



## Solid Waste and Recycling Board Meeting Attendance

Date of Meeting: Feb 17, 2005

Name	Area of Representation	Initials
Vacant	District #9 - Bluffton Township	
Earl Dietz	District #8 - St. Helena Island & Islands East	<i>ED</i>
Gordon Bowers	District #7 - Lady's Island	<i>GB</i>
Robert Washington	District #5 - Sheldon Township	<i>RW</i>
Carol Murphy	District #6 - Unincorporated Port Royal Island	<i>CM</i>
Vacant, ex officio	Beaufort	
Vacant, ex officio	Port Royal	
Vacant, ex officio	Bluffton	
Vacant, ex officio	Hilton Head Island	
<i>Gary Jones for</i> Alice Howard	MCAS Liaison	<i>GH</i>
Brad Woods	MCRD Liaison	
Leland McCormack	SCDHEC Liaison	
Eddie Bellamy, Director of Public Works	Beaufort County Public Works	<i>EB</i>
Jim Minor, Solid Waste and Recycling Superintendent	Beaufort County Public Works	<i>JM</i>

*GARY B. JONES.  
S.W.R. CPS/FOREMAN*

*Beaufort Co. Public Works GBJ*



## **Beaufort County Solid Waste and Recycling Board Meeting Agenda**

February 17, 2005

2:00 PM

Public Works Conference Room  
120 Shanklin Road  
Beaufort, SC 29906

- Call to Order- Mr. Dietz
- Review and Adoption of Minutes – Mr. Dietz
- Solid Waste Study report.- Ms. Abby Goldsmith, R.W.Beck, Inc.
- Solid Waste Recycling Division Monthly Report, December 2004 - Mr. Minor
- Solid Waste and Recycling Capital Improvement Projects Update (Oct, Jan, Apr, Jul)
- Announcements  
Next meeting, Thursday, March 17, 2005
- Adjourn

Cc: Mr. Gary T. Kubic, County Administrator  
Mr. Harold C. Boehm, Deputy Administrator Public Services / Land Management Department  
Miss Susan Rainey, Clerk to Council  
Mr. Eddie Bellamy, Director Public Works

**Beaufort County Solid Waste and Recycling Board Meeting**  
**Thursday, January 20, 2005, 2:00 p.m.**  
**Public Works Conference Room**

**Attendees:** Mr. Earl Dietz, Chairman and District 8 Representative  
Mr. Gordon Bowers, District 7 Representative  
Mrs. Carol Murphy, Vice – Chairperson and District 6 Representative  
Mr. Robert Washington, District 5 Representative  
Mr. Eddie Bellamy, Public Works Director  
Mr. James Minor, SWR Superintendent  
Mr. Gary Jones, Operations Foreman/Litter Officer  
Mr. Brad Woods, MCRD Liaison

**Absentees:** VACANT, District 3 Representative (Ex-Officio)  
VACANT, District 9 Representative  
Mr. Leland McCormack, DHEC Liaison  
VACANT, District 4 Representative (Ex-Officio)  
VACANT, District 2 Representative (Ex-Officio)  
VACANT, District 1 Representative (Ex-Officio)  
Mr. Carl T. Hallman, MCAS Liaison

- 
- Mr. Dietz opened the meeting
  - Minutes from December were read and approved.
  - Mr. Minor discussed the monthly report for November. The report was accepted as received.
  - Patron traffic continues to decrease at Coffin Point staff to continues to study the decreasing trend.
  - Mr. Minor reported the consultants from R.W. Beck, Inc. hope to have the final report ready for the February board meeting.
  - The Solid Waste and Recycling Board meeting schedule for 2005 was reviewed and a motion made and seconded to accept the schedule. The motion was passed unanimously.
  - The meeting was adjourned at 3:30 P.M.
  - The next meeting will be held at the Public Works Conference Room on at 2:00 p. m. on February 17, 2005.

