Garbology 101

April 16, 2015

Reduce, Reuse, Recycle

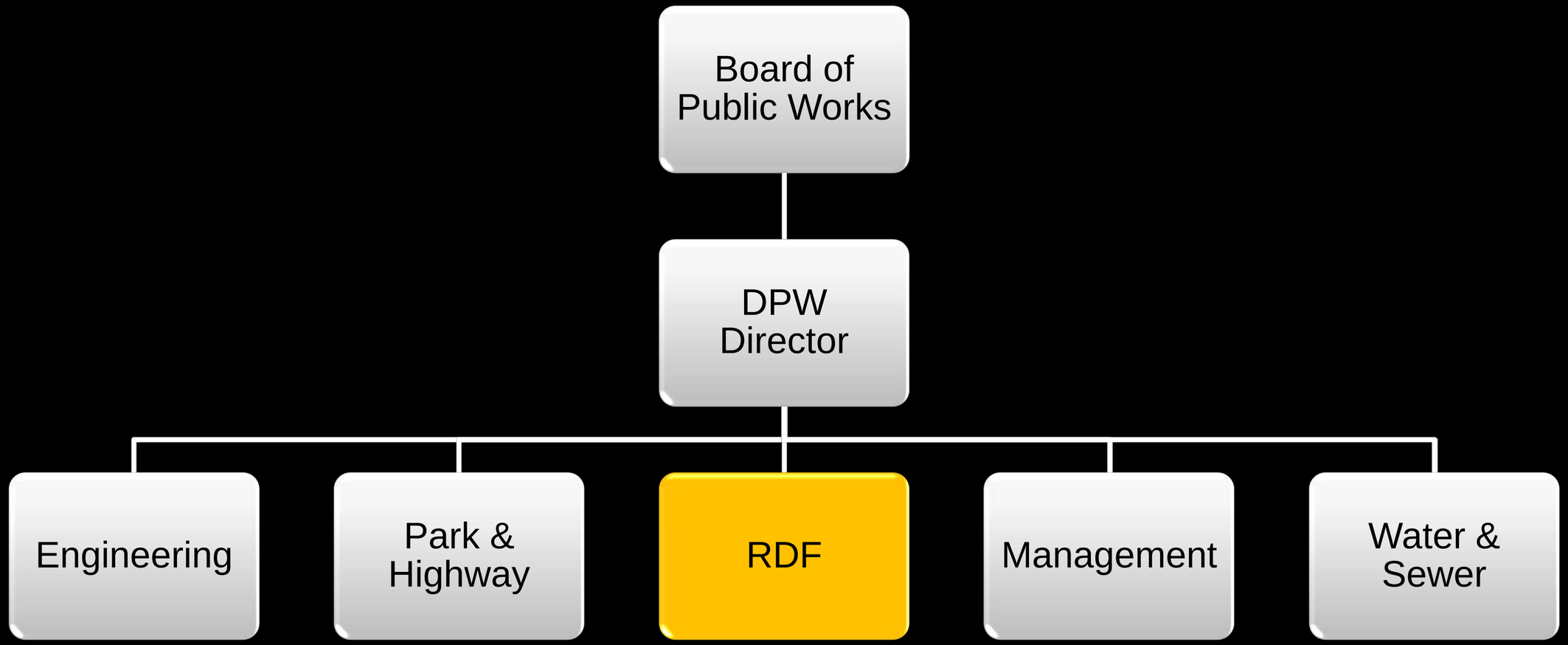
RDF Site Map

- 169 Great Plain Avenue
- 88 Acres
- Open 6 days per week plus 6 Sundays for busy leaf season

Estimated trips to the RDF

	2009	2010	2011	2012	2013
Residential	426,000	460,000	454,000	417,000	438,000
Commercial	6,100	7,000	6,450	6,100	5,450
Municipal	1,450	2,100	1,950	1,900	1,750
Total	**433,550**	**469,100**	**462,400**	**425,000**	**445,200**

