AGENDA OF THE SUSTAINABILITY COMMISSION

WEDNESDAY, FEBRUARY 12, 2020, 5:00 PM
CITY HALL, ROOM 604 - THE HARRY MAIER ROOM

A. Roll Call.

1. Seth Hoffmeister--Chair; Ned Dorff--Vice Chair; Ald. Randy Scannell; Kaurie Mihm--PRF; Prof. John Arendt; Deb Hutchison; Julia Noordyk; Mark Walter;

B. Approval of the Agenda.

1. Approval of the agenda for February 12, 2020.

C. Approval of Minutes.

1. Approval of the minutes from the meeting on January 8, 2020.

D. Regular Business.

1. Discussion with possible action on edited neighborhood letter.

E. Informational.

1. Presentation by Mark Walter on Recycling.
2. Update from committee members on activities.

F. Adjournment.

1) THIS MEETING IS RECORDED: THE VIDEO OF THIS MEETING AND MINUTES ARE AVAILABLE ONLINE AT www.greenbaywi.gov
2) ACCESSIBILITY: Any person wishing to attend who requires special accommodation because of a disability, should contact the City Safety Manager at 920-448-3125 at least 48 hours before the scheduled meeting time so that arrangements can be made.

3) QUORUM: Please take notice that a majority or quorum of the Common Council will attend this Sustainability Commission meeting and will constitute a meeting of the Common Council for purposes of discussion and information gathering relative to this agenda.
4) REPRESENTATION: The party requesting the communication, or their representative, should be present at this meeting.

DATE

Greetings, Green Bay Residents,

This short insert in your neighborhood association newsletter is from the Green Bay Sustainability Commission, a committee of the City of Green Bay. The Commission is reaching out to you to begin a conversation and convey information. Through our mission, we are "dedicated to the protection, stewardship, and improvement of the environment in the interest of the health, prosperity, and welfare of the Green Bay community for present and future generations."

By working with residents, businesses and city departments, we aim to

- Better prepare the community for severe storms
- Better prepare the community for flooding
- Effectively improve water quality
- Protect air quality
- Aim for clean-energy infrastructure and solutions
- Reduce waste
- Preserve biodiversity
- Promote equitable solutions to climate impacts

NEED TO ADD CHANGING CLIMATE

In order to guide our work, we'd like to hear from you. HOW DO THEY GET IN TOUCH (FACEBOOK)? Can you share what you're doing in your neighborhoods to promote and preserve the environment?

How can we work together to achieve common goals?

Website https://greenbaywi.gov/961/Sustainability-Commission AND INSERT THE FACEBOOK LOGO

Join us for our monthly meetings, 2nd Wednesday of the month at 5:00pm in the Harry Maier Rm (604), City Hall (100 N. Jefferson St.). Parking in the City Hall lot is free after 6 pm, daily.

Thank you!

The Green Bay Sustainability Commission
Seth Hoffmeister, Chair
Ned Dorff, Vice Chair
Ald. Randy Scannell
John Arendt
Debora Hutchison
Kaurie Mihm, Parks Recreation and Forestry
Julia Noordyk
Mark Walter

Report to the
Sustainability Commission
of the City of Green Bay

MEETING DATE	PREPARED BY
February 12, 2020	

AGENDA ITEM # E.1

Presentation by Mark Walter on Recycling.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

1. 2020-02-12 Recycling -CGB SustCom Presentation M Walter

The Changing World of Recycling

Mark Walter

Business Development Manager

Brown County Port & Resource Recovery Department

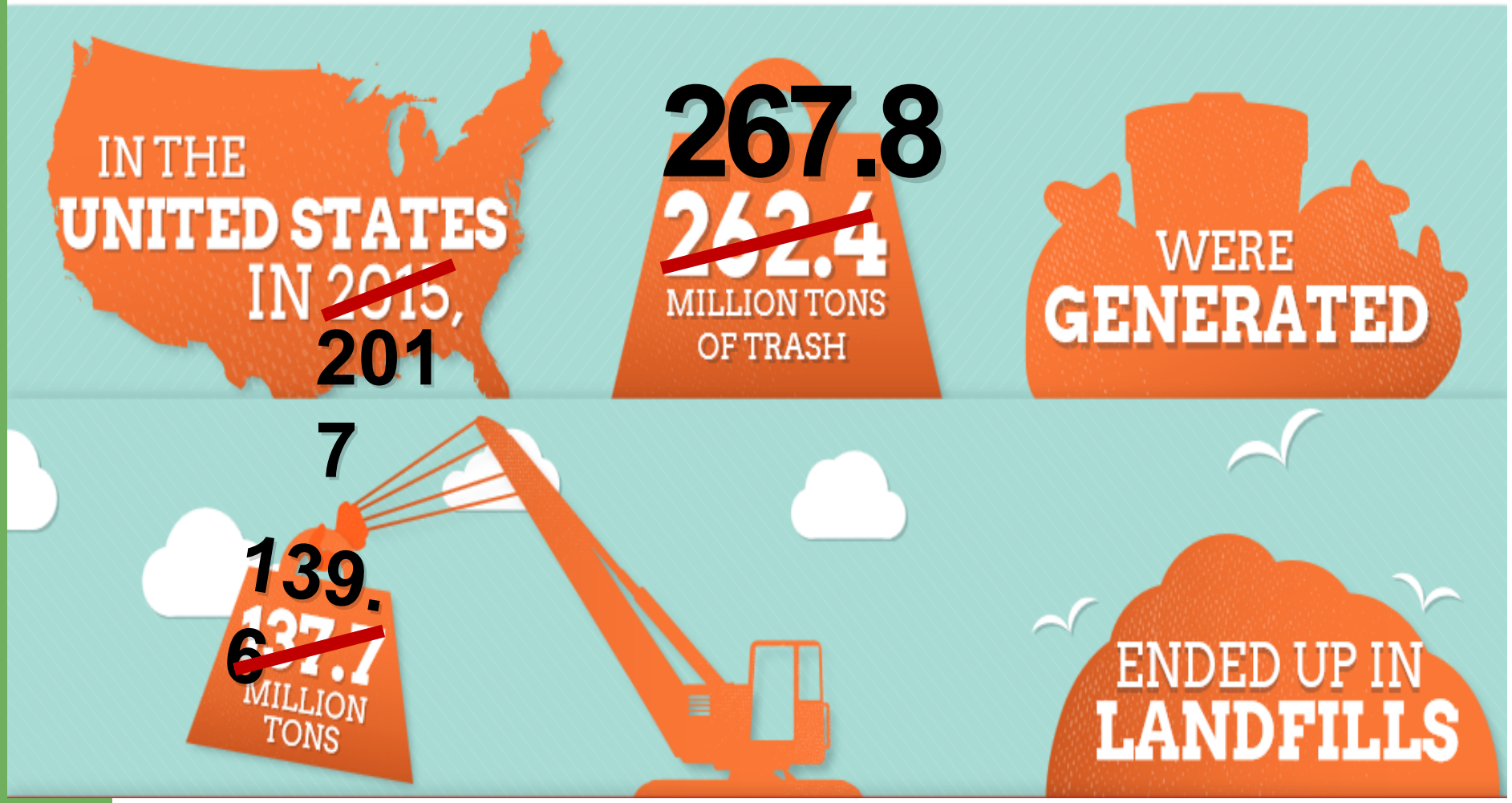
Introduction

- Department Background
- Solid Waste Management
- Recycling
  - Why Recycle?
  - What to Recycle
  - How Recycling Works
- What Else Can Be Recycled?
- Hazardous & Other Wastes
- Changes in Recycling
- Product Stewardship