**Cc:** Mr. Gary T. Kubic, County Administrator  
Mr. Harold C. Boehm, Deputy Administrator Public Services / Land Management Department  
Miss Suzanne Rainey, Clerk to Council

**Solid Waste and Recycling Division Monthly Update  
December 2004**  
Distributed to the Solid Waste and Recycling Board of Beaufort County

**I. Monthly Budget Update**

**Solid Waste - DOC and Overall County Tonnage**

	Dec-02	Dec-03	Dec-04	FY05 YTD
DOC Tonnage (Household & Bulky)	1,800.72	1,852.57	1,965.14	11,744.05
DOC Tonnage (Yardwaste)	272.96	312.55	279.04	2,251.54
Overall County Tonnage (Household & Bulky)	9,497.29	10,220.08	10,338.50	69,208.84
Overall County Tonnage (Yardwaste)	430.93	651.00	644.85	5,126.13
Overall County Tonnage (C & D)	318.59	177.79	120.91	957.75
Total Tonnage All Disposal	10,246.81	11,048.85	11,104.26	75,292.72

**Recycling - DOC and Overall County Tonnage**

	Dec-02	Dec-03	Dec-04	FY05 YTD
DOC Tonnage (Gross)	146.85	116.91	242.03	1,199.40
Contract Tonnage (Gross)	269.23	212.03	157.87	953.88
Total County Tonnage (Gross)	416.08	328.94	399.90	2,153.28

**Solid Waste Hauling and Disposal Budgets Status**

	Through DEC03	Through DEC04	Through DEC05	% Expended DEC03	% Expended DEC04	% Expended DEC05
Hauling Costs	\$366,417	\$379,214	\$384,938	52%	52%	45%
Disposal Costs	\$2,013,841	\$2,122,519	\$1,811,667	59%	58%	47%

**Recycling Services and Diversion Payment Budgets Status**

	Through DEC03	Through DEC04	Through DEC05	% Expended DEC03	% Expended DEC04	% Expended DEC05
Recycling Services	\$187,716	\$168,493	\$145,219	47%	45%	37%
Diversion Payments	\$43,721	\$40,891	\$3,896	47%	44%	11%

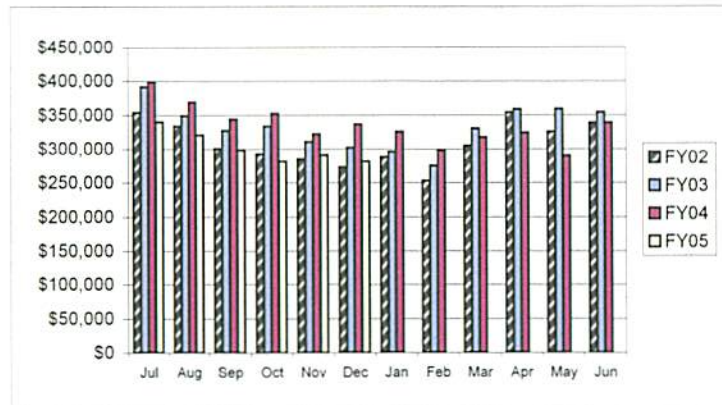
## Solid Waste and Recycling Division Monthly Update

December 2004

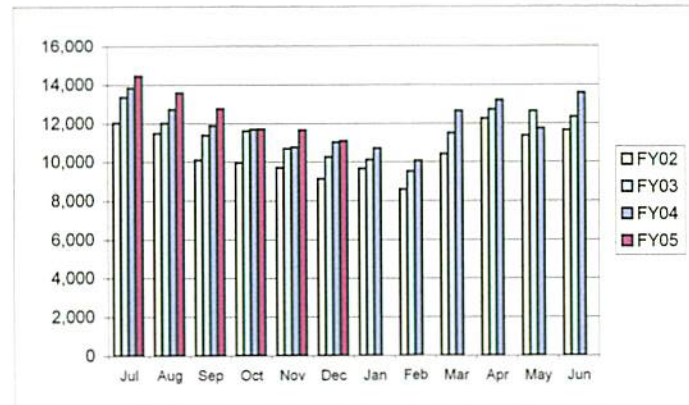
Distributed to the Solid Waste and Recycling Board of Beaufort County