DPW Org Chart

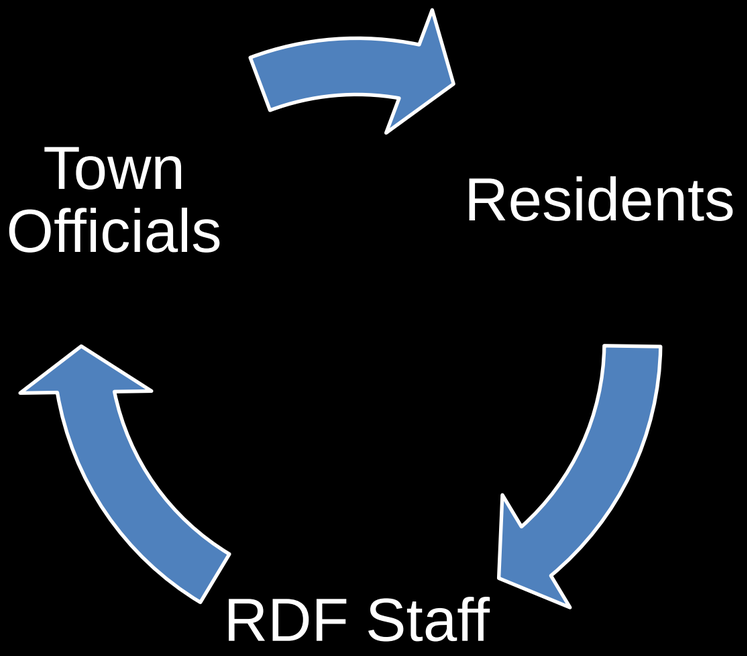


RDF Staffing

- Superintendant
- RDF Business Manager
- RDF Supervisor
- Office Assistant
- Facility Foreman
- Recycling Foreman
- Volunteers
- Transfer Haul Trailer Operator
- Transfer Haul Equipment Operators (3)
- Industrial Truck Operator
- Trash Truck Driver (3)

Solid Waste Management Strategy

The 3Rs