Port & Resource Recovery Dept

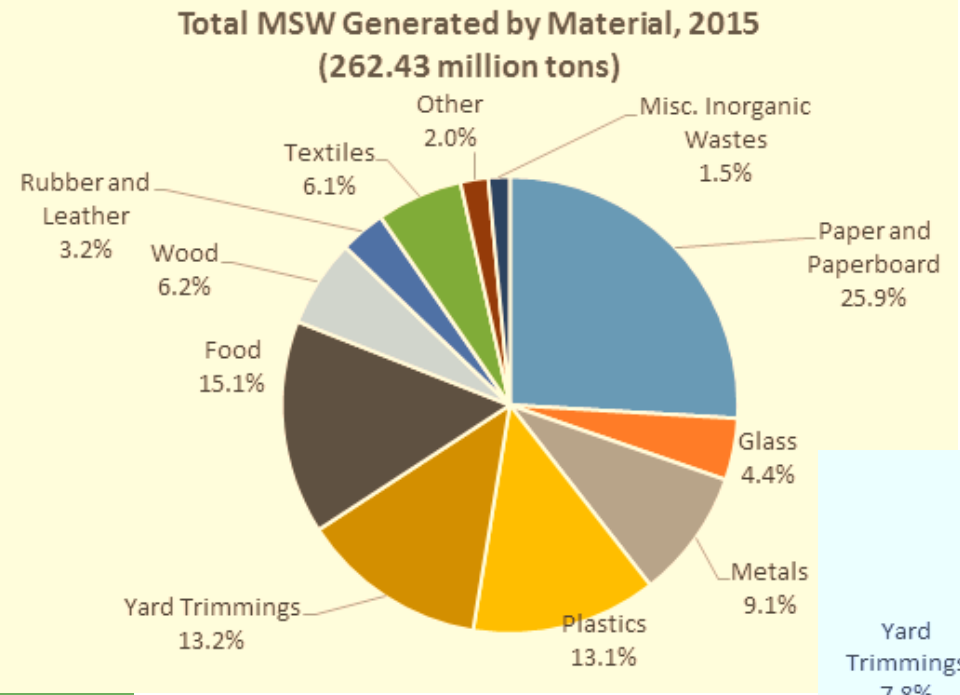
- Oversight by Solid Waste Board
- 2 Closed Landfills (1996 & 2004)
- Solid Waste Transfer Station (Opened 2003)
- South Landfill (Opening 2022)
- Recycling Transfer Facility (1993)(2009)
- Hazardous Material Recovery Facility (1996)
- *Port of Green Bay*
- 14 employees
- Enterprise Fund – self-supporting, no tax dollars

Let's Talk Trash

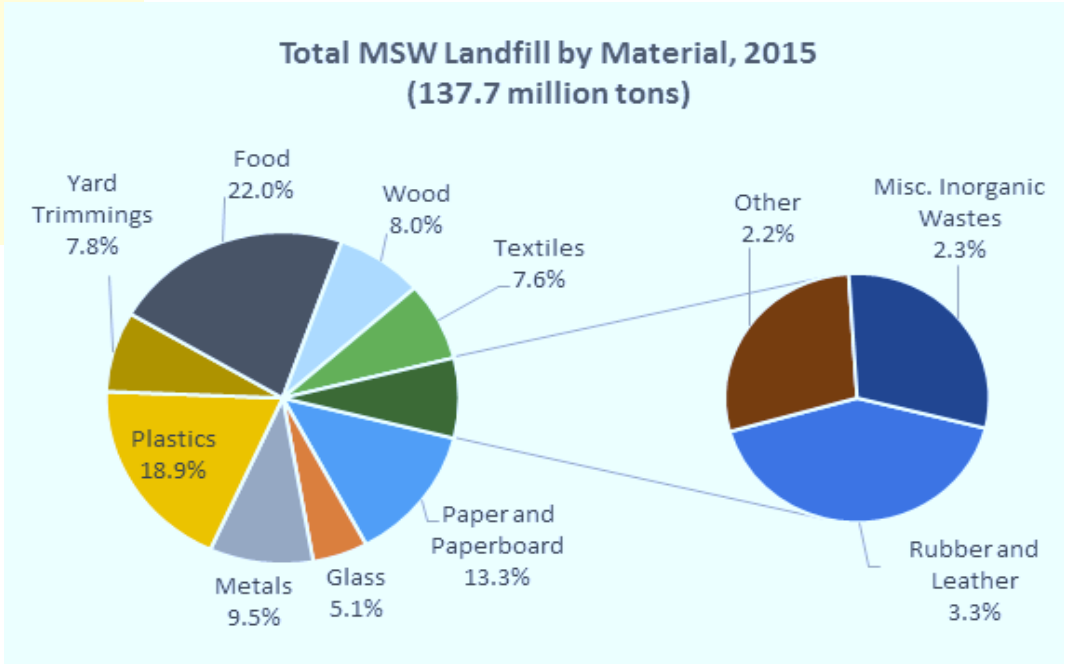


Source: USEPA, Advancing Sustainable Materials Management: 2017 Fact Sheet, 2019.

