

Emmet County Recycling



Adding New Materials: 7 Steps to Success

1. Evaluate material options
2. Markets
3. Volume, sorting, processing, storage, transportation
4. Collection options
5. Funding
6. Education/Outreach
7. Soft launch/pilot/adjust



Background on Emmet County

- Rural challenges – economies of scale
- Guiding principles from start of program:
 - Recyclable prevalent in waste stream
 - Recyclables toxic in waste stream
 - What people want to recycle
 - Markets
 - Ability to receive, sort, process and ship



Emmet County Transfer Station and Recycle Processing











Bulky Recyclables Drop-off



Hazardous Recyclables Drop-off



Yard Waste Composting





Recycle Drop-off Sites



Cost effective option for rural areas



Seed funding critical!

- Many long term programs successfully operating today received grant funding from the state in the late 1980s early 1990s



Curbside Recycling Collection





Challenges

- Identifying recyclables you can afford to accept
- Finding markets; determining revenue potential
- Determining sorting, processing, storage demands
- Figure collection and processing costs
- Net costs and how to fund them
- Communicating new recyclable to public
- Start-up!



3 Cs: convenient, comprehensive and cost effective

- The more convenient and comprehensive you make your program, the harder it is to remain cost-effective – therein lies the challenge.
- Fees for service, bundled fees, fee incentives (recycling less than disposal) and 'convenience' fees, all options for funding material recycling



Recycling Guarantee

- If you add a recyclable, determine to keep it in your recycling stream.
- If you choose to accept a material with only one market source (a risk), call it a 'pilot' program



Caveat

- Emmet County owns and operates its MRF, drop site and curbside recycling collection, and develops all its own education, promotion, and marketing
- If your program doesn't, the following points are considerations for those you contract with; negotiate on the points that matter



1. How to Prioritize Additions

- What's driving the desire for add-ons?
 - Increase waste diversion/recycling rate
 - Demand from your customers/the public
 - Market value; potential revenue stream
 - Excess capacity/sorting capability at MRF



2. Evaluate Market Potential

- Identify market opportunities
 - Ensure at least two strong market outlets
- Determine specification/volume/density requirements
 - Can you meet quality requirements (ex: EJ)
 - Can you meet density (ie: 44,000#/truck) reqs
 - Do you have room in warehouse for addl load



Local Markets, Win-Win

- Improving processing & transportation efficiencies
- Get the most value with highest & best use







3. Evaluate impact of adding recyclable

- What % of waste stream does it comprise?
- What is the capture rate expected
 - Cartons vs. #1-7 non-bottle plastics



Steps to evaluate new material for recycling

- Identify interest/need/waste minimization
- Find your markets
- Determine volume, processing capabilities
- Evaluate collection options
 - Drop site
 - Curbside
 - Drop off Center
 - Other (at source: batteries at hardware stores)
- Funding
- Education/Outreach



Paper Cartons & Emmet County



Great Lakes Tissue, Cheboygan, MI



3. Assess ability to receive, process, ship



3. Assess Processing Capabilities



4. Collection & Processing Conundrums



5. Funding Facility Upgrades

- Reclaimed Dual stream facility with limited sort options
- Carton Council grant facilitated upgrades
- Vacuum Chutes to increase efficiencies



Sorted Cartons



Unloading Mobile Carts on to Conveyor



Carton Bales



Great Lakes Tissue Products



6. How to educate/promote new materials

- Reach people where they buy the packaging that you are targeting for recycling
- Reach your audience where they recycle (drop site, curbside, main drop off center)
- Reach people where they get their information



The Carton Council

Promotion/Education Grant

“10,000 Pounds in 10 Weeks”
campaign

- Where you buy products in cartons
- Where you recycle
- Where you go for information
- Public art



Where you buy products in cartons



Where you recycle

Drop-Site Poster

Recycle your cartons!

HELP US RECYCLE
10,000 POUNDS
OF CARTONS
IN 10 WEEKS!

NOV 14 - JAN 22
AND BEYOND

 EmmetRecycling.org



Message Centers

Located at
7 of our
13 Drop Sites
countywide



Where you go for information

Recycle your cartons!

Help us recycle 10,000 pounds of cartons in 10 weeks!

