

COUNCIL WORK SESSION
TUESDAY
AUGUST 24, 2010
2:30 P.M. – 5:00 P.M.
PLAZA LEVEL CONFERENCE ROOM

Speakers from the floor from 2:30 – 3 p.m.

1. Landfill update. (Attachment will be provided in this week's IFYI)

Prior to the date of the briefing, contact Channel 13 at 333-6922 if you have electronic presentations.

Any individual with a disability who needs an interpreter or other auxiliary aids or services for this meeting may contact the City Clerk's Office at 373-2397 or 333-6930 (TDD).



August 20, 2010

TO: Rashad M. Young, City Manager
FROM: Robert W. Morgan, Deputy City Manager
SUBJECT: Landfill Closure Financing Update

Certain areas within the White Street Landfill have to be closed over the next several years to comply with State regulations. The specific areas, closure timelines and estimated costs are summarized below:

- **Partial Closure of Construction & Demolition (C&D) Landfill, Phase II.**
 - o Phase II of the White Street C&D landfill began accepting waste in 1998 with an original permitted area of approximately 25± acres. The disposal area was eventually modified and permitted to encompass a total disposal area of 65± acres. The permit expires in 2013.
 - o Closure of 38± acres of the site will begin in FY 2010-11 and the remaining 27± acres is expected to be closed no later than the end of FY 2013-14.
 - Estimates for the partial closure costs of the 38± acres site, updated by HDR Engineering, Inc., July 2010, are **\$3,758,000**. This figure may be reduced if the State approves a demonstration project of an alternative closure method (an exposed membrane method) for approximately 15 acres, of the 38 acres.
 - City Staff estimates the closure costs of the remaining 27± acres to be approximately **\$2,211,000**.
 - Potential cost of the 65 acres is \$5,969,000
 - See the attached map for further details of the subject area.

- **Partial Closure of Municipal Solid Waste (MSW) Landfill, Phase III.**
 - o Phase III of the White Street MSW landfill is approximately 51± acres and began accepting municipal solid waste in 1997.
 - o The schedule of closure of approximately 21± acres of the Phase III landfill will be based on the approval of a permit modification by the State regulatory agency and implementation of the closure activities associated with the C&D Phase II project. The partial closure would be scheduled in compliance with State regulations and is not anticipated for several years.
 - Estimates for the partial closure costs of the 21± acre site, updated by HDR Engineering, Inc., July 2010, are **\$4,319,000**.
 - The closure of the remaining 30± acres is not required for several years and therefore is not included as part of this analysis.
 - See the attached map for further details of the subject area.

- **Total potential cost for Phase II and Phase III is \$10,288,000.**

Summary of Project Costs & Funding Options:

Solid Waste Capital Reserve & Operating Funds–
Unreserved fund balance June 30, 2010 (Preliminary estimate – unaudited): \$ 6,512,000

Landfill closures planned FY 10-11:

Partial Closure of C&D Landfill, Phase II (*may be less if alternative closure method approved)	(38 acres)	(3,758,000)*
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Future landfill closures (start date to be determined):

Partial Closure of C&D Landfill, Phase II	(27 acres)	(2,211,000)
Partial Closure of MSW Landfill, Phase III	(21 acres)	<u>(4,319,000)</u>

