

Rural Recycling in Logan County

A More Sustainable Approach

Ohio EPA Workgroup, November 2014



Logan County Solid Waste District



- Rural County, population 45,481
- 4.4 % unemployment
- Bellefontaine, largest city

- Strong Agriculture
- Strong Industry
- Strong Tourism

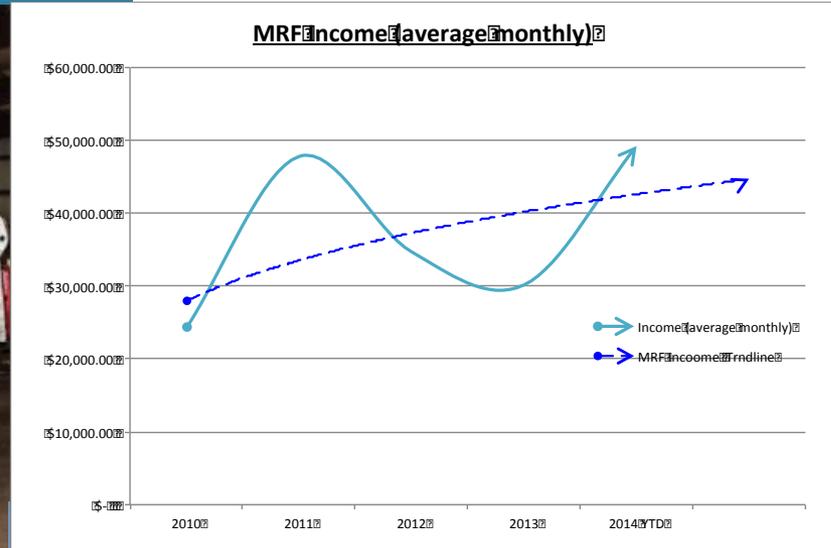


Full-time, Full-service PAYT Drop-offs



- Focus on underserved community and tourists
- Range of costs: \$40,000 to \$70,000
- Base unit cost: \$33,450 each

Dual Stream MRF & Roll-off Truck



MRF Cost:
off: \$305,141

New Roll-off
\$110,667



Curbside Recycling Programs



City of Bellefontaine

Lake Township

West Liberty Village



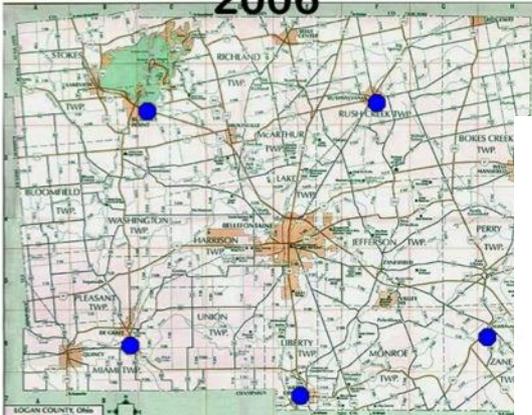
Public and Private Operations

- Private, Regional Landfill
 - Private Haulers
- Numerous Compost Facilities



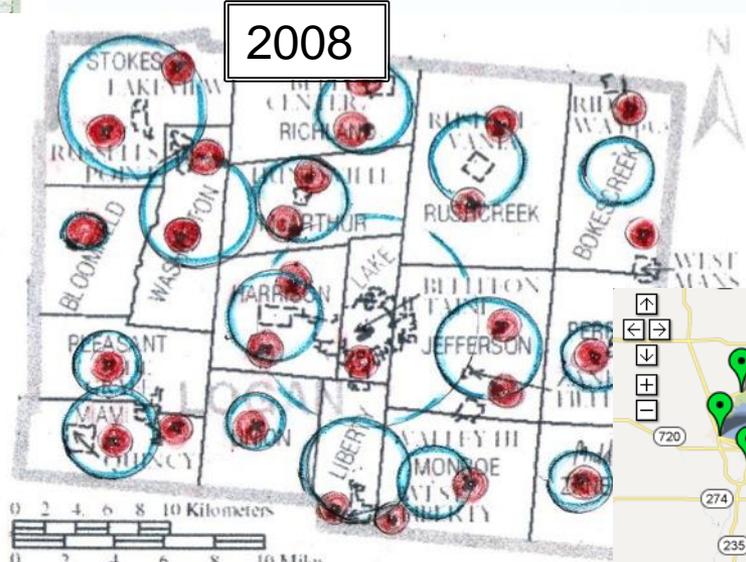
2006-2014

2006



5 part-time drop-off site
Built in the early '90's -
open 4 hours every
Saturday

2008



New Sites were planned
from a Bubble chart,
representing population
distribution, including ~1
million seasonal visitors

