Updating the Comprehensive Solid Waste Master Plan—The Future of Solid Waste Management in Rhode Island

Rhode Island Society of Environmental Professionals

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Recycling.
Make it second nature.

Will Cover Today…

Background/Scope:

- RIRRC
- RI Solid Waste Volumes/Remaining Landfill Capacity
- Waste Diversion Opportunities
- Regional Market and Waste to Energy
- Funding

Solid Waste Plan

- Key Issues
- Strategy Options
- Recommendations

Current Mission/Objectives

Mission: Provide safe, environmentally compliant, clean, and cost effective solid waste and recycling services for all Rhode Islanders.

Key Objectives:

1. Work collaboratively with stakeholders to increase recycling and diversion to make RI a greener and healthier place to live.

2. Continue to increase the life of the landfill in order to provide long term significantly reduced waste disposal costs versus the market for all municipalities.

3. Remain financially self-sufficient funding all operational and capital requirements from fees.

Successes Since 2007

- Reduced solid waste disposal volume by 400K tons/year (35%).
- Reduced actual spending by $26M (40%).
- Restructured RIRRC; Reduced staff by 1/3.
- Cronyism Eliminated.
- Recycling rates increased after years of stagnation.
- Materials Recycling Facility named Facility of the Year for North America 2013 by SWANA.
- Members of Local 57 Engineers decertified in August 2013, voting to be union free.
- 401K Pension funds and Landfill Trusts diversified under professional management firm using Board approved strategy; Landfill trust funds are fully funded.
- Sold or leased all industrial park lots, providing significant tax benefits to the Town of Johnston.
- Successfully permitted Phase VI of landfill expansion, adding 25 years of life.

