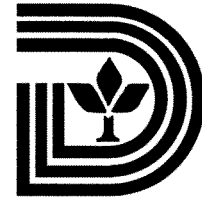


Memorandum



CITY OF DALLAS

DATE December 11, 2009

TO Honorable Members of the Budget, Finance & Audit Committee: Jerry R. Allen, Chair; Ann Margolin, Vice Chair; Delia D. Jasso, Vonciel Jones Hill, Angela Hunt, David A. Neumann, Ron Natinsky

SUBJECT **McCommas Bluff Landfill Briefing**

Attached is the briefing requested on the topic of McCommas Bluff Landfill. This briefing will be presented by Sanitation Services to the Budget, Finance & Audit Committee at 9:30 a.m. on Monday, December 14, 2009.

Please let me know if you need additional information.

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

Ryan S. Evans
First Assistant City Manager

Attachment

- C: Honorable Mayor and Members of the City Council
 - 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
 - David K. Cook, Chief Financial Officer
 - Mary Nix, Director, Sanitation Services
 - Helena Stevens-Thompson, Assistant to the City Manager

McCommas Bluff Landfill

Briefing for:
Budget, Finance and Audit Committee
14 December 2009
Ron Smith, SAN Assistant Director





McCommas Bluff Landfill

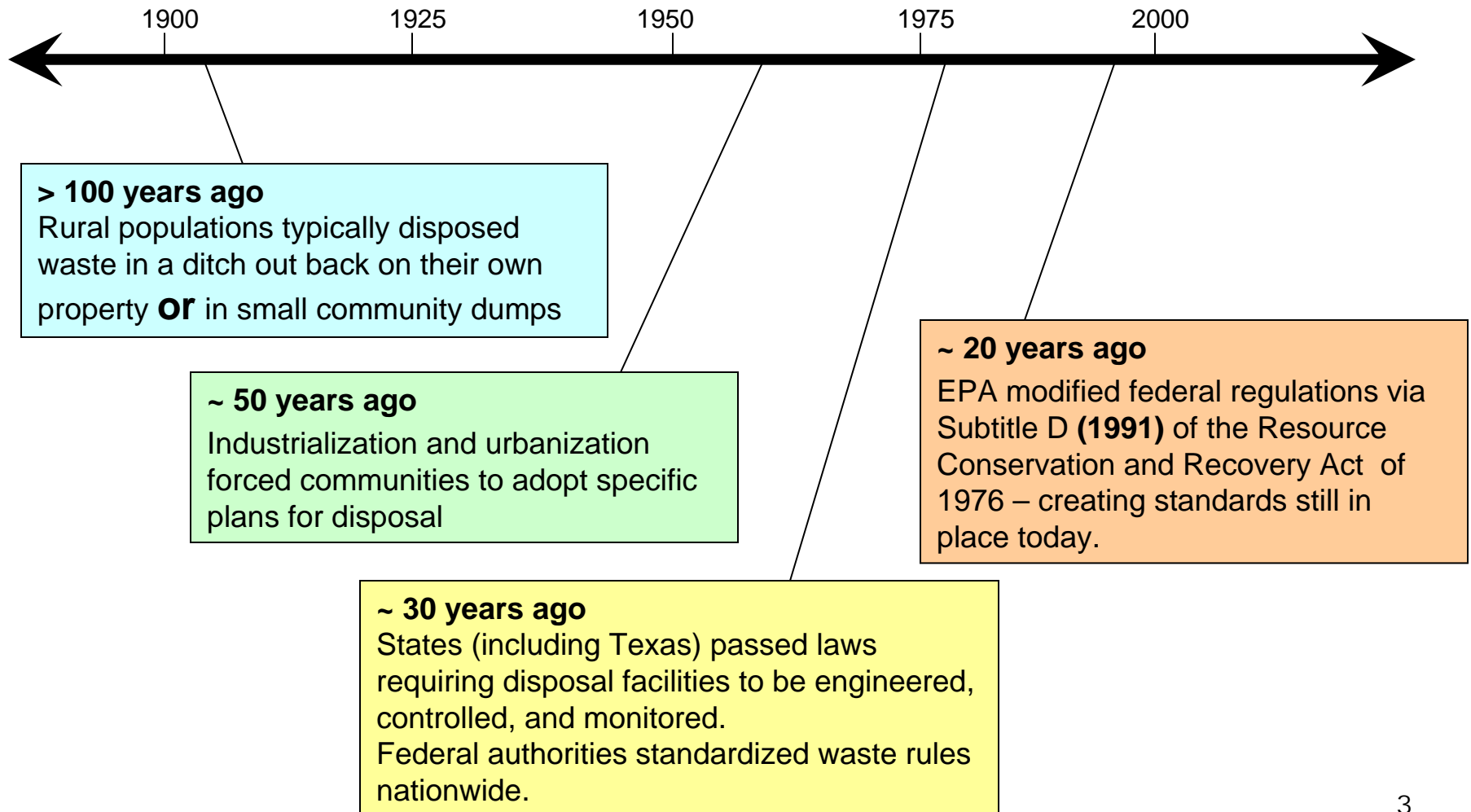
The landfill is a valuable city asset that meets a basic need of our citizens – the **safe** and **efficient** disposal of solid waste.

It is a large, on-going and developing site, well-planned and operated to last for many decades – possibly as long as Dallas needs disposal space.

This briefing will tell the story of how this landfill came to be, how we operate it, and where we're going in the future with it ... starting with a little history of waste disposal.

