



Rockingham County Strategic Planning – Case Study

*NC SWANA Spring Conference
April 17, 2013*

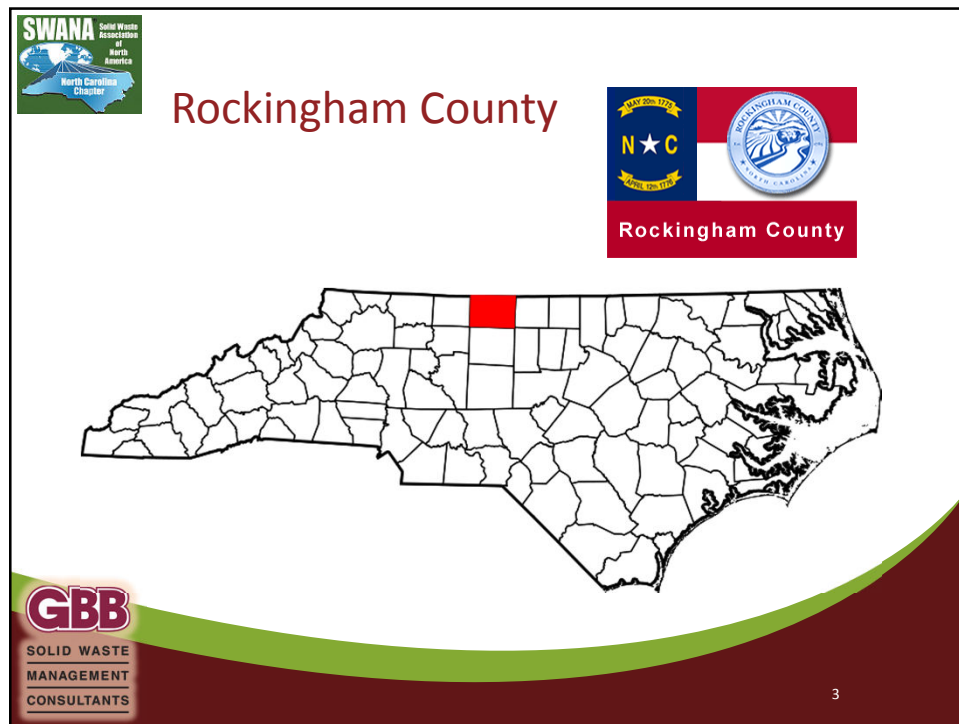
Lance Metzler, Rockingham County Manager
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John Carlton, P.E., BCEE, Senior Vice President, GBB



Outline


- Background on Rockingham County
- Challenges Facing the County
- Strategic Planning Elements
- Recommendations
- Lessons Learned

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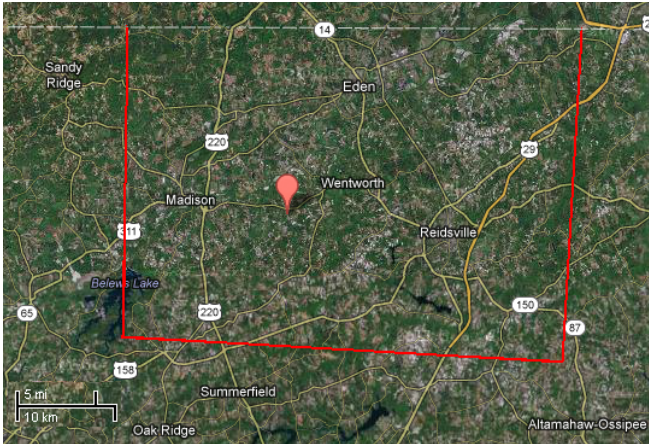



This slide features the title "Rockingham County" in a large, dark red serif font. In the top left corner is the SWANA logo, which includes the text "Solid Waste Association of North America" and "North Carolina Chapter". The center of the slide contains a bulleted list of statistics and facts about Rockingham County. At the bottom left is the GBB logo, which includes the text "SOLID WASTE MANAGEMENT CONSULTANTS". The slide has a decorative green and red curved border at the bottom. The number "4" is in the bottom right corner.

