



Town Council Work Session
Update of Comprehensive Review of
Solid Waste Collection and Disposal Options



Town of Chapel Hill
North Carolina

May 16, 2012

Introduction

- Project Introduction
- Mid-project Update
 - Disposal options
 - Short-term
 - Constructing transfer station
 - Commercial collections
 - Privatization
 - Increasing fees
 - On-going evaluations:
 - Collection improvements and efficiencies
 - Franchising/out-sourcing options
 - Pay-As-You-Throw
 - Recycling
 - Waste-to-Energy and waste conversion options
 - Collaboration with UNC and other government entities

Introduction

- Next Steps
 - Presentation of final report in June 2012
- Introduction of SCS Engineers Team
 - Bob Dick, PE – Project Director
 - Scott Mortimer – Project Manager
 - Bob Gardner, PE – Senior Vice President, Solid Waste Division

Partial Summary Study Options

- Short-term
 - Direct Haul/Transfer Station Options
 - Landfill Disposal Alternatives
 - Collection Improvements and Efficiencies
 - Regional Collaboration
 - Pay-as-You-Throw (PAYT)
 - Recycling
- Long-term
 - Waste Conversion/Waste-to-Energy
 - Organics Diversion
 - Other

Summary of Short-Term Disposal Option Evaluations

- Direct Haul to City of Durham Transfer Station
- Direct Haul to Other Transfer Station(s)
 - Private Sector Facilities in Raleigh/Durham Area
- Timing of Transition to Transfer Station Option
 - Immediately
 - After Orange County Landfill Closure
- Collaboration with Wake Co.
 - Direct Haul to Dormant South Wake Transfer Station
 - Chapel Hill Lease and Operate Transfer Station
 - Long Haul to Public/Private Landfill

Summary of Short-Term Disposal Options Assumptions

- No Change to Current Collections and Disposal Resource Allocation, Service, and Routing
- Add 1 Additional Truck and Crew
 - Accommodate for time lost in transit and queuing
 - No multiple trips
- Round-trip mileage and “gate rate” tip fee
- Fuel Cost \$4.20 per gallon
- Fleet Maintenance and Repair Costs provided from Town Records
- MSW: 15,380 tons per year (2013 projected)
- Yard waste to Orange County Landfill

Solid Waste Haul Distance Comparison



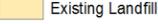
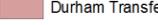
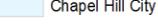
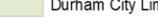
Orange County Landfill