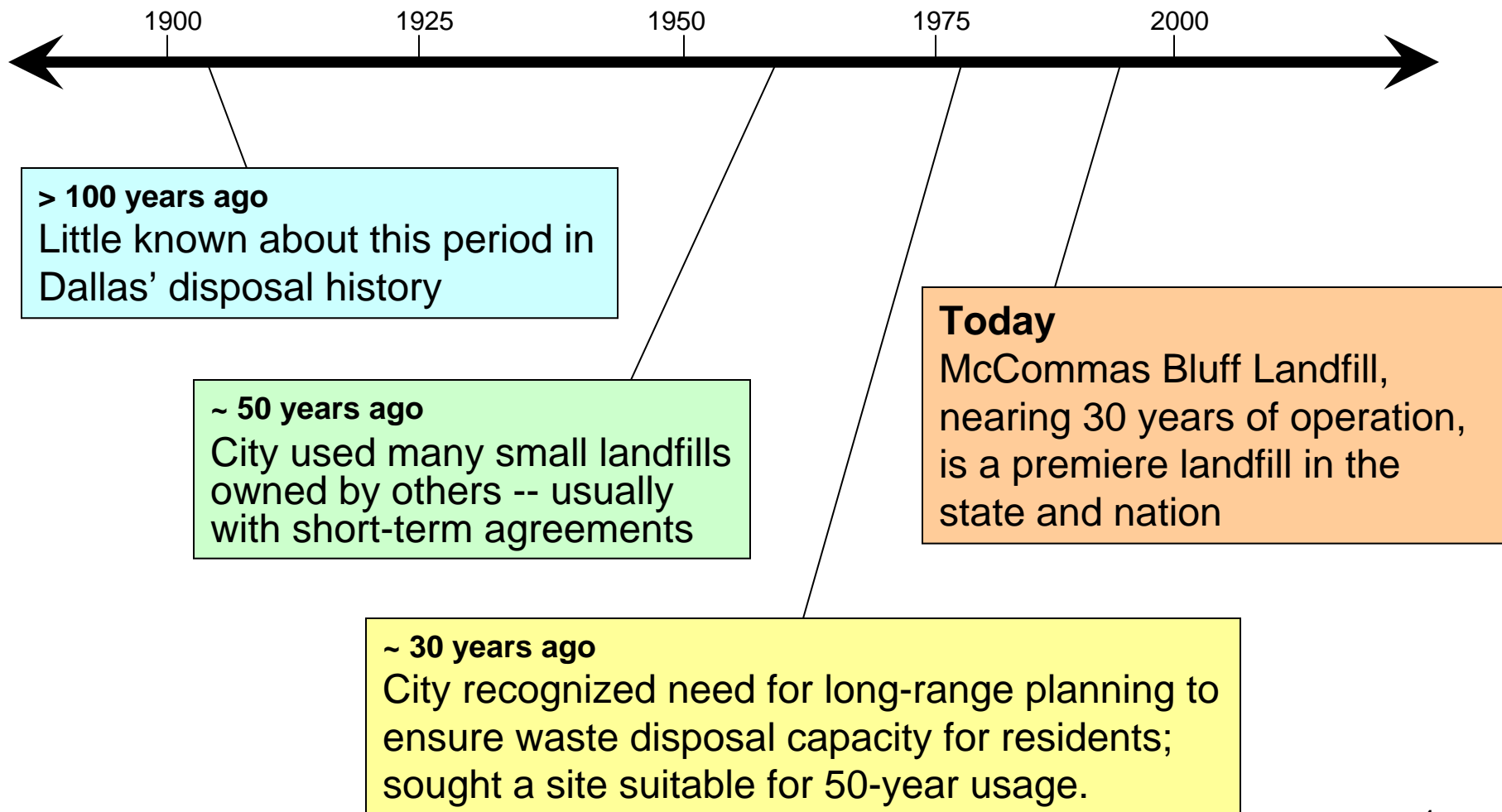
How We Got Here:

Waste disposal history in the U.S.