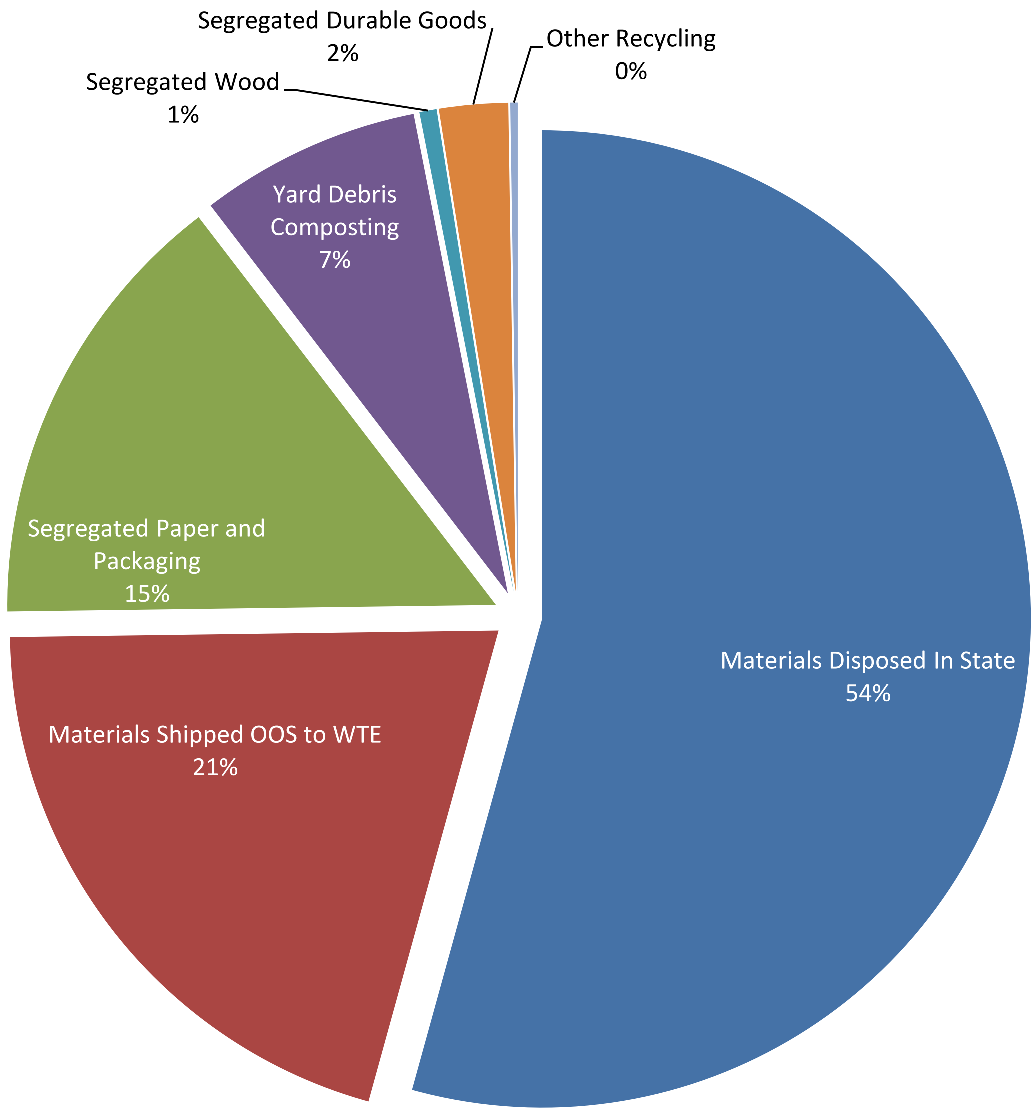
RIRRC Benefitting RI

- 10 years of landfill life added since 2007 that will save Rhode Island municipalities over $50million.
- Significantly lower disposal fees compared to New England market rates which are in the $65 to $80 per ton range.
- $0.00 Tip Fee for recyclables, for municipalities and businesses, as well as $0.00 Tip Fee for electronic waste, household hazardous waste, leaf and yard debris, textiles, books, motor and cooking oils, plastic bags, and scrap metal
- 50:50 Profit Share for municipalities; over $5m given back to cities and towns since 2007
- Positive working relationship with key constituencies
- Most importantly, a positive and engaged workforce focused on making RI a greener and healthier place to live and work

RI Solid Waste Generation

- Rhode Island generates ~1.5M tons of solid wastes each year:
  - ~25% is recycled or composted;
  - ~20% is transported and disposed out of state
  - ~55%, or 750K tons, is currently disposed in the Central Landfill