Estimated total closure costs for Phase II and Phase III **(10,288,000)**

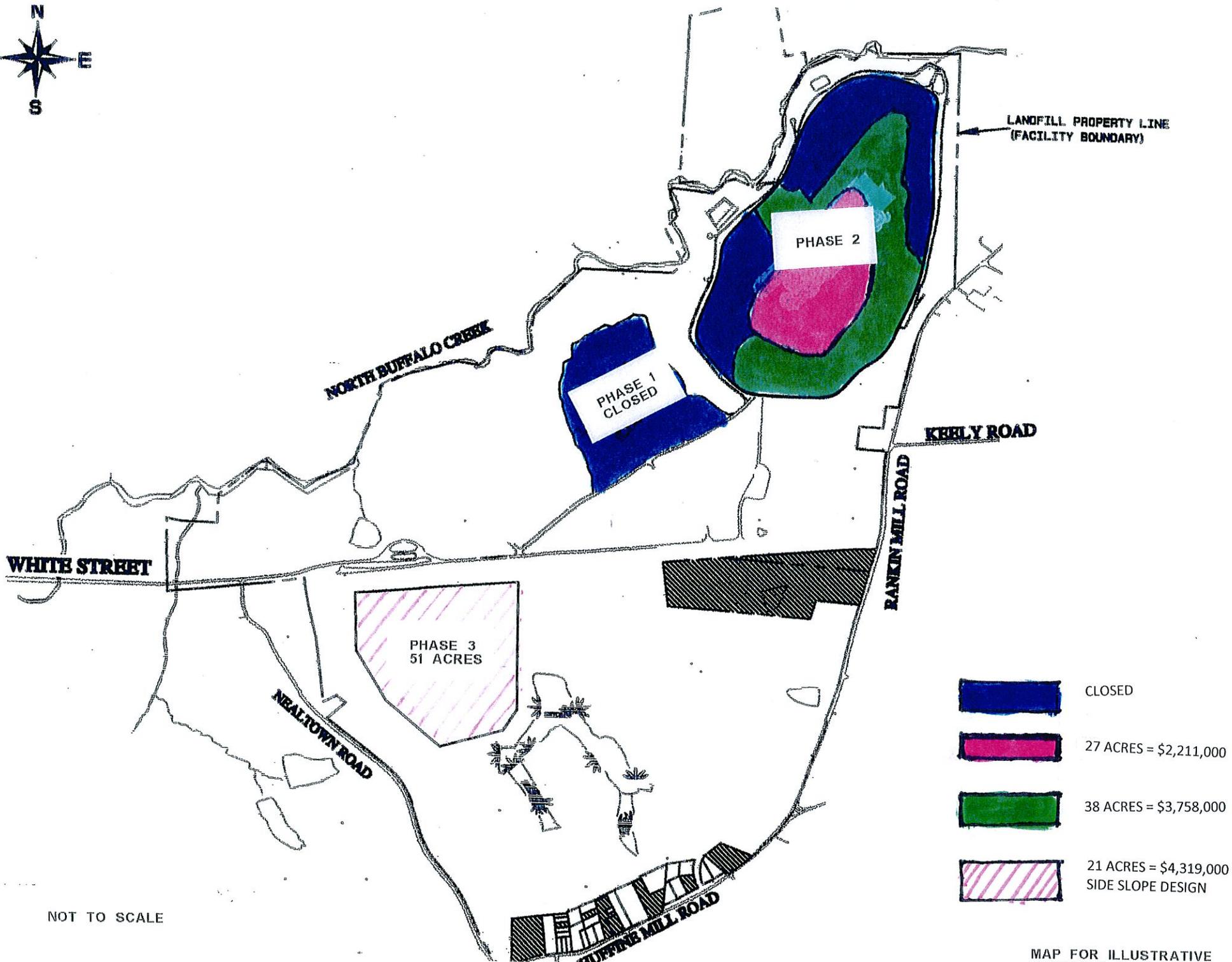
Additional Project Funds Required *(\$ 3,776,000)*

Funding options for the aggregate **\$10,288,000** in estimated landfill closure costs are as follows:

1. Available fund balances in the Solid Waste Management Capital Reserve and Operating Funds (\$6.5M) and additional General Fund transfers to the Solid Waste Management Capital Reserve Fund, or
2. Available fund balances in the Solid Waste Management Capital Reserve and Operating Funds (\$6.5M), additional General Fund transfers to Solid Waste Management Capital Reserve Fund, and issuance of Certificates of Participation, when needed, or
3. Available fund balances (\$6.5M), additional General Fund transfers to Solid Waste Management Capital Reserve Fund, and issuance of 2/3 Bonds (only available beginning FY 13-14 given current debt issuance and retirement schedules), when needed.

We are proceeding with meeting the requirements of NCDENR to commence closure activities of Phase II and plan to use available fund balances to begin this effort.

