



Rivanna Solid Waste Authority (RSWA)

Solid Waste Strategic Plan

Community Meeting

November 15, 2007



SOLID WASTE
MANAGEMENT
CONSULTANTS



Draper Aden Associates





Welcome and Introductions

- RSWA
- GBB Consultants
- Draper Aden Associates





Presentation Overview

1. Strategic planning process
2. Current situation
3. Technical review results
4. Stakeholder interview results
5. Public opinion survey
6. Benchmarking results and best practices
7. Scenarios for the future
8. Questions





1. Strategic Planning Process



Why a Strategic Plan Now?

- Lifting current physical facility constraints requires public support
- Current funding barrier to City and County cooperation
- Confidence in RSWA management improving
- Belief citizens want “greener” and better services
- RSWA looking for common ground and economies-of-scale
- Open to public-private partnerships that achieve overall goals



Strategic Planning Process

Task	Timeframe
1. Develop understanding of services & needs Conduct stakeholder interviews	Aug.- Oct. 2007
2. Critical review of facilities and services Data request and review Technical evaluation	Aug. - Sept. 2007 Sept. 2007
3. Benchmark comparison	Sept.- Oct. 2007
4. Public participation activities Community meetings, opinion surveys, etc.	Nov.- Dec. 2007
5. Summary report/recommendations Input from City and County staff, CAC, RSWA Board	Dec. 2007
6. Presentation of draft report to elected officials	Feb. – Mar. 2008
7. Final approval	TBD 2008





2. Current Situation



RSWA Organizational Agreement Highlights

- Established in 1990; in full force until June 30, 2030 or until Bonds repaid
- Revenue bonding anticipated for capital projects
- Authority expressly prohibited from collecting solid waste within the City or the County (recycling collection not mentioned)
- Authority may set up transfer stations and shall be sole provider for disposal, recycling or regeneration of such solid waste; City and County agree to only use Authority facilities/services
- Authority to be sole disposer of waste originating in City and County and not take waste from outside the County, subject to permitted capacities
- Parties agree to reduce waste and work together to acquire and commence operation of a new landfill or other disposal or recycling facility
- Serving a combined population through the City and the County of more than 132,000 people, including U. Va.



RSWA Facilities & Services

- **Facilities**
 - Ivy Materials Utilization Center (MUC)
 - McIntire Road Recycling Center
 - Paper Sort Facility (Public-private Partnership)
 - Zion Crossroads transfer and disposal (public-private partnership with Allied Waste)
- **Services**
 - Two drop off recycling centers in the County (Sam's Club and Pantops Shopping Center)
 - Recovered materials processing and marketing
 - Mulch processing and delivery
 - Public education
 - Ivy Landfill closure, monitoring/management
 - Transfer and disposal from Ivy MUC (Public – Private Partnership with Waste Management, Inc.)



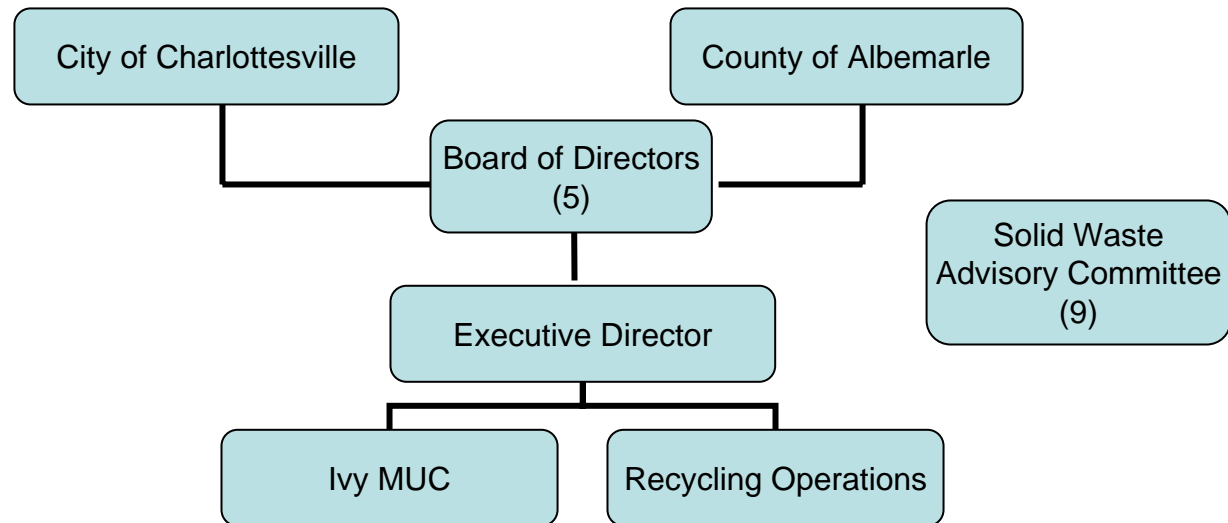
RSWA 2006 Materials Recycling and Disposal