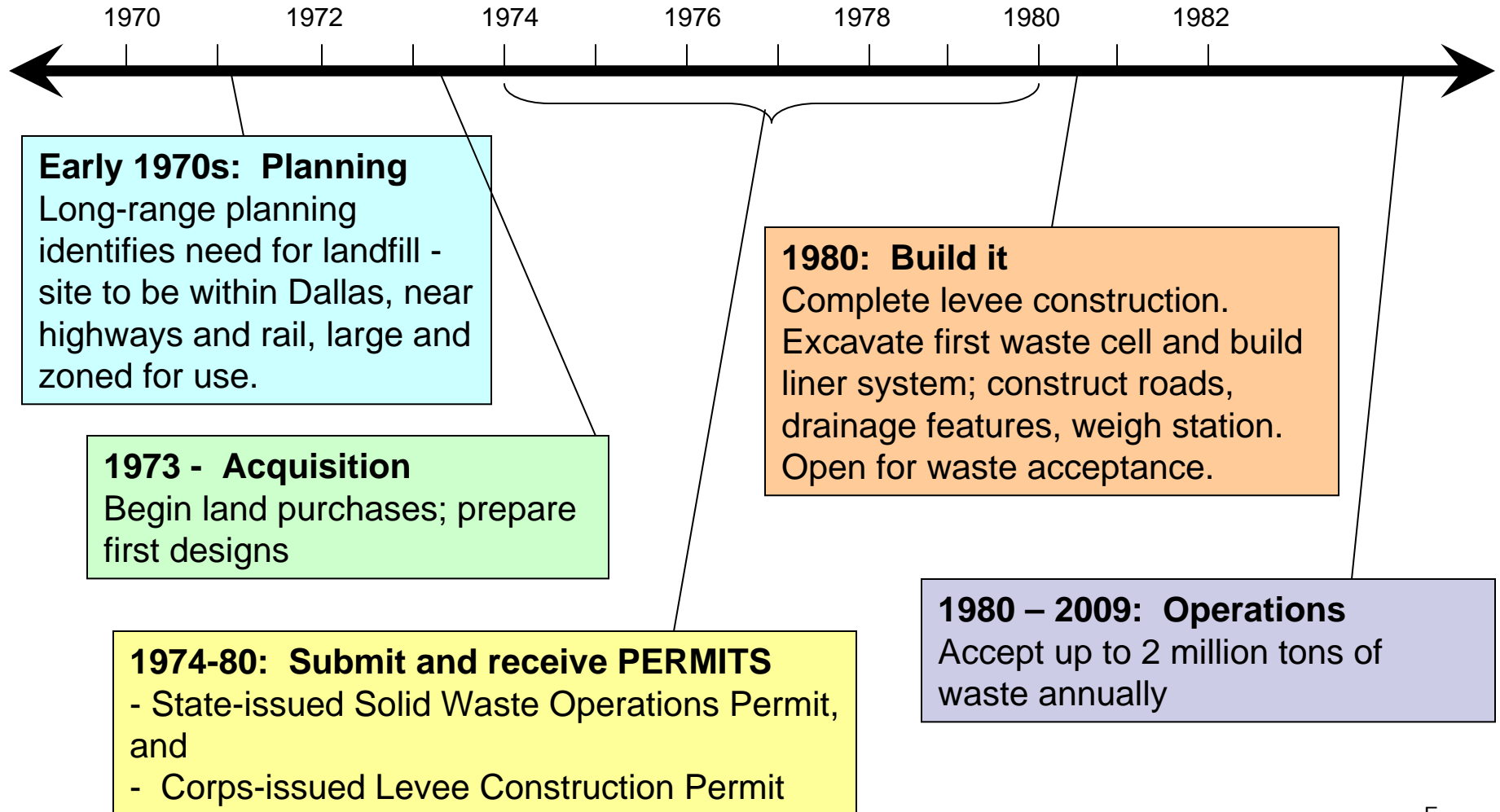
How We Got Here:

Waste disposal history *in Dallas*



How We Got Here:

The McCommas Bluff timeline



How We Got Here:

A landfill is not a “dump”

What makes a landfill different ?

Planning:

Landfills require long-range planning (similar to airports and & water supply)
Site selection, zoning, property acquisition are among the tasks requiring 3-10 years

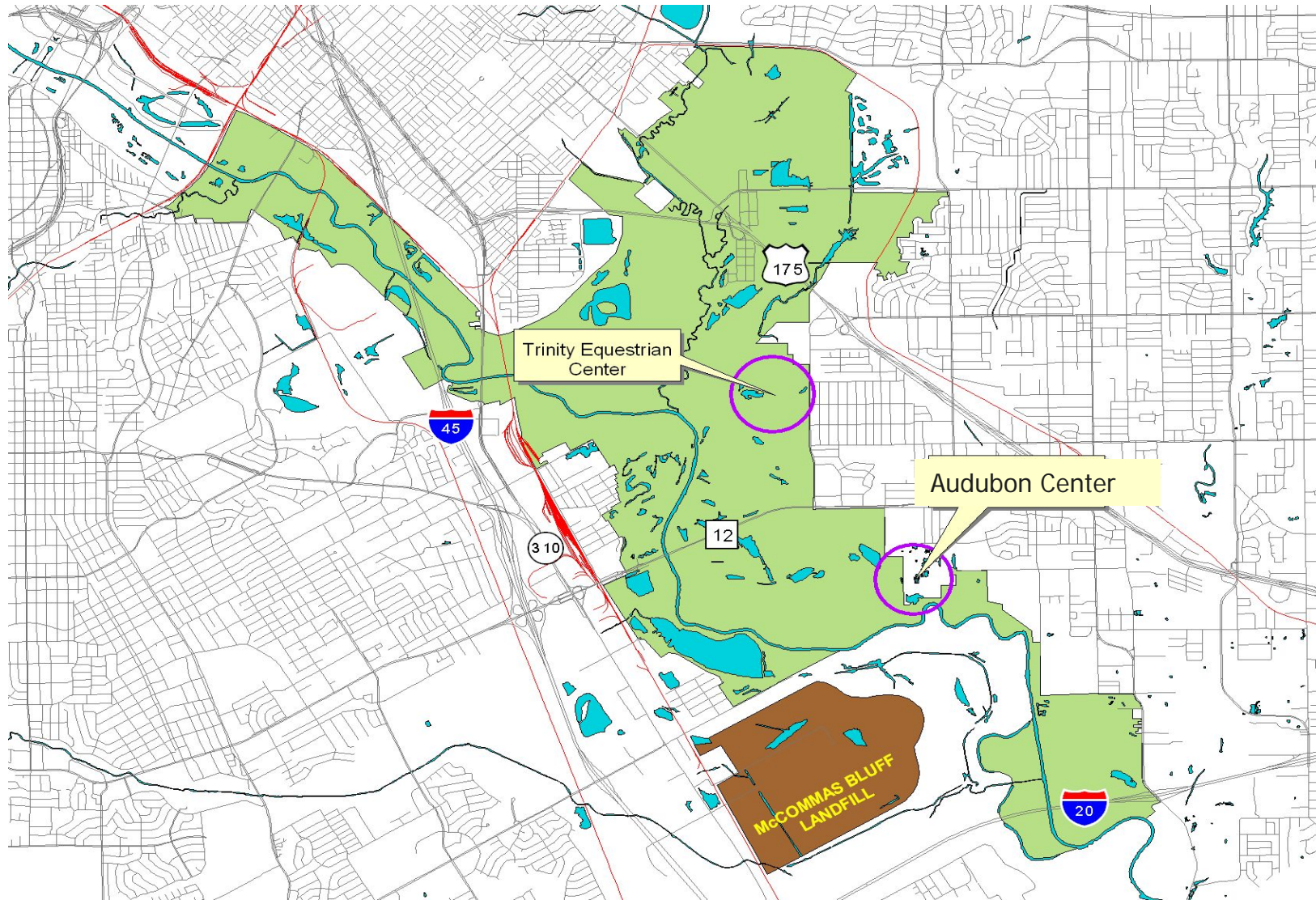
Engineering:

