

Metrics Matter

Why Reliable Data Is Critical To Measuring the Success of your Sustainability Program

- WHY?
- GOALS
- BASELINE
- METRICS
- KEEPING TRACK
- RESULTS
- IMPROVE

What is Zero Waste?

Zero Waste maximizes recycling, minimizes waste, reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace.

Why Zero Waste?

- On a per-ton basis, sorting and processing recyclables alone sustains ten times more jobs than landfilling or incineration.
- Recycling-based paper mills and recycled plastic product manufacturers employ 60 times more workers on a per-ton basis than do landfills.
- Many recycled aluminum cans are back on the shelf as new cans within 6 weeks

What's our goal?

- No burn or bury.
- Eliminating all discharges to land, water or air that are threat to planetary, human, animal or plant health.
- Focus on reducing/eliminating material to landfill.

Examples of goals

- Reduce our landfill waste per employee by 48 per cent.
- 97% of all packaging is diverted
- Lower all corporate waste by 80% and use no more energy than four years ago.

ESTABLISH --- BASELINE

Establish a baseline

- Waste audit
- Service provider data

The ECO Diversion Calculator is a waste optimization web tool to help you right-size collection services, increase recycling, and cut costs



Enter level of service info by location



Select from service change options



Location-specific and organization-wide analytics



Calculates results using extensive database of waste comp data



Optimize collection services



Reduce waste disposal costs



ECO-Diversion[™] calculator

A WASTE OPTIMIZATION TOOL

Step 2: Current Service Levels

Enter your current waste, recycling, and organics service levels. For each type of container you have, select the container size that most closely matches that container (for example, if you have a 95 gallon cart, select 96 gallons). Enter the number of containers, number of weekly pickups, and average bin fullness (at the time of collection) for each container size. Days of service is an optional field, but can help you determine when to assess bin fullness, when to conduct a waste audit, and what future service level changes might be appropriate.

Current Service Levels - Waste

	CONTAINER SIZE: *	# OF CONTAINERS *	# OF PICKUPS/WEEK *	DAYS OF SERVICE	BIN FULLNESS (%): *	TOTAL (CY)	
1	8 cubic yards ▼	8	1	Friday	100	64.00	✕ Remove

+ Add

Current Service Levels - Recycling

	CONTAINER SIZE: *	# OF CONTAINERS	# OF PICKUPS/WEEK	DAYS OF SERVICE	BIN FULLNESS (%):	TOTAL (CY)	
1	2 cubic yards ▼	1	1	Friday	50	1.00	✕ Remove

+ Add

Current Service Levels - Organics

	CONTAINER SIZE: *	# OF CONTAINERS	# OF PICKUPS/WEEK	DAYS OF SERVICE	BIN FULLNESS (%):	TOTAL (CY)	
1	1 cubic yard ▼	1	1	Friday	50	0.50	✕ Remove



ECO-Diversion[™] calculator

A WASTE OPTIMIZATION TOOL

Step 3: Disposal Composition

Select the sector that most closely matches your site from the dropdown list below.

Sector List: *

-Select-

The table below shows the average composition of disposed waste for the sector selected above. You may use this average disposal composition or enter your own.

Entering your own disposal composition is not required, but will improve the accuracy of the final report recommendations. To enter your own disposal composition, conduct a visual audit of your waste bins before they are collected, estimating the percentage of the total waste bin comprised by the materials in the table by volume.

Step 4: Opportunity Assessment

Select new recycling activities to implement from the list below, or choose Other to create your own. Based on your selections, tables will populate below with default capture rates. These percentages reflect the typical amount of material businesses can move from their disposed waste into recycling or organics by implementing the activity. For example, if you select Start Commingled Recycling, the table will populate with the materials that are affected and assume that when you start your program, you will capture 60% of the material that is currently being disposed and move it to recycling. You may use these defaults or adjust them to fit your site.

If you choose to create your own recycling activity, you will need to define your own capture rates. To do this, enter the percent of each material type in the disposed waste stream that you hope to move into the recycling or organics through your new activity.