Material	Quantity in Tons	Percent
Recyclable Materials	5,090	4.8
Clean Fill	17,987	16.9
Document Destruction	7	0.0
Grindable Vegetative Material	5,111	4.8
Pallets	180	0.2
Road Base	665	0.6
Whole Tires	284	0.3
White Goods	49	0.0
Ivy MSW	19,026	17.9
U. Va. MSW	4,963	4.7
County MSW	14,246	13.4
MSW Zion Allied	38,618	36.4
Total Material	106,226	100.0





Authority Organization



- Employees: 18 full time, 2 part-time
- Executive, Finance, Administration, and Environment/Safety functions contracted through RWSA
- 2008 annual budget \$5 million, not including landfill closure costs



Funding the Authority

- Before 1998:
 - Tipping fees covered all costs
 - Ivy Landfill used for disposal
- After 1998, when Ivy Landfill closed:
 - Tipping fees do not cover all costs
 - Service Contribution Fee at Zion Crossroads Transfer Station from City and County originated waste
 - Equity concerns between City and County
 - Payments from City, County, and U. Va. for Ivy Landfill closure and post-closure
- Revenues from the sale of recyclables
- Hauling Fees



City of Charlottesville Residential Services



- Single-family curbside collection of trash and recycling (single stream in bins – newspapers, cans, bottles, jars)
- Private contractor provides services
- Trash and recyclables delivered to Allied's Zion Crossroads
 - Recyclables go to Tidewater Fibers in Chester
 - Waste to Allied landfill in Henrico County
- City services funded by Bag-Tag payment and the General Fund



City of Charlottesville Commercial Services



- City contracts for most Downtown Mall services
- City buildings use contractors for trash and recycling
- City schools use private contractor for trash and RSWA for recycling
- Otherwise, businesses, including multi-family residential, contract directly with private haulers
- Private haulers decide where to take trash
 - Hopefully taken to either Ivy MUC or Zion Crossroads, subject to RSWA Fees



Waste Services in Albemarle County

- Residents contract for trash collection individually or through homeowners association -- \$20-27 per month
 - Some haulers offer newspaper recycling
- Some residents and businesses self haul to RSWA facilities
- County buildings and schools contract for trash and recycling services
- Otherwise, businesses contract directly with private haulers
- Private haulers decide where to take trash
 - Hopefully taken to either Ivy MUC or Zion Crossroads, subject to RSWA Fees
- Town of Scottsville: hires contractor to collect trash and no recycling collection
 - Trash taken to Ivy MUC





University of Virginia Trash and Recycling 2004-2006

- Manages approx. 9,000 tons per year
- On site collection and processing at their Recycling Park; 40% diversion per VA formula
- Contractor takes trash goes to Ivy MUC
- Other recycling: approx. 1,500 tons per year (tires, batteries, chemicals, oil, etc.)