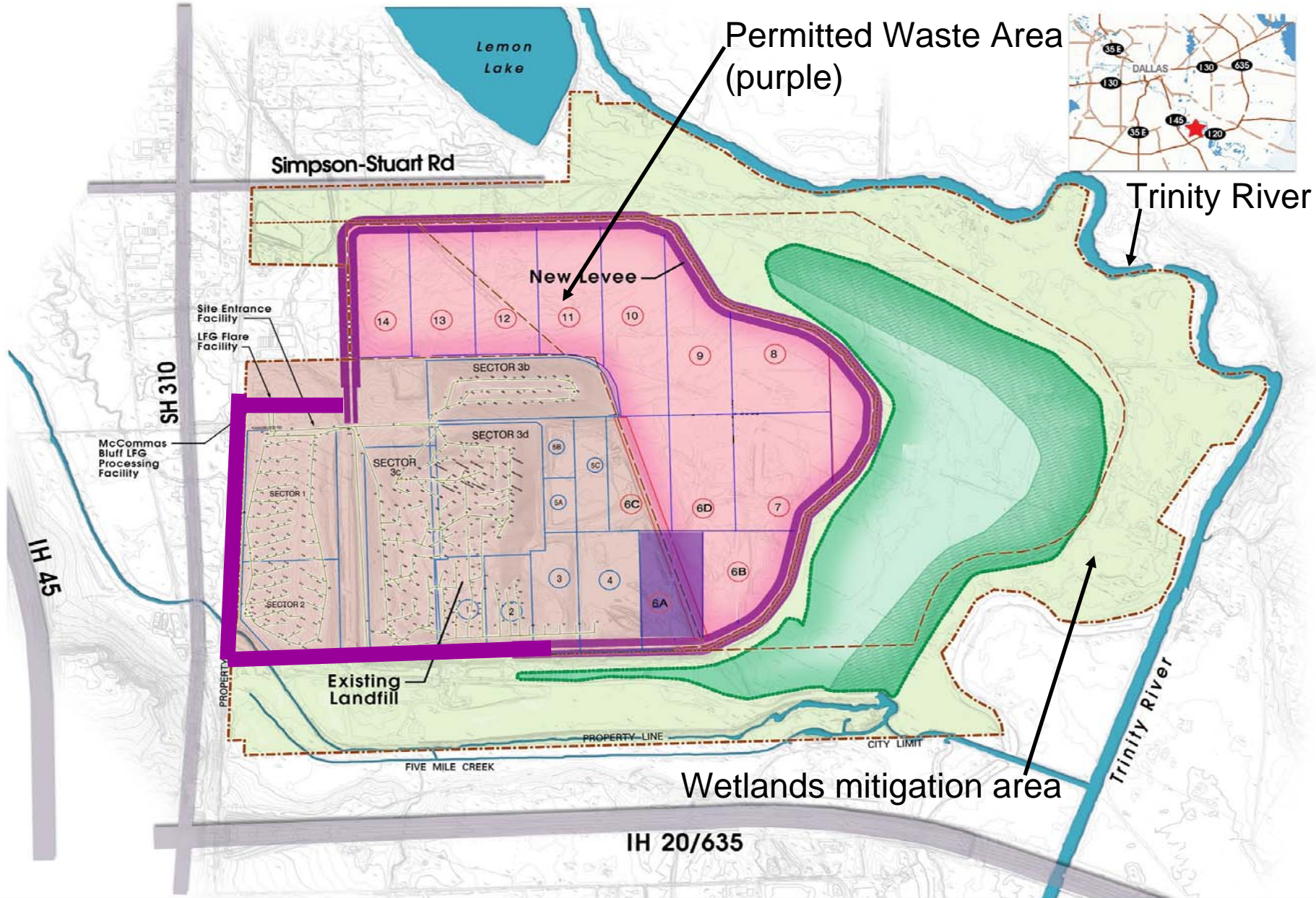
A landfill is an engineered facility – essentially, it's one large Public Works project that spans decades of design, construction and operations ... building a series of waste cells, roads, drainage features, slopes and berms, pump systems, and so on

Rules:

Landfills must adhere to strict federal, state, and local solid waste rules and protocols; must conduct rigorous environmental monitoring tasks to maintain compliance, must pay significant fees to state agencies who verify proper operations

McCommas Bluff Landfill in the Trinity Corridor





What We Do Here:

Waste Disposal for our Residents

The primary purpose is to serve the disposal needs of Dallas residents:

- Residents generate about 600,000 tons of waste annually
- Landfill capacity can serve just that need for **120 years**
- New technologies should replace landfills within 50 years
- McCommas' surplus capacity can provide much needed disposal capacity for commercial customers
- So ... we use what we can and sell the rest !



What We Do Here:

Waste Disposal for Others

The secondary purpose is to serve any other disposal needs, as a business venture

- Commercial waste haulers need landfill disposal space
- Dallas fulfills commercial demand with surplus capacity



- FY09 usage from commercial haulers: 1.1M tons
- City balances commercial usage with residential needs – using an annual capacity review and evaluation
- Landfill revenues contribute to Dallas' financial stability
- Everybody wins!