Municipal Solid Waste (MSW)



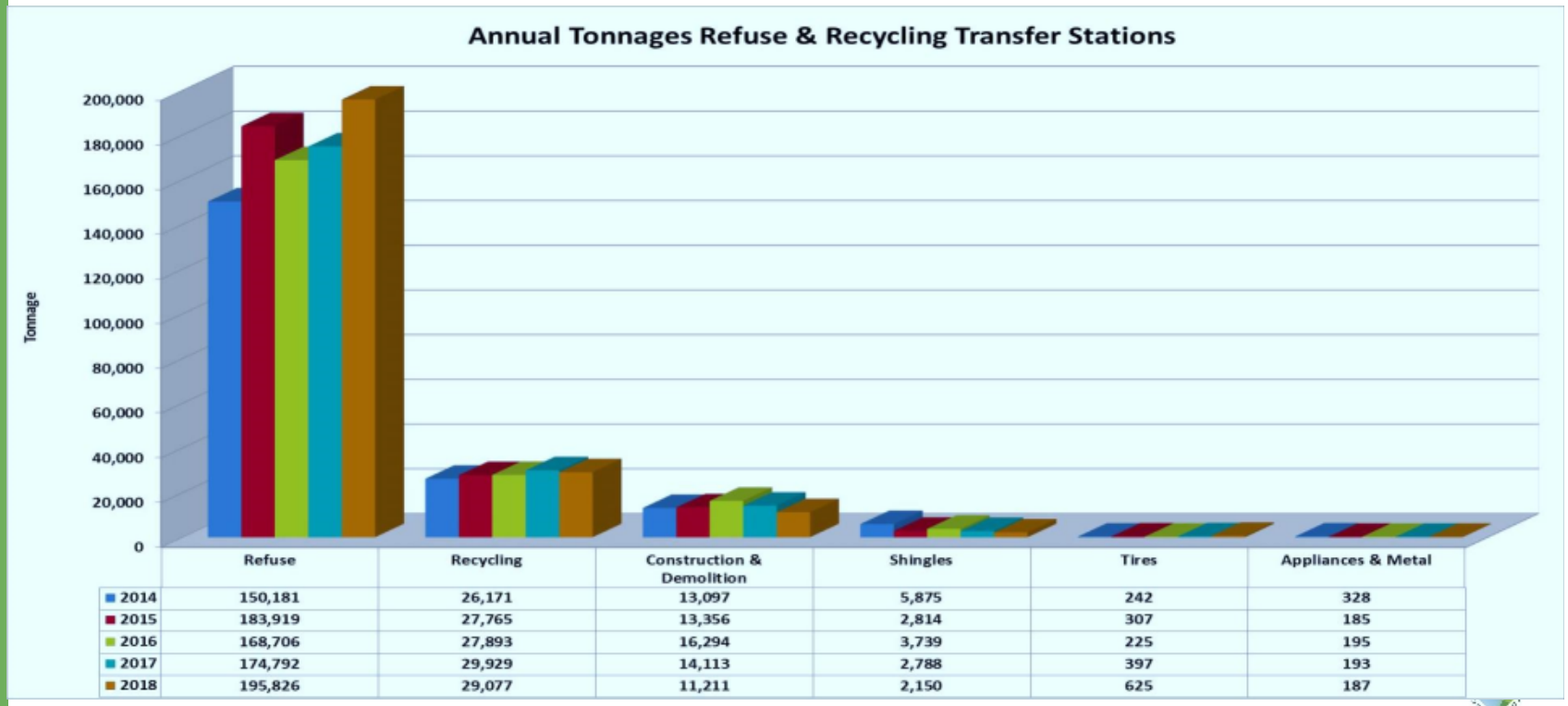
It's Not Just Garbage



Source: USEPA, Waste Characterization Study, 2017.

Department Tonnages

- Solid Waste Transfer Station – 160,000 tons/year
  - Landfill Total – 270,000 tons/year
- Recycling – 29,000 tons/year
- Hazardous Material Recovery – 700,000 lbs/year



	Refuse	Recycling	Construction & Demolition	Shingles	Tires	Appliances & Metal
2014	150,181	26,171	13,097	5,875	242	328
2015	183,919	27,765	13,356	2,814	307	185
2016	168,706	27,893	16,294	3,739	225	195
2017	174,792	29,929	14,113	2,788	397	193
2018	195,826	29,077	11,211	2,150	625	187

History of Solid Waste Management

Federal environmental regulation in the 1970s resulted in the closing of municipal dumps and incinerators.

- **Clean Air Act (1970)**
- **Clean Water Act (1972)**

The "BOW"

- Agreement between Brown, Outagamie and Winnebago (BOW) Counties to manage waste cooperatively
- Tri-County regional solid waste and recycling agreements signed in 2001
- Jointly constructed Tri-County Recycling Facility in 2009
- Coordinate waste disposal sequentially using one of the county landfills
- Share administrative and operational costs through annual audit

Tri-County Recycling
BROWN • OUTAGAMIE • WINNEBAGO

Waste Disposal – Where Should it Go?

Wisconsin Waste Disposal Hierarchy

- Reduce
- Reuse
- Recycle
  - Compost

Most Beneficial

- Energy Recovery
- Land Disposal
- Burning without Energy Recovery

Least Beneficial

Ch 287.05 (12) Wis Stats

Why Recycle?

- Reduces landfill space
- Saves natural resources
- Saves energy
- Helps the local economy
- In Wisconsin, It's the Law

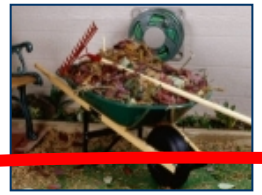
Wisconsin's Recycling Laws

Beginning in 1991 the law established bans on landfilling of a variety of materials.

1991

- Lead Acid Batteries, Major Appliances, Waste oils

1993



- Yard Waste

1995

- Aluminum containers, Corrugated Paper or other Containerboard, Plastic Containers #1 through #7, Foam Polystyrene Packaging. *Currently a variance issued by the DNR allows plastic containers #3 through #7 and polystyrene to be landfilled or incinerated. If at some future time, the DNR determines that adequate markets for these plastics exist, they will be banned from disposal.*

  Glass Containers, Magazines, Newsprint, Office Paper, Steel Containers, Bi-Metal Cans, Waste tires

2010

- Consumer electronics

2011

- Waste oil filters and spill material

What is Single Stream Recycling?

What to Recycle in your Cart?

Paper

ACCEPT:
- Newspapers & inserts
- Cardboard & paperboard (food boxes)
- Milk, juice & soup cartons
- Office & school paper
- Junk mail & catalogs
- Phonebooks, books & magazines

DO NOT ACCEPT:
- Tissue paper
- Pet food bags

shred paper in a paper bag & staple shut
flatten & cut boxes to 2ft x 2ft

What to Recycle in your Cart?

Metal

ACCEPT:
- Aluminum bottles & cans
- Steel & tin cans
- Empty aerosol cans

DO NOT ACCEPT:
- Aluminum pans or foil
- Empty paint cans
- Scrap metal

empty and rinse

What to Recycle in your Cart?

Glass

ACCEPT:
- Food and beverage bottles & jars

DO NOT ACCEPT:
- Window glass
- Ceramics, china
- Drinking glasses

empty and rinse

What to Recycle in your Cart?

