

# Charleston Long-Range Solid Waste Plan Input Sheet

Out of County  
RRF through 2030

## General Information

|   |         |
|---|---------|
| MSW Generated in Beginning Year (tons/year)   | 310,271 |
| MSW Generation Escalation Factor (%)          | 0.80%   |
| C&D Waste Managed by County (tons/year)       | 100,000 |
| C&D Waste Escalation Factor (%)               | 0.00%   |
| Discount Rates                                | 5.00%   |
| Inflation Rate / General Escalation           | 2.50%   |
| Start Year (will become "year 1" of proforma) | 1       |
| Beginning Fiscal Year                         | 2002    |

## Resource Recovery Facility

### MSW Tonnages

|                               |         |
|-------------------------------|---------|
| Current Tons of MSW processed | 200,000 |
| Beginning Year                | 2002    |
| Ending Year                   | 2010    |
|                               | -       |
| Future Tons of MSW processed  | 175,550 |
| Beginning Year                | 2011    |
| Ending Year                   | 2030    |

### Ash Residue

|  |         |
|--|---------|
| Ash Residue Generation Rate (% of MSW)                               | 27%     |
| Current Ferrous Metal Recovery Rate (% of Ash)                       | 0.5%    |
| Future Ferrous Metal Recovery Rate (% of Ash)                        | 0.5%    |
| Future Start Year  | 2002    |
| Beginning Ferrous Metal Sale Price (\$/ton)                          | \$0.00  |
| Ferrous Metal Sale Price Escalation Factor (%)                       | 0.0%    |
| Out of county ash disposal   |         |
| Beginning Ash Disposal Cost (\$/ton)                                 | \$27.00 |
| Ash Disposal Cost Escalation Factor (%)                              | 2.5%    |
| Beginning Year   | 2002    |
| Ending Year  | 2030    |
| Is Ending Year Cost split between County and out-of-County? (yes/no) | no      |
| In county ash disposal   |         |
| Beginning Year   | none    |
| Ending Year  |         |

### Ash Hauling Costs

|  |        |
|--|--------|
| Incremental Ash Hauling Cost (\$/ton)  | \$0.00 |
| Ash Hauling Cost Escalation Factor (%) | 0.0%   |
| Beginning Year                         |        |
| Ending Year                            |        |

### Operations/Maintenance Costs

|                                   |             |
|-----------------------------------|-------------|
| Current O&M Costs (\$/year)       | \$7,100,000 |
| Current O&M Escalation Factor (%) | 2.0%        |
| Future O&M Costs (\$/year)        | \$6,770,000 |
| Future O&M Escalation Factor (%)  | 2.0%        |
| Future Start Year                 | 2011        |

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## Non-Routine Capital Improvement Costs

|                    |      |
|--------------------|------|
| Description        | none |
| Cost               | \$0  |
| Cost Year Incurred |      |

## Current Debt

|                                 |         |
|---------------------------------|---------|
| Series 1997 Bond Allocation (%) | 100.00% |
|---------------------------------|---------|

## Energy Revenues

|   |         |
|---|---------|
| Current Electric Power Sold (MWh)                       | 48,000  |
| Beginning Year  | 2002    |
| Ending Year   | 2010    |
| Contractual electric power sales price (\$/MWh)         |         |
| FY 2002   | \$60.24 |
| FY 2003   | \$63.74 |
| FY 2004   | \$67.40 |
| FY 2005   | \$71.45 |
| FY 2006   | \$75.93 |
| FY 2007   | \$80.90 |
| FY 2008   | \$86.44 |
| FY 2009   | \$89.36 |
| FY 2010   | \$89.36 |
| County share of electric revenue (%)                    | 90%     |
| Future Electric Power Sold (MWh)                        | 86,000  |
| Beginning Year (leave blank if NA)                      | 2010    |
| Ending Year (leave blank if NA)                         | 2030    |
| Future Electric Power Sales Price (\$/MWh)              | \$25.00 |
| Future Electric Power Sales Price Escalation Factor (%) | 1%      |
| Future County share of electric revenue (%)             | 90%     |
| Current Steam Sold (mlbs)                               | 500,000 |
| Beginning Year  | 2002    |
| Ending Year (half year)                                 | 2010    |
| Current Steam Price (\$/mlbs)                           | \$6.59  |
| Current Steam Price Escalation Factor                   | 0.5%    |
| Current County share of steam revenue (%)               | 93%     |
| Future Steam Sold (mlbs)                                | 0       |
| Beginning Year (half year, leave blank if NA)           |         |
| Ending Year (leave blank if NA)                         |         |
| Future Steam Price (\$/mlbs)                            | \$0.00  |
| Future Steam Price Escalation Factor                    | 0.0%    |
| Future County share of steam revenue (%)                | 0%      |