What We Do Here:

Reuse and Recycle

Waste Diversion: Recycle it !

- **Concrete:** diverted, crushed, and reused (**25,000 tons per year**)
 - *Reuse as gravel substitute for landfill haul roads*
- **Brush:** diverted, ground, and reused (**15,000 tons per year**)
 - *Reuse as slope protection and wet-weather platform base*
- **Old Tires:** diverted to vendor (**500 tons per year**)
 - *Reuse as aggregate for biotech fluid dispersion system*
- **Glass, Plastic, Metals:** diverted to processor (**100 tons per year**)

Beneficial Reuse: Use it a second time !

- **Asphalt:** from street re-surfacing projects (**7,000 tons per year**)
 - *Reuse as gravel substitute for landfill haul roads*
- **Clean Soil:** from various contractor sources (**16,000 tons per year**)
 - *Reuse as soil cover, berms, haul road base*

What We Do Here:

Energy Recovery

Landfill Gas as a Renewable Energy

Dec 1994: City signs 30-year lease with EcoGas

Mid-1996: Initial gas wells installed, flare utilized
(well-field and flare cost: \$2.0M)

Jun 1998: Gas plant constructed to process gas
(plant financed using private funds at \$14.0M)

Today's Status

- *Dallas Clean Energy* is current lessee
- **5 million cubic feet** of landfill gas collected each day
 - Plans to triple that volume by 2014
- Gas plant “cleans” the gas and sells at market – a quantity that could heat 35,000 homes annually
- Dallas receives royalty on sales - \$1.2M annually, starting Dec 2008

What It Costs/Earns:

Landfill's FY10 Budget Summary

Expenses

Item	Expense
Labor	\$5.6 M
Equipment & Supplies	\$7.5 M
Utilities, Fees, etc.	\$4.6 M
Total:	\$17.7 M

Revenues

Source	Revenue
Commercial Hauler Fees	\$23.5 M
Commercial Hauler Franchises	\$2.5 M
Residents' Monthly Bills	\$5.8 M
Landfill Gas Sales	\$1.2 M
Total:	\$33.0 M

Net Contribution
to
General Fund

\$15.3 M

Portion of the residents' monthly Sanitation fee allocated to dispose of residential waste

What It Costs/*Earns*:

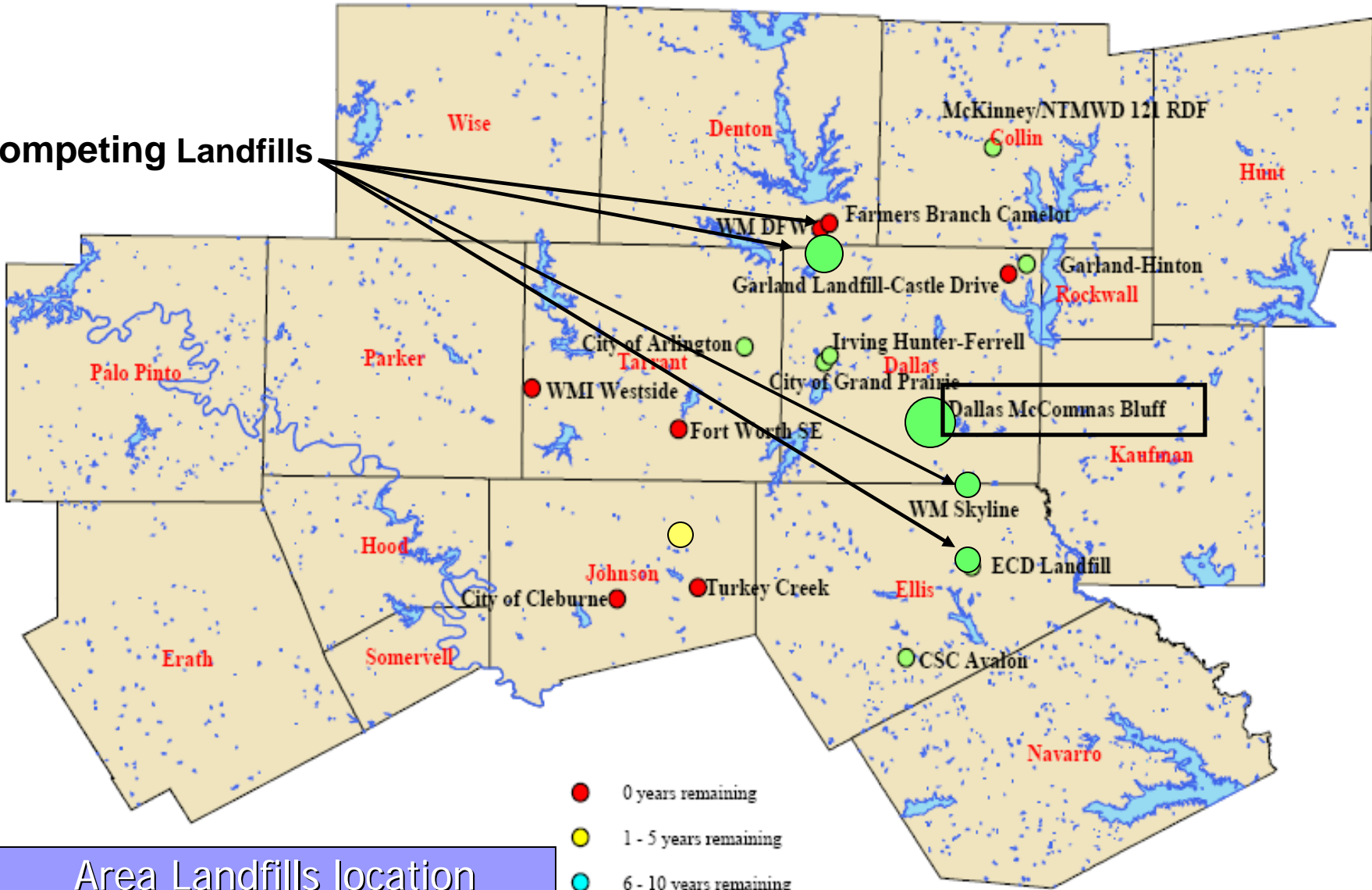
Landfill Market Analysis

- McCommas Bluff's **secondary** purpose – meet the needs of Dallas' commercial haulers, as a business venture
- Price the commodity (landfill waste space) based on market analysis
- Recognize that DFW area has ample waste capacity for the next 10 years – then dwindling capacity thereafter