3. Technical Review

Facilities Overview



Ivy MUC





Ivy MUC

Current Operations

- Transfer Station
- Convenience Center
- Yard Waste Disposal
- Clean Fill Disposal
- Encore Shop
- HHW Facility
- Scales
- Office

Issues and Findings:

- At 150 TPD permitted capacity
- Uses old technology
- Long wait lines because of physical constraints
- Neighborhood wants Ivy MUC closed





McIntire Road Recycling Center





McIntire Road Recycling Center



Current Operations

- Serves residents from City, County, including Scottsville and U. Va.
- Recycling for glass, plastic, aluminum, steel containers, newspaper, corrugated cardboard, glossy magazines, white office paper and book swap

Issues and Findings

- Unsafe mix of vehicle and pedestrian traffic
- Limited room to expand or provide circular traffic flow



Paper Sort Facility





Paper Sort Facility

Current Operations

- Serves commercial and institutional customers
- Processing limited to baling and direct loading
- Products: various types of paper; baled or loose
- Weyerhaeuser purchases all products

Issues and Findings

- Facility near capacity
- Existing building has processing limitations
- Cannot process mixed recyclables
- Lease ends 2010





Drop Offs in County



- Locations:
 - Sam's Club
 - Pantops Shopping Center
- Issues and Findings
 - Hard to find
 - Small and for limited materials
 - Inconvenient locations





Zion Crossroads Transfer Station – Allied Waste



Current Operations

- Permitted for 400 TPD
- Fluvanna County Landfill closing
- Allied doing renovations to expand capacity
- Haulers have to declare waste originates in Albemarle County or City of Charlottesville

Issues and Findings

- Not all haulers believed to be reporting accurately
- Located in Fluvanna County



4. Stakeholder Interview Results

*Hearing from the
Community and its Leaders*



Stakeholder Interviews

Interviewed 54 community stakeholders:

- Elected officials (City, County, Scottsville)
- Solid waste officials (City, County, U.Va.)
- Planning/development officials (City, County, U.Va.)
- RSWA Citizens Advisory Committee
- Solid waste businesses (haulers, processors)
- Developers/builders
- Nonprofit organizations and business associations
- Ivy Neighbors
- Thomas Jefferson Planning District Commission



What We Heard

The “Top Six”

1. Residents and businesses want to recycle more; options are limited for County residents
2. RSWA facilities are too small; limited capacity
3. RSWA funding mechanism needs to be fixed
4. Ivy landfill remediation and monitoring is no longer a problem; RSWA is transparent, effective
5. City, County and U.Va. should collaborate on the area’s solid waste management system
6. Residents here want to be part of an innovative, model community; this strategic plan is a welcome opportunity



What We Heard

Ideas and Suggestions

- Community should take care of its own waste here
- Offer curbside recycling collection (single stream) in County's urban ring with more drop-off sites in the County's rural area
- Build modern facilities:
 - Recycling center and/or composting facility
 - Regional Materials Recovery Facility to process recyclables
 - Consider feasibility of incineration (waste-to-energy) to manage waste here
 - Central sorting center for all trash and recyclables



What We Heard

Ideas and Suggestions (cont'd)

- Explore public-private partnerships to provide trash and recycling collection services
- Increase number of materials accepted for recycling (electronics, batteries, more plastics)
- Include waste from parks, schools, mall
- Capture and use or sell the landfill gas generated at the Ivy Landfill
- Explore regional opportunities
- Explore alternative funding mechanisms (user fee, utility fee, fee on tax bill)



5. Public Opinion Survey

We want to hear from you!

Please complete the online survey:

http://www.rivanna.org/rswa_strategicplan/tellus.htm

Or, please fill out a hard copy of the survey.