## Merchant Waste Revenues

|  |         |
|--|---------|
| Tons Merchant Waste Processed (tpy)        | 24,450  |
| Merchant Waste Tip Fee (\$/ton)            | \$85.00 |
| County Share of Merchant Waste Revenue (%) | 50%     |
| Beginning Year                             | 2011    |

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## Landfill

### Existing Landfill Operations

#### Bees Ferry Unlined MSW Landfill

calculated on proforma as  
balance of MSW not  
disposed of elsewhere

|  |           |
|--|-----------|
| Amount MSW Disposed at Landfill                                  |           |
| Ending Year  | 2006      |
| Is Ending Year a half-year? (yes/no)                             | yes       |
| Annual O&M Costs (\$/ton)  | \$11      |
| Closure Cost (\$/acre)   | \$110,000 |
| Number of Acres  | 72        |
| Year Closure Cost Incurred (half cost occurs in subsequent year) | 2006      |
| Annual Post-Closure Care Cost (\$/year)                          | \$85,000  |
| Year Post-Closure Care Costs Begin                               | 2007      |
| Number of Years for Post-Closure Costs                           | 30        |

#### Romney Street Post-Closure Care

|                                    |          |
|------------------------------------|----------|
| Annual Post-Closure Care (\$/year) | \$45,208 |
| Ending Year                        | 2025     |

#### Bees Ferry Ash Monofill

|                                    |          |
|------------------------------------|----------|
| Annual Post-Closure Care (\$/year) | \$15,040 |
| Ending Year                        | 2026     |

#### Bees Ferry Tire Recycling

|  |           |
|--|-----------|
| Amount of Tires Recycled (% of County MSW) | 1%        |
| Ending Year                                | 2030      |
| Annual O&M Costs (\$/year)                 | \$175,000 |

#### Bees Ferry C&D Landfill

|  |          |
|--|----------|
| Amount of C&D Managed at Landfill (% of C&D Managed by County) | 100%     |
| Ending Year  | 2030     |
| Annual O&M Costs (\$/ton)                                      | \$11     |
| Closure Cost (\$/acre)   | \$50,000 |
| Number of Acres  | 99       |
| Year Closure Cost Incurred                                     | 2031     |
| Annual Post-Closure Care Cost (\$/year)                        | \$50,000 |
| Year Post-Closure Care Costs Begin                             | 2032     |
| Number of Years for Post-Closure Costs                         | 30       |

### Revenues

|  |           |
|--|-----------|
| C&D Waste Tipping Fees, Private Customers (\$/ton) | \$25      |
| C&D Tonnage from Private Customers (%)             | 35%       |
| Tire Tipping Fee (\$/year)                         | \$325,000 |
| C&D and Tire Tipping Fee Escalation Factor (%)     | 3%        |
| DHEC Tire Refunds (\$/year)                        | \$135,000 |
| Tire Refund Escalation Factor (%)                  | 0%        |