Plastic

ACCEPT:

ALL Plastic bottles & containers

- Household bottles, jars & jugs
- Dairy containers & lids
- Produce, bakery & deli containers & lids

DO NOT ACCEPT:

- Plastic bags, wrap or film
- Motor oil bottles
- Styrofoam

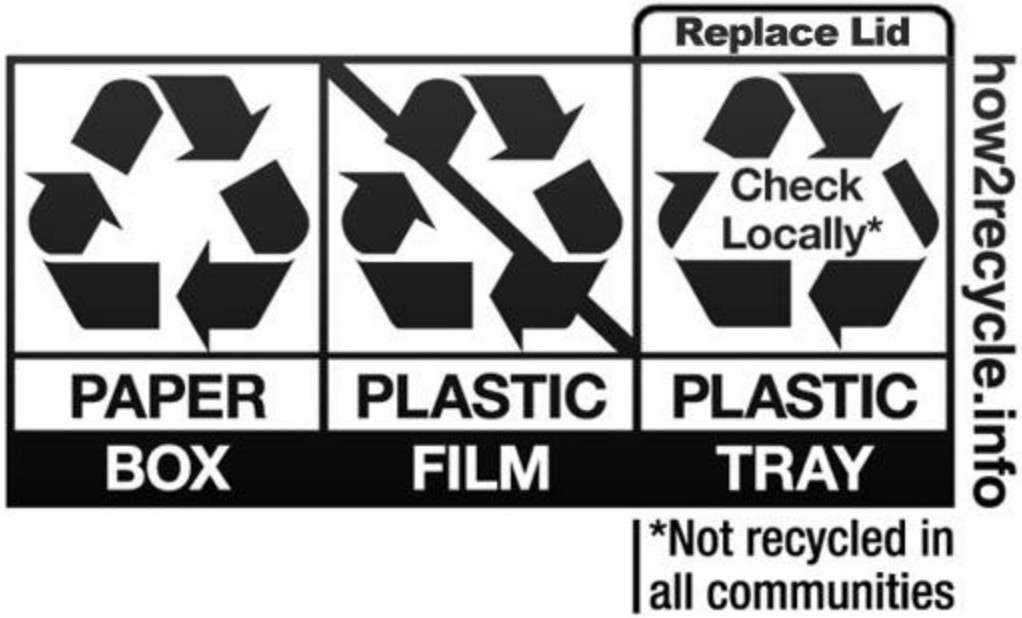
empty, rinse and replace caps & lids

More about Plastics

These are Resin Codes – NOT Recycling Symbols

1 PETE	2 HDPE	3 PVC	4 LDPE	5 PP	6 PS	7 OTHER
polyethylene terephthalate	high-density polyethylene	polyvinyl chloride	low-density polyethylene	polypropylene	polystyrene	other plastics, including acrylic, polycarbonate, polyactic fibers, nylon, fiberglass
soft drink bottles, mineral water, fruit juice containers and cooking oil	milk jugs, cleaning agents, laundry detergents, bleaching agents, shampoo bottles, washing and shower soaps	trays for sweets, fruit, plastic packing (bubble foil) and food foils to wrap the foodstuff	crushed bottles, shopping bags, highly-resistant sacks and most of the wrappings	furniture, consumers, luggage, toys as well as bumpers, lining and external borders of the cars	toys, hard packing, refrigerator trays, cosmetic bags, costume jewellery, audio cassettes, CD cases, vending cups	an example of one type is a polycarbonate used for CD production and baby feeding bottles
						

Changes in Labelling



What NOT to Recycle in your Cart

Some stuff just doesn't belong in your recycling bin...

Plastic bags

Plastic bags, film and wrap are the **#1 contaminant**. Keep recyclables loose in the bin and take plastic bags back to store drop-offs. See below.

Sharps

Needles, lancets and syringes are the **#1 safety concern** for sorting staff. Do not throw sharps in recycling or trash. Visit: **dnr.wi.gov** and **search** "Sharps Collections".

Yuck

Liquids, food and trash contaminate good recyclables. Empty and rinse containers; compost food scraps and throw trash in the garbage.

Tanglers

Cords, chains and wires wrap around sorting equipment creating unnecessary maintenance. Take these items to e-waste collectors or scrap metal dealers.

Textiles

Clothing, towels and bedding wrap around sorting equipment creating unnecessary maintenance. Donate textiles, or if wet and moldy, throw them in the garbage.

What Cannot be Recycled?

Sharps

"Tanglers"

What to do with Plastic Bags?

www.plasticfilmrecycling.org/Wisconsin

What Happens to my Recycling?

- Recycling is dumped onto the Recycling Tip Floor in Ashwaubenon
- Then loaded onto semi-trucks and taken to the Tri-County MRF in Appleton

Tri-County Material Recovery Facility (MRF)

One of the Largest Publicly Owned and Operated MRFs in the Country

- Initial capital cost was $7.5 million
- Serves 15% of Wisconsin's population
- Began operation July 2009
- 25 tons/hour and 110,000 tons/year – 2 shifts

Beginning the Sorting Process…

- Recycling is dumped onto the tipping floor at the MRF in Appleton
- Material is scooped up by a big loader

- Recycling is put in a metering bin
- Metering bin evens out the amount of recycling

The Pre-Sort Line…

Workers remove:

- Large metal objects
- Large plastics
- Large pieces of trash
- Plastic bags and rope

- Plastic bags and ropes can cause big problems

The How's of Sorting

❖ Mechanical Sorting

- An optical sorter looks for #1 plastic
- Separated by jets of air from other material