2014



16 completed sites where
people need them



**INDIAN LAKE AREA RECYCLING
LAKEVIEW DROP-OFF SITE**

Welcome to this unique state-of-the-art recycling and Pay-As-You-Throw drop-off site operated by the Logan County Solid Waste Management District and the Village of Lakeview. Please familiarize yourself with the guidelines for the use of this service, and make it a point to follow the existing signage.

VIDEO MONITORING AND RECORDING OF ALL ACTIVITIES AT THIS SITE OCCURS 24 HOURS A DAY TO PROVIDE YOUR SAFETY AND TO ELIMINATE ILLEGAL DUMPING.

Always be courteous and clean up after yourself.

LOGAN COUNTY SOLID WASTE MANAGEMENT DISTRICT
The County, 100 Westway, Logan, OH 43040
Lakeview Village, Main Office, 21000
Logan County Commissioner, 100 Westway, Logan, OH 43040

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INDIAN LAKE AREA RECYCLING MOUNDWOOD DROP-OFF CENTER

Welcome to this unique, state-of-the-art, recycling and Pay-As-You-Throw drop-off center provided by the Logan County Solid Waste Management District, Indian Lake State Park.

Please familiarize yourself with the guidelines for using this service, available in a pamphlet at the vending machine
VIDEO RECORDING OF ALL ACTIVITIES AT THIS CENTER OCCURS 24 HOURS A DAY TO PROVIDE FOR YOUR SAFETY AND TO ELIMINATE ILLEGAL DUMPING.



Your source for recycling information 599-1253
Indian Lake State Park Director: Frank Giannola
Logan County Commissioners: Jack Reaser, David Knight, John Bayliss