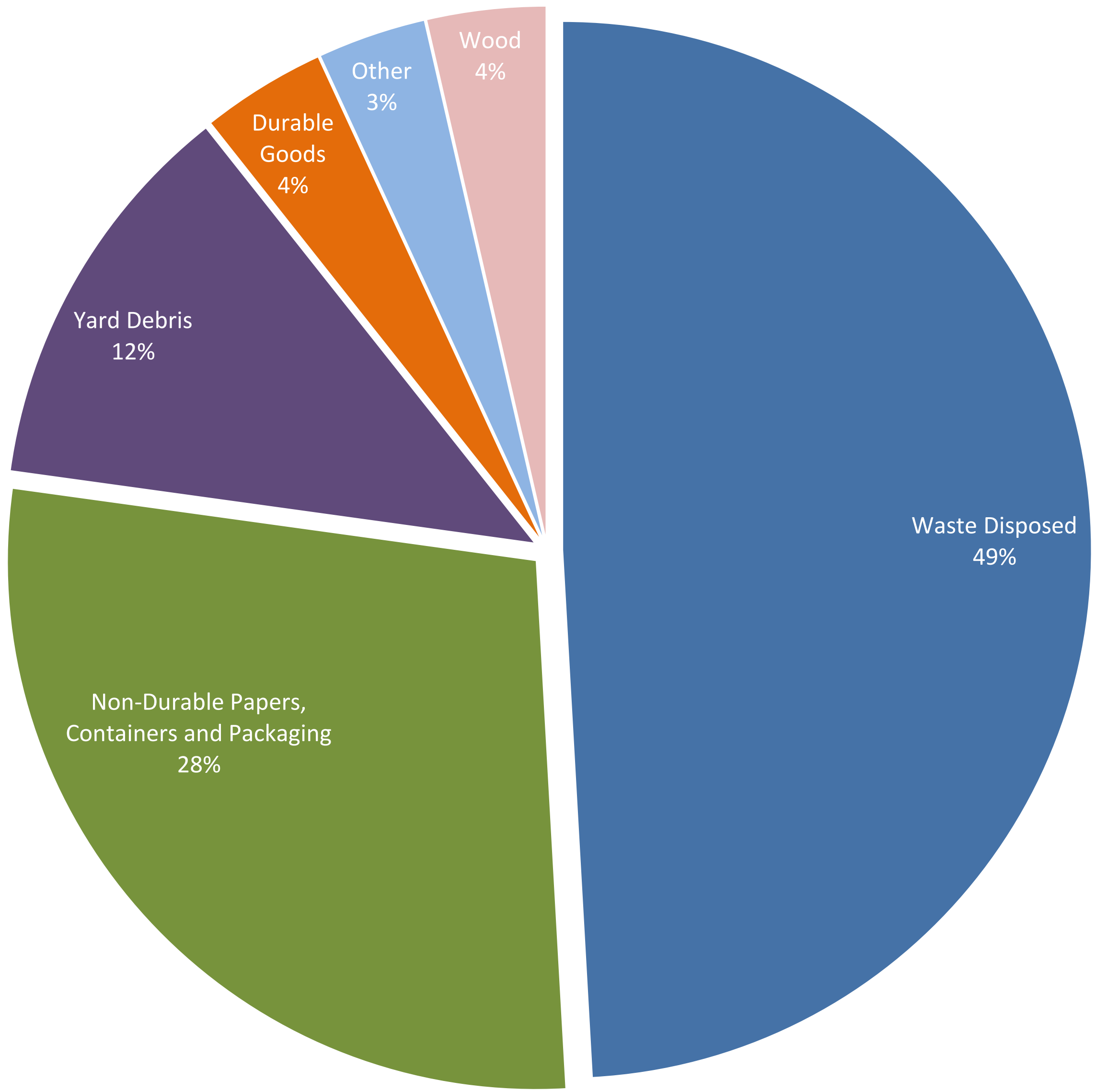
Current Disposition of 1.2M tons of RI Refuse



Background - continued

- Remaining approved landfill capacity (Phases V &VI) is 18.7M tons = 25 years at current loading rates
- Limited potential for further landfill expansion
- Additional recycling is possible but constrained by limited markets, required investments, and additional costs.
- Even at 90% recovery of currently mandated materials, coupled with some food waste recovery, 400K – 500K remaining tons will need disposal.

Potential Disposition of RI Refuse Assuming 90% Recovery of Mandatory Recyclables



Potential Waste Diversion Initiatives

- Maximize paper and packaging recovery
- Expand recycling of durables through Extended Producer Responsibility (e.g. tires, carpet, medications, batteries, appliances)
- Commercial Food Waste
- Residential Food Waste
- Construction & Demolition and Wood

Regional Solid Waste Market

New England Solid Waste Disposal Capacity (Annual Tons)
(ME, NH, MA, CT, and RI)

	Landfill	WTE	Total Capacity	Demand	Excess Capacity
2008	5.9M	6.7M	12.6M	~ 12.6M	None
2015E	5.0M	6.7M	11.5M	~ 10.0M	+1.5M

<u>Observations:</u>

– Current regional waste generation in the 10 million ton range.

– Market overcapacity will keep pricing unstable.