- 572 sq mi
- 93,800 population (2010)
- 99,400 tpy generated solid waste
- Rockingham County Landfill - primary disposal facility
 - 232 acre site
 - 82 acres permitted for disposal
 - 315 tpd disposal rate



Rockingham County Landfill





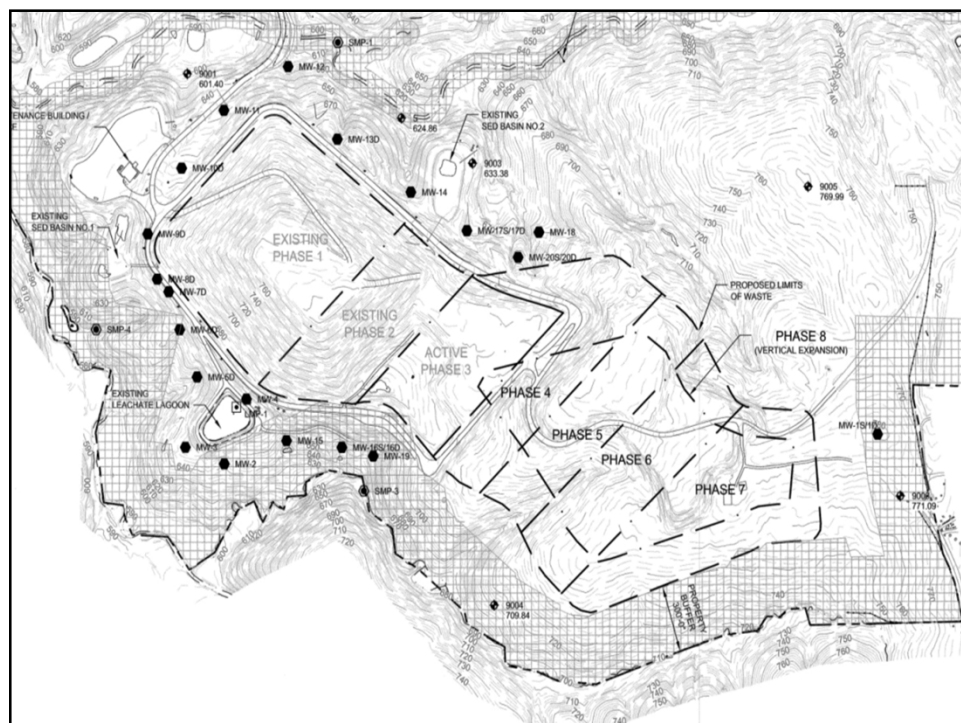
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Current Recycling Program

- 6 mobile drop-off trailers
- 10 permanent drop-off centers
- Drop-off centers require material sorted by type
- Curbside recycling in a couple communities (Madison and Stoneville)
- Low recycling rate




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Proposed Private Landfill

- Proposed private regional landfill in the County
- Same company proposed privatization of the County's landfill
- County need to evaluate these proposals and its own operations
- GBB was hired to assist with the evaluation



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SUMMARY STRATEGIC PLAN

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Gershman, Brickner & Bratton, Inc.




- Established in 1980
- Solid Waste Management and Technology Consultants
- Helping Clients Turn Problems into Opportunities



Quality – Value – Ethics – Results




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Focus of Study

- Evaluate Landfill Performance
- Review Waste Disposal Market
- Evaluate the Public/Private Partnerships
- Review County's Recycling Program
- Review Waste Conversion Technologies