### II. Historic Tonnage and Disposal Information

DISPOSAL				
MONTH	FY02	FY03	FY04	FY05
Jul	\$353,518	\$391,617	\$398,603	\$339,746
Aug	\$333,740	\$348,864	\$369,093	\$320,783
Sep	\$300,644	\$327,471	\$343,981	\$298,406
Oct	\$292,508	\$333,468	\$352,261	\$281,467
Nov	\$284,650	\$310,693	\$322,112	\$290,188
Dec	\$272,860	\$301,727	\$336,469	\$281,077
Jan	\$287,482	\$295,738	\$325,175	
Feb	\$252,844	\$274,955	\$297,918	
Mar	\$304,820	\$330,358	\$317,174	
Apr	\$353,610	\$358,705	\$323,976	
May	\$325,217	\$358,725	\$289,652	
Jun	\$338,569	\$354,232	\$338,978	
<b>TOTAL</b>	<b>\$3,700,462</b>	<b>\$3,986,553</b>	<b>\$4,015,392</b>	<b>\$1,811,667</b>



TONNAGE DISPOSED				
MONTH	FY02	FY03	FY04	FY05
Jul	12,029	13,364	13,830	14,458
Aug	11,504	12,010	12,717	13,584
Sep	10,077	11,389	11,887	12,763
Oct	9,947	11,614	11,705	11,720
Nov	9,696	10,704	10,784	11,662
Dec	9,132	10,247	11,049	11,104
Jan	9,640	10,105	10,726	
Feb	8,593	9,506	10,049	
Mar	10,410	11,514	12,663	
Apr	12,254	12,714	13,218	
May	11,371	12,642	11,745	
Jun	11,646	12,331	13,578	
<b>TOTAL</b>	<b>126,300</b>	<b>138,139</b>	<b>143,951</b>	<b>75,292</b>



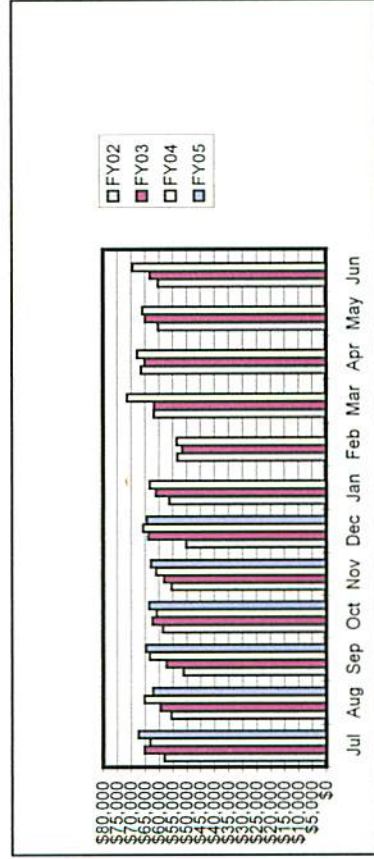


# **Solid Waste and Recycling Division Monthly Update December 2004**

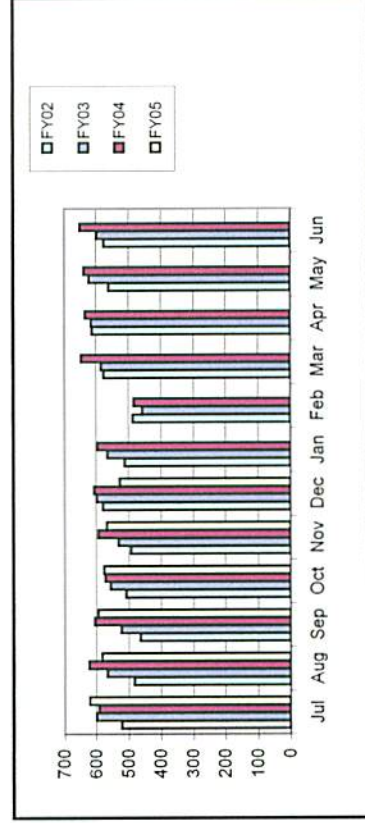
Distributed to the Solid Waste and Recycling Board of Beaufort County

