

# Waste Cell 6A Construction Contract

## McCommas Bluff Landfill

**Briefing for: Quality of Life Committee**

**Presenter: Ron Smith, Assistant Director Sanitation Services**

**Date: January 8, 2007**

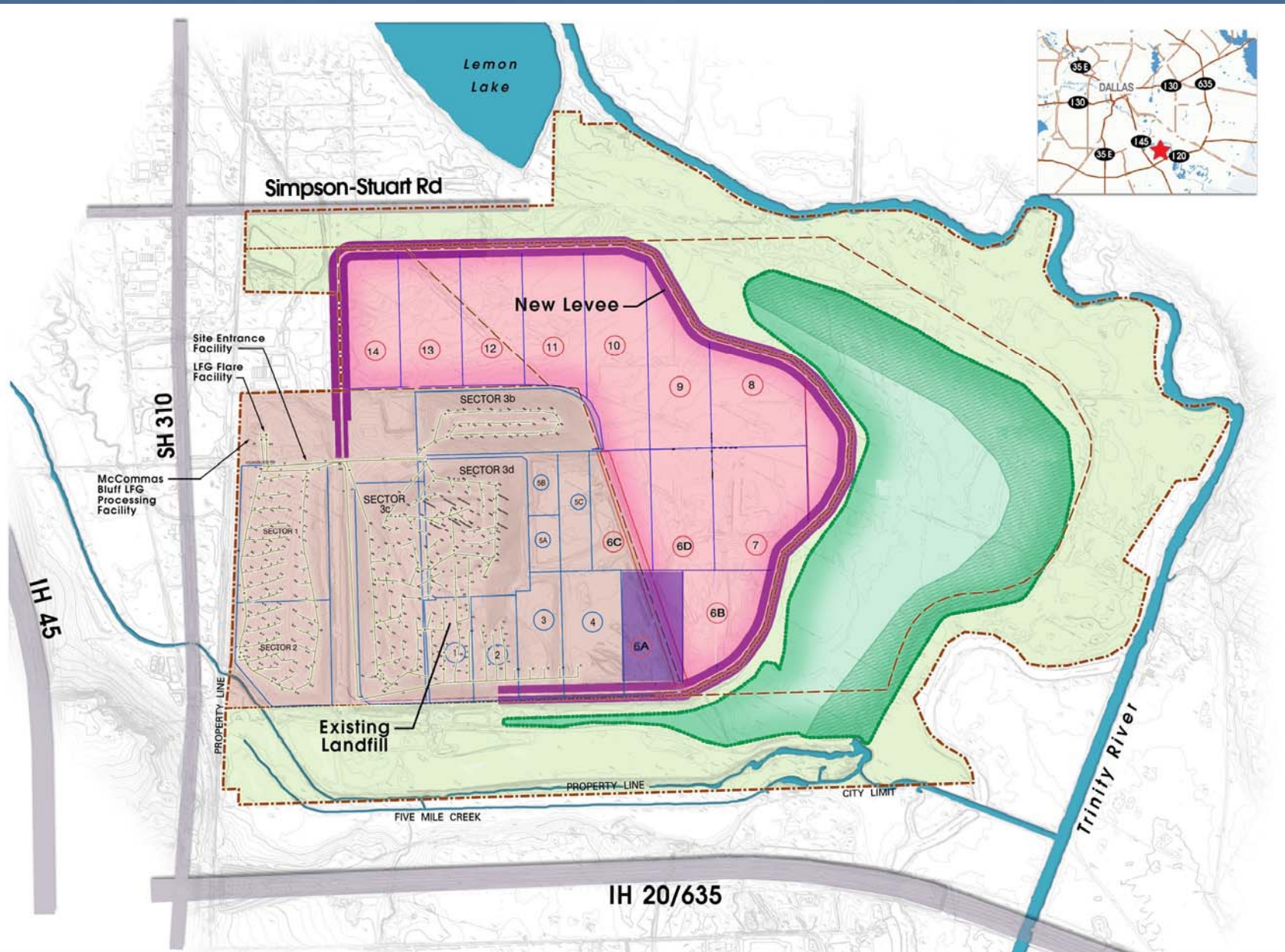
# Purpose of Briefing

- Prepare committee members for Council action of January 24 – proposed contract award
- Re-familiarize committee with landfill features and development