- Aluminum is sorted by an Eddy Current
- The Eddy Current repels aluminum

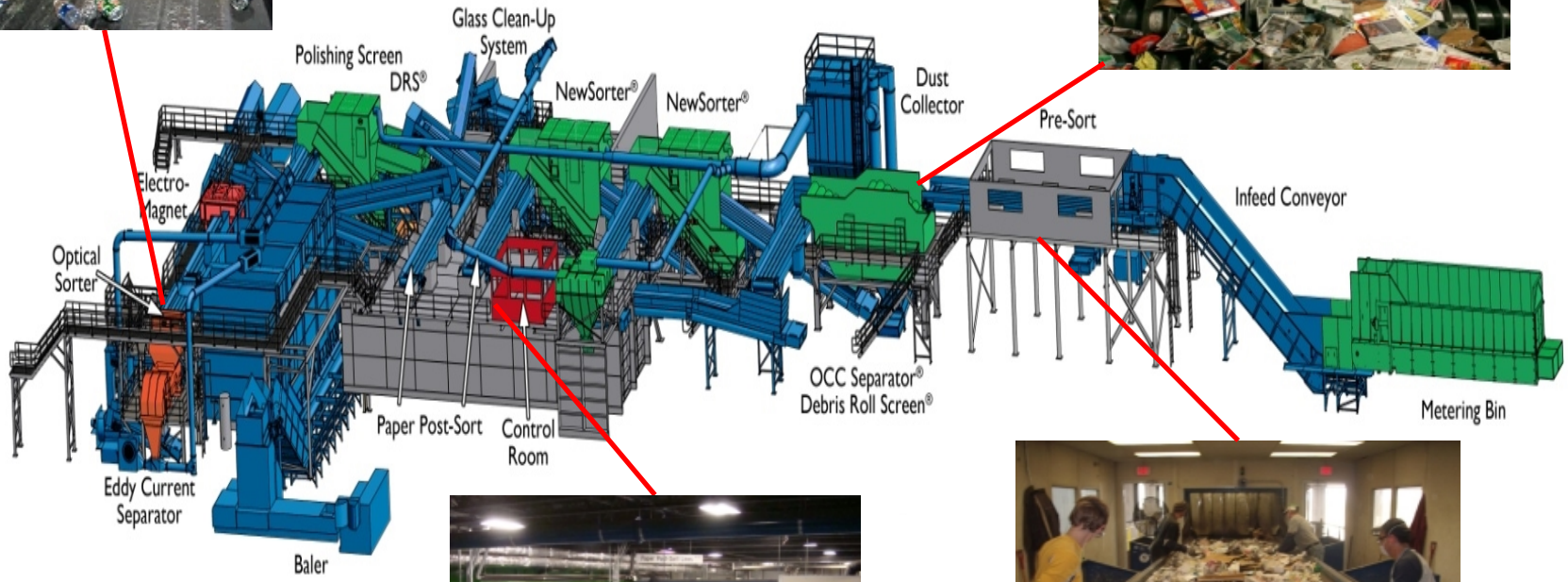
The How's of Sorting

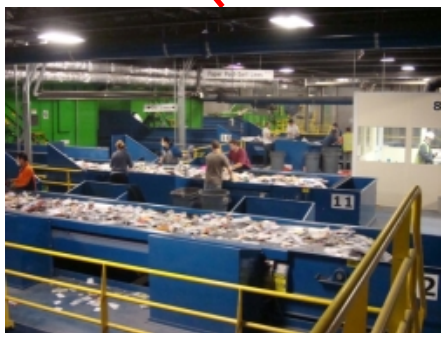
❖ Hand Sorting

- Crew of 20 hand sort and provide quality control on each of 2 shifts

The Single-Stream Process

Tri-County Single-Stream Recycling Facility
Appleton, Wisconsin





New Products are Made…

What else CAN be recycled?

What else CAN be recycled?

- Hard To Recycle Materials
  - Latex Paint
  - Light Bulbs
  - Oil
    - Motor oil
    - Cooking oil
  - Antifreeze
  - Household Batteries
  - Cylinders
  - Electronics

Hazardous Material Recovery Facility

In 1996, Brown County and the Green Bay Metropolitan Sewerage District partnered to build and operate Wisconsin's 1st permanent HHW facility for residential use focused on collecting the following types of products:

NEW Water
The brand of the Green Bay Metropolitan Sewerage District

- Flammable – Paint, Thinners, Gas
- Corrosive – Acids, Bases
- Toxic – Pesticides
- Reactive – Bleach, Pool Chemicals

A single quart of motor oil, if disposed of improperly, can contaminate up to 2,000,000 gallons of fresh water.

Yard Waste & Composting

- Provide valuable material for gardens and landscaping
- Reduce costs for landfilling
- Compost is a soil-like material produced from the breakdown of organic materials
- Home composting can be done in bins or in a heap

Food Waste & Organics

Brown County Food Waste & Organics Drop-off Program

Acceptable Material

Includes compostable food and paper waste:

Food scraps and leftovers		Paper take-out containers (remove any metal or plastic pieces like staples, handles, etc.)	
Vegetables and fruit peels, pits, rinds, etc.		Pizza delivery boxes	
Coffee grounds and filters		Breads and other grains	
Paper tea bags and tea leaves		All other foods	
Cooked meat, bones, seafood and shells		Used paper plates, paper cups, paper with food residue	
Eggs, cheese, and other dairy products		All other dirty paper	
Paper towels (not soiled with chemicals such as cleaning products), tissues and napkins		Cotton balls, cotton swabs (made of paper)	
Paper egg cartons, toilet paper tubes, paper towel tubes		Dryer lint, hair	

Only BPI-Certified Compostable Bags Are Accepted!

Bags and other compostable products are available through our website.

For more information visit:
www.BrownCountyRecycling.org/organics

Brown County Food Waste & Organics Drop-off Program

Not Accepted!

Items that **cannot** be composted:

No Plastic of Any Kind		No cosmetic products	
No yogurt tubs		No medication	
No plastic bags		No dental floss	
No plastic cups		No dryer sheets	
No Styrofoam		No human or animal waste including diapers, baby wipes, bandages, feminine hygiene products, kitty litter, etc.	
No granola bar wrappers, chip bags, or plastic /foil candy wrappers		No yard waste, branches, garden plants , grass clipping or leaves (take to your local yard waste site)	
No metal including cans, twist ties, foil, silverware, staples, etc.		No rubber	
No milk cartons, juice boxes or any foil lined cartons		No liquids	

Only BPI-Certified Compostable Bags Are Accepted!