ENTRANCE

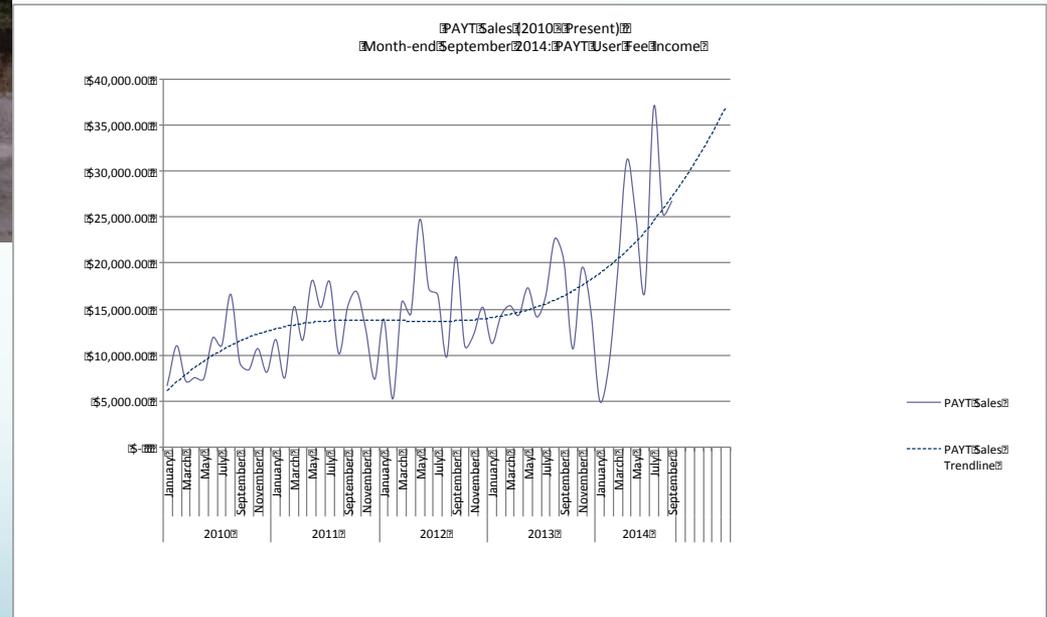


RECYCLING
Huntsville
CENTER

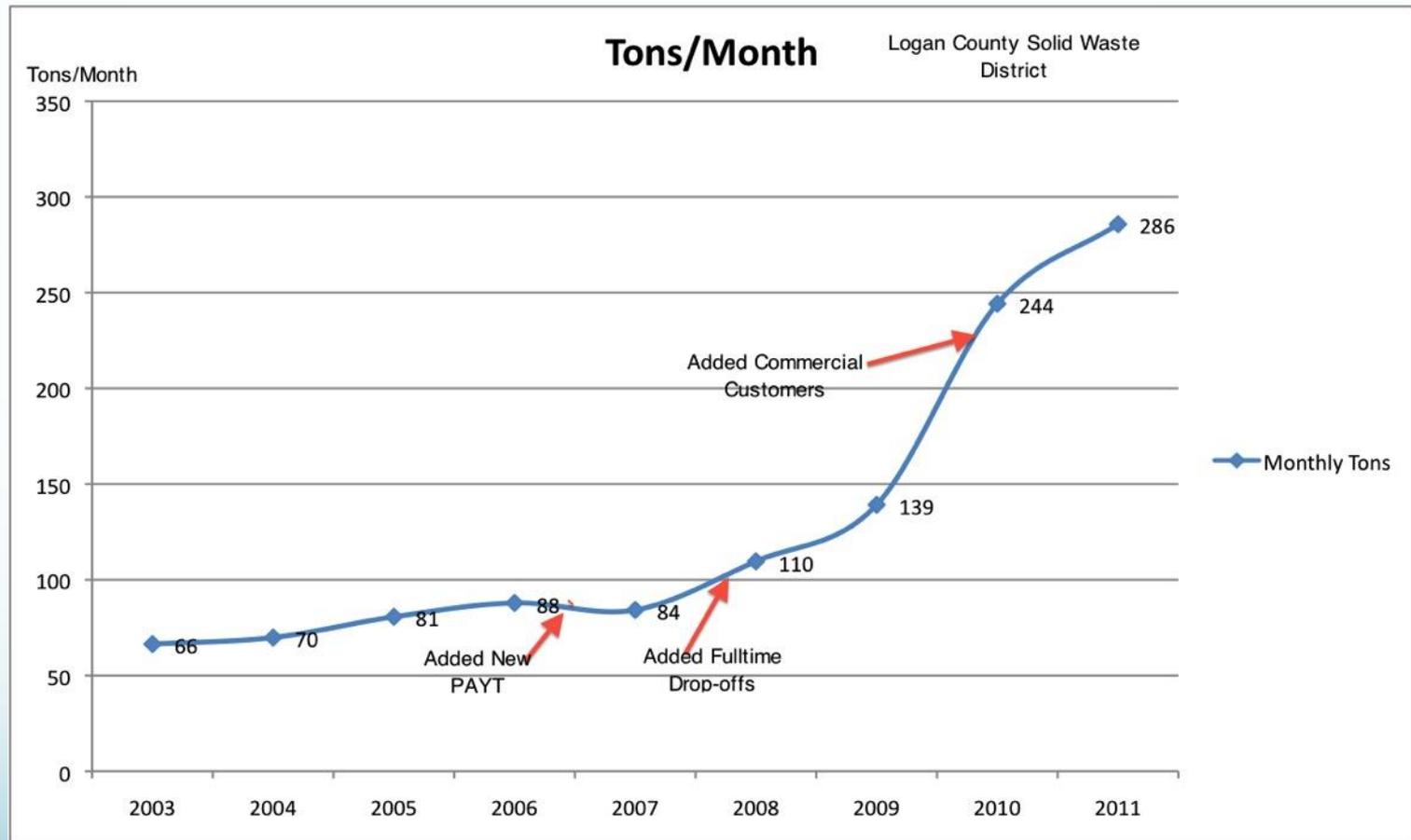
TRASH ONLY



Direct sell bags, contracting collection & disposal service from Republic Waste



It works.