## **III. Historic Hauling and Container Pull Information**

MONTH	HAULING			
	FY02	FY03	FY04	FY05
Jul	\$58,134	\$65,203	\$63,254	\$67,460
Aug	\$55,682	\$59,326	\$65,221	\$62,104
Sep	\$51,353	\$57,362	\$63,338	\$64,749
Oct	\$58,668	\$62,440	\$60,840	\$63,562
Nov	\$55,555	\$58,240	\$60,944	\$62,826
Dec	\$50,211	\$63,846	\$65,618	\$64,238
Jan	\$56,272	\$61,088	\$63,344	
Feb	\$53,371	\$51,626	\$53,623	
Mar	\$61,798	\$61,649	\$71,316	
Apr	\$66,365	\$65,041	\$67,799	
May	\$60,332	\$64,919	\$65,851	
Jun	\$60,345	\$63,180	\$69,437	
<b>TOTAL</b>	<b>\$688,084</b>	<b>\$733,919</b>	<b>\$770,584</b>	<b>\$384,938</b>



MONTH	# OF PULLS				
	FY02	FY03	FY04	FY05	
Jul	522	599	591	622	
Aug	483	566	625	582	
Sep	464	523	605	594	
Oct	508	556	572	576	
Nov	493	531	593	567	
Dec	579	598	606	527	
Jan	512	565	597		
Feb	487	458	484		
Mar	576	584	648		
Apr	612	617	636		
May	561	624	640		
Jun	576	598	652		
<b>TOTAL</b>	<b>6373</b>	<b>6819</b>	<b>7249</b>	<b>3468</b>	



**Solid Waste and Recycling Division Monthly Update  
December 2004**

**Distributed to the Solid Waste and Recycling Board of Beaufort County**

**IV. Drop-Off Center Traffic Activity**

DOC Name	Total Traffic this Month	# of Days Open this Month	# of Hours Open this Month	Average Daily Traffic	Average Hourly Traffic	# of Compactor Pulls	# of Bulky Pulls	# of Yard Waste Pulls	Total Swap Outs	Total # of Pulls
Hilton Head	26,846	30	354	895	76	26	47	15	16	104
Lobeco	7,319	30	354	244	21	5	9	4	0	18
Gate	15,179	30	354	506	43	12	32	13	11	68
Shanklin	12,483	30	354	416	35	10	50 17 cd note	13	14	87
Lady's Island	17,085	30	354	570	48	10	31	8	15	65
Coffin Point	1,471	20	121	74	12	2	3	2	0	7
Cuffy	1,077	21	126	51	9	2	4	1	1	8
St Helena	12,761	30	354	425	36	15	40 note 17 CD&WG	14	3	72
Bluffton	25,641	30	354	855	72	21	53	15	16	105
Pritchardville	4,397	25	300	176	15	6	8	2	1	17
Big Estate	1,399	21	224	67	6	2	3	1	0	6
Sheldon	1,531	18	164	85	9	1	3	1	1	6
<b>TOTAL</b>	<b>127,189</b>	<b>315</b>	<b>3,413</b>	<b>4,363</b>	<b>382</b>	<b>112</b>	<b>193</b>	<b>89</b>	<b>78</b>	<b>563</b>

**Solid Waste and Recycling Division Monthly Update**  
**December 2004**  
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**V. Recycling Activity by Solid Waste District**