Reduce, Reuse, Recycle

Marketing Strategy

- ✓Goal is to make or save as much money as possible
- ✓Source separated materials worth more
- ✓Export quality bales
- ✓Reduce or eliminate profit making middle companies

Operational Strategy

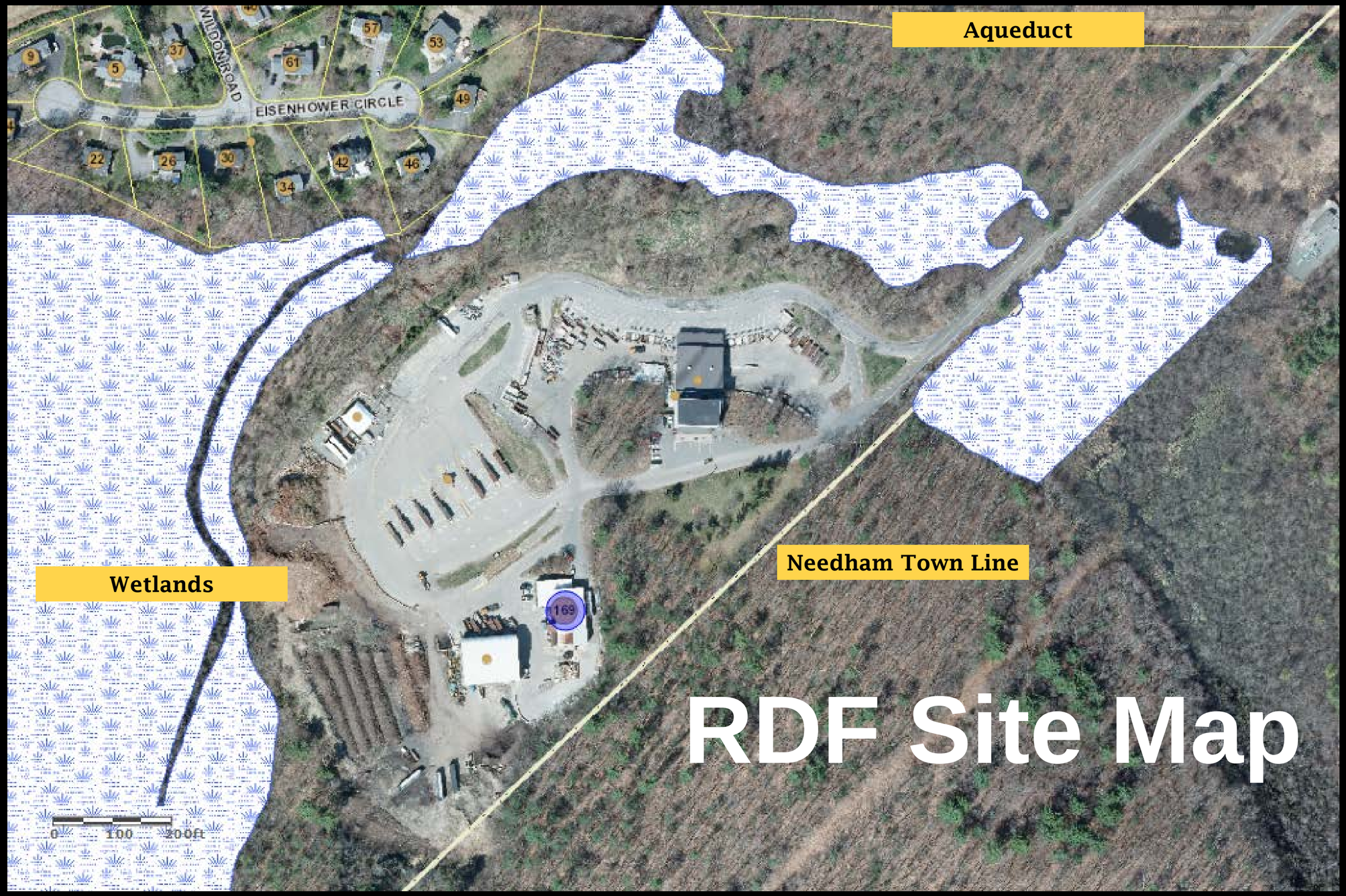
- ✓Flexibility to handle a variety of material streams
- ✓Work Smarter, Not Harder
- ✓Touch it once

