

# Advisory Committee

Solid Waste Management Plan for Lincoln and Lancaster County (Solid Waste Plan 2040)

December 11, 2012



Solid Waste Management Plan for Lincoln and Lancaster County

 **Solid Waste Plan 2040** 

# Purpose of the Plan

*The Solid Waste Plan 2040 will be a guidance document, communication tool, and resource for policy decisions regarding solid waste management systems, facilities, and programs.*

# Agenda

1. Public Meeting Law Acknowledgement & Safety Briefing
2. Call Meeting to Order
3. Roll Call
4. Approve Meeting Minutes from November 13, 2012
5. Vision Statement and Goals
6. System Definition and Refinement
7. Disposal Modules
8. Committee Questions and Discussions

**BREAK**

# Agenda

## BREAK

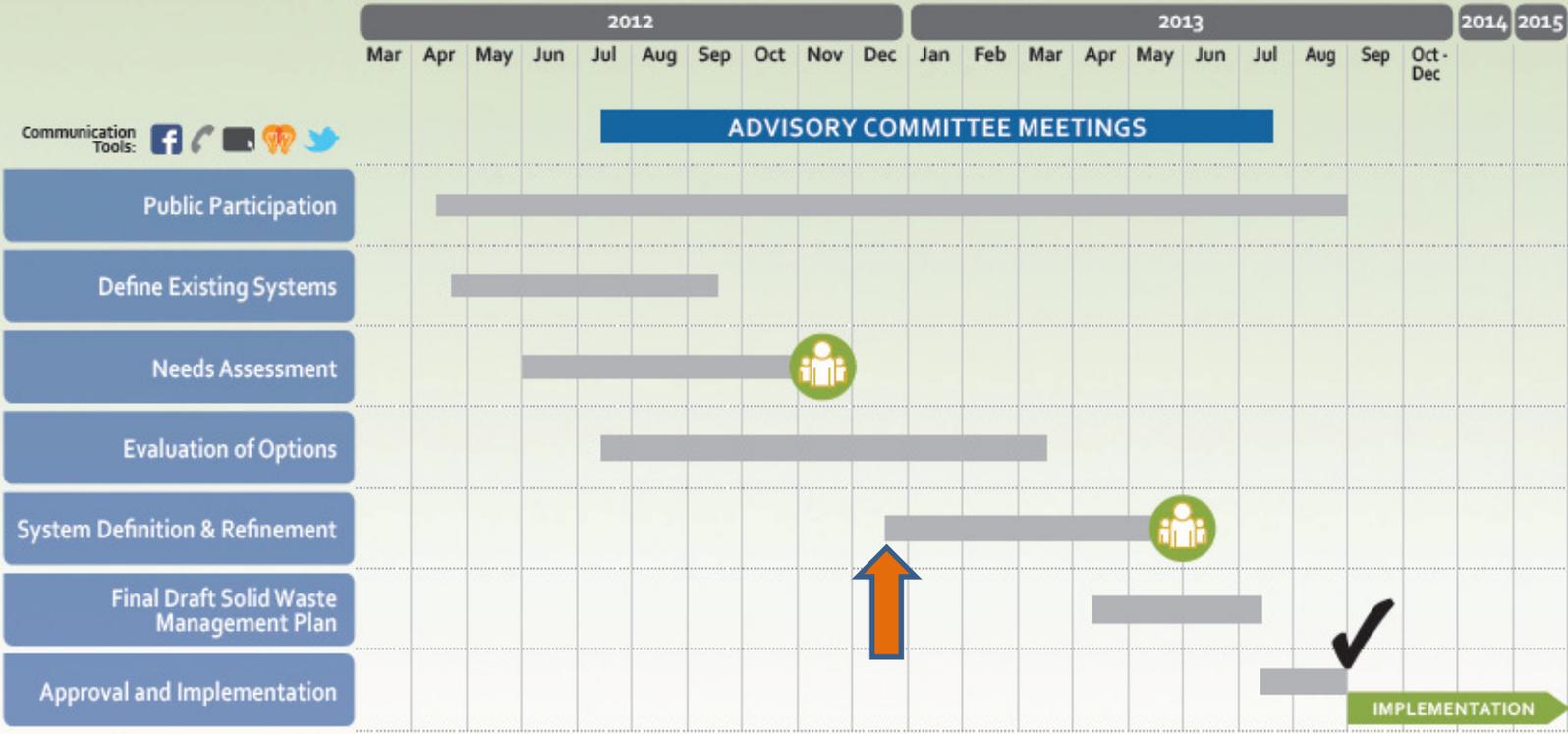
9. Group Discussion
10. Public Participation
  - a) Meeting Metrics
  - b) Comments
11. Committee Questions and Discussion
12. Next Advisory Committee Meeting
  - a) Timing, Topics and Notification
13. Public Comment (final 15 minutes)
14. Close Meeting