Select recycling activity: *

☐ Start [Commingled Recycling](#) (paper, bottles and cans, glass, and cardboard all in one bin)

☐ Improve [existing commingled recycling](#) (paper, bottles and cans, glass, and cardboard all in one bin)

☐ Source separate [a material for single stream recycling](#) (for the material of your choice, enter 80% below)

☐ Source separate [cardboard for single stream recycling](#)

☐ Source separate [office paper for single stream recycling](#)

☐ Source separate [plastic film for single stream recycling](#)

☐ Start [organics collection](#) in break room/office

☐ Improve [organics collection](#) in break room/office

☐ Start [organics collection](#) in restaurant kitchen or office cafeteria

☐ Improve [organics collection](#) in restaurant kitchen or office cafeteria

☐ [Other](#)



ECO-Diversion[™] calculator

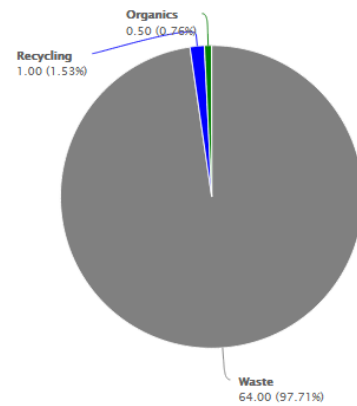
A WASTE OPTIMIZATION TOOL

Audit Results Final Report (With Rates)

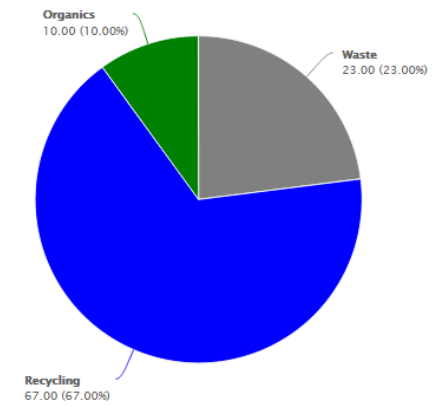
Audit Name	Conducted On	Site Address	City, State, Zip	Contact	Email
Demo Audit	01/22/2015	Demo Location #1	Bradenton, FL, 34205	George	gforeman@emergetest.ca

Phone	Number of FTEs:	Square footage:
123456789	45	1,234

Where is material going now? (CY)



What is in the waste?



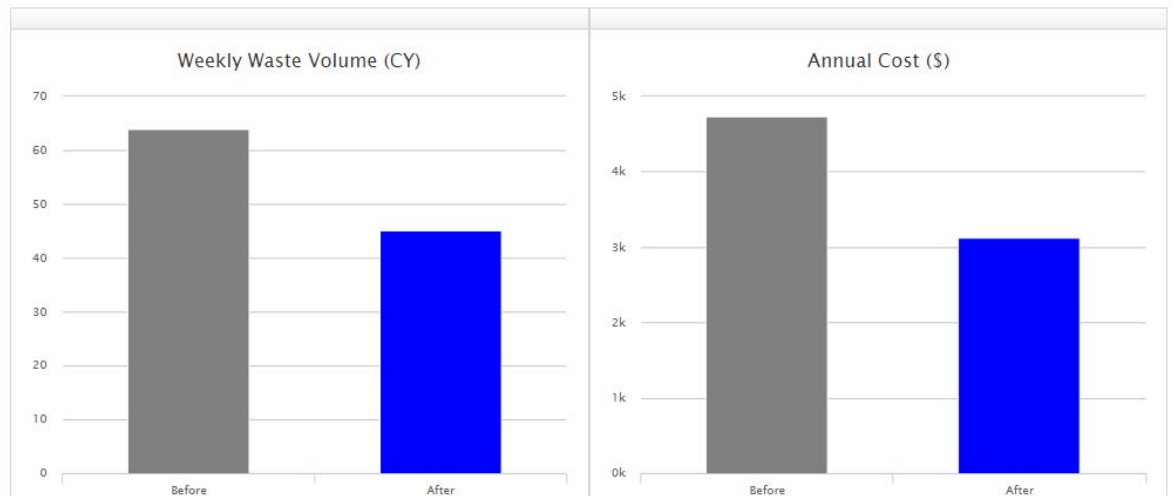


ECO-Diversion[™] calculator

A WASTE OPTIMIZATION TOOL

Benefits

	Financial Benefits	Waste Generation			Environmental Benefits
	Annual Costs	Weekly Waste Volume (CY)	Annual Waste Volume (CY)	Diversion Rate	Annual CO2 Emissions
Current	\$4,728	64.0	3,328.0	2%	-
Projected	\$3,120	45.1	2,343.1	31%	-
Change	\$1,608 saved	18.9 CY reduced	984.9 CY reduced	Increased 29 percentage points	Decreased 143.5 MT