Awareness Strategy

- Step Up Program
- Did you know?
- Recyclable of the Month
- Recycling Thermometer
- Recycling Trailer
- Special Events
- Website
- Newsletter

RDF Tour

1 Recycling Wall
2 Bulky Waste Drop Off
3 Special Waste
4 Reusables
5 Goodwill & Textiles
6 Residential Trash Drop Off
7 Yard Waste Drop Off
8 Trash Loading
9 Scale Office
10 Wood waste and single stream loading area
11 Book Exchange


Aqueduct
Needham Town Line
Wetlands
WILDOW ROAD
EISENHOWER CIRCLE
9
5
37
61
57
53
49
22
26
30
34
42
46
169
0
100
200ft

RDF Site Map

RDF Snapshot

How is waste handled now?

Three product categories:

Trash

Recycling

Earth Products

Trash

- 6,300 tons of residential trash x $83 per ton =

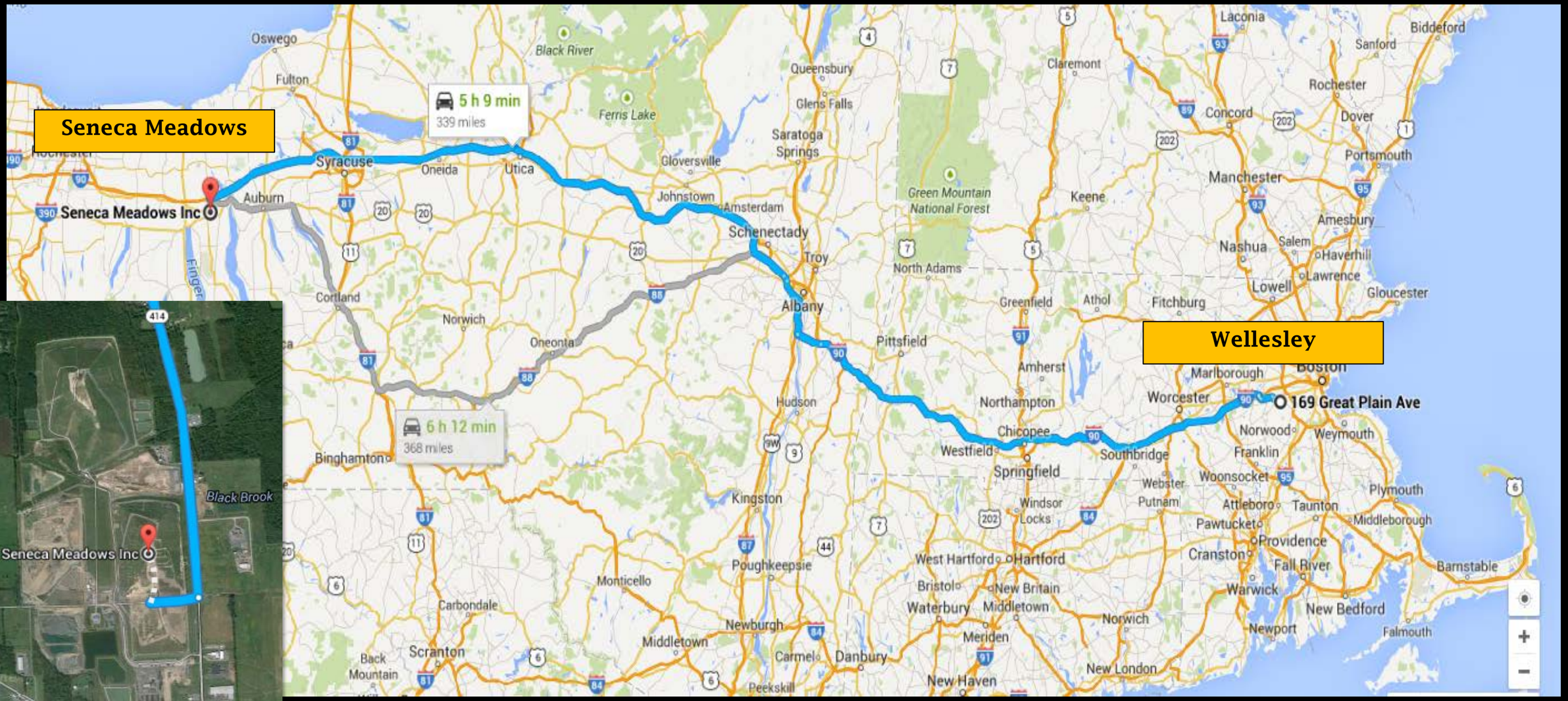
$522,900 per year

- 1,370 pounds per household
- 26 pounds per household per week

Trash

- Drive through residential compactor area and drive up bulky waste containers
- Full containers are moved and emptied on Transfer Haul building floor
- Commercial trash weighed and tipped directly
- Excavator loads trash into 100 cubic yard trailer
- Vendor hauls trailers to their facility in Seneca Meadows NY

Seneca Meadows



http://www.senecameadows.com/facilities_animation.php

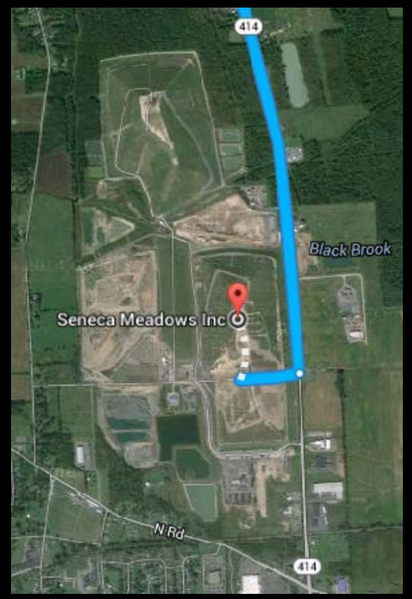
Seneca Meadows – Gas to Energy

Gas to Energy

Reducing America's reliance on foreign oil has been the goal of government and industry for decades. Seneca Meadows joined the effort in 1995 with the establishment of a landfill gas to energy plant on its site. The plant, which is owned and operated by Seneca Energy, Inc., produces sufficient electricity for thousands of homes and businesses.