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## Future Landfill Operations

|   |               |
|---|---------------|
| Where is future MSW disposed? (county, out-of-county) | out-of-county |
| If County, which location? (Bees Ferry or 17 South)   | NA            |
| Where is future ash disposed? (county, out-of-county) | out-of-county |
| If County, which location? (Bees Ferry or 17 South)   | NA            |
| Where is future C&D disposed? (county, out-of-county) | county        |
| Final Year  | 2030          |
| In-place density MSW (tons/yd3)                       | 0.6           |
| In-place density ash (tons/yd3)                       | 1.2           |
| In-place density C&D (tons/yd3)                       | 0.5           |

## New County Landfill(s)

|   |      |
|---|------|
| Amount MSW Disposed at County Landfill          | None |
| Are MSW and ash co-disposed? (yes/no)           | NA   |
| Is ash used for daily cover? (yes/no)           | NA   |
| Savings factor for using ash as cover (\$/year) | NA   |
| Ending year for savings factor                  | NA   |
| O&M Costs for FIRST County Landfill (\$/year)   | \$0  |
| Personnel (\$/year)                             | \$0  |
| General Operating Costs (\$/year)               | \$0  |
| Leachate Treatment Costs (\$/year)              | \$0  |
| Gas Collection System Cost (\$/year)            | \$0  |
| Cover Material Costs (\$/year)                  | \$0  |

Adjustment to O&M Costs for SECOND County Landfill (\$/yr)  
Year Adjustment begins  
Adjustment to O&M Costs for NEW County C&D Landfill (\$/yr)  
Year Adjustment begins

### **FIRST LANDFILL**

|  |     |
|--|-----|
| Initial Construction Cost (\$)                             | \$0 |
| Year Initial Construction Cost Incurred                    | NA  |
| Average size of cell (acres)                               | 0   |
| Average cell capacity (yd3)                                | 0   |
| Cell Construction Cost (\$/acre)                           | \$0 |
| Cell Closure Cost (\$/acre)                                | \$0 |
| Annual Post-Closure Care Cost (\$/year)                    | \$0 |
| Final Operating Year                                       |     |
| Year Post-Closure Care Costs Begin (leave blank if NA)     |     |
| Number of Years for Post-Closure Costs (leave blank if NA) |     |

### **SECOND LANDFILL**

|  |  |
|--|--|
| Initial Construction Cost (\$)                             |  |
| Year Initial Construction Cost Incurred                    |  |
| Average size of cell (acres)                               |  |
| Average cell capacity (yd3)                                |  |
| Cell Construction Cost (\$/acre)                           |  |
| Cell Closure Cost (\$/acre)                                |  |
| Annual Post-Closure Care Cost (\$/year)                    |  |
| Final Operating Year                                       |  |
| Year Post-Closure Care Costs Begin (leave blank if NA)     |  |
| Number of Years for Post-Closure Costs (leave blank if NA) |  |
| C&D Closure Cost Allowance                                 |  |

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## Out-of-County Landfill

|   |                               |
|---|-------------------------------|
| Amount MSW Disposed at Out-of-County Landfill (tons/year) | MSW not disposed of elsewhere |
| MSW Disposal Cost at Out-of-County Landfill (\$/ton)      | \$22.41                       |
| Ash Disposal Amount & Costs at Out-of-County Landfill     | included under RRF module     |
| Amount of C&D to Out-of-County Landfill (%)               | 0%                            |
| C&D Disposal Cost at Out-of-County Landfill (\$/ton)      | \$0                           |
| Year Out-of-County C&D Disposal Begins                    | NA                            |

## Current Debt

|                                 |     |
|---------------------------------|-----|
| Series 1994 Bond Allocation (%) | 78% |
|---------------------------------|-----|

## Recycling

### Recyclables Tonnages

|   |       |
|---|-------|
| Current Amount of County MSW to MRF (%)         | 4.2%  |
| Future Amount of County MSW to MRF (%)          | 4.2%  |
| Future Start Year                               | 2002  |
| Out-of-County Recyclables to MRF (tons/year)    | 3,200 |
| Out-of-County Recyclables Escalation Factor (%) | 0.5%  |