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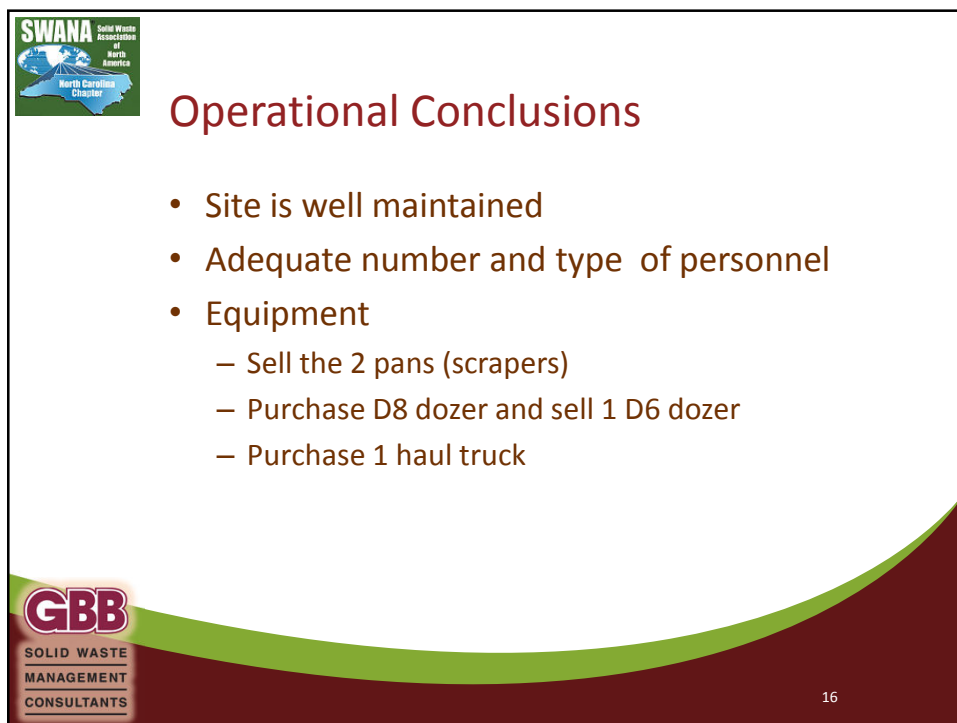
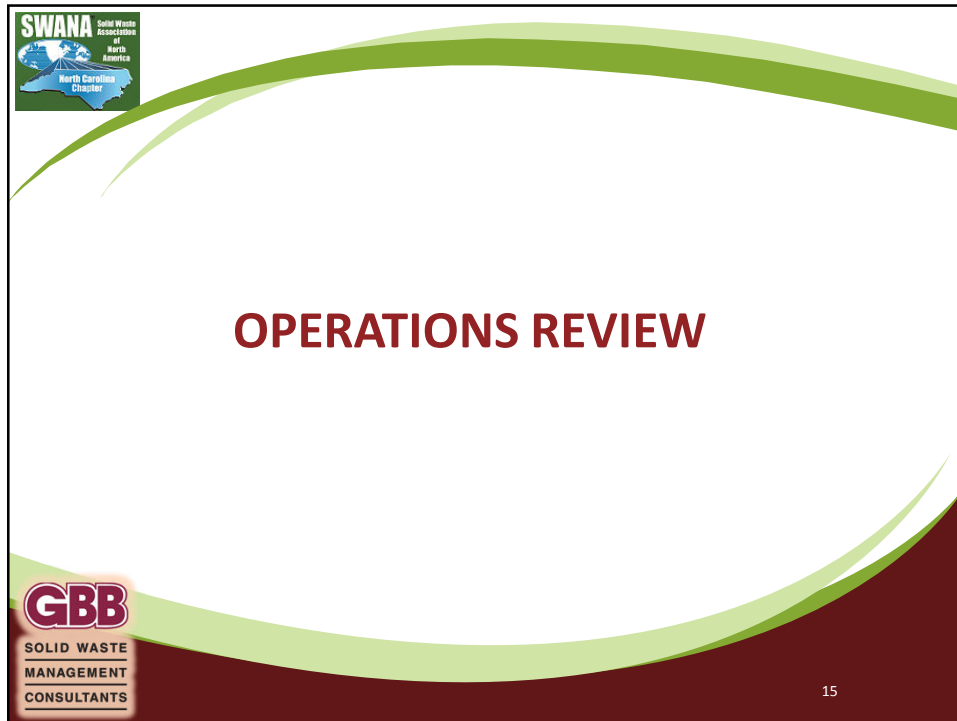



Summary Strategic Plan Elements

- Operations Review
- Landfill Operating Scenarios
- Solid Waste Disposal Marketplace
- Improving Recycling
- Waste Conversion Technologies
- Public/Private Partnerships
- Private Landfill Feasibility Review
- Strategic Plan Recommendations




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Operational Conclusions (continued)

- Consider alternate leachate management options
 - Evaporation using LFG
 - Discharge to constructed wetlands
 - Recirculation
 - Forcemain to WWTP
- Consider additional waste tonnage in manageable increments



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Operational Conclusions (continued)

- Consider capping Phase 1
- Consider Landfill waste compaction monitoring technology
 - Airspace is landfill's asset
 - Industry standard 1,300-1,400 lbs/cyd
 - Prior to 2005, 1,000 lbs/cyd
 - 2011 study, 1,200 lbs/cyd