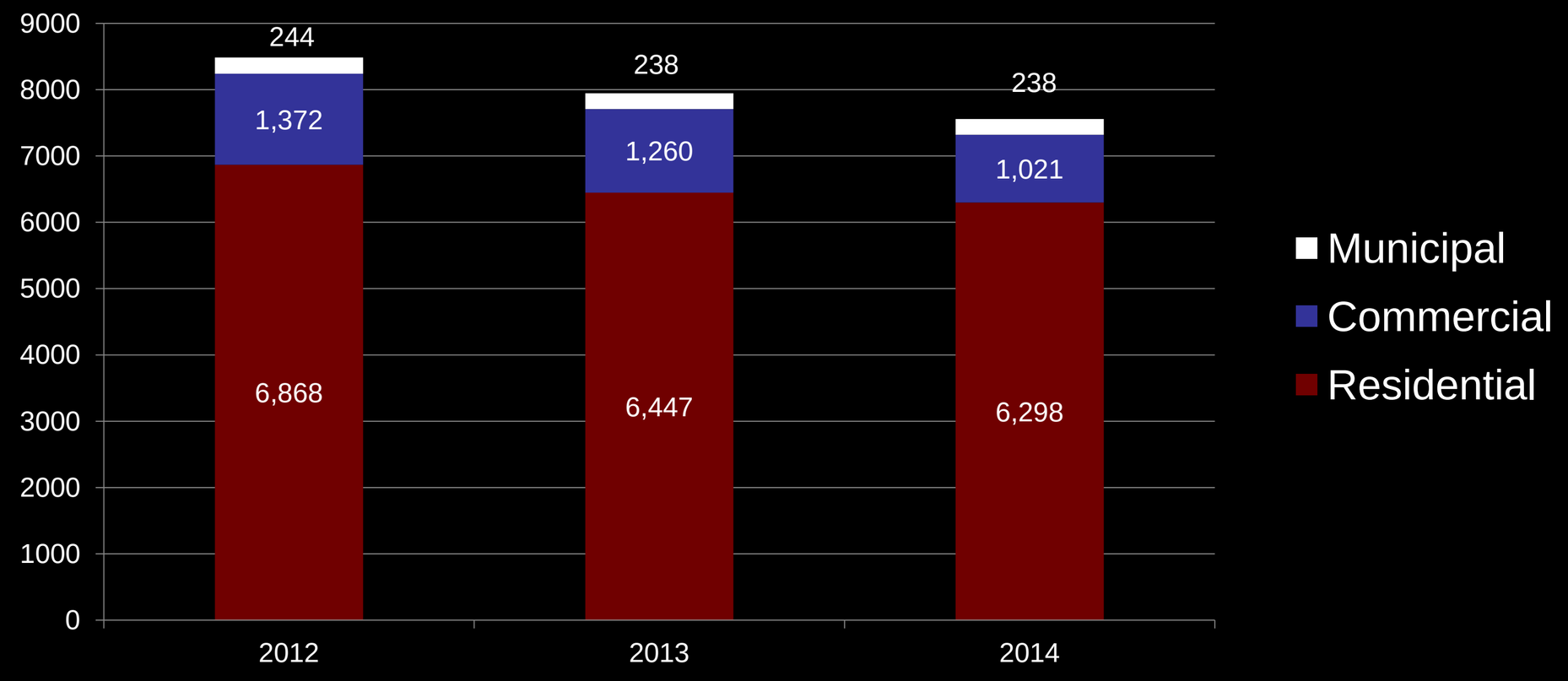
Landfill gas, a byproduct of organic waste decomposition, is collected from the landfill and piped to the gas plant to burn as fuel in the engine generators. Burning landfill gas produces yet another benefit to the environment: it destroys 98% of non-methane organic compounds.

1. **Landfill Gas Header Pipe** Landfill gas is piped from the waste cell to the Seneca Energy Gas Plant
2. **Scrubber Room** The landfill gas is prepared in a scrubber system prior to entering the engine generators
3. **Engine Generators** The prepared landfill gas is burned in the engine generators to produce electricity
4. **Electrical Generation** 18 engine generators produce 17 megawatts of electricity
5. **Enclosed Flares** Any excess landfill gas is flared, reducing non-methane organic pollutants by 98 percent
6. **Power Substation** The electricity generated at the Seneca Energy Gas Plant is fed into the local grid, providing electricity for thousands of homes and businesses