# Vision Statement, Guiding Principles and Goals

Solid Waste Plan 2040 acknowledges and will reflect the core promise embedded in LPlan 2040; that being a commitment to *“maintain and enhance the health, safety and welfare of our community during times of change, to promote our ideals and values as changes occur, and to meet the needs of today without sacrificing the ability of future generations to meet their needs.”*

The Solid Waste Plan 2040 will also reflect the *“importance and interconnectedness of economic, environmental, and socio-cultural domains, and the ways in which technology and public policy are applied and affect outcomes in these domains”* as is likewise stated in LPlan 2040.

# System Definition & Refinement - Schedule



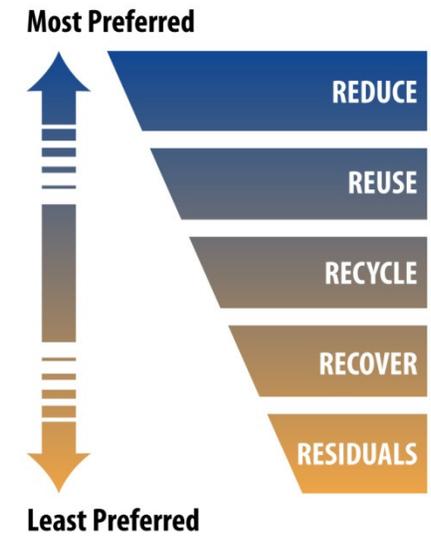
Solid Waste Management Plan for Lincoln and Lancaster County

# System Definition and Refinement

- Establish Alternatives to Baseline/Status Quo
  - 3 scenarios
- Committee Discussion/Modification
- Further Refinement & Evaluation
- Basis for System Definition
  - Present to Public
  - Refinement for Plan Development

# Disposal Topics (Modules 3 & 4)

- Module 3 - Disposal Capacity
- Module 4 - Disposal Requirements
- Topics
  - Waste Conversion Technologies
  - Municipal Solid Waste Disposal
  - Construction and Demolition Waste Disposal
  - Bioreactor/Bio-Stabilization Technologies



# Disposal – Waste Conversion Technologies

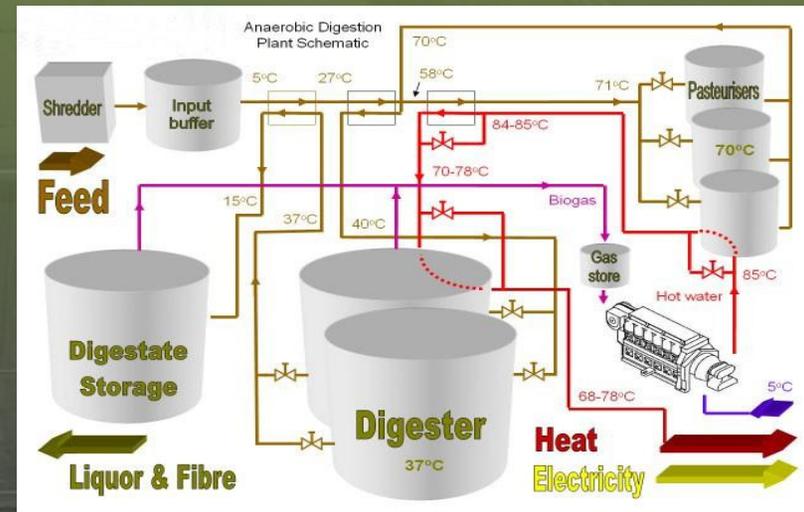
- Also known as waste-to-energy (WTE), resource recovery, combustion, and incineration
- 12% of MSW in US managed by combustion with energy recovery
- Recovery of energy and metals
- Compatible with recycling and diversion programs
- Reduces volume and organic content of landfilled waste

# Disposal – Waste Conversion Technologies

- May be considered a renewable energy source
- Current landfill gas-to-energy system at the Bluff Road MSW Landfill is a form of conversion technology
- MSW =  $\frac{1}{2}$  the energy content of coal