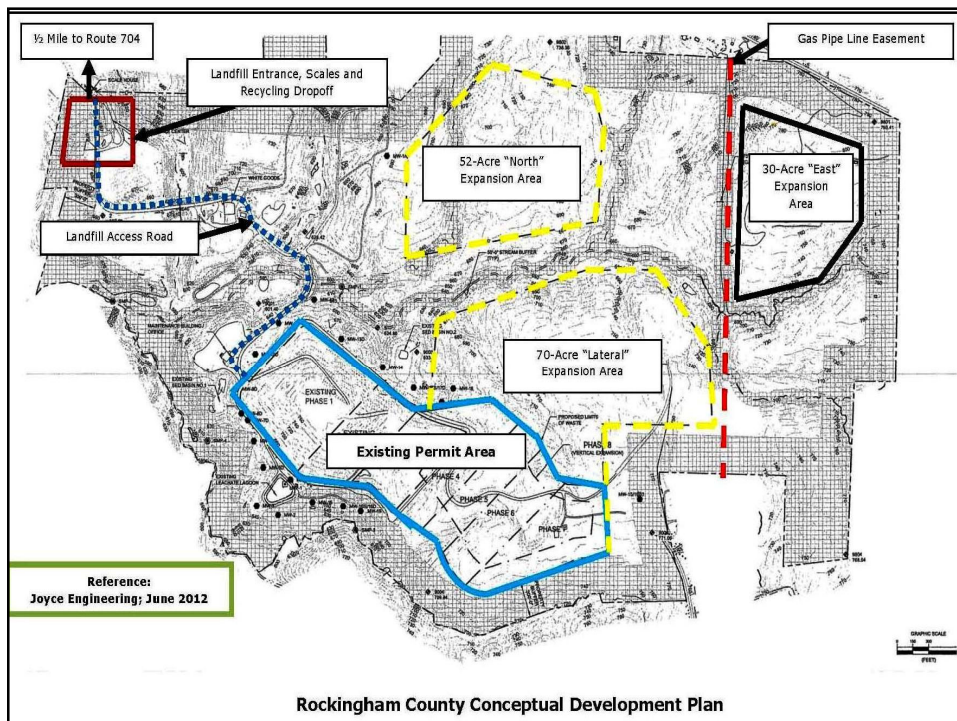
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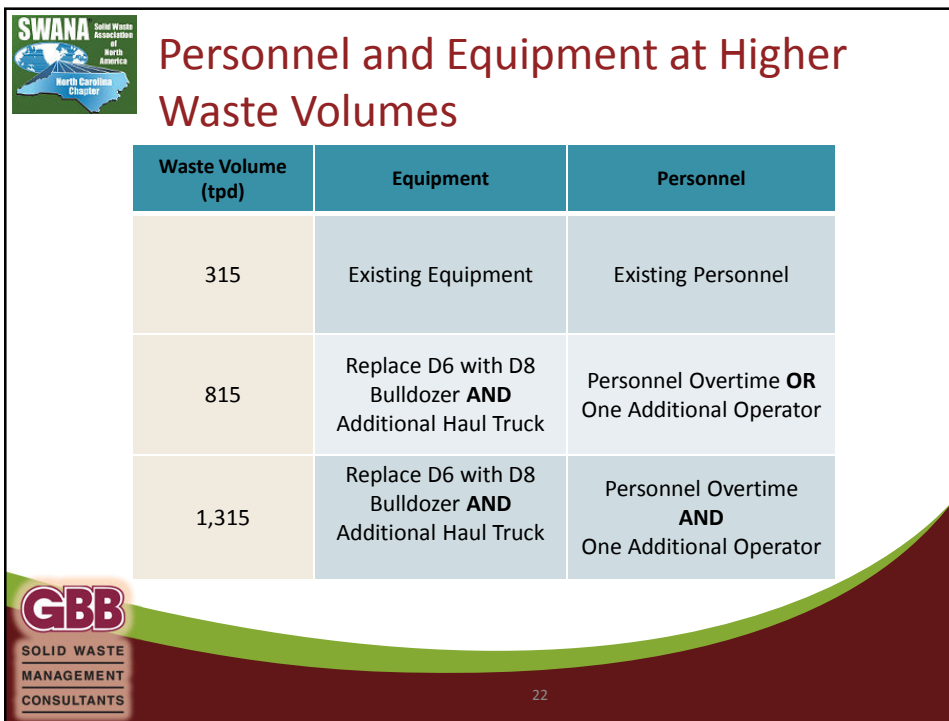
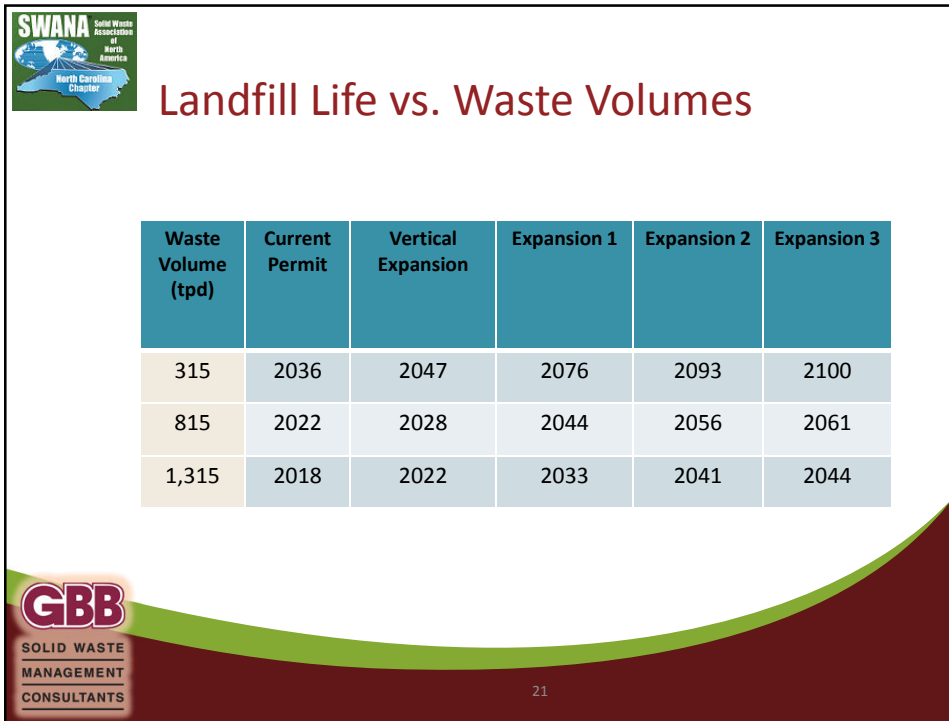
SWANA Solid Waste Association of North America
North Carolina Chapter