<u>Solid Waste District</u>	<u>Total Tonnage</u> <u>DEC02*</u>	<u>Total Tonnage</u> <u>DEC03*</u>	<u>Total Tonnage</u> <u>DEC04*</u>	<u>Commercial</u> <u>Tonnage</u>	<u>DOC Tonnage</u>	<u>Residential</u> <u>Tonnage</u>
#1 - City of Beaufort	67.56	62.97	43.66	23.87	0.00	19.79
#2 - Town of Port Royal	4.91	7.35	0.00	0.00	0.00	0.00
#3 - Town of Hilton Head	89.38	137.68	136.47	32.10	100.21	4.16
#4 - Town of Bluffton	0.00	0.00	0.00	0.00	0.00	0.00
#5 - Sheldon Township	0.00	0.00	0.00	0.00	0.00	0.00
#6 - Unincorporated PRI	20.69	16.81	17.54	0.00	17.54	0.00
#7 - Lady's Island	49.23	44.84	29.28	0.00	29.28	0.00
#8 - St. Helena Island	5.54	3.77	26.99	0.00	26.99	0.00
#9 - Bluffton Township	107.16	111.40	145.96	67.49	68.01	10.46
<b>TOTAL</b>	<b>344.47</b>	<b>384.82</b>	<b>399.90</b>	<b>123.46</b>	<b>242.03</b>	<b>34.41</b>

<b>RECYCLING TONNAGE**</b>			
<b>MONTH</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>
Jul	374.42	412.34	366.24
Aug	400.88	349.20	356.39
Sep	347.08	297.16	320.77
Oct	405.42	347.59	328.34
Nov	353.24	275.49	381.54
Dec	344.47	384.82	399.9
Jan	372.84	327.23	
Feb	359.52	328.71	
Mar	425.58	364.75	
Apr	409.51	389.68	
May	382.43	327.82	
Jun	384.34	369.28	
<b>TOTAL</b>	<b>4559.73</b>	<b>4174.07</b>	<b>2153.18</b>

<b>DIVERSION PAYMENTS</b>			
<b>MONTH</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>
Jul	\$7,547	\$7,971	\$1,227
Aug	\$8,130	\$6,885	\$2,128
Sep	\$6,127	\$6,071	\$541
Oct	\$9,035	\$7,280	\$0
Nov	\$6,551	\$4,801	\$0
Dec	\$6,331	\$7,883	\$0
Jan	\$7,377	\$6,038	
Feb	\$7,492	\$6,795	
Mar	\$7,867	\$7,814	
Apr	\$7,607	\$8,392	
May	\$7,250	\$6,641	
Jun	\$7,245	\$7,529	
<b>TOTAL</b>	<b>\$88,560</b>	<b>\$84,100</b>	<b>\$3,896</b>

<b>RECYCLING SERVICES</b>			
<b>MONTH</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>
Jul	\$33,360	\$34,104	\$26,539
Aug	\$34,547	\$29,636	\$26,989
Sep	\$27,373	\$24,593	\$21,150
Oct	\$35,112	\$27,668	\$21,386
Nov	\$28,927	\$24,021	\$27,026
Dec	\$28,397	\$28,472	\$22,129
Jan	\$32,201	\$27,613	
Feb	\$29,006	\$22,355	
Mar	\$32,940	\$25,011	
Apr	\$32,569	\$22,583	
May	\$26,453	\$20,826	
Jun	\$24,529	\$27,686	
<b>TOTAL</b>	<b>\$365,414</b>	<b>\$314,667</b>	<b>\$145,219</b>

<b>NEWSPAPER RECYCLING</b>		
<b>MONTH</b>	<b>TONNAGE</b>	<b>REVENUE</b>
Jul	64.16	\$962.53
Aug	87.63	\$1,314.53
Sep	124.58	\$1,868.75
Oct	77.03	\$1,155.46
Nov	94.63	\$1,419.38
Dec	111.23	\$1,688.47
Jan		
Feb		
Mar		
Apr		
May		
Jun		
<b>TOTAL</b>	<b>559.26</b>	<b>\$8,409</b>