# Disposal – Waste Conversion Technologies

Demonstrated Technologies	Developing Technologies
Anaerobic digestion	Pyrolysis gasification
Gasification	Plasma arc gasification
Mass burn (waste to energy)	Hydrolysis
Refuse derived fuel (waste to energy)	Catalytic depolymerization



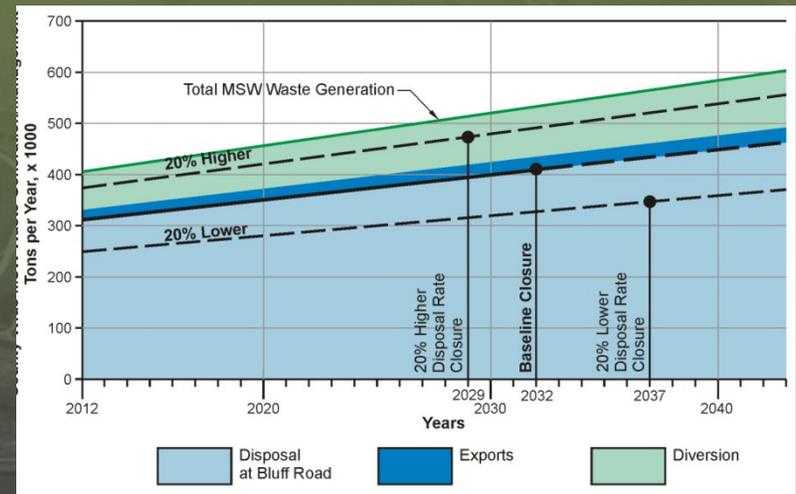
# Disposal – Waste Conversion Technologies

## Issues:

- Social/political acceptance
- Supply of waste
- Siting/location
- Permitting
- Implementation considerations
- Technology risk
- Costs
- Energy markets
- Air emission
- Residuals management

# Disposal – Municipal Solid Waste

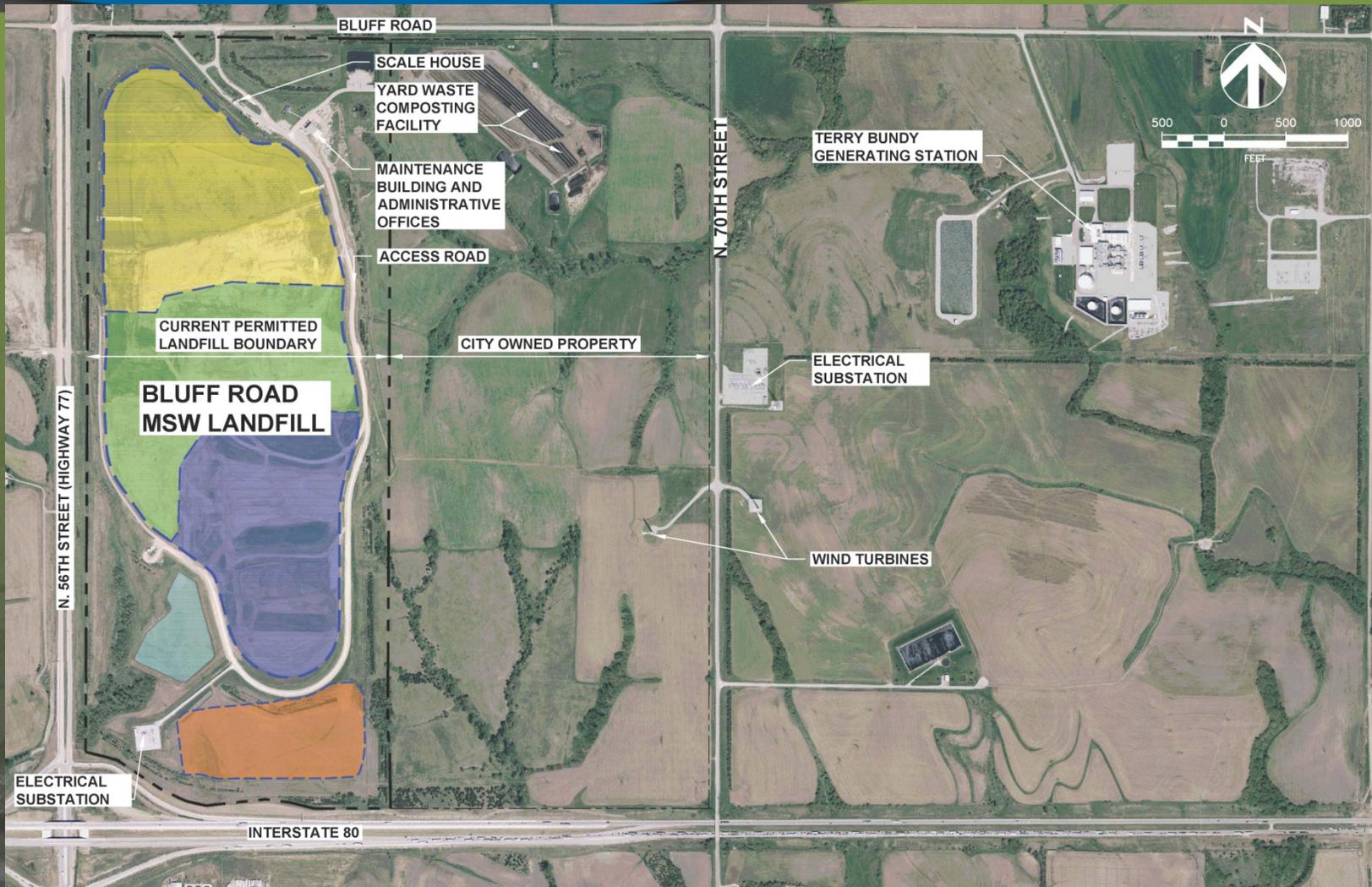
- County/municipality shall provide safe and sanitary disposal of solid waste
- Remaining capacity of Bluff Road MSW Landfill
  - Approximately 20 years
- Siting new landfills is **DIFFICULT!**
- Considered necessary
- Typically lowest cost option
- Long-term liability