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For more information visit:
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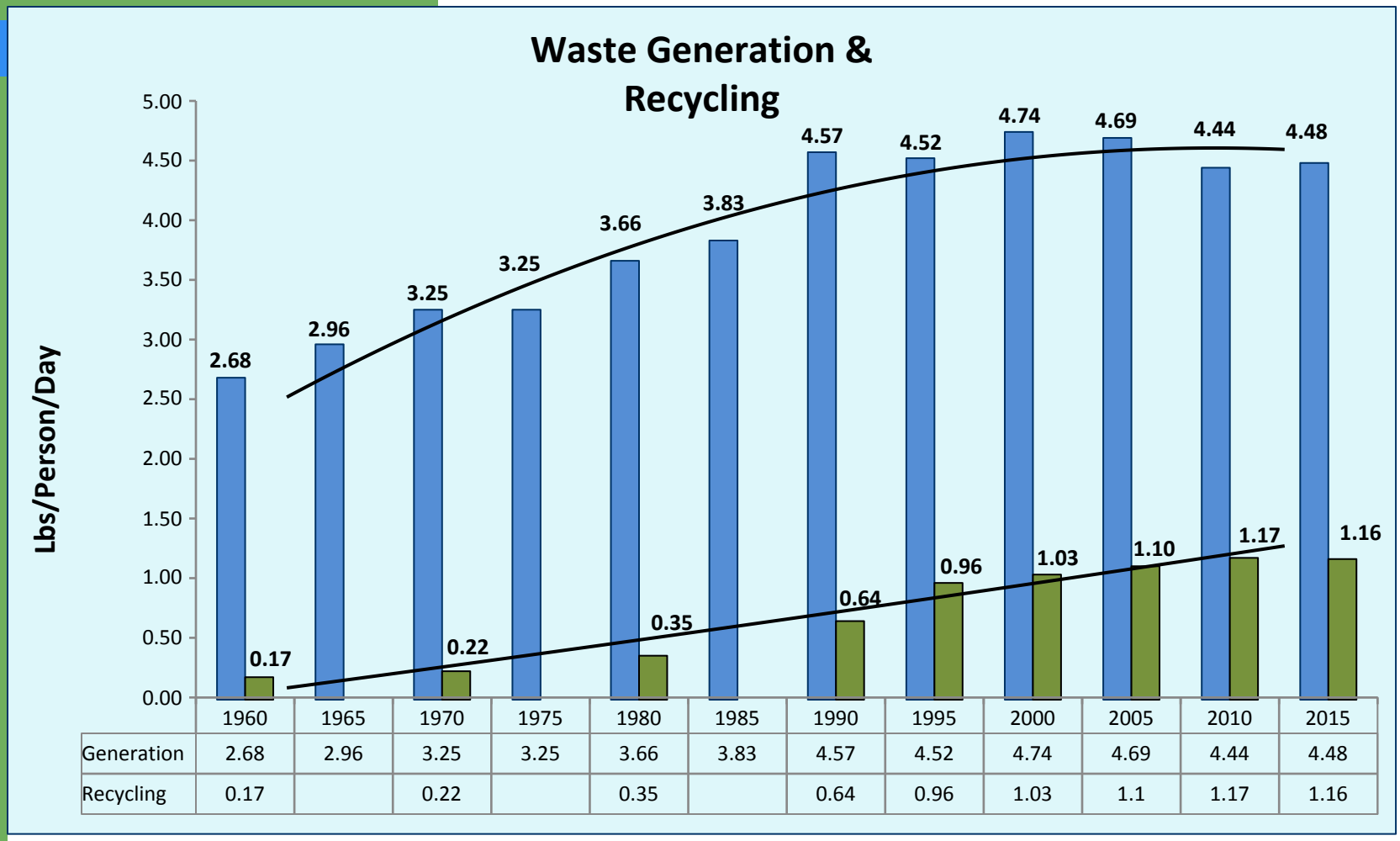
The Evolving Ton

MSW Trends 1960-2015



	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
Generation	2.68	2.96	3.25	3.25	3.66	3.83	4.57	4.52	4.74	4.69	4.44	4.48
Recycling	0.17		0.22		0.35		0.64	0.96	1.03	1.1	1.17	1.16

- Waste generation grew consistently through 2000
- Slight decline in the last 20 years
- Recycling is stagnant

Packaging Continues to Shift

The Evolving Package: Flexible Pouches

The Evolving Package: Flexible Pouches

Frozen food from coated paper to flexible packaging

- **Light-weighting**
- **Flexible packaging expected to grow 4 -6% annually in the next few years**

From steel can, paper label adhesive to **multi-layer, foil-lined flexible film pouch**

HDPE Bottle, PP Cap to **multi-layer, flexible film pouch**

Lightweighting

Typical plastic water bottle weighs <u>37% less</u> than 10 years ago:

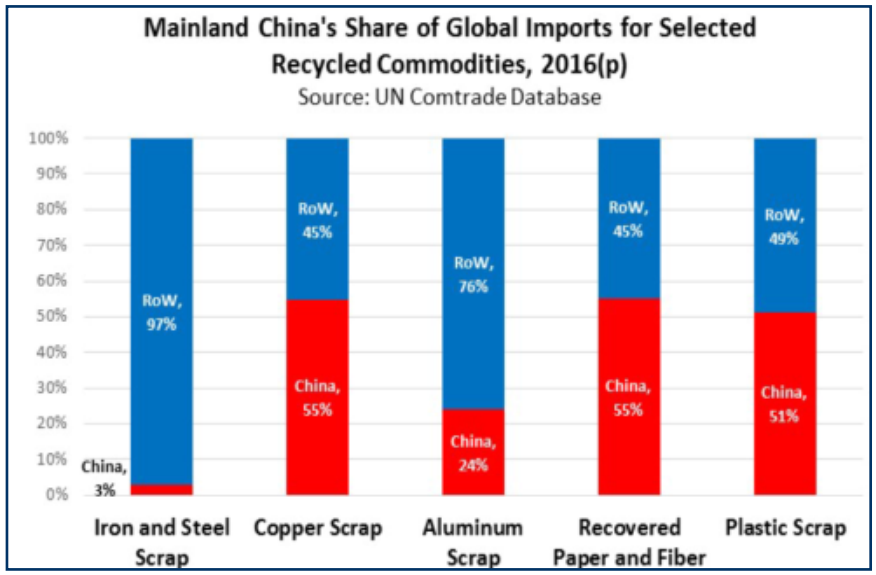
- There are 97,000 bottles in a ton today, compared to 62,000 bottles 10 years ago
- We now must process 3.6 Billion more bottles to equal 100,000 tons!

Aluminum cans weighed 16.5 gm in 1992 compared to 14.9 gm today; from 55,000 cans per ton to 61,000 cans per tons

Global Recycling Marketplace

U.S. is part of a global recycling industry

- Global scrap exports: 160M tons worth $70B
- U.S. exported 37M metric tons worth $17.9B
- ~30% of scrap processed in US is exported
- U.S. exports to China worth $5.6B