CHOOSING THE RIGHT METRICS



Be cautious of...

- Overconfidence bias
- Status quo bias

Overconfidence

- Educated employees will make better recyclers

Status quo bias

- Bins per square foot may be a very important metric at the beginning of your program (access)
- As your program matures, emphasis should shift from access to education, additional streams.

How do we reach our goal?

- We need to track factors/activities that are helping us achieve this objective
- Metrics that reliably reveal cause and effect
- Effective factors have to be
 - Persistent
 - Predictive (causal)

KEEPING --- TRACK

Key Questions

- Is useful data already being collected?
- Who will collect the data?
- What's the timeline?
- How will you manage the data?

Re-TRAC Connect's waste diversion tracking tool reveals insights to optimize your sustainability programs.



- ✓ Track waste diversion data for internal operations
- ✓ Configurable tracking forms
- ✓ Over 250 trackable materials
- ✓ Instantly generate eye-catching charts & graphs
- ✓ Exportable tables, charts, and graphs
- ✓ All data is private and secure

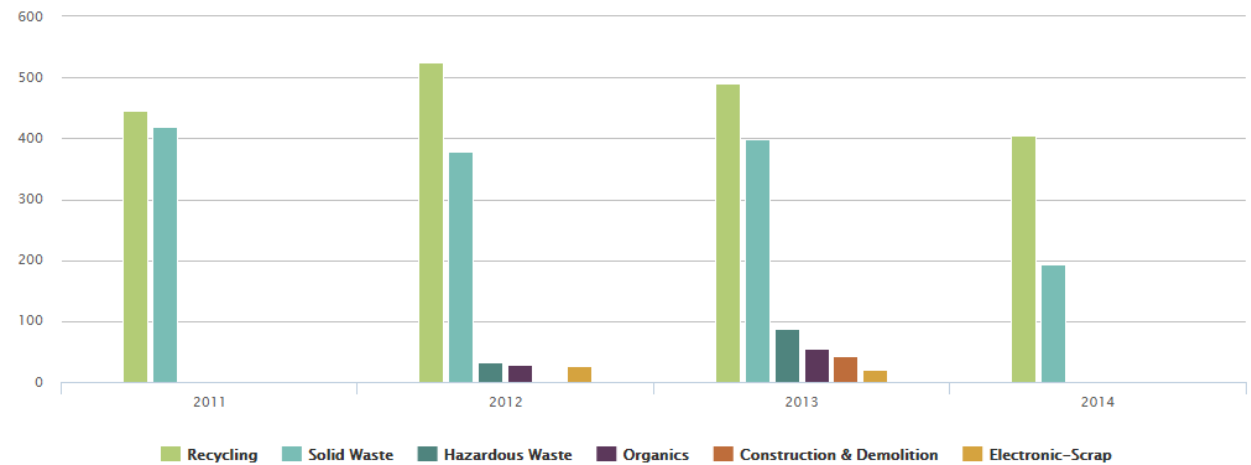


MATERIAL	AMOUNT	UNITS	TONS	ACTIVITY/PROCESS
Commingled - Recycling				
Commingled - All Residential Recyclables	54.200	Tons ▼	54.200	Recycled ▼
Glass				