RL/nls
Attachment



MAP FOR ILLUSTRATIVE PURPOSES ONLY

**LONG TERM SOLID WASTE MANAGEMENT
INFRASTRUCTURE SYSTEM**

Proposal Evaluation
August 24, 2010

City of Greensboro

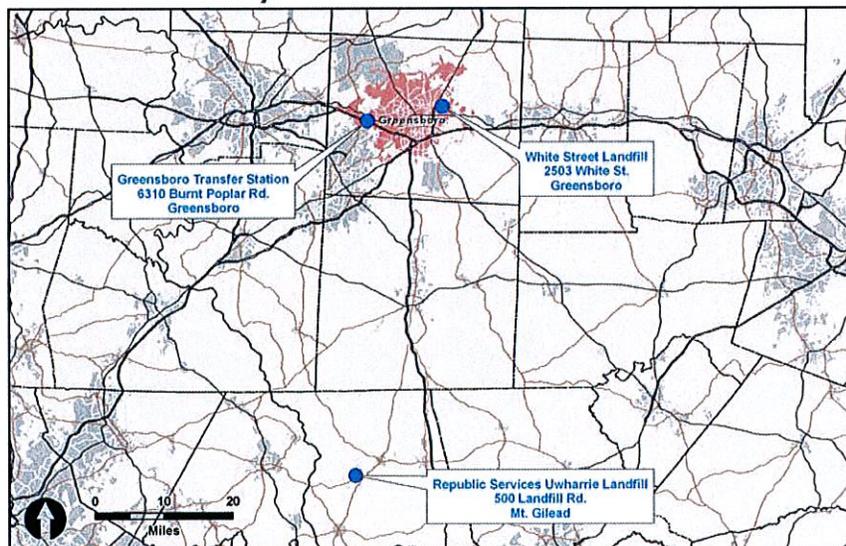
Presentation Overview

- Current Solid Waste Disposal System (5 min.)
- Summary of Proposals Received (20 min.)
 - ▣ Landfill Based Proposals
 - ▣ Energy Conversion Based Proposals
 - ▣ Proposals with Both Landfill and Energy Conversion
- Discussion of Key Issues (10 min.)
 - ▣ Policy Decisions
 - ▣ Risk Tolerance
- Next Steps (5 min.)

HDR Qualifications

- Founded in 1917
- Over 8000 Employee Owners with 185 Offices Nationwide, 170 Staff in the Carolinas
- Projects in All 50 States and More Than 40 Countries
- Leaders in Solid Waste Consulting – Ranked No. 1 in The Nation by Engineering News Record
- HDR's Solid Waste Practice Began in the 1970's with Energy Conversion Projects
- Have Provided Service to the City of Greensboro Since the 1980's
- Key Carolinas Staff:
 - ▣ Joe Reading, PE – Greensboro Project Manager Since 1994 and HDR's National Landfill Practice Leader
 - ▣ Bob Rella, PE – East Region Director of Waste Facilities, Experienced in Energy Conversion Technologies

Current System



White Street Landfill



Current System FY 2009-2010

- Approx. 240,000 tons of MSW per year (125,000 collected by City fleet, 115,000 collected by private companies) is transferred through the City's Transfer Station, hauled, and disposed of at the Uwharrie Landfill in Montgomery County
- Transfer Waste (City Ops): \$4/ton = \$1M/Yr
- Haul (HiLCo Contract): \$13/ton = \$3.1M/Yr
- Dispose (Republic Contract): \$23/ton = \$5.5M/Yr
- Total Annual Cost (Approx): \$40/ton = \$9.6M/Yr

Summary of the City's RFP

- RFP issued November 3, 2009
- Proposals received March 1, 2010
- City solicited proposals for the "design, financing, permitting, development, and operations of a long-term solid waste management infrastructure system"
- Open to "traditional and alternative waste disposal and processing technologies"
- General Evaluation Criteria – Proposed waste management strategy should:
 - Be permissible; meet zoning, comply with regulations;
 - Describe process, inputs, outputs, transportation, land area needs;
 - Engage immediately surrounding community;
 - Be proven technique; identify performance guarantees;
 - Demonstrate financial strength;
 - Be capable of managing 1,500 tons per day;
 - Demonstrate where applicable a regional implementation strategy.