Landfills with Competitive Range				
Site	Operator	Fee * (per ton)	Annual Tons	Est'd Life (years)
McCommas Bluff	City of Dallas	\$ 21.00	1,750,000	47
Skyline	Waste Mgmt	\$ 29.73	1,000,000	25
DFW Lewisville	Waste Mgmt	\$ 23.50	1,400,000	11
Farmers Branch	Republic Waste	\$ 25.50	350,000	14
121 Regional	Republic Waste	\$ 31.00	650,000	102
Hinton	City of Garland	\$ 35.00	450,000	39
Grand Prairie	City of Grand Prairie	\$ 36.00	200,000	35
Hunter Ferrell	City of Irving	\$ 40.00	175,000	44
ECD (Ellis County)	Republic Waste	\$ 24.00	130,000	230

* Highlighted fees indicate that Operator offers discounts (up to 30%)

Competing Landfills

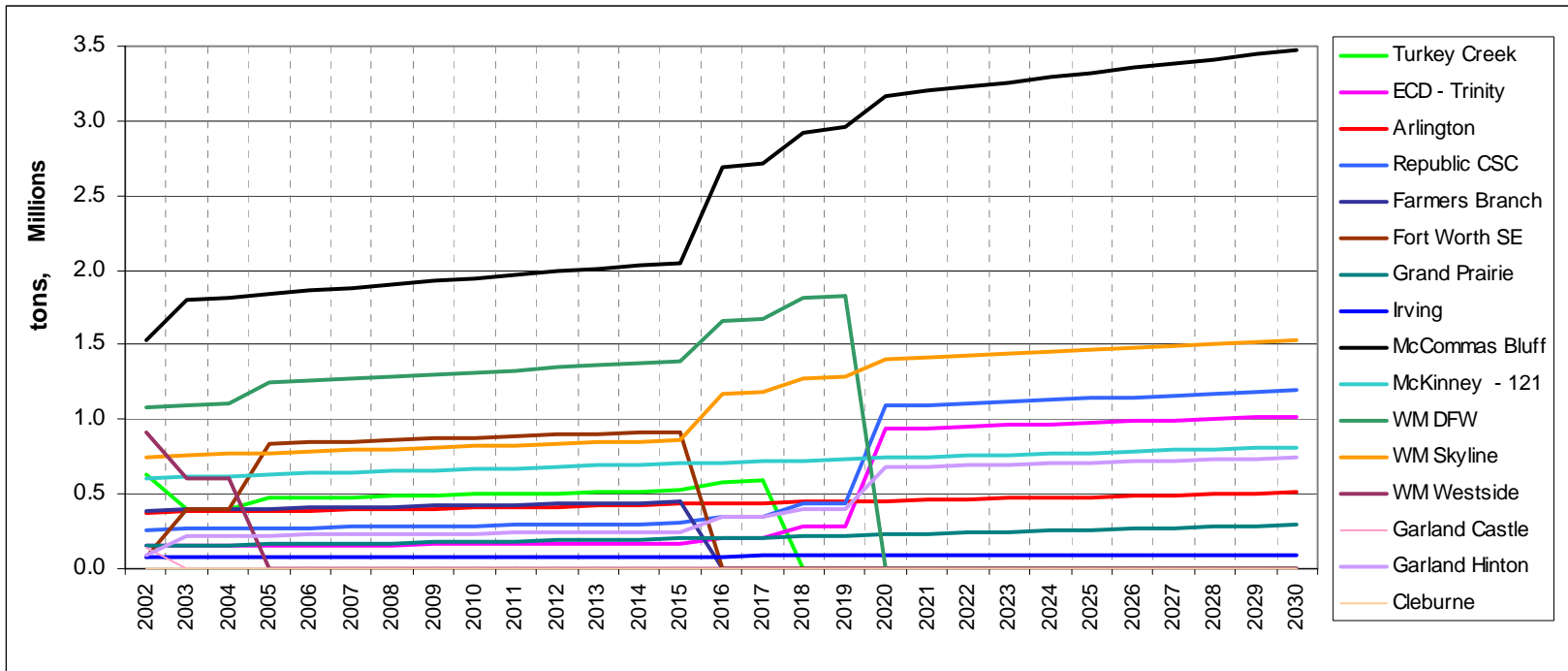


Area Landfills location and their remaining life
2003 NCTCOG report

- 0 years remaining
- 1 - 5 years remaining
- 6 - 10 years remaining
- >10 years remaining

What It Costs/Earns:

Landfill Market Analysis



According to a NCTCOG study conducted in 2003, McCommas' capacity will be essential to meet the DFW area's waste disposal needs for the long-term.