# Disposal – Municipal Solid Waste

- Long-term Capacity Options
  - New City MSW landfill
  - New private MSW landfill
- LPlan 2040 identifies:  
“planning for expansion...on City owned property ...east of the existing site is anticipated....the expansion has not been permitted”

# Disposal – Municipal Solid Waste



# Disposal – Municipal Solid Waste

- Expansion Considerations:
  - Discourage conflicting development
  - Document compliance with NDEQ criteria
  - Designate in future land-use plans
  - Zoning regulation modifications
  - Obtain approvals
    - Local
    - State

# Disposal - Construction & Demolition Wastes

- Many C&D waste management options
- “Fill” material can be exempt from regulations
- City currently uses C&D wastes for beneficial filling purposes
- 75 to 80+ percent of concrete and asphalt is currently recycled

# Disposal - Construction & Demolition Wastes

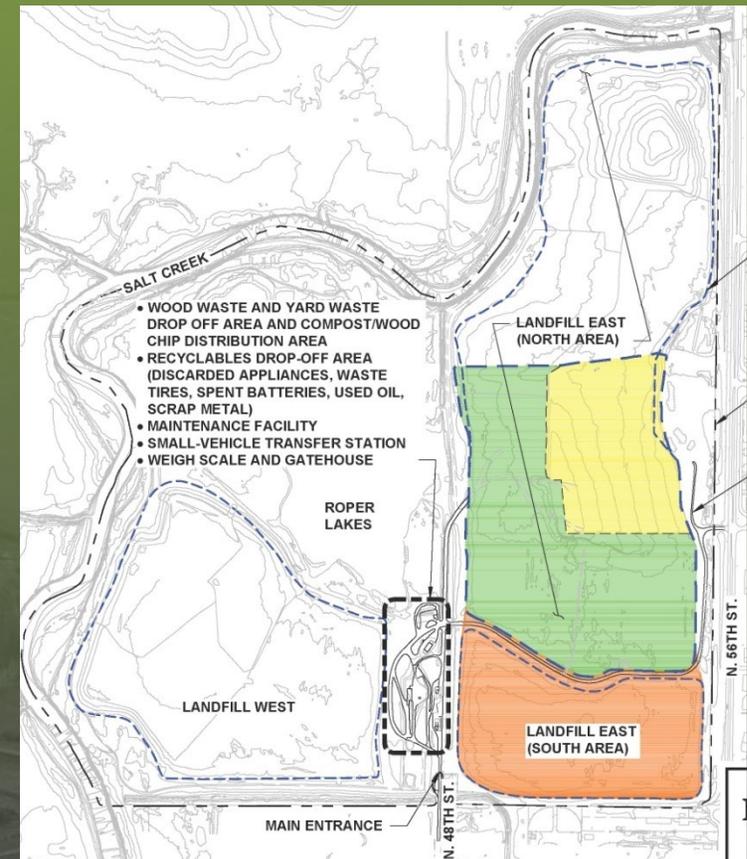
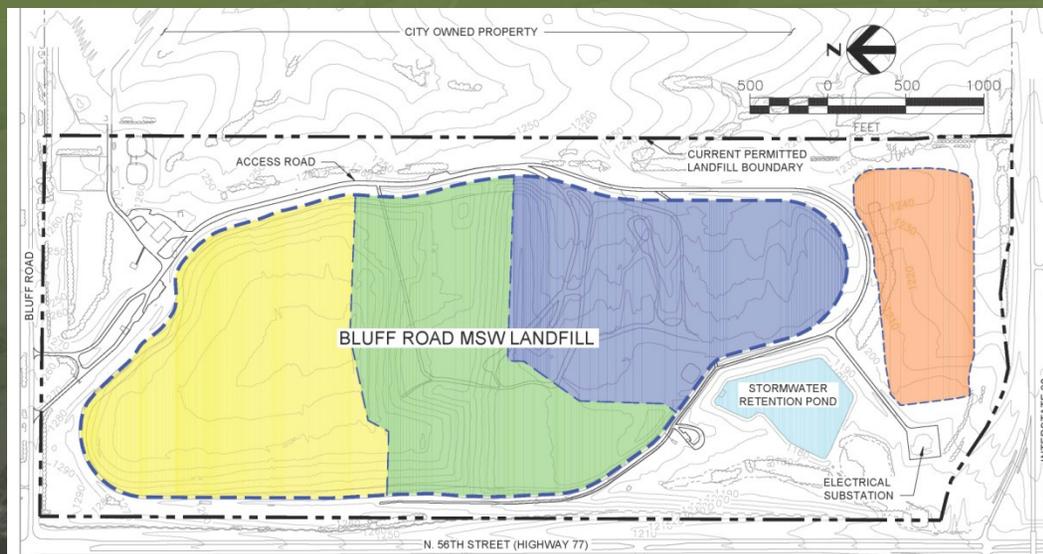
- Remaining capacity – Approximately 18 years
- Siting new landfills is **DIFFICULT!**
- Long-term Capacity Options
  - Expansion of Existing Site
  - New City C&D waste landfill
  - New Private C&D waste landfill
  - Combined C&D and MSW landfill



# Disposal - Construction & Demolition Wastes

## Future Disposal Options - Existing Sites

- Potentially easier to permit
- City owned & properly zoned
- Necessary infrastructure

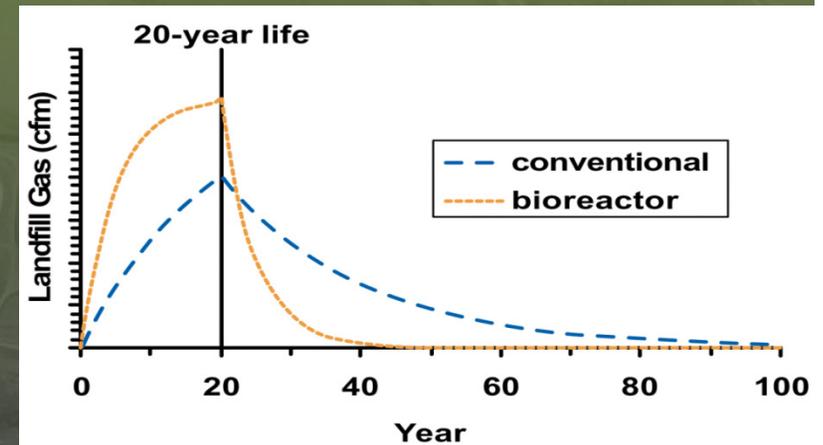


# Disposal - Construction & Demolition Wastes

- New Site Considerations:
  - **Public opposition**
  - Identify and acquire land
  - Siting and location restrictions
  - Zoning and land-use
  - Permitting
  - Infrastructure requirements
  - Costs
  - Implementation schedule