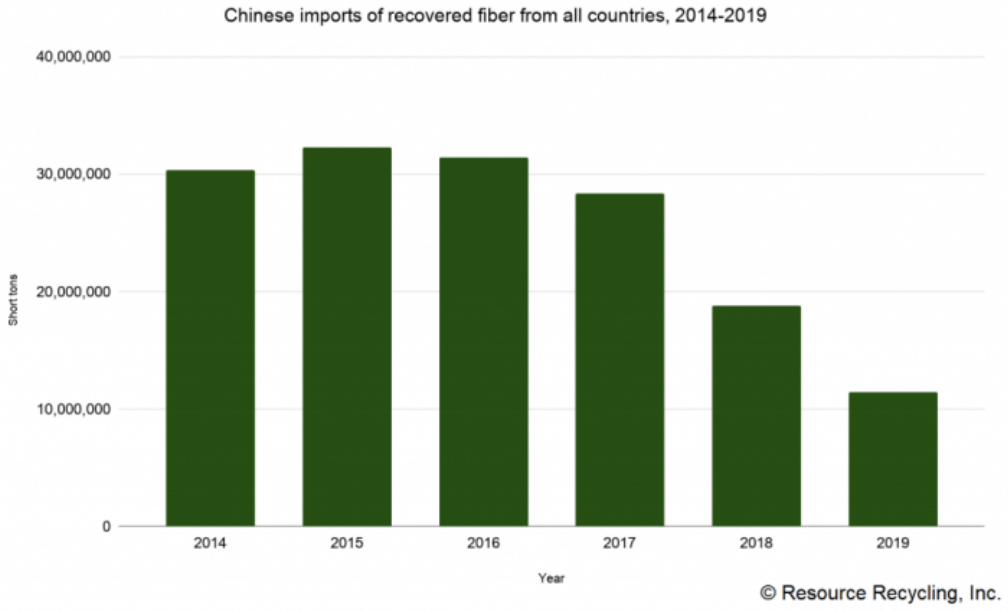


China was world's largest importer of fiber and plastic

Source: ISRI, 2017

What is National Sword?

- In 2013, China implemented "Green Fence," an import restriction program
  - US exports to China fell by 40%
- In July 2017, Chain announced "National Sword"
  - Limits or outright bans the importation of certain recyclables, including some paper and plastics, as of January 1, 2018
  - Sets a new, exceedingly stringent contamination standard of 0.5%, inconsistent with global standards and nearly impossible to attain (or even measure)