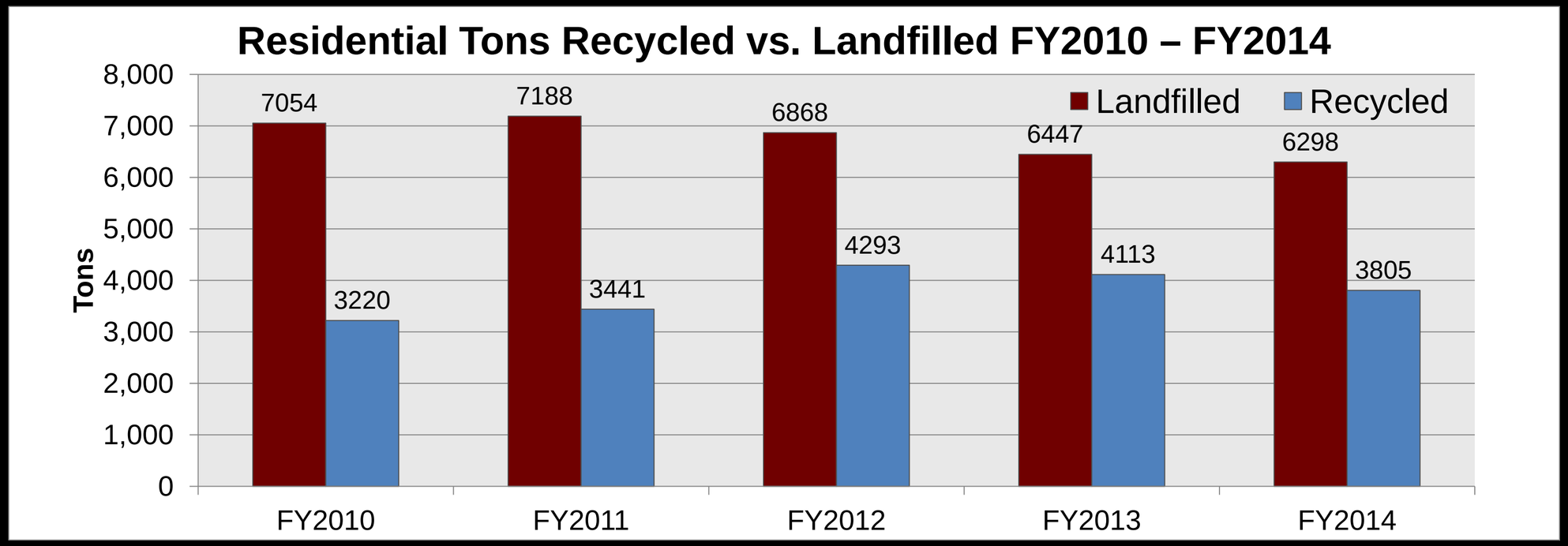


http://www.senecameadows.com/facilities_animation.php

Trash Tons by Customer Type



Residential Trash vs. Recycling



	2010	2011	2012	2013	2014
Landfilled	7,054	7,188	6,868	6,447	6,298
Recycled	3,220	3,441	4,293	4,113	3,805
Total	**10,274**	**10,629**	**11,161**	**10,560**	**10,103**
Recycling Rate	***31.3%***	***32.4%***	***38.5%***	***38.9%***	***37.7%***