NOV 14 - JAN 22
AND BEYOND

In the Container Bin at all Emmet, Charlevoix, and Cheboygan county drop sites and curbside



EmmetRecycling.org
Visit us for more information



Ad in main regional newspaper
(@1/3 page)



Where you go for information



Where you go for information



Click on the photo to start tagging. **Done Tagging**



Did you know that cartons are now recyclable in Emmet County? <http://ow.ly/i/llkU>

Done Tagging **Add Location** **Edit**

Like · Comment · Share · Edit

Molly Fettig likes this.

Write a comment...

Sponsored

Carlin Smith, Peg Muzzall and Lindsey Pauline Walker like Odawa Casino Resort.



Odawa Casino Resort
Like



Where you go for information

Radio Ads



Public Art Draws Attention



“They seem to be quite the thing. It has me wondering where they’ll go next, and, well, we want them!”



Promotional Campaign Results

- Met and exceeded challenge
- 50% increase in volume coming in
- Boyne City Schools implemented recycling due to Carton Campaign - 500 cartons/day
- Requests to host the Carton Crane continue



Ongoing Education & Promotion

- “Recycle Your Cartons” Shelf talkers remain on store shelves county-wide
- Carton Crane and Carton Heron circulating throughout the four-county service area



The Basic Four

1. Bin/Tote/Cart Labels
 2. Website
 3. Paper Recycling Guide
 4. Phone number and someone answering
- THEN, take on press releases, school outreach, events, advertising, parades, promo items, etc.



Drop site bins as message centers



- Labeling of bins critical education opportunity (Teachable moment!)
 - No scavenging
 - Recycling info website address
 - Phone number
 - Visuals for what is (and is not) accepted
 - No littering



Brochure Racks



Message Centers



7. Soft launch/pilot/adjust

- #1-7 non-bottle plastics example of a soft launch
- Recyclables with only one market a pilot
- Learn from experience and adjust!



Examples of adding recyclables

- Asphalt shingle recycling
- Mattress recycling
- Latex Paint recycling
- #3-7 Plastics
- Plastic Film
- Rubble
- Plant Plastics
- Large Mixed Rigid Plastics
- Textiles & Shoes



Asphalt Shingles

- “Don’t want that in the waste stream!”
 - Only one market available = “pilot” status
 - Can be fully funded with incentive pricing
 - Who’s bringing it in?
 - Roofers
 - Do it yourselfers

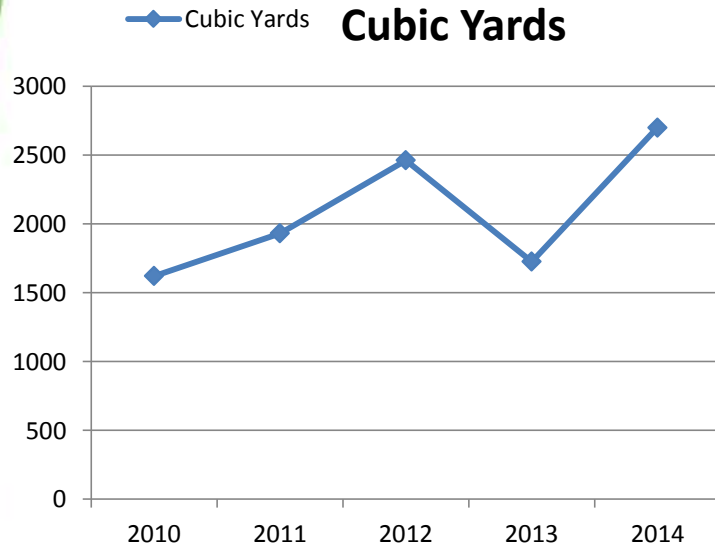


So...