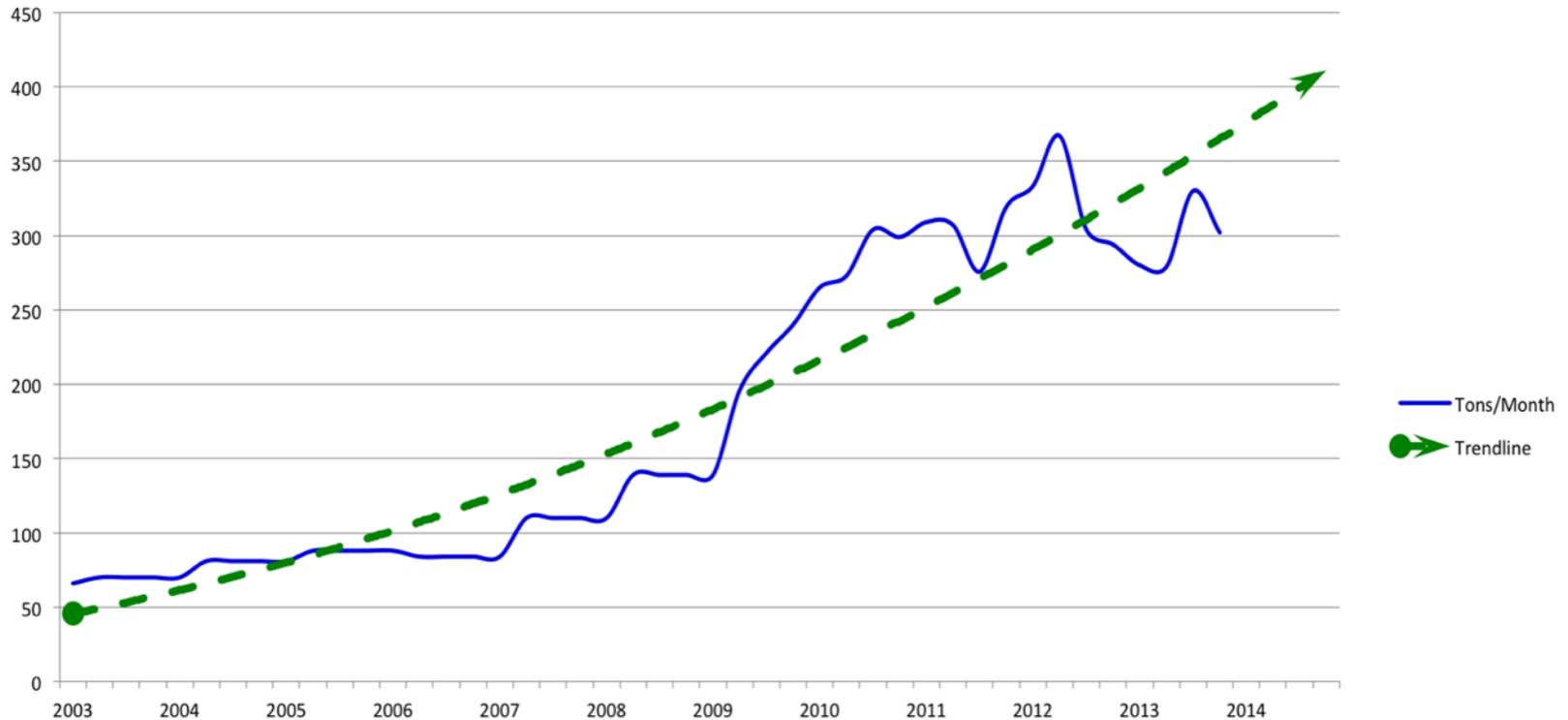
Sales Variability

- First: \$10,267 First full year (Lakeview, 2008)
- Best: \$1972/month (Moundwood)
- Worst: \$152/month (Belle Center – Month #1)
- Recent Average: \$1691/month



Focus on Residential Materials

Average Tons per Month (by Qtr) Reported September 2014 for 2003-2014



File Name: Historic Monthly Recycling Tons 2003 thru 2014

Why Abandon the Old Model ?

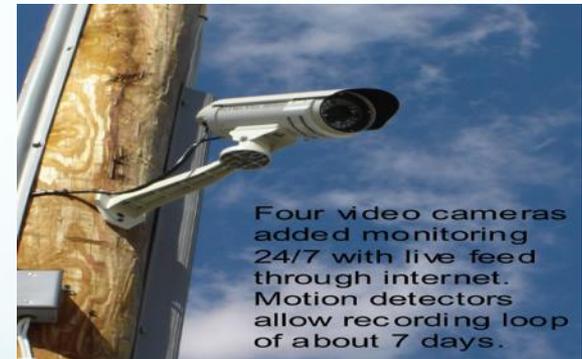


- $ROI = (\text{Return} - \text{Investment}) / \text{Investment}$
- Pre-2007: $ROI = (\$0 - \$35K) / \$35K = -100\%$
- Drop-off Recycling would never support itself
- Alternate approaches were unsustainable



Why this approach?