Mixed Glass	11.240	Tons ▼	11.240	Recycled ▼
Metals				
Aluminum	4.960	Tons ▼	4.960	Recycled ▼
Iron		Tons ▼		Unspecified ▼
Steel	2.100	Tons ▼	2.100	Recycled ▼
Tin	6.800	Tons ▼	6.800	Recycled ▼
Paper				
Books	10.220	Tons ▼	10.220	Reused ▼
Cardboard		Tons ▼		Unspecified ▼
Cartons ?		Tons ▼		Unspecified ▼
Magazines		Tons ▼		Unspecified ▼
Mixed Paper		Tons ▼		Unspecified ▼
Plastic - Mixed Resin Rigid				
All Rigid Plastic: No Bulky ?	15.333	Tons ▼	15.333	Recycled ▼
All Rigid Plastic: with Bulky ?		Tons ▼		Unspecified ▼
Commingled Plastic Bottles ?		Tons ▼		Unspecified ▼
Plastic - Resin Segregated Rigid				
HDPE Bottles & Containers		Tons ▼		Unspecified ▼



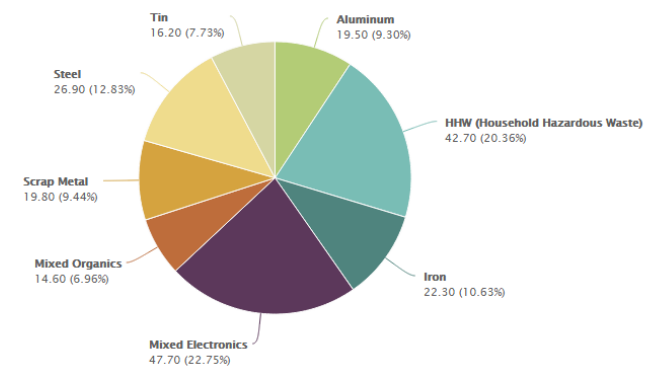
Annual Trend By Wastestream

January 01, 2011 – December 31, 2014



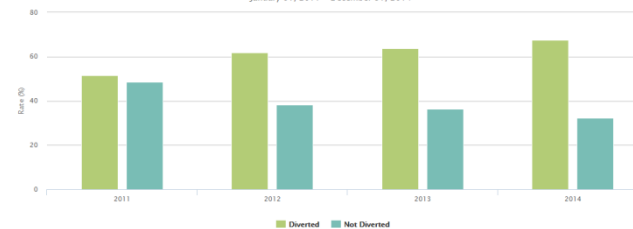
Snapshot Summary (Tons)

January 01, 2011 – December 31, 2014



Standard Diversion Rate (%)

January 01, 2011 – December 31, 2014





The Challenge

- Overall weights provided by waste hauler
- Lack of store level data
- Wanted to capture wider activity
- 95% Diversion Rate Goal



- 78 Stores reporting
- Established a FAQ system once/week for first 3 weeks

“The system has given us the ability to see exactly what each location is doing and how they contribute to our overall sustainability goals. “