Chinese imports of recovered fiber from all countries, 2014-2019
40,000,000
30,000,000
20,000,000
10,000,000
0
Short tons
2014
2015
2016
2017
2018
2019
Year
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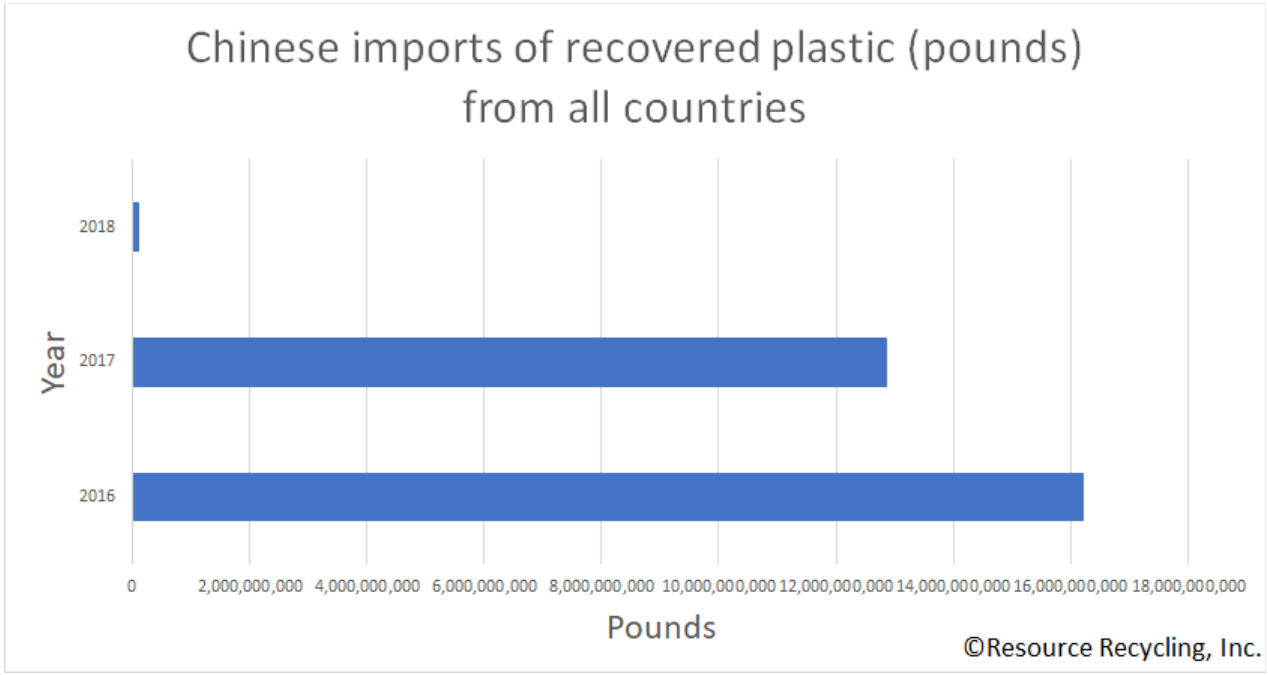
Chinese imports of recovered plastic (pounds) from all countries
Year
2018
2017
2016
0
2,000,000,000
4,000,000,000
6,000,000,000
8,000,000,000
10,000,000,000
12,000,000,000
14,000,000,000
16,000,000,000
18,000,000,000
Pounds
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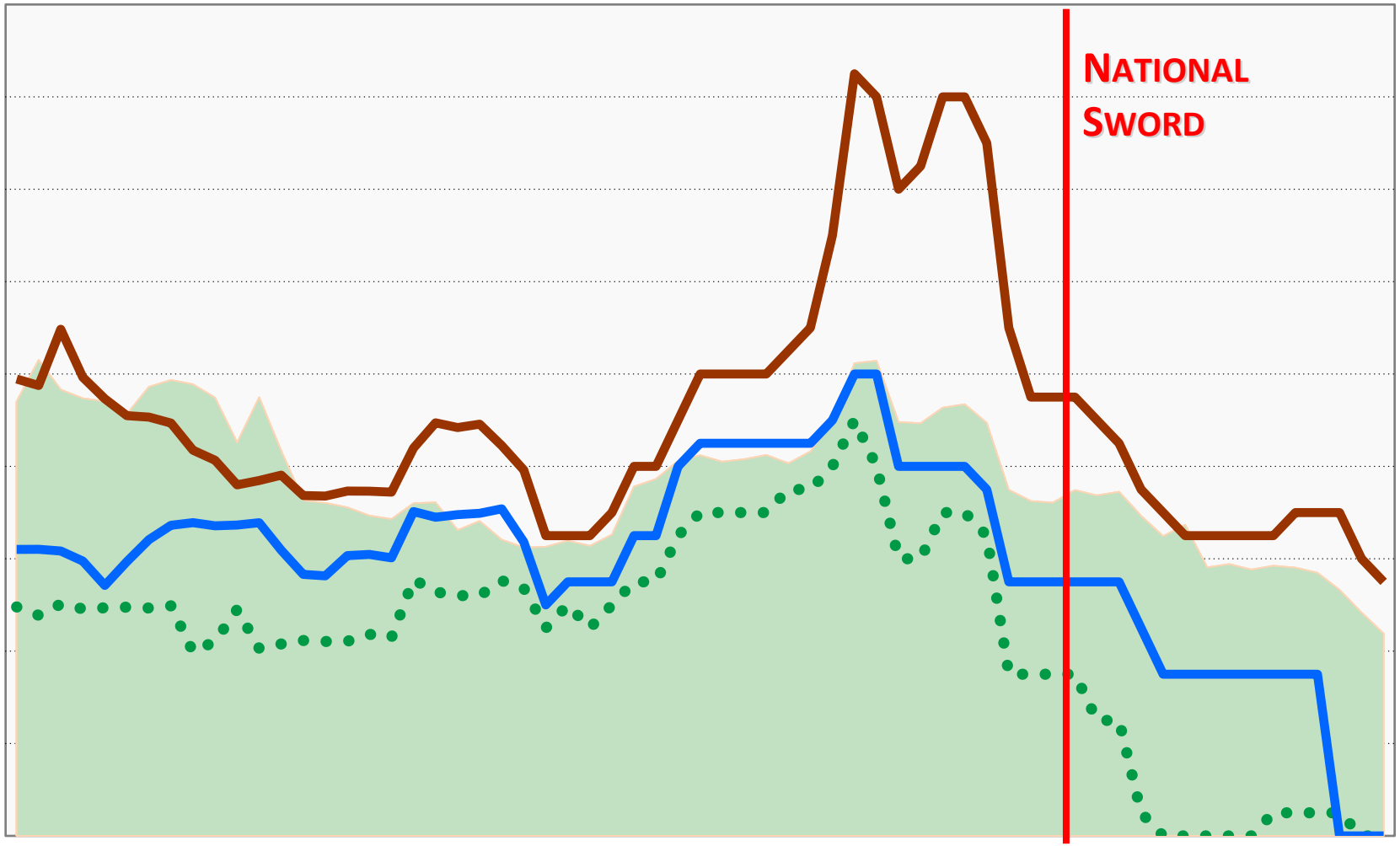
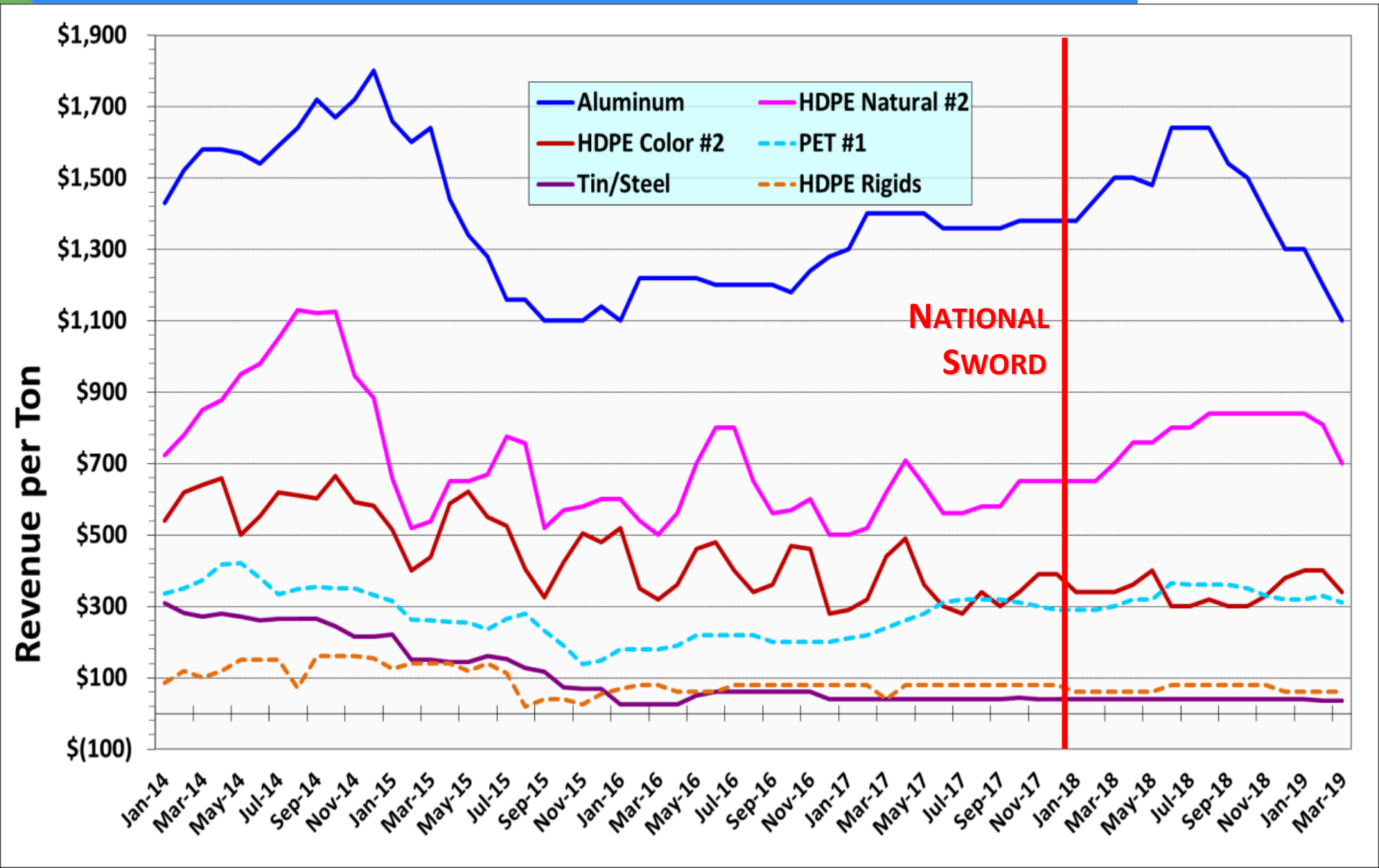
BOW Recyclable Paper Values



BOW Recyclable Commodity Values



What is Zero Waste?

- Trash is what remains after we reduce, reuse, recycle, and compost
- Maximize recycling
- Minimize waste
- Reduce consumption
- Promote sustainable materials management in the manufacturing of products

What is the End Goal?

- To Recycle More?
  - Is our goal 75% recycling? 90% diversion? Zero waste?
  - If recycling is good, is recycling more always better?
- Packaging is changing – which reduces food and product wastes, lower GHG impact.
- Should we think in terms of lifecycle?
  - Product Stewardship or Extended Producer Responsibility?
- How can we be more Sustainable?
- Should our Goal be to Reduce overall GHG emissions?

Sustainable Materials Management

Circular Economy

Questions?

Remember:

Recycle More

Landfill Less

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walter_ma@co.brown.wi.us
www.BrownCountyRecycling.org