- Convergence of opportunity:
 - 10+ years of experience with PAYT
 - Catastrophic loss (-85%) of revenue;
 - 20-years of looking for a permanent answer to static and unsustainable recycling
 - Waste Sorts had confirmed the need for easy, affordable disposal options
 - The watershed idea to take PAYT to the drop-offs to fund the sites
 - Unaware of pending financial cliff, pilot site was underway and proven when needed
- “Hits” of great luck:
 - Perfect timing:
 - Repurposed idle lumber yard in a buyer’s market
 - New roll-off truck available
 - Advantageous commodities markets
 - Cheap loans and idle contractors
 - Healthy reserve fund to ensure working capital
 - Local fabricator working fast and affordably
 - Great Team of people: talented, committed staff; parks, schools, and city & county officials; an enthusiastic hauler, landfill, elected officials and residents



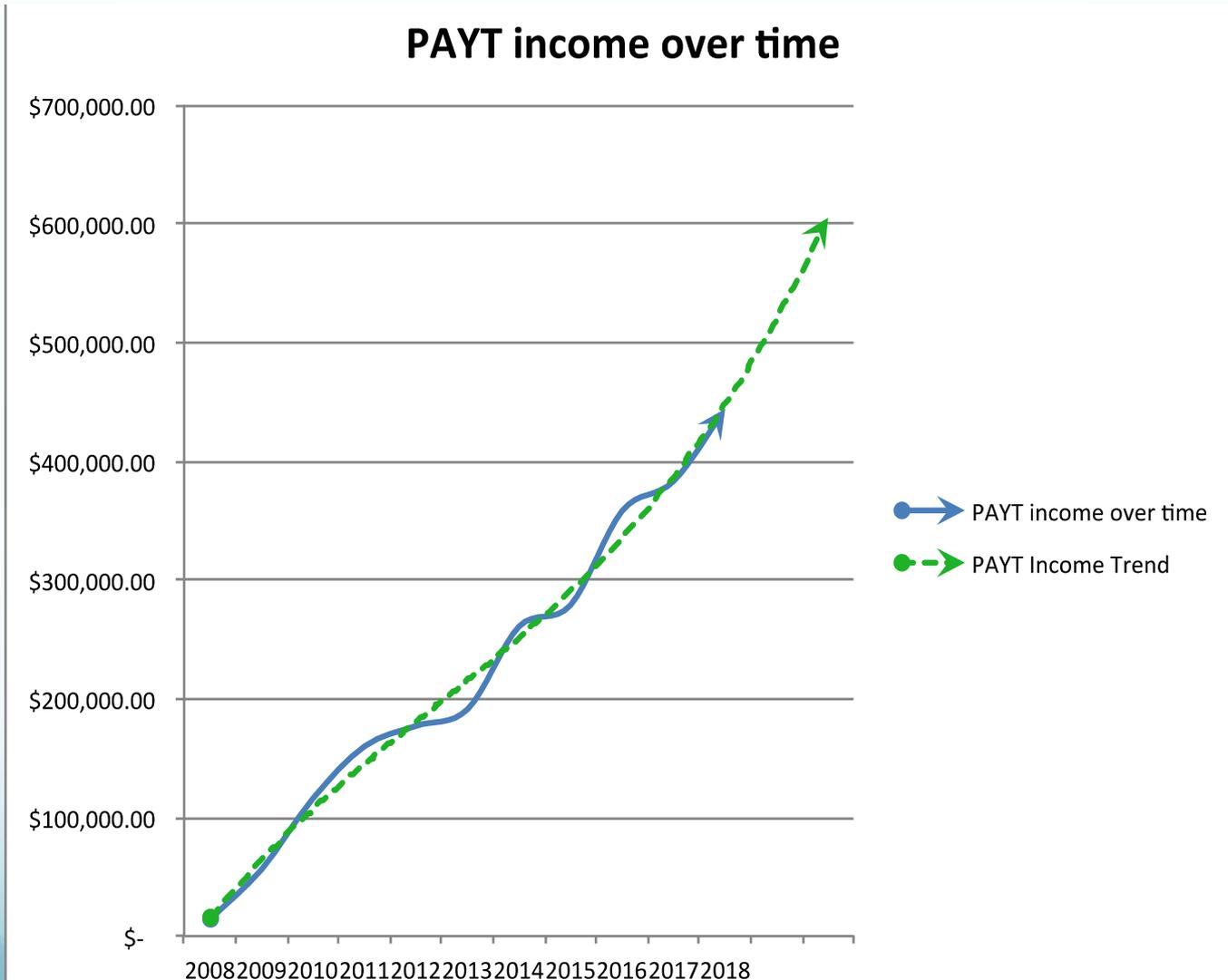
Cost elements of PAYT Drop-sites

- Site acquisition (leased)* = \$1
- Site work, utilities, paving* = \$5,000 - \$25,000
- 3 Containers (OCC, CoM, Paper)* = \$15,690
- Vending Enclosure (shed)* = \$1,950 – \$2,700
- Vending Machine* = \$5,200
- CCTV = \$4,800-\$10,000
- Landscape, fencing, signs, other = \$2,300 – \$5,100