## MEMORANDUM

Date: December 13, 2004

To: Eddie Bellamy, Public Works Director

From: James S. Minor, Jr., Solid Waste and Recycling Superintendent

Subject: **RECYCLING REVENUE/CREDITS FY 2005 TO DATE**

1. The following update is provided for your information:

	(white goods) Charleston Steel	(newspaper) SP Recycling	(credit from MRF) Waste Management
July 2004		\$962.53	\$6,837.90
August 2004		\$1,314.53	\$7,319.37
September 2004	\$7,153.75	\$1,868.75	\$9,652.65
October 2004	\$15,689.06	\$1,155.46	\$10,439.18
November 2004	\$21,162.19	\$1,419.38	\$8,842.22
December 2004		\$1,688.47	\$16,415.93
January 2005			
February 2005			
March 2005			
April 2005			
May 2005			
June 2005			
Sub Totals	\$44,005.00	\$8,409.12	\$59,507.25
<b>GRAND TOTAL TO DATE</b>			<b>\$111,921.37</b>





# Evaluation of Solid Waste Management Alternatives

Beaufort County, South Carolina

February 17, 2005

R·W·BECK





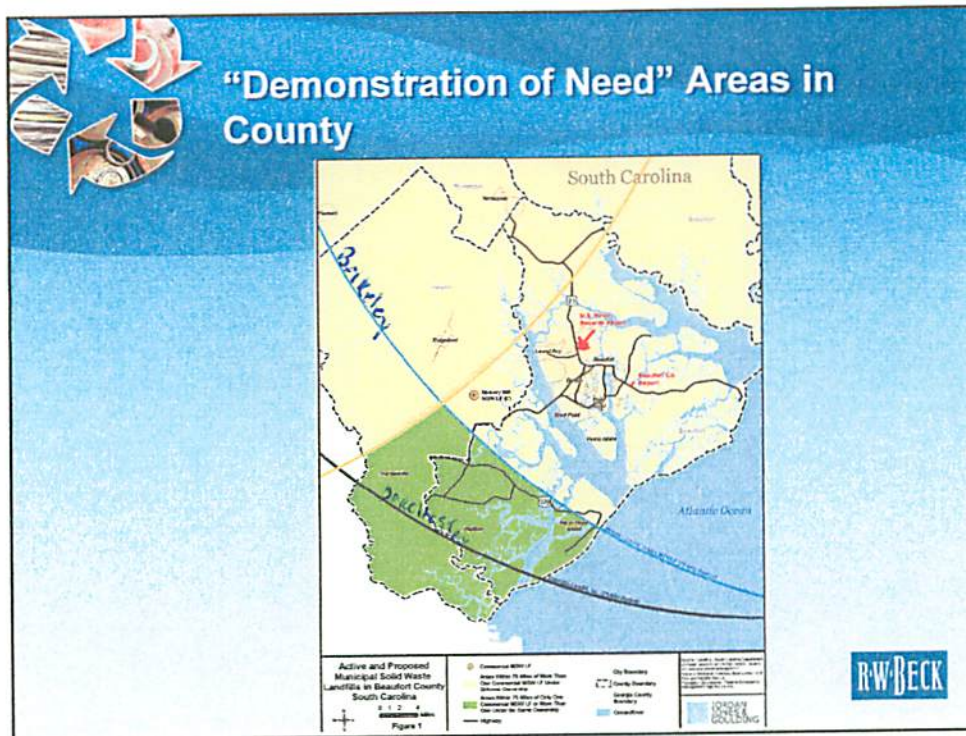

## Scope

- Disposal Options After 2010
- Curbside Collection Options in Districts 6 and 7
- Recycling Options
- Financial Modeling of Alternatives