# Background Info

- McCommas Bluff Landfill
  - large site with 996 acres for waste
  - Accepts 1.8M tons annually – largest in Texas
  - Produces revenues from commercial haulers (\$16.6M in FY06)
  - Opened in 1981; projected life to 2050
  - About 30 percent space used
  - Construct new waste cells every 2-4 years
  - Cell 6A scheduled for use in Oct 07
- Using latest technology to maximize asset





# McCommas Bluff Landfill

March 30, 2006



# Advancing Technologies

- Increase density of waste
  - Maximize use of space with tighter compaction (use of heavy compactors, minimize soil use)
- Divert reusable materials
  - Waste concrete and asphalt – use to build miles of landfill roads and drainage structures
- Use of GPS on landfill equipment
  - Improve compaction by monitoring equipment passes on waste
  - Keep waste filling at optimal lines and grades
  - Reduce need for land surveyors
  - Better predict future cell construction requirements



# Advancing Technologies, cont'd

- Use of surveillance cameras
  - Monitor various landfill activities remotely and simultaneously
  - Efficiently position resources based on customer volume & needs
  - Enhance operational safety
  - Reduce opportunity for scavenging
- Harvest landfill gas for energy uses
  - Decomposing waste produces methane & CO<sub>2</sub>
  - 5 million cubic feet of gas generated daily
  - Provides enough energy to heat 70,000 homes
  - Creates future revenue stream for City
  - Possibility of tripling gas volume with Biotechnology