Financial Basics

2014	Income Category	January	February	March	April	May	June	July	August	September	YTD TOTAL
Administrative	Loan Related Income (sale of notes)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	PAYT User Fees (Bag Sale)	\$ 5,000.00	\$ 8,890.00	\$ 19,193.66	\$ 31,207.14	\$ 25,098.83	\$ 16,862.50	\$ 37,057.50	\$ 25,417.50	\$ 26,736.00	\$ 195,463.13
	Landfill Disposal Fees	\$ 72,282.09	\$ 64,704.77	\$ 56,874.84	\$ 68,506.86	\$ 80,093.75	\$ 84,495.81	\$ 82,944.55	\$ 92,075.26	\$ 81,171.40	\$ 683,149.33
	Administrative Grants	\$ 28,001.35	\$ 82,551.86	\$ 21,979.16	\$ 28,754.05	\$ 103,054.61	\$ 18,875.72	\$ 2,500.00	\$ -	\$ -	\$ 285,716.75
	NEG Reimbursements	\$ 28,001.35	\$ 82,551.86	\$ 21,979.16	\$ 28,754.05	\$ 103,054.61	\$ 18,875.72	\$ -	\$ -	\$ -	\$ 283,216.75
	Pass-throughs	\$ -	\$ -	\$ 3,092.85	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,092.85
	CHaRM & Other Administrative Income	\$ 100.40	\$ 11,086.03	\$ 5,920.69	\$ 1,931.90	\$ 1,519.10	\$ 691.00	\$ 1,313.61	\$ 2,229.71	\$ 1,797.80	\$ 26,590.24
	Monthly Administrative SUBT	\$ 105,383.84	\$ 167,232.66	\$ 107,061.20	\$ 130,399.95	\$ 209,766.29	\$ 120,925.03	\$ 123,815.66	\$ 119,722.47	\$ 109,705.20	\$ 1,194,012.30
	Quarterly Administrative SUBT	\$ -	\$ -	\$ 379,677.70	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MRF	Commodities	\$ 20,617.05	\$ 6,193.00	\$ 27,135.14	\$ 43,554.33	\$ 59,507.64	\$ 5,278.06	\$ 49,754.62	\$ 39,282.46	\$ 42,821.62	\$ 294,143.92
	User and Service Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	MRF Grants and Other	\$ 36,000.00	\$ 36,000.00	\$ -	\$ -	\$ 100.00	\$ -	\$ 75,000.00	\$ 1,858.43	\$ -	\$ 148,958.43
	Monthly MRF SUBT	\$ 56,617.05	\$ 42,193.00	\$ 27,135.14	\$ 43,554.33	\$ 59,607.64	\$ 5,278.06	\$ 124,754.62	\$ 41,140.89	\$ 42,821.62	\$ 443,102.35
	Quarterly MRF SUBT	\$ -	\$ -	\$ 125,945.19	\$ -	\$ -	\$ 108,440.03	\$ -	\$ -	\$ 208,717.13	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Operating Income	\$ 162,000.89	\$ 209,425.66	\$ 134,196.34	\$ 173,954.28	\$ 269,373.93	\$ 126,203.09	\$ 248,570.28	\$ 160,863.36	\$ 152,526.82	\$ 1,637,114.65
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Expense Category										
Administrative:	Loan Services + Capital Expenditure	\$ 5,412.23	\$ 11,441.61	\$ 10,239.20	\$ 30.00	\$ 10,177.22	\$ 23,037.50	\$ -	\$ -	\$ -	\$ 60,337.76
	PAYT Expenses	\$ 4,242.07	\$ 14,170.18	\$ 10,102.28	\$ 5,237.08	\$ 12,261.75	\$ 7,279.18	\$ 11,151.03	\$ 13,406.27	\$ 9,837.90	\$ 87,687.74
	Grants	\$ 48,040.19	\$ 43,868.84	\$ 36,062.10	\$ 74,984.39	\$ 25,789.48	\$ 10,886.01	\$ 22,611.32	\$ 30,389.39	\$ 7,658.46	\$ 300,290.18
	NEG Expenses	\$ 48,040.19	\$ 42,875.51	\$ 28,480.00	\$ 28,340.23	\$ 12,757.22	\$ 1,175.18	\$ 1,544.80	\$ 2,234.04	\$ 1,489.36	\$ 166,936.53
	Pass-throughs	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 1,030.95	\$ 9,278.55
	Staff and Office	\$ 18,683.92	\$ 42,231.38	\$ 37,181.70	\$ 24,139.16	\$ 31,195.47	\$ 27,456.03	\$ 24,077.77	\$ 29,257.60	\$ 24,358.37	\$ 258,581.40