What It Costs/*Earns*:

Landfill Revenues

- Dallas area disposal rates: \$15 and above
 - Most cities raise the fee to conserve landfill capacity
 - Some rates up to \$40/ton

- McCommas' Gate Rate: **\$21 / ton**
 - Ample capacity at this site
 - Competing landfills charge \$15-\$28
 - Dallas offers volume discounts via **disposal contracts**
 - Discount based on quantity and contract period
 - Rates range from \$17.16 to \$18.43 under contracts
 - Keeps revenue stream more predictable
 - 29% of commercial tonnage under contract

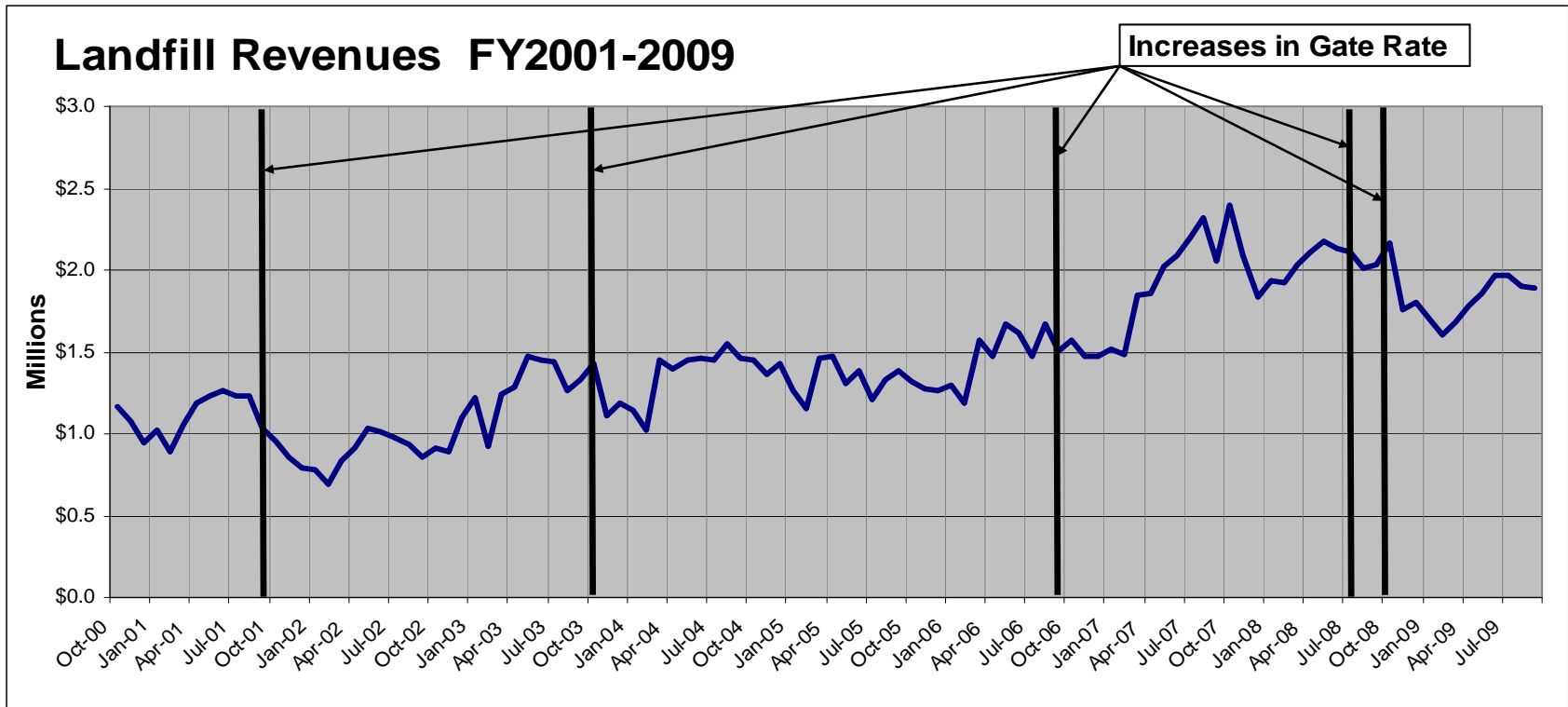


What It Costs/*Earns*:

Landfill Revenues

- Changing the landfill fee
 - Highly competitive marketplace
 - Four landfills within 30 miles of McCommas
 - Haulers switch from one site to another easily
 - McCommas advantages:
 - Readily accessible location
 - Well-managed site
 - Broad hours of operation

- Sensitivity of rate changes
 - McCommas acts as pricing anchor
 - Rate increase sets off loss of customer
 - Other sites adjust prices upward, subsequently
 - **Market-share recovery requires 6 months or so**



Notes:

- 1) Following a gate rate increase, landfill revenues fall for 4-6 months. Recovery to the previous revenue level requires as much as a year, depending on the local economy.
- 2) Other landfills respond to McCommas' rate increases by attracting commercial haulers with unchanged rates, and seek extended agreements to keep the revenue stream.
- 3) The City should secure more the commercial waste stream through disposal contracts (now at 29%) before hiking the gate rate.

Franchise Fees as a Revenue Source

- Prior to the franchise system the city utilized individual vehicle and container permits.
 - Proved to be labor intensive
 - Very time consuming to manage
- Transitioned to a Franchise system for all solid waste haulers January 2007
 - More efficient
 - More revenue



Franchise Fees



■ Background

- Change from “permit system” to “franchises” for efficiency, better oversight of haulers, and increased revenue
- Solid waste haulers operating in Dallas must have a franchise, effective 2007. Council awards individual franchises, with a term of 20 years plus four 5-year extensions (up to 40 years total)

■ First franchises awarded in Jan 2007

- 180 haulers now franchised; additional haulers awarded when identified and educated on the requirement
- **\$2.5M** in annual fees collected in FY09 (vs. \$1.6M using permit system)
- Many smaller haulers resisted the requirement
 - New system – needed to adjust bookkeeping and rates
 - Concerned about remaining competitive

■ SAN arranged for Auditor to audit franchisees, beginning after the first year’s reports from haulers

Franchise Fees, cont'd

- Auditor followed up, as planned

- Audited nine waste haulers
- Representing 85% of revenue stream

- Auditor found:

- Haulers tried to follow ordinance properly for reporting and paying fees
- Seven underpaid; two overpaid
- Discrepancies were resolved – and SAN invoiced and collected the unpaid balances
- SAN and Auditor to continue audits to ensure accuracy of hauler payments to city





What the Future Holds:

Continuous improvement . . .