Proposals Received

- Advanced Disposal Services Carolinas, LLC
- CICO, LLC
- Herzog Environmental, Inc.
- MRR Southern, LLC
- Republic Services of NC, LLC
- Ulturnagen, LLC
- Waste Connections of North Carolina, Inc.
- Waste Industries, LLC
- Waste Management, Inc.

Landfill Services Proposed

- Advanced Disposal Services Carolinas, LLC
- CICO, LLC
- Waste Connections of North Carolina, Inc.
- Waste Industries, LLC
- Waste Management, Inc.

Energy Conversion Services Proposed

- CICO, LLC – International Environmental Systems (Pyrolysis)
- MRR Southern, LLC – Novo Technology (Mass Burn)
- Ultornagen, LLC – Thermoselect (Gasification)
- Waste Connections of North Carolina, Inc. – Fulcrum Bioenergy (Ethanol)
- Waste Management, Inc.– Wheelabrator (Mass Burn)

Definitions

- Gasification - A process that converts carbonaceous materials, such as coal, petroleum, biofuel, or biomass, into carbon monoxide and hydrogen by reacting the raw material, such as household waste, or compost at high temperatures with a controlled amount of oxygen and/or steam.
- Mass-Burn System - A municipal waste combustion technology in which solid waste is burned in a controlled system without prior sorting or processing.
- Pyrolysis - A form of incineration that chemically decomposes organic materials by heat in the absence of oxygen.
- Ethanol Production – A multistep process where waste is converted to synthesis gas by gasification and then the synthesis gas is converted to ethanol by an alcohol-synthesis process.¹

	No Specific Option Proposed	White Street Landfill Only	Energy From Waste Only	Landfill/Energy From Waste	Materials Recovery / C&D Recycling	White Street Facility Used	Other Location Proposed	Revenue to City Discussed	Expanded Service Area	Community Involvement Discussed
Advanced Disposal		✓		✓	✓		✓	✓	✓	
CICO				✓	✓		✓			✓
Herzog	✓									
MRR Southern			✓		✓	✓				
Republic Services	✓									
Uturnagen			✓			?				
Waste Connections				✓		✓	✓	✓	✓	
Waste Industries		✓			✓	✓	✓	✓	✓	✓
Waste Management				✓	✓	✓		✓		

Advanced Disposal Services Carolinas, LLC

- Expansion and operation of White Street facility
 - MSW Disposal
 - C&D Disposal
 - Yard Waste Processing
- Modification of transfer station to MRF
- Initial cash payment plus annual lease payment and revenue sharing
- Combination of disposal fees and operations fees
- Commit up to \$2,000,000 to community recreation facility
- Expand to 12 county service area

CICO, LLC

- Expansion and operation of White Street facility
 - MSW Disposal
 - C&D Disposal and Recycling (50%)
 - Yard Waste/LCID Processing
- Phased implementation of Energy from Waste (pyrolysis) facility at White Street
- Royalty for sale of energy, surplus gas, boiler fuel plus host fee for waste outside of Guilford County
- Disposal fee for MSW, Yard Waste, and C&D
- Establish community organization funded at \$2/ton for waste landfilled

Herzog Environmental, Inc.

- Provided Letter of Interest/Qualifications
- No specific options proposed

MRR Southern, LLC

- Construct, Own and Operate 900 tons/day energy from waste facility (mass burn) off Bishop Road
- C&D materials processing (70% diversion by weight) facility with residue disposal at White Street Landfill
- Disposal fees to be negotiated

Republic Services of NC, LLC

- Provided Letter of Interest
- Willing to negotiate extension to current disposal agreement

Ulturnagen, LLC

- Approximate 2,000 tons/day energy from waste (gasification) facility to be located in the "Greensboro Energy Complex"
- Possible Public-Private partnership with City

Waste Connections of North Carolina, Inc.