	Administrative Subtotal	\$ 71,997.13	\$ 101,301.35	\$ 84,377.03	\$ 105,421.58	\$ 70,277.65	\$ 46,652.17	\$ 58,871.07	\$ 74,084.21	\$ 42,885.68	\$ 655,837.87
	Quarterly Administrative SUBT	\$ -	\$ -	\$ 257,675.51	\$ -	\$ -	\$ 222,351.40	\$ -	\$ -	\$ 175,840.96	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MRF:	Rebates	\$ -	\$ -	\$ -	\$ -	\$ 3,016.03	\$ 204.60	\$ 19,833.24	\$ -	\$ -	\$ 23,053.87
	Supplies, Utilities, Maintenance	\$ 15,144.54	\$ 19,063.53	\$ 44,642.60	\$ 19,241.80	\$ 15,107.68	\$ 9,170.11	\$ 22,441.02	\$ 15,033.26	\$ 9,039.11	\$ 168,883.65
	Staffing	\$ 9,573.06	\$ 14,455.22	\$ 16,667.32	\$ 21,808.81	\$ 23,036.17	\$ 17,922.00	\$ 16,958.85	\$ 16,004.37	\$ 18,181.67	\$ 154,607.47
	MRF Subtotal	\$ 24,717.60	\$ 33,518.75	\$ 61,309.92	\$ 41,050.61	\$ 41,159.88	\$ 27,296.71	\$ 59,233.11	\$ 31,037.63	\$ 27,220.78	\$ 346,544.99
	Quarterly MRF SUBT	\$ -	\$ -	\$ 119,546.27	\$ -	\$ -	\$ 109,507.20	\$ -	\$ -	\$ 117,491.52	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Operating Expenses	\$ 96,714.73	\$ 134,820.10	\$ 145,686.95	\$ 146,472.19	\$ 111,437.53	\$ 73,948.88	\$ 118,104.18	\$ 105,121.84	\$ 70,106.46	\$ 1,002,412.86
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2014 ADMIN	Earnings (Loss)	\$ 33,386.71	\$ 65,931.31	\$ 22,684.17	\$ 24,978.37	\$ 139,488.64	\$ 74,272.86	\$ 64,944.59	\$ 45,638.26	\$ 66,819.52	\$ 538,174.43
MRF	Earnings (Loss)	\$ 31,899.45	\$ 8,674.25	\$ (34,174.78)	\$ 2,503.72	\$ 18,447.76	\$ (22,018.65)	\$ 65,521.51	\$ 10,103.26	\$ 15,600.84	\$ 96,557.36
TOTAL	Monthly Earnings (Loss)	\$ 65,286.16	\$ 74,605.56	\$ (11,490.61)	\$ 27,482.09	\$ 157,936.40	\$ 52,254.21	\$ 130,466.10	\$ 55,741.52	\$ 82,420.36	\$ 634,701.79
	Prior Year Earnings	\$ (41,789.30)	\$ (67,184.63)	\$ (16,081.66)	\$ 17,479.33	\$ (51,225.15)	\$ (19,653.86)	\$ (13,693.60)	\$ 99,203.56	\$ 66,117.75	\$ 67,604.87
	Projected Earnings	\$ 68,021.67	\$ 86,021.67	\$ 56,021.67	\$ 43,021.66	\$ 11,521.66	\$ 11,521.66	\$ 86,521.66	\$ 11,521.66	\$ 44,521.66	\$ 264,608.33
	Variance from Budget	\$ (2,735.51)	\$ (11,416.11)	\$ (67,512.28)	\$ (15,539.57)	\$ 146,414.74	\$ 40,732.55	\$ 43,944.44	\$ 44,219.86	\$ 37,898.70	\$ 216,006.81
	Quarterly Variance from Budget	\$ -	\$ -	\$ (81,663.89)	\$ -	\$ -	\$ 171,607.71	\$ -	\$ -	\$ 126,062.99	\$ -
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cumulative	2014 Earnings (Loss)	\$ 65,286.16	\$ 139,891.72	\$ 128,401.11	\$ 155,883.20	\$ 313,819.60	\$ 366,073.81	\$ 496,539.91	\$ 552,281.43	\$ 634,701.79	
Capital	Expenditures + Debt Service	\$ 5,412.23	\$ 11,441.61	\$ 45,746.80	\$ 47,469.14	\$ 10,177.22	\$ 23,037.50				\$ 143,284.50
Starting	Fund Balance	\$ 658,047.34	\$ 717,921.27	\$ 781,085.22	\$ 723,847.81	\$ 703,860.76	\$ 851,619.94	\$ 880,836.65	\$ 1,011,302.75	\$ 1,067,044.27	
Ending	Fund Balance	\$ 717,921.27	\$ 781,085.22	\$ 723,847.81	\$ 703,860.76	\$ 851,619.94	\$ 880,836.65	\$ 1,011,302.75	\$ 1,067,044.27	\$ 1,149,464.63	