Approx. 6 Miles
One Way

Approx. 18 Miles
One Way

City of Durham
Solid Waste Transfer Station

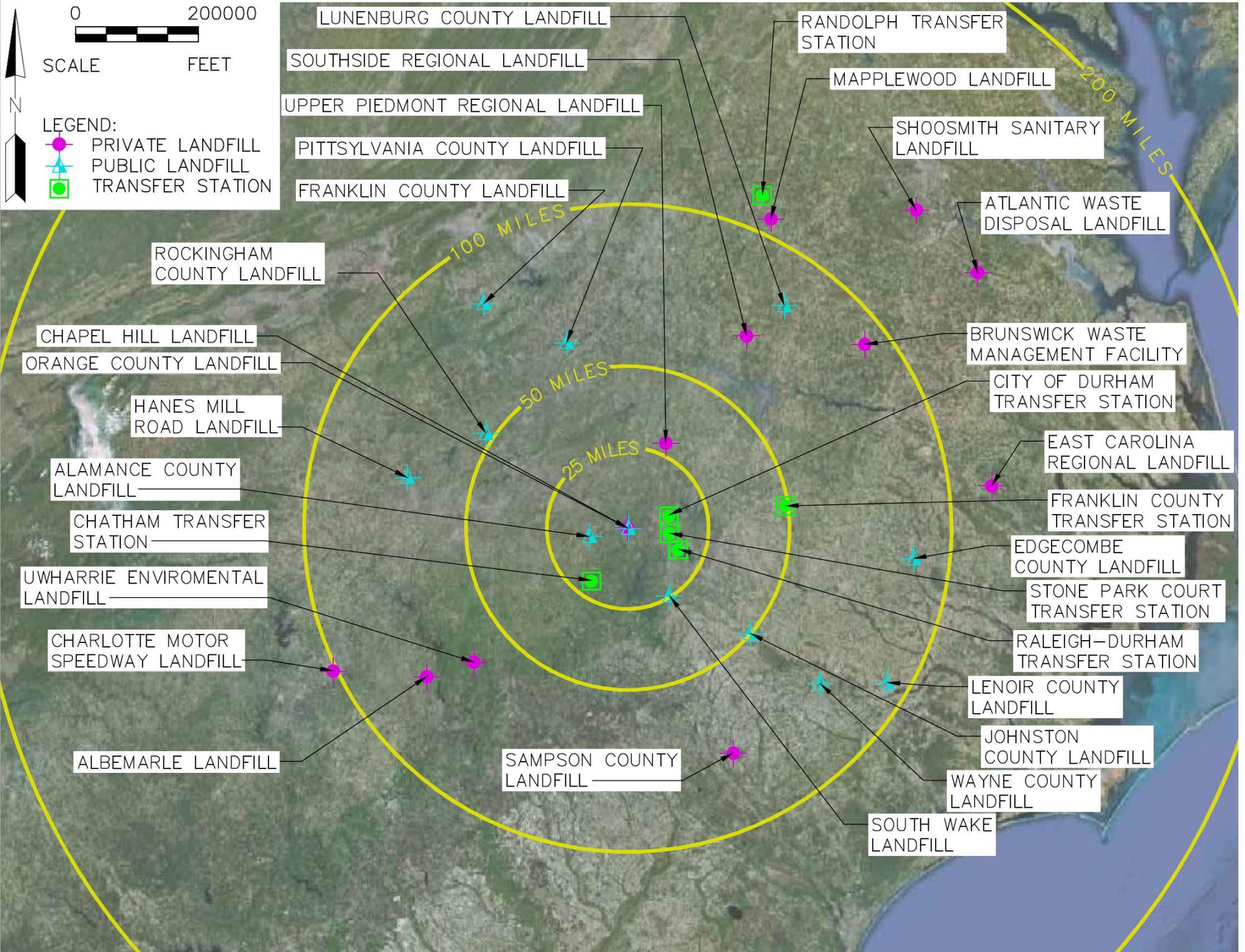
Legend

 Transfer Station Route	Land Use
 Landfill Route	 Existing Landfill
 Franklin - Columbia Intersection	 Durham Transfer Station
 Durham Roads	 Chapel Hill City Limits
 Orange Roads	 Durham City Limits

Map Prepared by Chapel Hill GIS
Public Works Dept
Engineering Design & Services Div.
January 2012

0 200000
SCALE FEET

LEGEND:
 PRIVATE LANDFILL
 PUBLIC LANDFILL
 TRANSFER STATION



Scenario Modeling Results

Disposal Location	Durham TS
Additional Labor	\$ 143,000
New Vehicle, Amortized	39,000
Fuel, O&M New Vehicle	20,000
Subtotal	\$ 202,000
Additional Off-Route Labor, O&M, & Fuel	179,000
Add'l Cost w/ new vehicle & crew	\$ 381,000
Contingency, 25%	95,000
Total Additional Collection Costs	\$ 476,000
Projected Tip Fee, Orange County LF	903,000
Projected Tip Fee, Durham TS	674,000
Tip Fee Savings	(\$229,000)
Net Increase in Costs	\$ 247,000

Results are preliminary and subject to final model quality control review and verification.

Transfer Station Options

Scenario	Landfill Facility Name	Tipping Fees (\$/ton)	Mileage	
			Distance to Chapel Hill, NC (miles)	Roundtrip (miles)
Current-MSW	Orange County LF (All)	57.00	6	12
Current-YW	Orange County LF (Veg Waste only)	18.00	6	12
A	City of Durham TS	42.50	17.5	35
B	Waste Industries - Durham Transfer Station	42.50	18	36
C	WMI - Raleigh Transfer Station	57.00	18	36
D	PCM Construction Apex C&D Transfer Station	NA	23	46
E	South Wake Transfer Station	TBD	28	56
F	Siler City Transfer Station	45.35	31	62
G	WCA Waste - Raleigh Transfer Station	47.28	33	66
H	East Wake Transfer Station	36.00	35	70

Notes:

1. Source: Screened from Waste Business Journal, "Directory of Non-hazardous Waste Sites-2011" and confirmed by SCS telephone survey.
2. Tipping Fee is published gate rate. Lower pricing would likely be obtained through formal procurement process and solicitation for solid waste disposal service.

Compare Direct Haul to Durham FY 2013 or FY 2014?

Scenario	DH to TS		
Disposal Facility	City of Durham TS		
Add New Route	Yes, FY2013		
Privatize Commercial, Yes/No and When	No		
Budget Summary Item	2013	2014	2015
Collection Personnel Services	1,888,000	1,944,000	2,003,000
Collection Operating Expenses	980,000	1,013,000	1,035,000
Disposal Charges	729,000	763,000	797,000
Revenue	(\$388,000)	(\$398,000)	(\$412,000)
Net Cost	3,209,000	3,322,000	3,423,000
Scenario	DH to TS		
Disposal Facility	City of Durham TS		
Add New Route	Yes, FY2014		
Privatize Commercial, Yes/No and When	No		
Budget Summary Item	2013	2014	2015
Collection Personnel Services	1,745,000	1,944,000	2,003,000
Collection Operating Expenses	750,000	1,013,000	1,035,000
Disposal Charges	958,000	763,000	797,000
Revenue	(\$388,000)	(\$398,000)	(\$412,000)
Net Cost	3,065,000	3,322,000	3,423,000

Figures do not include contingency as w/ previous slide, and includes Yard Waste disposal.