- Expansion and operation of White Street facility
 - ▣ MSW Disposal
 - ▣ C&D Disposal
- Increase service area to include 90-mile radius from White Street facility
- Phased implementation of energy (ethanol) from waste at White Street
- Phased disposal fees for MSW and C&D material
- Establish citizen's advisory committee funded at 50¢/ton for each ton generating revenue

Waste Industries, LLC

- Expansion and operation of White Street facility
 - ▣ MSW Disposal
 - ▣ C&D Recycling (3 to 5%) and Disposal
- Increase service area to include 90-mile radius from White Street facility (NC only)
- City would continue to operate yard waste/composting program
- Initial cash payment plus royalty fees
- Disposal fee based on initial payment and royalty fee
- Establish community advisory group funded by contribution of \$100,000 per year
- Construction of 4 miles of nature trails and natural wildlife habitat park
- Redesign current scalehouse as environmental education center

Waste Management of Carolinas, Inc.

- Offered a Menu of Management Strategies:
 - Expansion and operation of White Street Landfill
 - Expansion and operation of Piedmont Landfill
 - Development of energy from waste (mass burn) facility
 - Development of materials recovery facility
 - Service area to include City only, City/County or City/County/Surrounding Counties as desired by Greensboro
- Phase disposal fees depending on options implemented and service area

Potential Cost/Revenue to City	Advanced Disposal	CICO	Herzog	MRR Southern	Republic Services	Ultragen	Waste Connections	Waste Industries	Waste Management
Proposed Per Ton Fee for MSW Landfill Disposal	\$28	\$23					\$25 ¹ \$28.50 ²	\$30 ³ \$35 ⁴ \$37 ⁵	\$18 - \$27 ⁶
Annual Lease Payment for White Street Landfill	\$1,000,000								
Up-Front Payment to the City for White Street Landfill Expansion	\$17,898,527							\$15,000,000 ³ \$20,000,000 ⁴ \$25,000,000 ⁵	
Proposed Per Ton Fee for MSW Disposal using Alternative Technology		\$30							\$40 - \$125 ⁶
Proposed Per Ton Host/Royalty Fee								\$2.00 ³ \$1.50 ⁴ \$1.50 ⁵	

Notes:
¹ Phase III Operations
² Expansion Area
³ \$15M Payment with \$30/ton Tip Fee and \$2/ton Royalty
⁴ \$20M Payment with \$35/ton Tip Fee and \$1.50/ton Royalty
⁵ \$25M Payment with \$37/ton Tip Fee and \$1.50/ton Royalty
⁶ Range taken from graph assuming approximately 240,000 to 500,000 tons per year

Current System Cost Comparison

- Current Disposal Model Cost = Approx. \$10M/year
 - Over 25 year period = \$250M
- Landfilling* (By City or outsourced) would result in approximately \$100M of cost savings

*In-County Landfill (No waste transfer required)

Key Issues

- Policy Decisions
 - Relative importance of cost of service
 - Future of White Street/community impact
 - City operation of White Street
 - Service area – Guilford County and beyond
 - Landfilling vs. Alternative Technology
- Risk Tolerance
 - Viability of proposed technologies – Commercially proven?
 - Experience of offerer
- Process Moving Forward
 - Level of detail necessary to screen proposals
 - Decision steps moving forward

Key Issues, Con't.

- If Cost of Service is most important...
 - ▣ Consider Landfill based system at White Street with private operation or City operation
 - ▣ Consider expanding Service Area to yield host fee

Key Issues, Con't.

- If Alternative Technology is most important, while minimizing cost of service...
 - ▣ Consider Landfill based system at White Street with future WTE facility
 - ▣ Consider expanding Service Area to yield host fee

Key Issues, Con't.

- If reopening White Street is not an option...
 - ▣ Consider Kernersville Landfill or one of the WTE offers, or
 - ▣ Continue out-of-County disposal

Moving Forward...

- Get direction on as many key Policy and Risk issues as possible
- Consider benchmarking City operation of White Street if reopening it is an option
- If proceeding from current proposals:
 - ▣ Short list offers to as few as possible
 - ▣ Develop Request for Information from remaining candidates
 - ▣ Proceed to refine offers (including development of draft contract conditions)
 - ▣ Negotiate contract with preferred offerer
- If a second RFP is needed to proceed:
 - ▣ Develop new, more specific RFP with draft Terms and Conditions and resolicit
- Or, take no action on proposals and continue private disposal of MSW

End