- Where received:
 - Main drop site only
 - What does market require re: specs:
 - Nails okay, NO caulk tubes, roofing paper, aluminum edging
 - Since industry specific, required 'certification trainings'
 - deep discounts on recycling over disposal



Over 450 roofs-worth of shingles in 2014

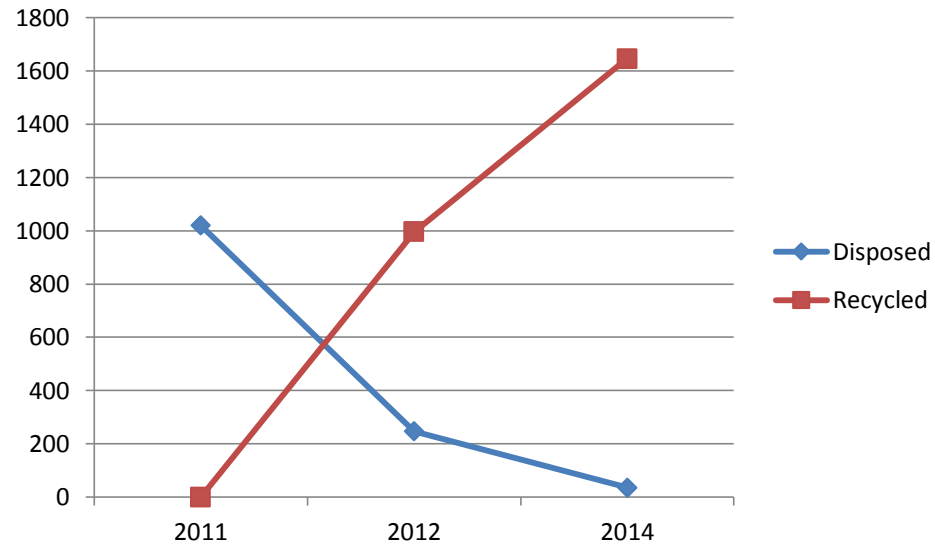


Mattresses

- Main drop off center only/no sorting or processing required
- Economies worked (lower recycle cost)
- Only one market, hence “pilot” program



Incentivized Pricing in Mattresses



Latex Paint Recycling

- ePaint



Recycling latex paint!

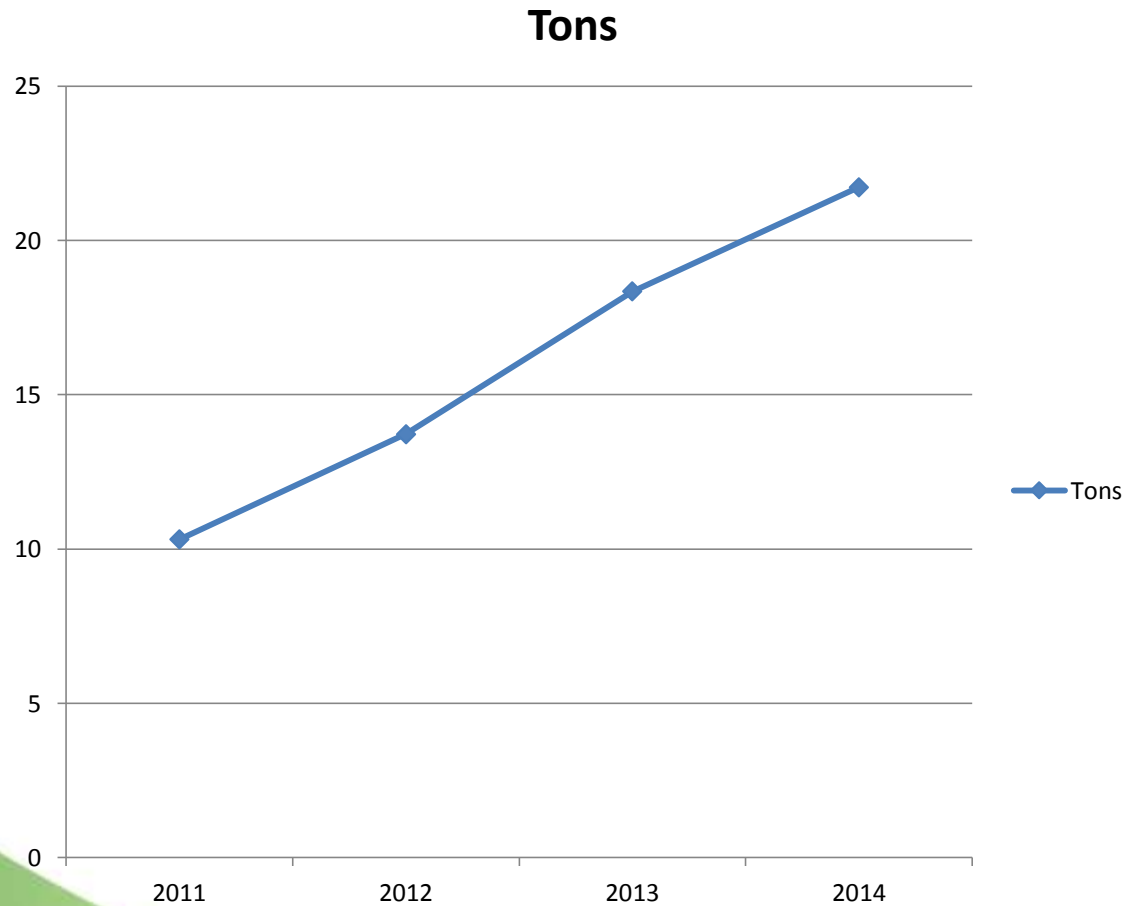
- Another market-driven opportunity
- Only one option, so started as a pilot
- A former headache:
 - Not solid waste, not a hshld haz waste
 - The 'dry it out with kitty litter' very unpopular
 - People willing to pay for convenience