Findings: RSWA Current Situation

- ✓ Organization
 - ✓ Respected, transparent, experienced, committed, lean with limited resources
- ✓ Ivy Landfill monitoring/remediation -- no longer a concern; under control
- ✓ Facilities and services-- too small, at capacity
- ✓ Funding mechanism – unstable
- ✓ City and County not following the original intent of the Organizational Agreement
- ✓ Community wants to be greener and recycle more (currently reported to Commonwealth at 38.5%)
- ✓ Region is relatively small, requiring consolidation of services for reasonable costs
- ✓ Facilities and services must improve to meet needs of growing region



6. Benchmarking Results and Best Practices

*Lessons Learned from Other
Communities*



Benchmarked Communities

- Ann Arbor, Washtenaw County and University of Michigan
- Blacksburg, Montgomery County and Virginia Tech
- Chapel Hill, Orange County and University of North Carolina
- Harrisonburg, and James Madison University
- Williamsburg, James City County and William and Mary



Success Themes from Benchmarking Research

- Extensive collaboration among local governments and university on facilities and services, such as:
 - Multiple convenience centers and/or recycling drop offs
 - Contracted recycling and/or trash collection services
 - Contracted recycling processing services
 - Authority owned Materials Recycling Facility (MRF)
 - Authority owned Transfer Station
 - Waste-to-energy Facility for university energy needs
- A central organization coordinating common services; and the university is a partner in regional efforts
- Each local government can customize services for its citizens while also collaborating through regional partnerships
- Funding provided through user fees, fees with property tax bills, and/or local government direct payments



Some Best Practice Examples from Other Communities

1. Central Virginia Waste Management Authority
 - Offers single contract for curbside recycling collection and processing and 46 recycling drop-off centers serving 240,000 households throughout the region; 45% recycling rate
2. Prince William County, VA
 - Countywide solid waste fee included as line item on tax bills homes and businesses
 - Allows for zero tipping fee at landfill and pays off debt
3. Harrisonburg, VA
 - Uses energy value of waste for James Madison University



Some Best Practice Examples from Other Communities

4. City of San Jose, CA

- Carts for trash, recycling and yard waste
- Pay-as-you-throw monthly charge for trash cart size:
 - 20-gallon cart \$24.30
 - 32-gallon cart \$25.80
 - 64-gallon cart \$51.60
 - 96-gallon cart \$77.40
 - Extra Garbage Sticker \$6.25 each
- Currently 62% diversion of waste from landfill; 75% goal