## Criteria for Disposal Options

Criteria	Score
The alternative selected should have the lowest possible average cost per ton over 20 years.	4.75
The alternative selected should allow Beaufort County maximum control over its destiny.	4.50
The alternative selected should address the cost of commercial and residential disposal.	3.86
The alternative selected should have the lowest capital investment requirement.	3.13
The alternative selected should not include the development of a new landfill in the County.	2.88
The alternative selected should not include the development of a new transfer station in the County.	2.50
The alternative selected should not include the development of a new landfill at all.	2.29

### Facilities Expressing Interest in Beaufort County's Waste

Facility Name	Ownership	Rd. Miles to Beaufort	Remaining Life (yrs)	Proj. Tip Fee (\$/ton)
Hickory Hill Landfill	Waste Management	20	26.6	\$43.08
Camden County Landfill	Camden (GA) County Solid Waste Authority	169	19	\$27
Richmond County Deans Bridge	Richmond County, Georgia	137	2	\$28-\$32
Charing Landfill	Allied Waste	249	23	\$15.15
Broadhurst Landfill	Republic Waste	143	16	\$16-26
Berkeley County Landfill	Berkeley County Water & Sanitation Authority	89	21.6	\$50
Lee County Landfill	Allied Waste	144	23.4	\$20
Three Rivers Landfill	Three Rivers Solid Waste Authority	95	106.9	\$28.77





## Projected Costs of Transferring Waste

Facility Capacity	300 TPD	500 TPD	800 TPD
Predevelopment Costs (05\$)	\$450,000	\$525,000	\$600,000
Building(05\$)	\$2,035,000	\$2,200,000	\$2,640,000
Equipment Costs	\$681,375	\$1,026,375	\$1,250,625
Annual Operating Cost <sup>1</sup>	\$585,000	\$877,500	\$1,250,625
Operating Cost per Ton <sup>1</sup>	\$6.25	\$5.63	\$4.38

<sup>1</sup> Average over 20 years



## Conclusions

- Demonstration of Need criteria limit areas in County for new landfill
- Sufficient capacity in landfills in region to accept waste from Beaufort County
- Distance to other landfills requires transfer of waste
- County owned transfer station provides more County control
- Transfer and haul costs must be less than the savings in tipping fees at more distant landfills to make alternatives viable





## Recommendation

- Issue Request for Proposals for disposal capacity for all County waste starting July 1, 2010 allowing for any of the following:
  - Development of new disposal capacity
  - Cost to use existing disposal facility only (County develops or procures transfer station)
  - Cost to transfer, haul, and dispose (with one or two transfer stations)



## Criteria for Collection Options in Districts 6 and 7

Criteria	Score
The alternative selected should have the lowest possible average cost per ton over 20 years.	4.63
The alternative selected should allow Beaufort County maximum control over its destiny.	4.63
The alternative selected should be readily expandable to other areas in the County.	3.71
The alternative selected should have the lowest capital investment requirement.	3.38
The alternative selected should mimic the curbside systems already in place in the County.	1.75





## System Design

- Weekly curbside collection of garbage and recyclables
- Yard trimmings and bulky material would continue to be collected at drop-off centers
- Fully automated system for garbage collection using roll-carts
- Two-stream collection of recyclables using two bins



## Projected Costs of Collection System

Cost Category	Projected Amount
Initial Capital Cost	\$2,204,982
Annual Operating Cost in 2005	\$867,512
Average Annualized Cost Over 20 Years <sup>1</sup>	\$2,210,057
Average Annual Cost/Customer <sup>2</sup>	\$116.03
Monthly Cost/Customer	\$9.67

1 Includes equipment replacement every 7 years and 3% inflation per year  
2 Escalated for growth in population (i.e. adds vehicle when anticipated)







## Conclusions

- Curbside collection would cost approximately \$10 per residential unit per month if implemented in both Districts simultaneously, if costs are averaged over 20 years.
- Projected savings at three convenience centers in the Districts total approximately \$300,000 in 2005 and could be applied to reduce fee to residents in Districts 6 and 7.
- If County can implement certain practices (e.g. maintain hydraulic vehicles cost effectively, implement incentive programs that reward productivity) then public and private costs should be comparable.