# New waste cell construction

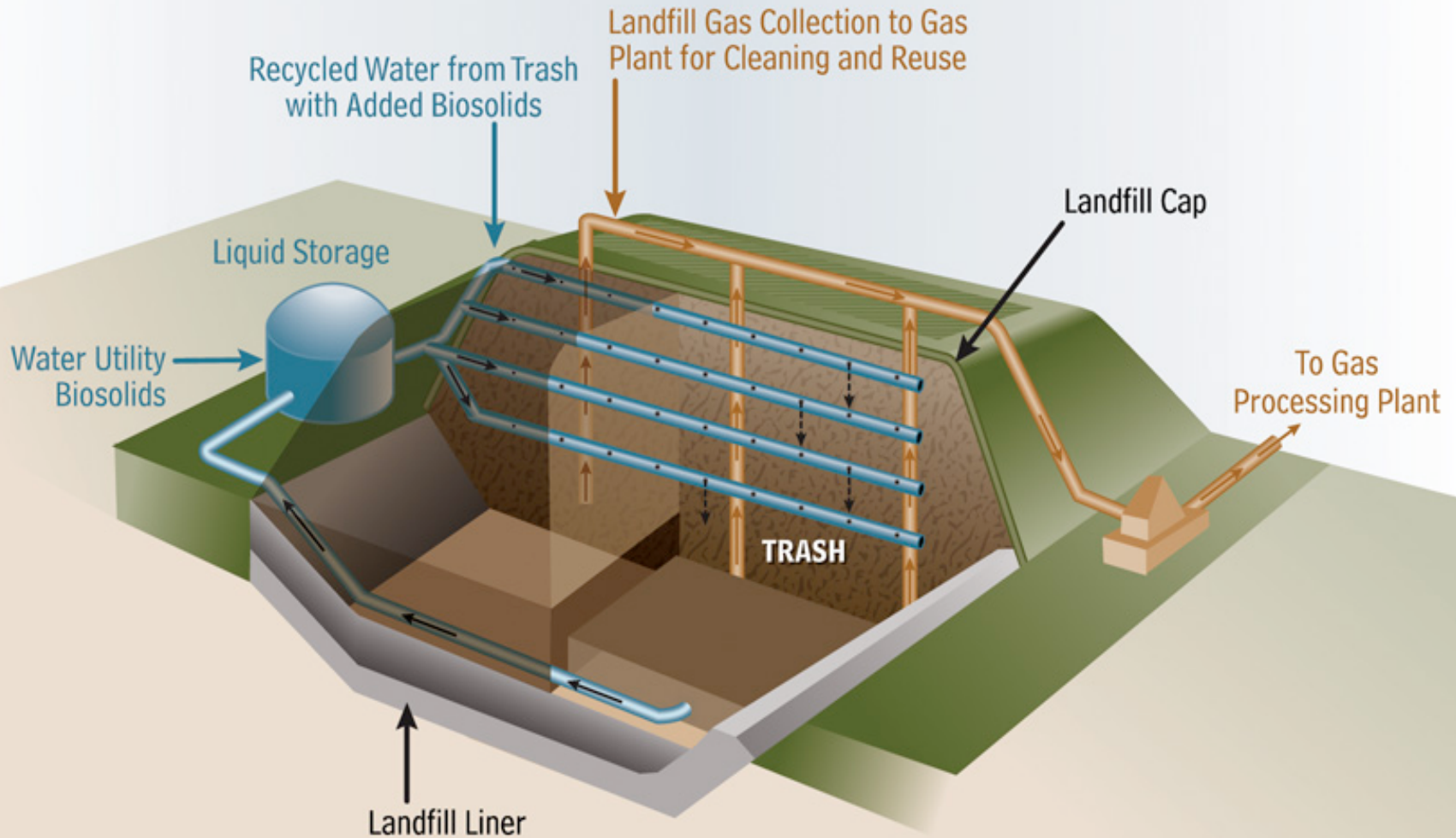
- To meet disposal needs for city's residential and commercial customers
- Cell 5 has 15 months of space now (through March 08)
  - Construction of Cell 6A requires 6-8 months
  - Provide a 6-month overlap from one waste cell to next (in case of unforeseen construction delays, weather issues)
- Cell 6A to be ready for waste in October 2007
- Cell 6A will be first cell in the landfill to use new *biotechnology techniques*

# Landfill Biotechnology

- Advancing technology to prolong landfill life and generate renewable energy
- How does it work ?
  - Build waste cell with standard liner and upgraded leachate collection system
  - Add fluids and air via recirculation conduits
  - Collect landfill gas and send to processing plant for energy use
  - See schematic



# How does it work?



# Landfill Biotechnology – Cell 6

- McCommas Bluff is first in Texas to receive TCEQ approval for additional liquid recirculation
- Direct value of using biotechnology in Cell 6:
  - Accelerated waste decomposition
    - Provides long-term stabilization of landfill
    - Up to 30% additional airspace through settlement
  - Accelerated landfill gas generation
    - Renewable energy source
    - Enhanced revenue stream for City of Dallas
    - Very attractive energy source for future industry

# Fiscal Information

- Five bidders – each provided experience and reference qualifications
- Low bid: \$3,190,846 (Rodman Construction)
  - Previous cells cost per acre: \$125,436 (avg)
  - Cell 6A cost per acre: \$112,826
- Supplementary project – to be bid separately
  - Leachate pumps and panels: \$60,000 (est.)
  - New electrical power supply: \$140,000 (est.)
  - Specialized work
  - Both items support increased need for recirculation system for biotechnology cell



# Timeline

Jan 24, 2007	Council award of contract
March 2007	Contractor mobilizes, begins construction
April 2007	TXU provides electrical power
August 2007	Pumps and Panels installed
Sept 2007	Construction complete; City submits completion report to TCEQ for review
Oct 2007	State reviews and approves cell liner
Oct 2007	Available for waste October 2007