - Accelerates trash decomposition
    - Creates additional waste space

2



# We're ready

- **Already keeping pace with progressive practices**
  - **Generates “green energy” from landfill gas**
    - Protective of air quality
    - Provides fuel – sufficient to heat 25,000 homes each year
    - FY10 royalty of \$1.6m

3



# Preparing for the future

## Landfill has an ample capacity

- Current life is **45 years** remaining
- Additional **47 years\*** available bringing the total to 92years

**Technology** (now and future) **will make good use of the resource stream – and leave landfill space unused**

- \* **Biotechnology = 10 years**  
**New landfill space = 37 years**





# Landfill will take on new meaning

- Become “**Resource Recovery Facilities**”
  - Materials arrive are sorted, and baled
  - Baled materials marketed and sold
  - Some items will be processed in the facility to become a renewable energy source

# Preparing for the future

- **Use facility as a *storage vault***
  - Today's "wastes" are future resources
  - Capture and store these resources ***now***
  - ***Later***, recover and use ...as new technologies evolve
  - Future value may be quite extraordinary



# Preparing for the future

## Make good use of the “vault”

- Stockpile today’s resources – we have the space
- Hold for future uses, such as:
  - Waste-to-electricity projects
  - Waste-to-fuel facilities
  - Advanced recycling / re-use opportunities

## Simple to do:

- Half of Dallas’ resource stream is flowing OUT of the city – don’t let it go !
- Use ordinance authority to direct all Dallas waste resources to McCommas Bluff/Bachman Transfer Station