– Key Drivers affecting overall supply/demand:

  » Economy and waste generation

  » Transportation costs

  » New legislation

  » New technology

  » Recycling markets

  » Closed/Mothballed/New WTE/Landfill Sites

Rhode Island Market Dominated By Regional Incinerators

	Number of Incinerators	Percent Incinerated	National Rank
Connecticut	6	65%	1
Massachusetts	7	34%	2
United States	87	7%	N/A

Funding Rhode Island’s System

Key RIRRC Business Trends

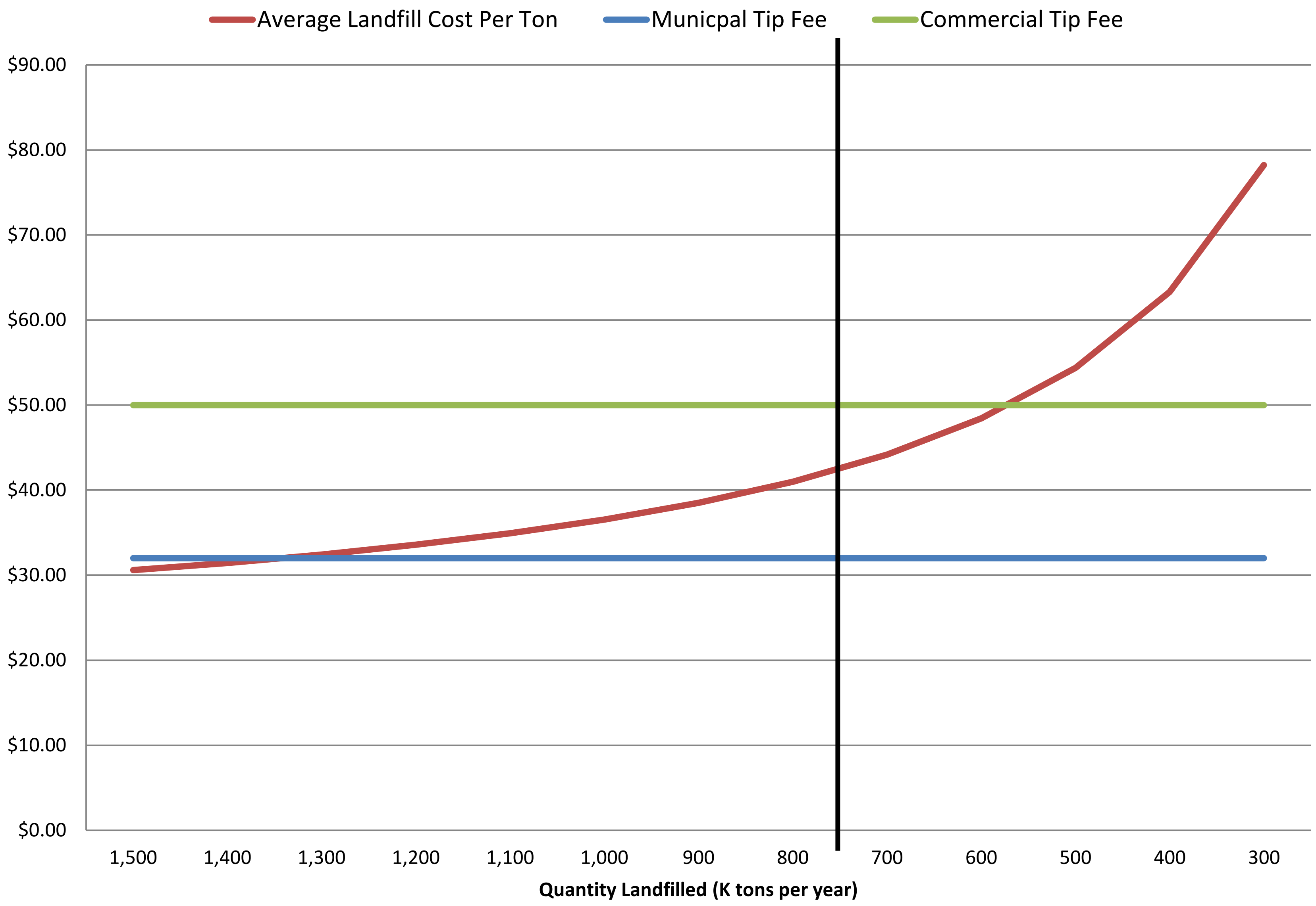
Category	Actual Fiscal 2007	Actual Fiscal 2008	Actual Fiscal 2009	Actual Fiscal 2010	Actual Fiscal 2011	Actual Fiscal 2012	Actual Fiscal 2013
Statistical							
Solid Waste Tons(millions)	1.1	1.0	0.6	0.7	0.7	0.6	0.7
Average Tip Fee/Ton:							
*Municipal	$32	$32	$32	$32	$32	$32	$32
**Commercial	$52	$55	$61	$53	$50	$50	$50
Remaining Landfill Life (years)	19	20	29	28	27	26	25
Recycled Tons (000)	91	97	99	97	99	97	107
*$32 ton since 1992 **$50 ton in 1990							