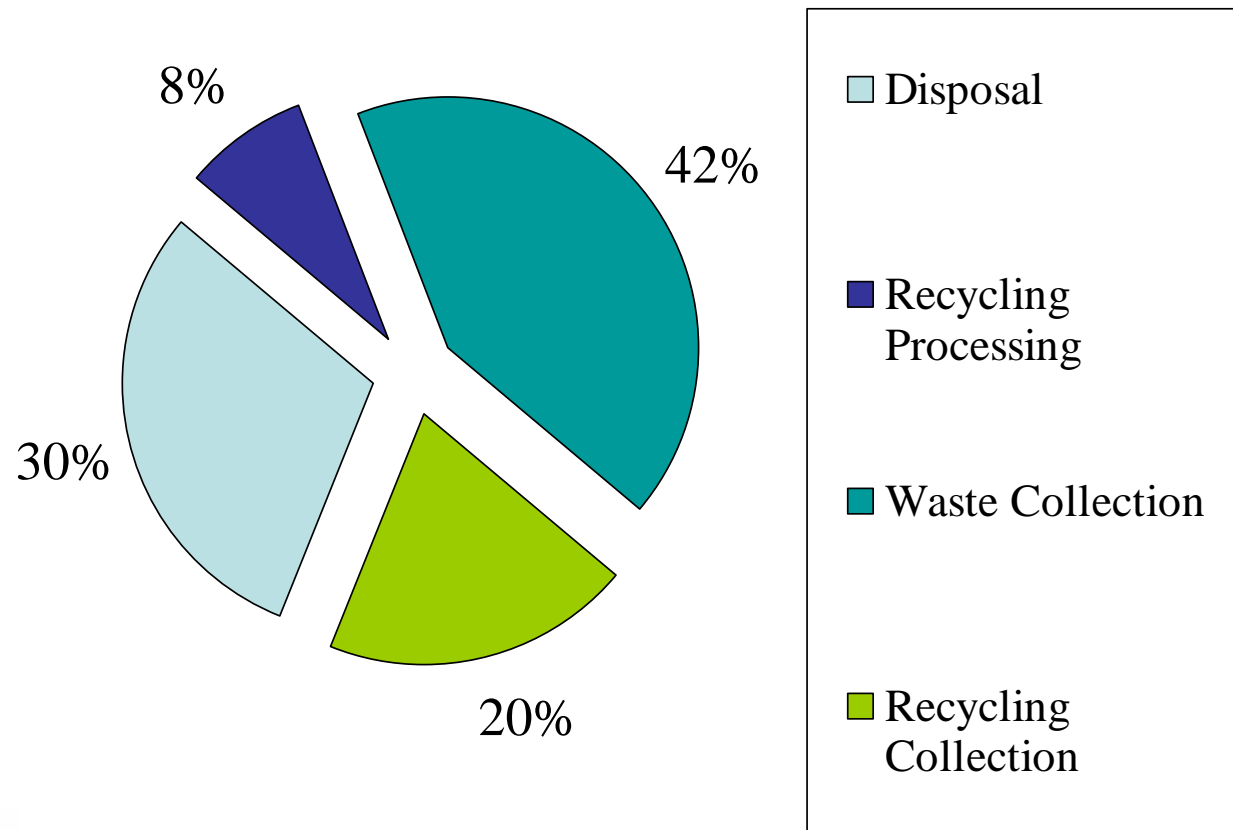
5. Fairfax County, VA

- Recycling requirements for private hauler collection
- Curbside collection of a full range of recyclables is required for:
 - All single family homes
 - Apartments, built after July 2007
- Apartments built before July 2007 are required to have mixed paper and cardboard collection
- Non-residential properties required to recycle mixed paper and cardboard
- Larger properties are required to identify their principal recyclable material and recycle it



Total Trash and Recycling Cost Range in the U.S.

\$10.00 to \$30.00 per Household Per Month





Factors that Increase Diversion



- ✓ Strong and ongoing public education
- ✓ Single stream programs for all clean and dry recyclables
- ✓ Targeting organics, at least yard waste, and providing collection services
- ✓ Reuse functionality coordinated amongst local non-profits and at convenience centers
- ✓ Convenient and large storage containers for recyclables
- ✓ Mandated programs requiring source separation
- ✓ Enforcement of mandated programs
- ✓ Technical assistance to large generators to set up special programs





Factors that Drive Cost Down

- ✓ Unbundling collection from processing
- ✓ Long-term contracts
- ✓ Every other week collection for recyclables and yard waste
 - ✓ Even once per month for recyclables
 - ✓ Seasonal for yard waste
- ✓ Call in bulk service
- ✓ Automated collection
- ✓ Get techy!
- ✓ Maintenance contracts
- ✓ Close collection markets – contracting or franchising





7. Scenarios for the Future

Ideas for a New Beginning



Maintain Status Quo

Continue to operate as RSWA does now:

- No change to facilities
 - Close Ivy MUC when permit limit reached
- Staffing levels remain the same
- No change to services
- No change to funding mechanism
 - Continuing arguments over Service Contribution Fees
- Non-compliant with Organizational Agreement





Status Quo - Pros and Cons

Pro:

- + Easy, nobody has to do anything
- + No major capital improvements required

Con:

- Levels of service go down as facilities age, population increases
- Recycling and diversion rates go down
- RSWA funding remains unstable
- Greenhouse gas emissions increase: more trucking and more landfilling
- Maintenance costs keep rising



5 Scenarios

1. Eliminate RSWA
2. Manage Disposal
3. Increase Recycling
4. More Recycling
5. Sustainable System



Scenario 1 – Eliminate RSWA

- City and County decide:
 - *Who operates which facility?*
 - *What services are provided for City and for County?*
 - *How to pay for them?*
 - *Who takes over Ivy remediation?*