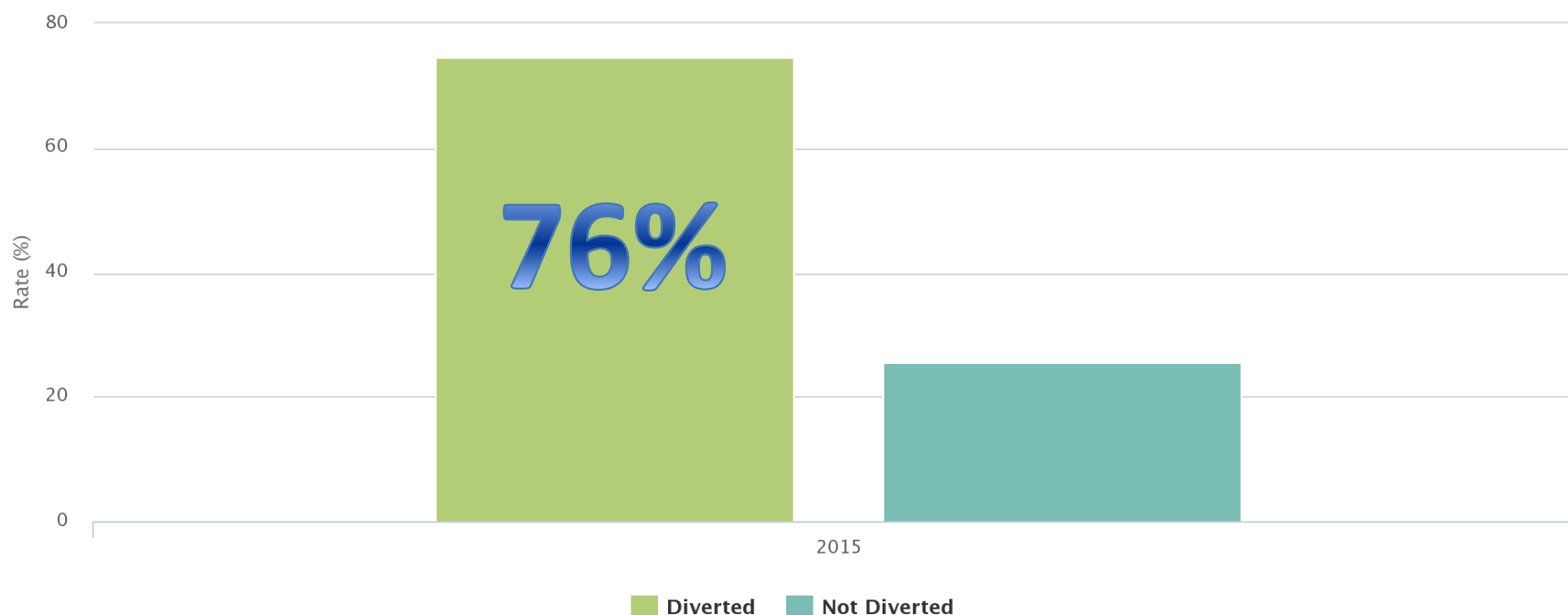
Maury McCausland
London Drugs - Retail Operations Sustainability Specialist



Diversion Rate (YTD)

Standard Diversion Rate Report (%)