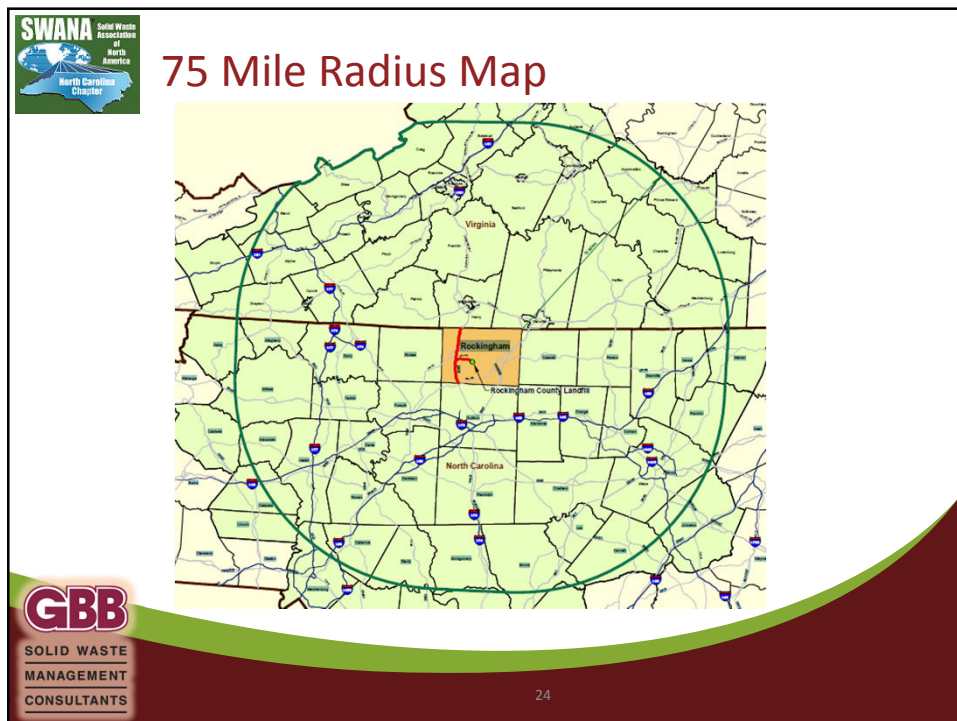
LANDFILL OPERATING SCENARIOS


GBB
SOLID WASTE
MANAGEMENT
CONSULTANTS

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Potential Sources of Additional Solid Waste