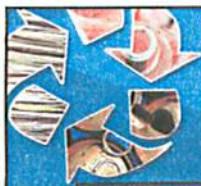


## Recommendations

- County should determine whether it wants to be in the collection business.
- If so, solicit bids for equipment and hire staff.
- If not, issues Request for Proposals for collection in Districts 6 and 7.
- If contractor is hired, maintain County control by billing residents and write in contract terms that provides incentives for customer service, maximum diversion, and other County objectives.







## Criteria for Recycling Options

Criteria	Score
The alternative selected should have the lowest possible average cost per ton over 20 years.	4.75
The alternative selected should result in moving towards State's waste reduction goals.	4.50
The alternative selected should allow Beaufort County maximum control over its destiny.	4.00
The alternative selected should have the lowest capital investment requirement.	3.13
The alternative selected should not include the development of a new MRF in the County.	2.14



## Options Considered

- Process and market curbside-sorted recyclables;
- Bale mixed paper and transfer commingled containers (two stream collection);
- Sort/bale mixed paper and transfer commingled containers (two stream collection); or
- Process two stream recyclables at a full scale Material Recovery Facility (MRF).





## Projected Costs of Options

Options	Capital Costs <sup>1</sup>	Operating Costs, 2005		Annual Revenues
		Facility Operation	Other	
Existing Practice	\$0		\$160,090	\$7,680
1 - Process and Market Curbside-Sorted Recyclables	\$1.1 million	\$450,000	\$80,000 <sup>3</sup>	\$435,000
2 - Bale Mixed Paper and Transfer Commingled Containers	\$1.2 million	\$105,000	\$235,000	\$150,000 <sup>5</sup>
3 - Sort/Bale Mixed Paper and Transfer Commingled Containers	\$1.2 million	\$105,000	\$325,000	\$110,000 <sup>5</sup>
4 - Full Scale MRF Processing of Two Stream Recyclables	\$2.3 million	\$540,000		\$510,000

<sup>1</sup> Building and equipment are included.  
<sup>2</sup> Processing fee paid to Hickory Hill (after revenues are applied).  
<sup>3</sup> The cost for an additional vehicle and labor that would be incurred if sorting was performed at the curb.  
<sup>4</sup> Includes the cost of transferring commingled containers 75 miles.  
<sup>5</sup> Paper revenue minus \$12 per ton to tip at John L. Jencks Recycling Center in Charleston.



## 20 Year Projected Costs of Recycling Options

Options	Avg Annual Cost Over 20 Years	Avg Cost per Ton Over 20 Years
Existing Practice — Deliver Recyclables (excluding newspaper) to Hickory Hill MRF	\$374,359	\$41.44
1 - Process and Market Curbside-Sorted Recyclables	\$248,242	\$27.48
2 - Bale Mixed Paper and Transfer Commingled Containers	\$177,401	\$19.64
3 - Sort/Bale Mixed Paper and Transfer Commingled Containers	\$248,945	\$27.56
4 - Full Scale MRF Processing of Two Stream Recyclables	\$345,859	\$38.28

RWBEEK





## Conclusions

- Least costly option is to develop a facility to bale and market mixed paper and to transfer commingled containers to another MRF, assuming that JLJ will take commingled containers at the rate quoted.
- Beaufort County facility can be developed by County or contractor
- Collection can be adjusted to two-stream, allowing for fewer containers, less sorting, and the potential to collect more materials.
- Save costs if facility if developed in concert with transfer station but need to work out differences in schedule

1590

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## Recommendations

- County should negotiate pricing for commingled containers
- Determine whether County wants to own or facility
- If so, solicit bids for building and equipment then:
  - Enter into market agreements and operate facility
  - Hire contractor to operate facility
- If not, issues Request for Proposals for processing facility

RWBECK