January 01, 2015 – December 31, 2015



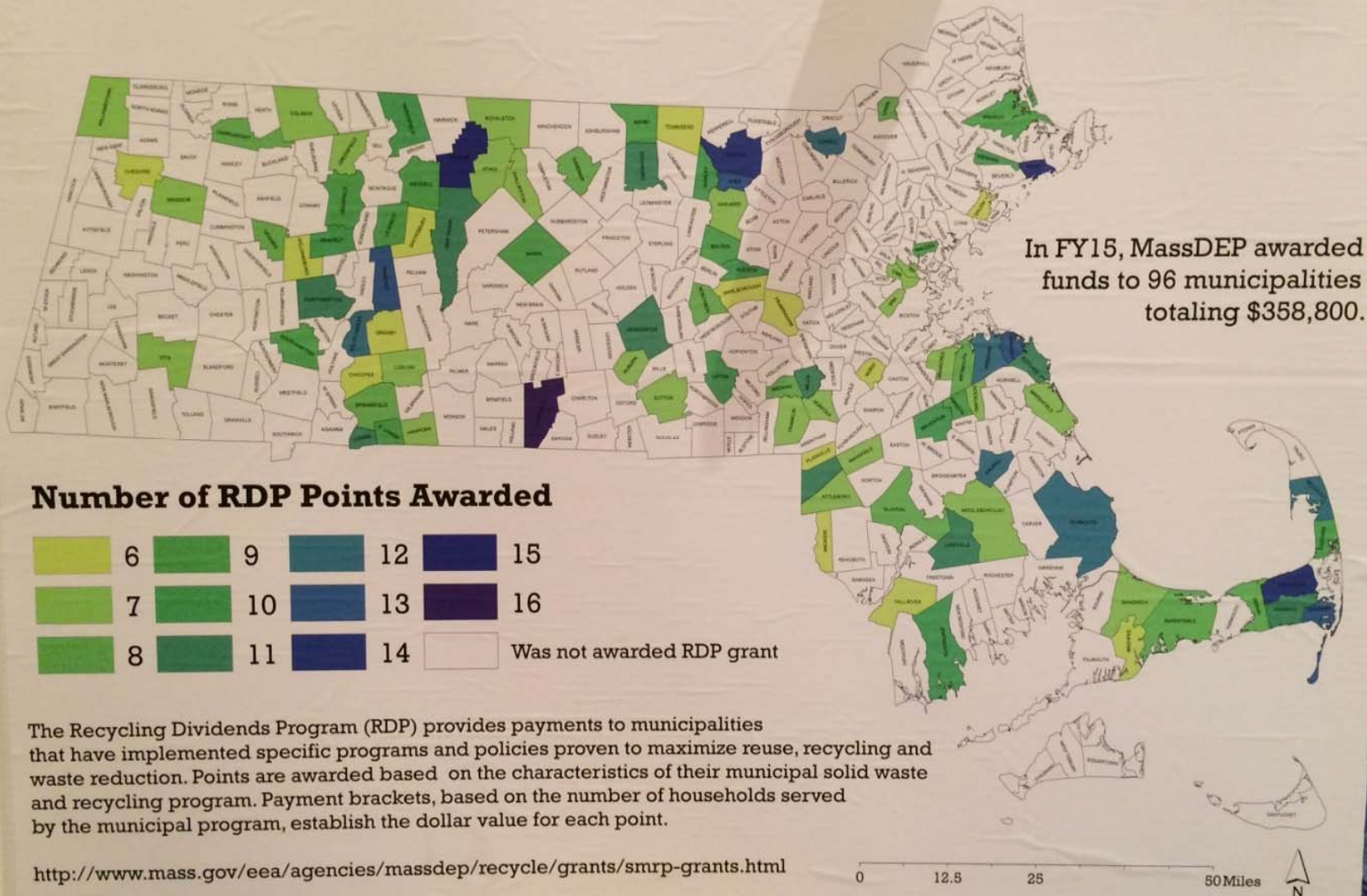
COMMUNICATE

RESULTS

Successful programs have...

- Buy-in at all levels of the organization
- Effective communication tools

MassDEP's Recycling Dividends Program - FY 2015 Results



Recyclemania

Grand Champion, Organized by Rank

<i>School</i>	<i>Rank</i>	<i>Recycling Rate (%)</i>
ORDERED BY RANK		
<u>Antioch University Seattle</u>	1	96.759
<u>University of Missouri-Kansas City</u>	2	84.568
<u>New Mexico State University-Main Campus</u>	3	82.960
<u>Loyola Marymount University</u>	4	82.597
<u>Richland College</u>	5	80.316
<u>Macalester College</u>	6	77.963
<u>University of California-Irvine</u>	7	74.737
<u>Berkshire Community College</u>	8	70.629
<u>Stetson University</u>	9	69.144
<u>Massachusetts Maritime Academy</u>	10	68.149
<u>Chatham University</u>	11	66.821
<u>Minneapolis College of Art and Design</u>	12	66.103
<u>San Francisco State University</u>	13	64.533
<u>Guilford College</u>	14	63.464
<u>University of Louisville</u>	15	63.461

IMPROVE

What's next?

- Set new targets
- Look to your suppliers, distributors, etc.
- Get involved

THANK YOU



Sign up for your Free Account today!

connect.re-trac.com

CHRIS RONSON

chris@emergeknowledge.com

Programs

- ✓ Facilities (landfills, MRFs, etc)
- ✓ Local governments
- ✓ Haulers
- ✓ Businesses
- ✓ Government agencies
- ✓ Events
- ✓ Internal departments
- ✓ Competitions
- ✓ Voluntary initiatives
- ✓ Stewardship agencies

What's important to your program?