Key RIRRC Financial Trends

(All In Millions)

	Actual 2007	Actual 2008	Actual 2009	Actual 2010	Actual 2011	Actual 2012	Actual 2013
Revenues	$69.8	$66.9	$45.5	$48.8	$51.9	$45.9	46.0
Operating Expenses	-66.5	-61.7	-49.5	-43.4	-42.8	-35.6	-40.2
Operating Income	3.3	5.2	-4.0	5.4	9.1	10.3	5.8
Transfer to State of Rhode Island	-3.3	-5.0	-7.5	0.0	0.0	-3.5	0.0

RIRRC Average Cost Paid From Landfill Revenues



RIRRC Landfill Costs Per Ton Estimates

Solid Waste Landfilled (K Tons)	500	750	1,000
Total Cost ($M)	$27.6	$ 32.0	$ 36.5
Average Cost Per Ton*	$ 55	$ 43	$ 37
Landfill Life(Years)	37	25	19

*Includes $1.7M in program costs unrelated to the landfill.

20 Year Plan Overview

The Plan will address three key issues:

1. What is the overall strategy to further reduce solid waste volume and extend the LF life?
2. What is the best post Central Landfill disposal option?
3. How should the system be funded and what is the structure to set pricing?

Strategy Options

Issue #1: What is the overall strategy to further reduce solid waste and extend LF life?

- Maintain status quo.
- Invest in new programs and policies to reduce waste.
- Become primarily a municipal disposal facility.

Strategy Options (cont.)…

Issue #2: What is the best post Central Landfill disposal option?

- Transport/Dispose most RI waste at out of state facilities.
- Utilize technology to process solid waste.
- Pursue a Zero Waste objective.
- Expand landfill capacity in RI.

Strategy Options (cont.)

Issue #3: How should the system be funded and what is the structure to set pricing?

- Continue with current structure.
- Set target commercial loading and commercial price restrictions.
- Municipal governance of RIRRC with revenue sharing.
- Enact statewide RIRRC mandated PAYT for residents.

Recommended Actions:

Issue #1: Reduce the amount of solid waste sent to disposal:

A. Implement a RIRRC mandated statewide PAYT.
B. Commence a waste characterization study.
C. Identify underperforming municipalities and barriers to improvement.
D. Expand producer responsibility.
E. Improve paper and packaging recycling in the commercial sector.
F. Support food waste diversion.
G. Continue to provide public education and technical services.
H. Employ new and expanded public outreach tools.
I. Identify underperforming school programs and barriers to improvement.
J. Consider centralized management of recycling collection services.

Recommended Actions (cont.)

Issue #2: Determine the Post Central Landfill Disposal Solution:

- Recommendation: Evaluate alternative options and recommend best option by 2017, implement by 2021.

Issue #3: How to fund the system and set pricing:

- Implement statewide mandatory PAYT.
- Implement statutory maximum commercial disposal targets.
- Identify alternative models of RIRRC governance to oversee financials.

Discussion