Source Location	Potential Quantity (tpd)	Expected Disposal Fee Range (\$/ton)
NC Counties and Cities	700	\$23.50-\$30.00
VA Counties and Cities	400	\$20.00-\$33.00
Total	1,100	\$20.00-\$33.00



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IMPROVING RECYCLING



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Improving Drop-off Program

- Consider less sorting
 - More convenient for public
 - Cardboard and mixed recyclables
 - Possible separate glass (local market for glass cullet)
- Possibly take advance of new Waste Management single stream recycling facility in Forsyth County




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Curbside Collection

- Would result in increased recycling participation and recovery
- Collection costs could be significant



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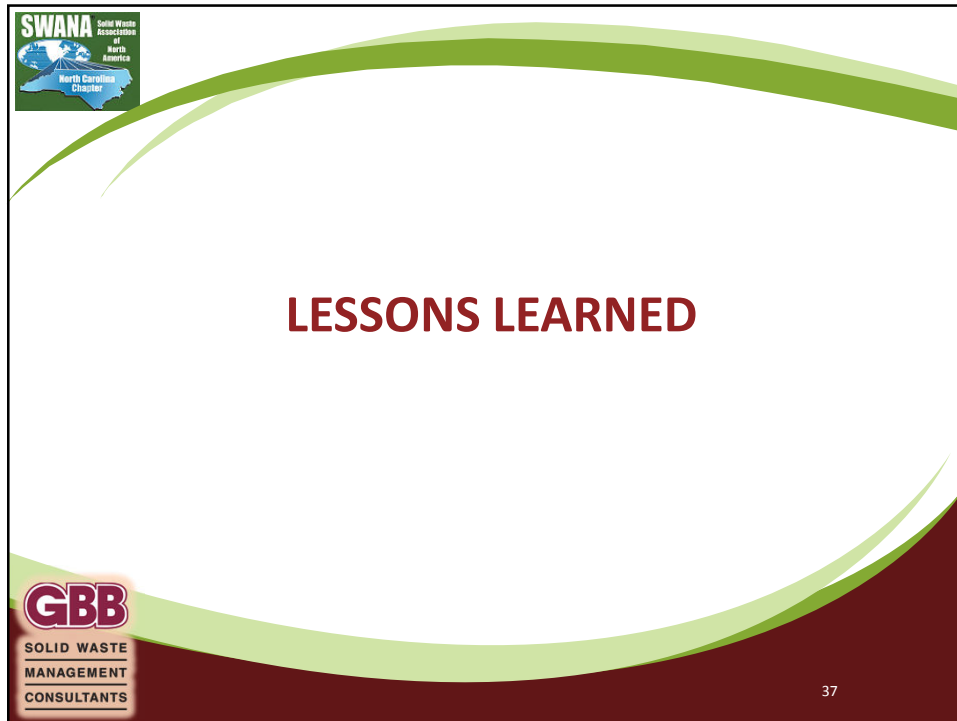
Waste Conversion Technologies

Alternative	Risks/Liability	Risk Summary
Mass Burn	Proven Commercial Technology	Low
RDF	Proven Commercial Technology	Low
Anaerobic Digestion	Proven Technology; Limited US Experience	Moderate
Pyrolysis	Uncertain Commercial Potential; No Large Scale Operations	High
Gasification	Limited Small Scale Operations; Potential Scale-up Issues	High







This slide features a large, stylized green arch graphic. In the top left corner is the SWANA logo (Solid Waste Association of North America, North Carolina Chapter). In the bottom left corner is the GBB logo (Solid Waste Management Consultants). The text "Lessons Learned" is centered in a dark red font. Below the title is a bulleted list of six items. The number "38" is in the bottom right corner.

- Helpful for the County / Elected Officials to understand the landfill
- Opportunities to improve County landfill operations and efficiency
- Additional waste volumes could be accepted at landfill and from where
- County needs to look at improving recycling
- Waste conversion may provide opportunities in future
- Privatization not needed at this time



SWANA Solid Waste Association of North America
North Carolina Chapter

Thank you!

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