- Continue good stewardship of this valuable city resource

- Continue protecting the environment with prudent waste management

Innovate . . .

- Accelerate landfill gas production using Biotechnology techniques

- Increase recycling and diversion to retain surplus waste capacity for sale to commercial market

- Implement composting as additional diversion option

- Propose landfill capacity increase – for longer-term benefits to community

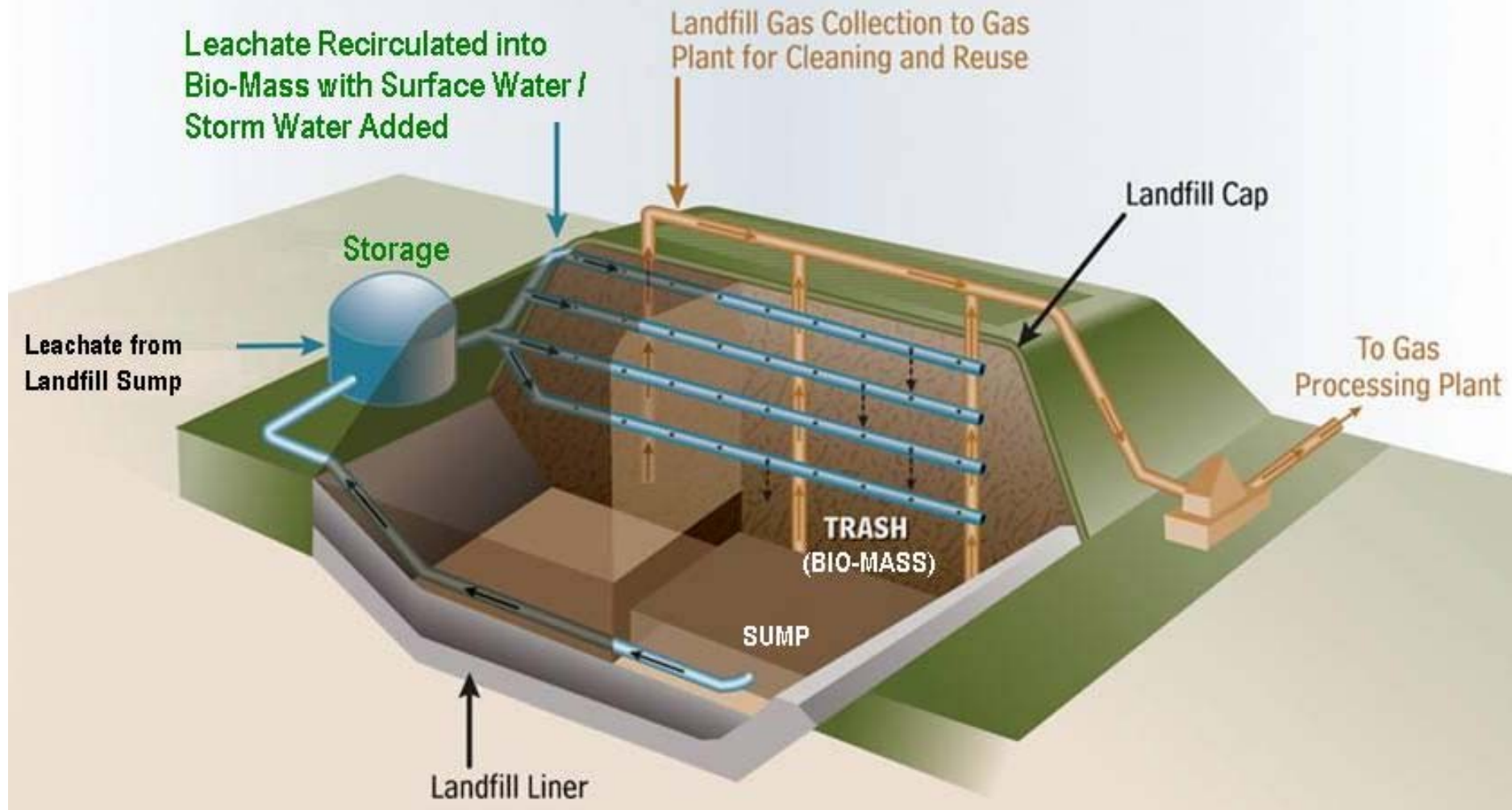
What the Future Holds:

Innovation.....

Landfill Biotechnology

- A means to optimize landfill capacity and gas production
 - First in the state of Texas
 - Add liquids to the waste to accelerate decomposition
 - Results in faster settlement
 - Can re-use the same waste space
 - Reduces need for new cell construction (\$4M every 2-3 years)
 - Accelerates gas production, generates gas royalties sooner
 - Becoming a model site for industry, researchers and regulators to gather and share information nationwide

What does Landfill Biotechnology look like?



Summary

- Landfill is a valuable asset because of its size, location and disposal capacity
- Landfill produces positive net revenue to General Fund of about \$10M -15M annually
 - Revenue is primarily from commercial haulers who pay market-based rate
- New technology is generating “green energy” and valuable reclaimed capacity