Eliminate RSWA - Pros and Cons

Pros:

- + Ends negotiating over RSWA funding
- + All solid waste activities and functions transfer to local governments with full legislative and police powers

Cons:

- City and County agree on transition/shut down plan
- All responsibilities and costs shift to County and City
- No mechanism for cooperation
- Lost opportunity for economies of scale
- Landfill remediation will still be necessary and management/oversight provided for



Scenario 2 – Manage Disposal

- Develop a modern transfer facility for all waste from City and County
- New facility transfers recyclable materials to private processor(s)
- Contracted hauling and disposal
- Add four (4) un-staffed recycling drop-off centers outside urban ring
- Source separated C&D accepted at new Transfer Station, stored and shipped to market in trailer loads
- New facilities can be financed with bonds



Manage Disposal - Pros and Cons

Pros:

- + Addresses limitations of current facilities
- + Lowers cost of transfer station operations and haul
- + Consolidates solid waste transfer and disposal into one contract and facility
- + Reduced wait times and improved customer service
- + Trash managed locally except for ultimate disposal
- + Potential to reduce cost of some C&D waste disposal (carpet, virgin drywall, lumber)

Cons:

- Capital investment required
- Siting a facility is difficult
- Implementation takes planning and time
- Bonding will require source of guaranteed revenue from City and County



Scenario 3 - Increase Recycling

- Maintain all Scenario 2 facilities and services
- Provide curbside collection of recyclables to residences and businesses in urban and development areas of the County and the City
- Expand drop-offs to be staffed convenience centers for: bagged trash, bulk items, recyclables, electronics, and green waste
- Expand C&D recycling capability at the transfer station
- Establish a utility fee collected on property tax bills to cover costs or direct payments from City and County



Increase Recycling - Pros and Cons

Pros:

- + Ends most negotiations over money
- + Increases recycling scope, consistency, and quantity throughout City and County
- + Provides convenient recycling throughout the RSWA service area, including growth areas of County
- + Lowers recycling cost through economies of scale and getting more value for recyclables
- + Potential to reduce cost of some C&D waste disposal (carpet, virgin drywall, lumber)
- + Greener!

Cons:

- Will increase the cost to some homeowners and businesses, especially if disposal savings not passed along
- Policy changes required by County
- Utility fee may be considered a “tax increase” by some



Scenario 4 – More Recycling

- Continue all Scenario 3 programs
- Construct new MRF for recyclables from City, County, and U. Va.
- U. Va. Uses RSWA facilities and services
- Implement C&D processing for additional recycling
- Could finance construction with bonds



More Recycling - Pros and Cons

Pros:

- + Includes all Scenario 3 advantages
- + New MRF lowers cost of processing and hauling, and provides additional revenue
- + U. Va. participation increases economies of scale
- + C&D processing increases diversion
- + We are more self-sufficient

Cons:

- Capital investment requires sustained policies to support bonds
- Siting new facility and gaining approvals is a difficult process



Scenario 5 - Sustainable System

- Continue all Scenario 4 programs
- Construct Refuse Derived Fuel (RDF) or Waste-to-Energy Facility for non-recyclable and burnable materials
 - *Could U. Va. or others be interested to purchase RDF or steam?*
 - Electricity sale to Dominion Power
- Could finance construction with bonds



Sustainable System - Pros and Cons

Pros:

- + Includes all Scenario 4 Pros
- + RDF/WTE increases diversion from landfilling and lowers GHG emissions
- + Overall reduction in Carbon footprint with potential to sell Carbon credits
- + Minimal reliance on out of area landfill and transfer and disposal fees
- + Additional revenues from energy products sales
- + Even greener!!

Cons:

- Longer development time, effort and expense
- Capital investment requires sustained policies to support bonds
- Siting and facility expansion and approval is a difficult process



8. Questions



Stakeholder Survey

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Or, please fill out a hard copy of the survey.

And, please take extras for your neighbors, too!

For more information: www.avenue.org/rswa





Thanks for coming!

GBB