everybody's paint closing the loop



Paint Recycling Takes Off!



- 2,062 gallons in 2011
- 4,346 gallons in 2014



Rubble: bricks, blocks, ceramics,
porcelain fixtures



In pilot-mode: Mixed Rigid Plastics



Examples of matls within sort

- 3-7 plastics (we call 1-7 non-bottle mix)
- Film plastic bags (HDPE & LDPE)
 - Dual Stream allowed us to add additional sorts
 - Consider sort line and bunker capacity (linear feet on sort line and # of bunkers/carts to sort into)
 - Consider warehouse space for full load (28 bales or 40,000 #s) onto trailers
 - Consider messaging to public



LDPE & HDPE Film Plastics



#1-7 Non-bottle plastics



One market can complement another: #1-7 plastics and plant plastics



Local market



Market Challenges

- China's Green Fence made markets for both plastic film and non-bottle containers more challenging
- Our material still very clean compared to single stream mixed plastics and we were able to keep moving our material



Market Considerations

- Market specs crucial here in how we added to our facility
 - Film plastic needs to be clean and dry for best market opportunities (but several markets available so NOT introduced as a pilot)
 - Chose to make our #1-7 plastics a ‘positive sort’ to minimize contamination – also numerous market options so NOT introduced as a pilot



What we added and when

- 1990: Newspaper, Cardboard, Motor Oil, Batteries
- 1992: #2 Bottles/Jugs, Al/Steel cans, glass (all colors), scrap metal
- 1995: Magazines
- 1997: Textiles, shoes, hard-covered books
- 2000: #1 Bottles, electronics
- 2006: Tires, Rubble, Wood, Yard Waste
- 2010: Cartons, #1-7 non bottle plastics, film plastic bags, asphalt shingles
- 2012: Mattresses
- 2014: Latex Paint (piloted since 2012?)



Results

- Plastic containers recycled DOUBLED when adding non-bottle 1-7s
- BUT processing costs/ton increased, due to high sorting requirements of low value and low weight material
- Sorts will increase per ton as plastic container manufacturers continue to lightweight packaging



2 examples of what we don't accept yet and why

- Styrofoam

- Very low % of waste stream
- Very high demand from customers to recycle
- Very costly to collect, sort
- Difficult market specs: clean, dry, white
- No revenue stream/high cost/ton transport costs
- Requires specialized densification equipment to compact enough for 'efficient' transport



Carpet and carpet padding

- We have one market (not two)
- Revenue for padding but not carpet
- Problematic handling on-site: heavy and cumbersome; ramps to trailer expensive, stairs a liability
- Good cost/benefit analysis: can charge half the cost of disposal to receive, store, ship
- Difficult to describe specs for public, but not for commercial installers



What's next for us: Food Waste!

- Pilot: primarily from restaurants
- Designed to learn from for full roll-out
- Huge % of waste stream
- Revenue product in compost made on-site
- Picture of compost piles and bunkers here
- We consider this 'low hanging fruit' due to high diversion potential



Building Community



Keeping the Green in Northern Michigan





Emmet County Recycling

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