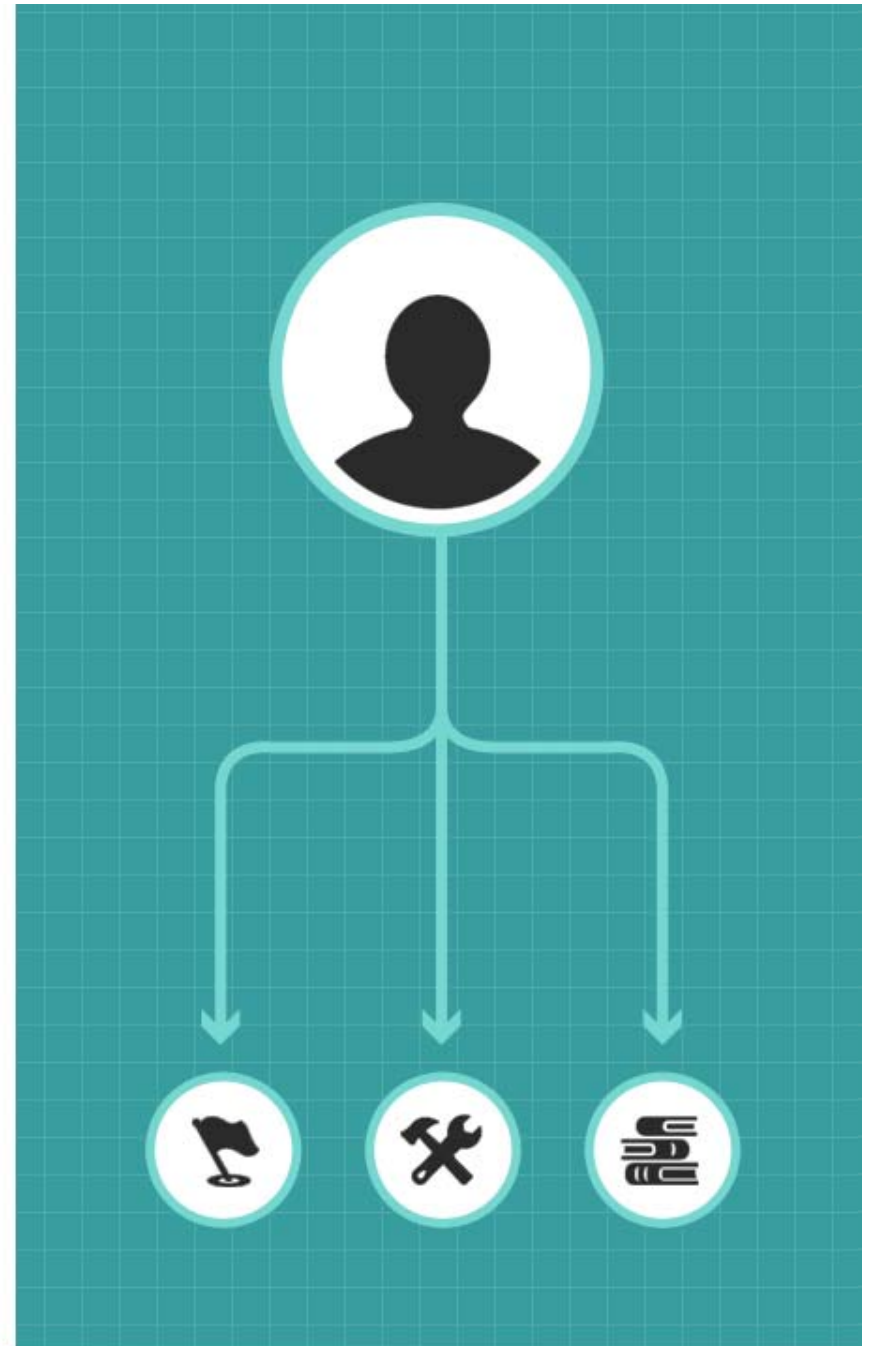
- ✓ Required annual reporting
- ✓ Grant applications
- ✓ Membership information
- ✓ Certifications
- ✓ Tonnage tracking
- ✓ Directory listings (e.g. drop-off locations)
- ✓ Award applications
- ✓ Contracts
- ✓ Waste mgmt program assessments
- ✓ Waste audits
- ✓ Sustainability reporting

Organizations (reporting entities) create free accounts

-  Report to national, state/provincial, and local programs
-  Access to tools for optimizing operational and educational initiatives
-  Access to hundreds of resources including Resource Recycling articles

EXAMPLES:

- ✓ Local Governments
- ✓ Businesses
- ✓ Universities & Colleges
- ✓ Landfills...and more



- WASTING AND RECYCLING IN THE UNITED STATES 2000 (GrassRoots Recycling Network - <http://www.grrn.org/assets/pdfs/wasting/WRUS.pdf>)