# Here's where our resources go now

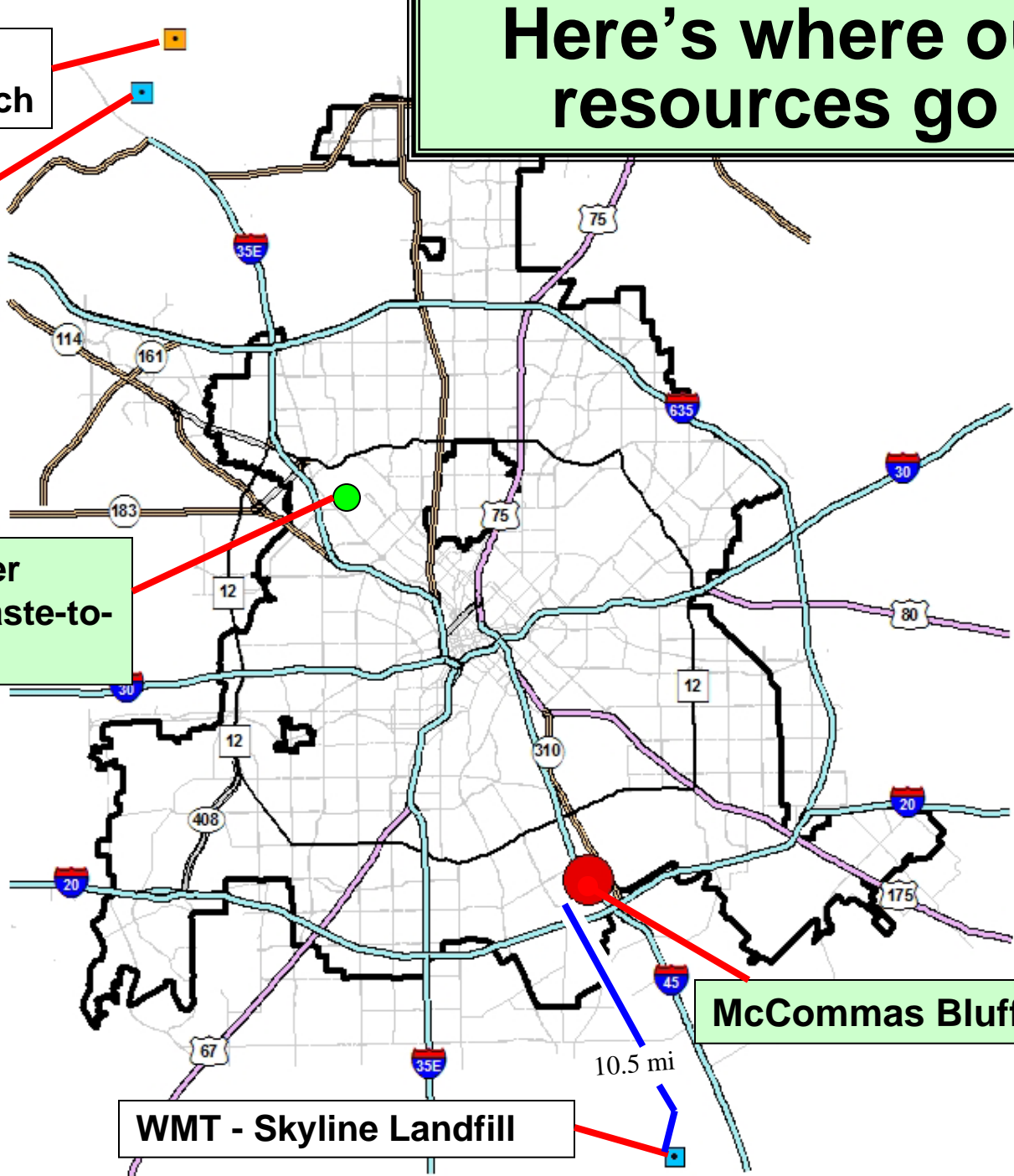
Republic –  
Farmers Branch

WMT –  
DFW Landfill

Bachman Transfer  
Station/future Waste-to-  
Energy Facility

McCommas Bluff Landfill

WMT - Skyline Landfill



# New Resource Control Ordinance

also called “*waste flow control*” ordinance

- Adopting a Resource Control ordinance means that all who collect waste within Dallas must use city facilities (i.e., McCommas Bluff landfill, transfer sites)
- About half of these **resources** are going to landfills OUTSIDE of Dallas
- New ordinance redirects the **resources** from haulers – from 1.0m tons per year to 1.9m tons/year
- **We have the obligation** to manage our solid waste materials
  - Protecting the public health and the environment
  - Maximizing all city assets to community benefit – getting the recycling and energy value from the waste resource
- **U.S. Supreme Court** reinforced this in a 2007 decision



# Financial Impacts

- **Operational**
  - **\$5m** in first year, decreasing to \$3m per year thereafter
  - Needed for:
    - equipment, manpower, infrastructure improvements, environmental monitoring, TCEQ permit changes, legal
- **Revenue**
  - 850,000 more tons annually – nearly double current rate
  - Equates to **\$18m** in additional annual revenue  
(or **\$15m** – with a Jan 2012 start date)
- **Net financial impact = \$13m to \$15m annually**

# How other cities direct the waste

- **Two primary methods** - each has benefits and challenges that may appeal or deter various communities
  - **Waste flow control ordinance**
  - **Exclusive franchise agreement**

# How other cities direct the waste

## ***Waste Control ordinance:***

**In Texas: El Paso passed ordinance in 2010 to be implemented in FY13**

### **Nationally:**

- Jacksonville, FL
- Seattle, WA
- Palm Beach Co, FL
- Snomish County, WA
- San Jose, CA
- Urbana, IL,
- Portland, OR (metro)
- Lancaster County, PA.
- Franklin Co, OH

## ***Exclusive franchise agreements:***

- Arlington, Grand Prairie, NTMWD, College Station
- Allows only one hauler – eliminating all others
- In meetings with staff, haulers voice strong opposition with this concept



# Options to consider

## **Continue with current approach**

- Others capitalize on Dallas' resources
- City then less able to implement new technologies

## **Take control of our useful resources**

- By pursuing an exclusive franchise
  - Does gain control over resources
  - Eliminates 188 waste haulers in Dallas' open market