### Recycling Curbside Collection

|                        |           |
|------------------------|-----------|
| Current Cost (\$/year) | \$981,000 |
| Future Cost (\$/year)  | \$981,000 |
| Future Start Year      | 2002      |

### Recycling Drop Sites

|                                  |          |
|----------------------------------|----------|
| O&M Cost per Drop Site (\$/site) | \$11,000 |
| Current Number of Drop Sites     | 47       |
| Future Number of Drop Sites      | 47       |
| Future Start Year                | 2002     |

### MRF

|                            |             |
|----------------------------|-------------|
| Current O&M Cost (\$/year) | \$1,360,000 |
| Future O&M Cost (\$/year)  | \$1,360,000 |
| Future Start Year          | 2002        |

### Recycling Revenues

|   |         |
|---|---------|
| Recyclables Sales (\$/ton)              | \$69.00 |
| Recyclables Sales Escalation Factor (%) | 0.0%    |
| Out-of-County Tipping Fees (\$/ton)     | \$12.00 |
| Tipping Fee Escalation Factor (%)       | 1.0%    |

## Current Debt

|                                 |     |
|---------------------------------|-----|
| Series 1994 Bond Allocation (%) | 19% |
|---------------------------------|-----|

# Charleston Long-Range Solid Waste Plan Input Sheet

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## MSW Transfer Station

### Transfer Station Tonnages

|  |      |
|--|------|
| Amount of Landfill MSW to Transfer Station (%)   | 75%  |
| Amount of C&D to Transfer Station (%)            | 0%   |
| Transfer Station Start Year (specify year or NA) | 2006 |
| Is Start Year a half-year? (yes/no)              | yes  |

### Operation/Maintenance Costs

|                                     |           |
|-------------------------------------|-----------|
| Total O&M Costs (\$/year)           | \$310,000 |
| MSW O&M Costs (\$/year)             | \$310,000 |
| Incremental C&D O&M Costs (\$/year) | \$0       |

### Hauling Costs

|                                 |        |
|---------------------------------|--------|
| MSW Hauling Costs (\$/ton/mile) | \$0.50 |
| C&D Hauling Costs (\$/ton/mile) | \$0.50 |
| Distance to Landfill (miles)    | 37     |
| 17 South: 25 miles              |        |
| Out-of-County: 37 miles         |        |
| Fennell or Collins: 13 miles    |        |

### Construction Costs

|   |             |
|---|-------------|
| Total Construction Cost, Including Initial Equipment (\$) | \$3,200,000 |
| MSW TS Construction Cost (\$)                             | \$3,200,000 |
| Incremental C&D TS Construction Cost (\$)                 | \$0         |
| Year Construction Cost Incurred                           | 2006        |

### Revenues

|                        |     |
|------------------------|-----|
| Tipping Fees (\$/year) | \$0 |
|------------------------|-----|

## Yard Waste Composting Facility

### Composting Tonnages

|  |     |
|--|-----|
| Amount of County MSW to Composting (%) | 11% |
|--|-----|

### Operation/Maintenance Costs

|                               |           |
|-------------------------------|-----------|
| Beginning O&M Costs (\$/year) | \$801,500 |
|-------------------------------|-----------|

### Composting, Mulch, Firewood Revenues

|  |          |
|--|----------|
| Annual Composting Sales (\$/year)      | \$61,000 |
| Composting Sales Escalation Factor (%) | 0.0%     |

### Current Debt

|                                 |    |
|---------------------------------|----|
| Series 1994 Bond Allocation (%) | 3% |
|---------------------------------|----|

# Charleston Long-Range Solid Waste Plan Input Sheet

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## Other System Components

### Solid Waste Administration

Beginning Year Cost \$1,640,000

### Rural Convenience Centers

Beginning Annual Cost per Center (\$/center/year) \$221,800

Number of Centers 7

### Household Hazardous Wastes

Beginning Annual Cost (\$/year) \$227,300

### Litter Program

Beginning Annual Cost (\$/year) \$111,900