Potential Collaboration – Wake Co.

- Direct Haul to Dormant South Wake Transfer Station – approximately 28 miles
- Scenario Model Assumption
 - Capital Cost for Upgrades (Under investigation)
 - Operating Costs (See New Transfer Station)
 - Long-haul Disposal Cost
- Pros/Cons
 - Town maintain control over tip fee and disposal location
 - Potential for Material Recovery Facility
 - Dependence on agreement/lease arrangement
- Scenario Modeling Results Pending

South Wake Transfer Station



Summary of Select Long-Term Disposal Option

- Town of Chapel Hill to Site, Construct, and Operate a Transfer Station
 - Town-owned parcel
 - Off Millhouse Road, between Public Works and Transportation

Site / Construct Transfer Station



Site & Construct a New Transfer Station

Item	Capital Cost (\$)	Debt Service (\$/year)
Pre-Development	\$ 843,750	\$ 66,000
Construction	2,957,400	231,000
Equipment	<u>276,000</u>	<u>49,000</u>
Totals	4,077,150	346,000

Results are preliminary and subject to final model quality control review and verification.

Operation & Hauling Costs

New Transfer Station

Transfer Station Constructed?	Yes
Year Implemented	2014
Disposal Location	Upper Piedmont Environmental Landfill

Item	2014
Transfer Station Costs, \$	\$ 585,000
Hauling Costs, \$	291,000
Disposal Costs, \$	<u>542,361</u>
Total Cost	\$ 1,418,361
Tons	15,630
Cost/Ton	\$ 90.7
Per Ton Cost Breakdown	
Transfer Station Costs	\$ 37.4
Hauling Costs	\$ 18.6
Disposal Costs	\$ 34.7
Total	\$ 90.7

Note: Costs include annual debt service and operations costs

Results are preliminary and subject to final model quality control review and verification.

Summary of Commercial Sector Service Offering

- Increase Fees and add Customers
- Potential to Eliminate Service
- Revenue and Cost Impacts
- Mitigate Impacts to Multi-family Residential Customers
- Pros and Cons of Options

Summary Collection Options

Collection Scenario	Description
A	Current
B	Privatize Commercial - Current Residential
C	Keep Commercial/Add New Res. Route
D	Privatize Commercial/Add New Res. Route (Same Time)
E	Privatize Commercial after New Res. Route/New Res. Route

Existing Commercial Collections

- One “free” dumpster collection to multi-family units per week.
- Additional pickups at a fee.
- Commercial establishments pay.
- School system pays.

Options to Eliminate Commercial Collection

- Options
 - Continue collection to multi-family units with dumpsters, eliminate commercial account collections (i.e., stores).
 - Eliminate dumpster collection; eliminate commercial account collections (issue of subsidizing multi-family currently served with one free collection per week)

Potential Cost Savings

Privatize Commercial Collection

Scenario	DH to TS		
Disposal Facility	City of Durham TS		
Add New Route	Yes, FY2014		
Privatize Commercial, Yes/No and When	Yes, FY2014		
Budget Summary Item	2013	2014	2015
Collection Personnel Services	1,745,000	1,681,000	1,731,000
Collection Operating Expenses	750,000	831,000	847,000
Disposal Charges	958,000	369,000	385,000
Revenue	(\$345,000)	(\$32,000)	(\$34,000)
Net Cost	3,108,000	2,849,000	2,929,000

Net Savings: \$259,000/year

1. Results are preliminary and subject to final model quality control review and verification.
2. Additional savings from reduced vehicle replacement costs not included.
3. Alternatively, consider increasing rates for commercial to fully cover allocated costs.

Other Ongoing Evaluations

- Recycling Program
- Collections Improvements and Efficiencies
 - Yard Waste, Organics Diversion
 - Routing and Technology
 - Pay-As-You-Throw (PAYT)
- Site/Construct New Material Recovery Facility (MRF)
- WTE/Waste Conversion Options
- Collaboration with UNC and other government entities

Next Steps

- Complete Scenario Analyses and Report
- Summary and Sustainability Matrices
- Submit Comprehensive Report to Town
- Presentation to Town Council (6/11/12)