# Disposal – Bioreactor/Bio-Stabilization Technologies

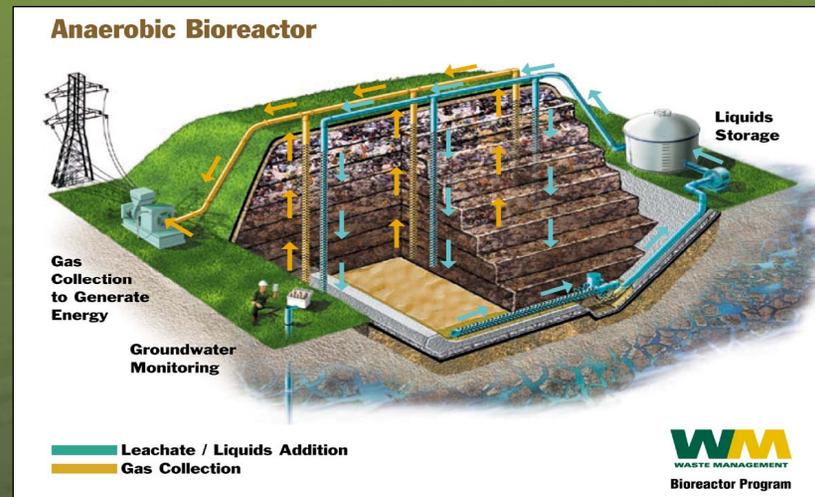
- Long-term biologic activity versus stabilization
- Requires large volumes of off-site liquids
- Research, Development & Demonstration (RD&D) permit required
- Added benefit in utilization of permitted air-space:
  - 10 -15 % Retrofits
  - 30 -50 % New site
- Reduces long-term risk?
- More landfill gas – short-term



# Disposal – Bioreactor/Bio-Stabilization Landfill

Most research focuses on the following techniques:

- Anaerobic
- Aerobic
- Hybrid



Issues:

- Liquids and liquid source(s)
- Added costs (construction & operation)
- Neighbor concerns
- Regulatory uncertainty

# Committee Questions & Discussion

- Vision Statement and Goals
- System Definition and Refinement
- Disposal Topics

# Purpose of the Plan

*The Solid Waste Plan 2040 will be a guidance document, communication tool, and resource for policy decisions regarding solid waste management systems, facilities, and programs.*

# Group Discussion

- Review Question
- Assign Recorder and Reporter
- Discuss
- Report Discussion/Conclusions
- Submit Sheets for Tabulation

# Group Discussion

**DISCUSSION TOPIC: Nationally, 34% of the municipal solid waste is recycled compared to about 18% in Lincoln. Should the Solid Waste Management Plan 2040 set a numeric goal for recycling?**

# Group Discussion

**DISCUSSION TOPIC: The Needs Assessment describes the current solid waste management system, facilities and programs (the “Status Quo”). Should these be considered the “minimum level of service” for future planning purposes?**

# Public Participation

Website: [lincoln.ne.gov](http://lincoln.ne.gov)

- keyword: solid waste plan

Social Media

- Facebook
- Twitter

Comment Line  
(402) 441-7738



The screenshot shows the website for the Solid Waste Management Plan for Lincoln and Lancaster County. The header includes the City of Lincoln logo and the title "Solid Waste Plan 2040". A navigation menu lists "Home", "The Process", "Committee", "Contact", "FAQs", "Resources", and "Community Comments". Below the menu is a large image of a landfill. A "Follow us" section includes Facebook and Twitter icons. The main content area features the heading "Solid Waste Plan 2040" and a paragraph explaining the plan's development. A callout box provides details for the "Next Advisory Committee Meeting" on Tuesday, October 9, 2012, at 2:30 p.m. to 4:30 p.m. at the UNL - Lancaster County Extension Education Center. Logos for the City of Lincoln, Lancaster County, and the Public Works & Utilities and Health Departments are displayed. At the bottom, there are social media icons for RSS, YouTube, Facebook, and Twitter, along with the instruction to log on to <http://lincoln.ne.gov> and search for "solid waste plan".

Solid Waste Management Plan for Lincoln and Lancaster County

**Solid Waste Plan 2040**

# Public Participation - Update

## Meeting Metrics - Needs Assessment

### Comments

# Committee Questions & Discussion

- Discussion Topics
- Public Participation

# Next Advisory Committee Meeting

## Next Meeting:

January 8th, 2013

2:30 pm to 4:30 pm

Lincoln/Lancaster County Health Department  
Lower Level Training Room

## Topic:

- Module 5 - Implementation Considerations
- Module 6 - Collection and Handling Programs?
- System Definition and Refinement?

# Public Comment

- Guidelines:
  - State name and address
  - Limit your remarks to time allotted – 3 minutes
  - Show respect to the meeting attendees, Advisory Committee members, facilitator and presenter(s)
  - No foul language or inappropriate behavior
  - Follow standard rules of decorum

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