## **OR**

- Adopt new Resource Control ordinance

# Summary

- “Waste” is a valuable resource
- Great opportunities emerging to turn trash into energy and fuel
- City can capitalize on the resources – for both immediate and long-term benefit
- Or leave it to others to utilize them



# Recommendation

- **Proceed with:**
  - Completing *resource control* ordinance for Council review
  - Anticipate a 2012 implementation date
- **Prepare the affected community**
  - Continue meeting with solid waste haulers and stakeholders
  - Collaborate to resolve concerns
- **Prepare facility to accept new resources**

# APPENDIX

## Supplementary Information

# *Resource Control Ordinance:*

## Basic Points

- All solid waste generated within city limits must be disposed at city owned or operated facilities
- Director has the authority to designate disposal sites
  - **Includes landfill and transfer stations**
- Haulers commit offense if they deposit anywhere else
- City (via SAN director) may curtail, temporarily suspend, or permanently halt any disposal violators of the ordinance
- Effective date of ordinance will allow for haulers to resolve contract matters with customers

# Industry's view of the future

## April 2011 Green Brainstorms conference

*Fortune* teamed up with its program partners—The Nature Conservancy, NRDC, and the Environmental Defense Fund—to gather "the smartest people we know" in sustainability from business, government, and NGOs. This session focused on the key emerging environmental trends as well as innovative ways that companies can drive sustainability-based transformational change initiatives.

- **LAGUNA NIGUEL, CALIF.** - At the Fortune: GREEN Brainstorm kickoff Monday, Waste Management **(WM) CEO David Steiner** brought an intriguing case to light: Increasingly, **waste companies are finding more and more valuable uses for our garbage**. Steiner says that with the additional value that WM is able to pull from ordinary household trash over its competitors, one day consumers may just get paid for their waste. **"If we can extract \$100 to \$200 of value out of a ton of material, we can start paying the customers,"** he says. "It is a once-in-a lifetime opportunity. Four years ago years ago, you wouldn't have heard those words come out of my mouth"
- Hear all of the conference on: <http://www.fortuneconferences.com/brainstormgreen/>

# Industry's view of the future

From the ***New York Times***, April 12, 2010:

## **Europe Finds Clean Energy in Trash, but U.S. Lags**

“...With all these innovations, Denmark now regards garbage as a clean alternative fuel rather than a smelly, unsightly problem. And the incinerators, known as waste-to-energy plants, have acquired considerable cachet as communities like Horsholm vie to have them built...”

# Industry's view of the future

*MSW Management magazine* – June 2006

## **“The Time Has Come For Conversion Technologies”**

For as long as civilizations have generated solid wastes, the accepted disposal method has been landfilling—despite advancements in technology and environmental impacts to air and water. In Europe and Japan, new processes for treating MSW, called “conversion technologies,” are being widely implemented. Many of these facilities are in operation, and others are under construction. Conversion technologies use advanced thermal, biological, or chemical processes to convert the carbon-based portion of the MSW stream into useful products, including electricity, renewable or “green” fuels, or chemicals.

### **Conversion Technologies 101**

Conversion technologies (CTs) include a wide range of processes that can be categorized into thermal, biological, and chemical technologies (some approaches involve combinations of these). Thermal CTs are well developed overseas, and include gasification, pyrolysis, and subsets of these, such as plasma gasification and processes that combine gasification and pyrolysis.