Annual PAYT Income



ROI Over Time

- 2010-2014:

- ROI = $(\$975\text{K} - \$853\text{K}) / \$853\text{K} = 14\%$ Capital only

- ROI = $(\$476\text{K} - \$853\text{K}) / \$853\text{K} = -44\%$ Operation cost included

- 2008-2018

- ROI = $(\$1,317\text{MM} - \$853\text{K}) / \$853\text{K} = 54\%$

- Breakeven = **6+ Years**



You can always count on Americans to do the right thing - after they've tried everything else.

Winston Churchill

Some “misses”:

Cash vending

Too many cameras to watch

A couple of difficult locations

If we had a “do-over” ...

1. We would take more time to implement
2. With the extra time, we would contain installation costs to \$40K each or less:
 1. Better site selection (existing pavement, utilities, lights, etc)
 2. Less paving required
 3. Landscaping would be partnered with other groups
 4. Fewer and more effective camera systems
 5. No cash machines; all credit card readers
 6. One or two underperforming sites would not be built
3. We would not have to overdesign in order to assure success

Baseline Costs and ROI

- 2010-2014: $\text{ROI} = (\$975\text{K} - \$535\text{K}) / \$535\text{K} = 82\%$ Capital costs only
- 2010-2014: $\text{ROI} = (\$476\text{K} - \$535\text{K}) / \$535\text{K} = -13\%$ Operation cost included
- 2008-2018 $\text{ROI} = (\$2.4\text{MM} - \$535\text{K}) / \$535\text{K} = 349\%$ Capital costs only
- 2008-2018 $\text{ROI} = (\$1.3\text{MM} - \$535\text{K}) / \$535\text{K} = 143\%$ with Operating costs
- Breakeven = 4+ Years

Where could this concept be applied?

- Rural areas: When services are lacking and expensive
- Urban areas: Replace or supplement curbside. Similar diversion rates to mature curbside programs
- Apartments: Where recycling loses to unlimited trash service
- Tourist areas: People visit for short durations and want affordability and accessibility
- Business Districts: when shared dumpster service is a necessity