Residential Recycling

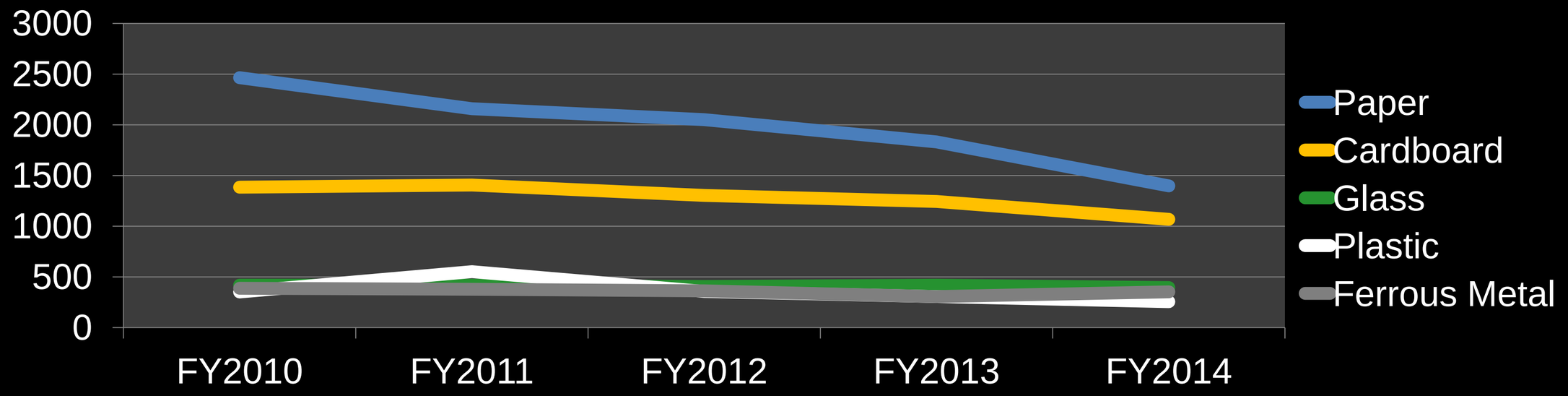
- 2,900 residential tons x $76 per ton =

  $220,000 in revenue

- 5 major source separated product categories: Paper, Glass, Plastic, Metal, Special Waste
- Paper and cardboard make up nearly 65% of residential recycling tonnage

Top 5 Residential Recycling Categories

FY10 –FY14



	FY2010	FY2011	FY2012	FY2013	FY2014
Paper	2,465	2,159	2,051	1,832	1,398
Cardboard	1,385	1,406	1,304	1,244	1,068
Glass	419	419	406	419	395
Plastic	351	552	357	306	256
Ferrous Metal	388	378	363	306	353

Top 10 Most Valuable Recyclables

Product	FY14 Sales	Current Price Per Ton
Cardboard	139,807	$95
Paper - Baled	86,671	$80
Ferrous Metal	71,750	$210
Plastic	29,980	$160
Mixed Paper - Loose	22,030	$53
Refundable Containers	11,375	$700 $.05 per container
Steel Cans	6,581	$2.60
Clear Glass	2,612	$20
Non-Ferrous Metal	2,538	$500
Automotive Batteries	2,449	$400 $14 - $20 per Battery

Baling Process

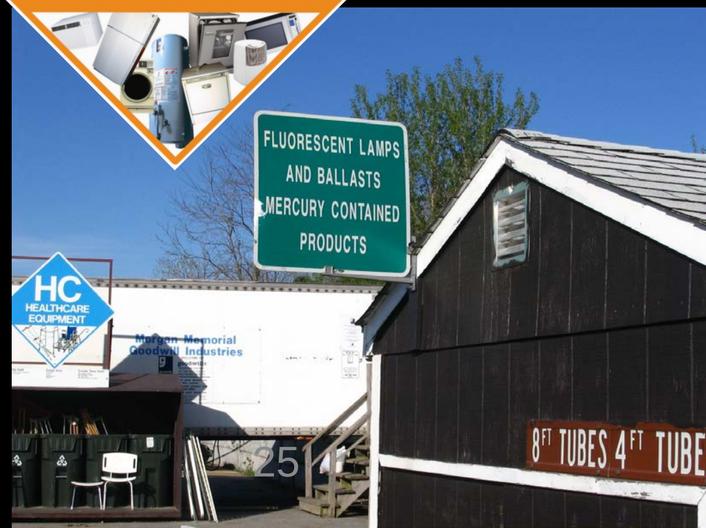
- Products sold
- FY14 Revenue = $266,000

Single Stream

- Handling process
- We charge $0-5 per ton tipped at RDF
- We earn $10 per ton sold
- FY15 estimated revenue = $30K
- FY15 estimated tons = 3,000

Special Waste

- Variety of materials accepted
- Handling process differs
- Paint Collection Days
- Hazardous product collection day
- Shredding event



Reuse

- Reusables area – volunteer managed
- Textiles and Medical Equipment
- Book Exchange
- Cell Phones
- Compost
- Asphalt, Brick & Concrete

Earth Products

– Leaves, grass clippings, brush

Reduce, Reuse, Recycle

Questions, Answers, & Discussion

What’s The Problem?

What’s The Problem?