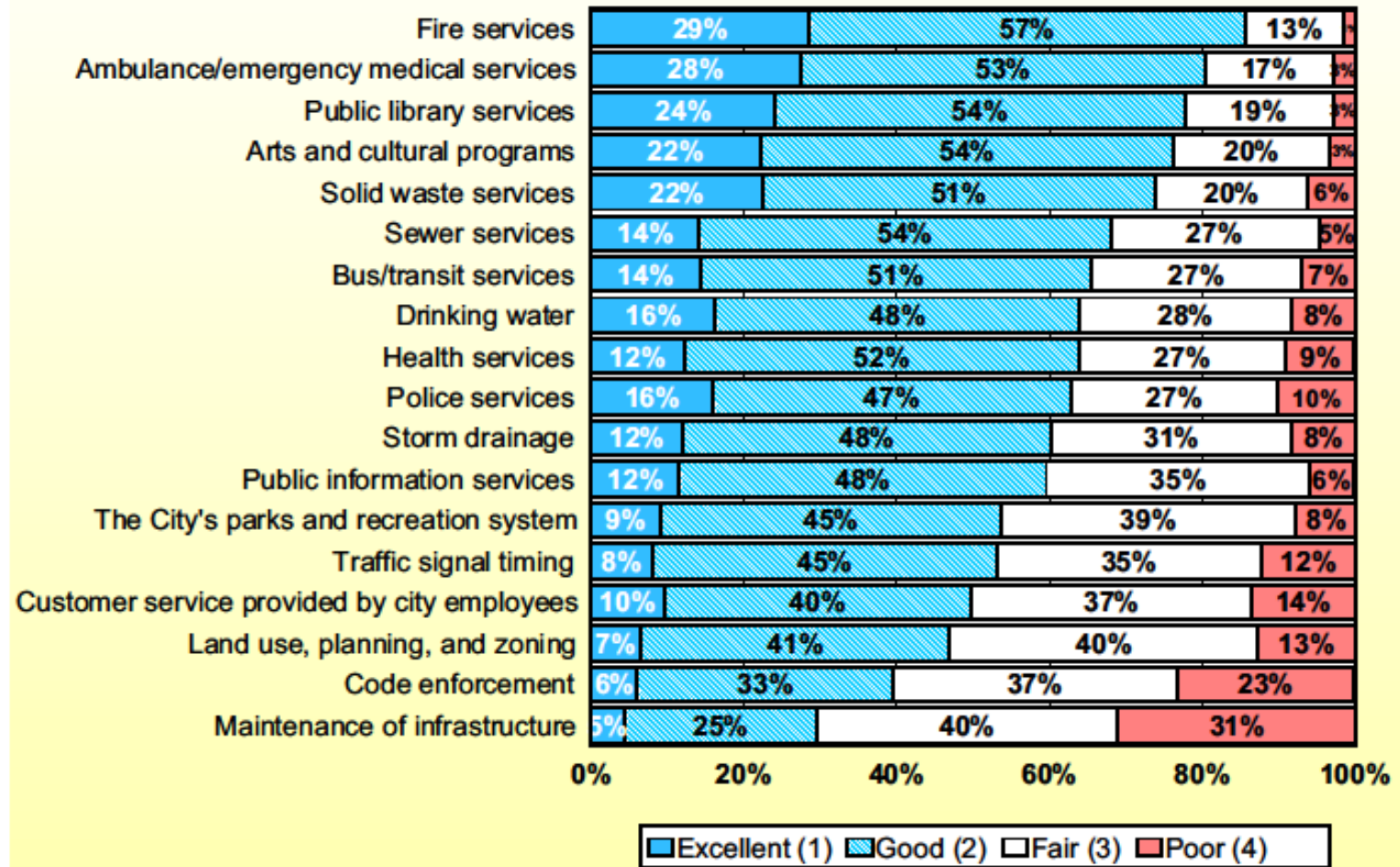
**Pyrolysis** is the thermal degradation of organic materials, using an indirect source of heat at 750-1,650 degrees F in the absence of oxygen, to produce a synthetic gas, leaving behind a carbon char.

**Gasification** is the thermal conversion of organic materials, using direct heat at 1,400-2,500 degrees F with a limited supply of oxygen, producing a syngas.



## Q7. Ratings of Major Categories of City Services

by percentage of respondents who rated the item as a 1 to 4 on a 4-point scale (excluding don't knows)



Source: ETC Institute (February 2009)

ETC Insitute (2009)