

# Fall 2017 SWIP Meeting

Tuesday, October 10, 2017



# Agenda

9:45	Welcome	Joe Van Rossum
9:50	WMM Program updates Topic Updates Staffing Updates Guidance Updates	Joe Van Rossum
10:30	Leachate Line Cleaning	Valerie Joosten
10:50	WMM Financial Update	Matt Matrise
11:05	Recycling Markets and Wisconsin Data	Jennifer Semrau
11:20	WMM Study Group Updates	Chad Doverspike & Meleesa Johnson
11:40	Wrap-up and Adjourn	Joe Van Rossum

# WMM Director Updates

- Topic Updates
- Staffing
- Guidance

# Environmental Fees @ Landfills

- Cat. 28 – Natural Disaster Debris
- Cat. 30 – MRF residue
- Cat. 31 – C&D residue
  - Form developed for reporting to landfills

# Rule Development

- Hazardous Waste – NR 600
  - Generator improvement rule
  - Def. of Solid Waste
  - Mgt of Pharmaceutical waste
  - Haz. Waste Manifest Rule
- Evaluating action related to:
  - RD&D Rule
  - CCR – Permit Program

# Streamlining Projects

- Online Licensing/Renewal
  - All non-landfill in spring 17
  - 60% of 1,757
- Wood Waste Processing Facilities
  - Application form
  - Template for approvals

## Misc. Updates

- Deer carcass management survey
- WMM GIS Data Viewer
- Shingle Processing Facility Approvals

# Staffing – Recent Hires

- Field Operations Director
  - Natasha Gwidt
- Business Support & IT
  - Matt Matrise
- Regional Env program Associates
  - Katie A, Jordan P, + one more
- IT – Project Coordinator
  - Brian Williams
- RU Program LTE – Ariana Mankerian
- Communications LTE – Cyndi Thomas



# Staffing - Recruitments

- Regional Hydrogeologists
  - WCR, NER, SCR
- Regional Haz Waste Specialists
  - NER, SCR, SER
- Hazardous Waste Section Chief
- Regional Team Supervisors
  - NER & SER
- Recycling & Solid Waste SC

# Plan Review Decisions

- FY 2017 performance
- Decisions Issued – 314
- 95% on time

# Guidance Documents

- Clean soil
- Reducing or terminating groundwater monitoring at landfills
- E-cycle reporting and record keeping
- Alternative glass use options
- Managing container glass in accordance w/landfill ban

# Leachate Collection Lines

Valerie Joosten, Waste Management  
Engineer - Plan Review Expert

# Background

- Collection Line Rule
  - effective Dec. 1, 2005
  - Initial leachate collection pipe cleaning
  - Video camera inspection
  - Investigation of blockages
  - Summary Reports
  - Extended collection lines

## Current Considerations

- Applicability
- Consistency
- Lessons Learned / Considerations



# Operational Requirements

- Initial Cleaning – NR 506.075(d)
  - requires the leachate collection lines be cleaned with water jet cleanout devices initially after placement of the leachate drain layer using pipe cleaning procedures that insert cleanout devices from each access point to the toe of the opposite side slope.
- Video Camera Inspection – NR 506.07(5)(e)
  - Requires all leachate collection pipes after the initial pipe cleaning and at 5 year intervals
    - All = new and previously installed pipes
  - At each cleanout point
  - Extend a min. of 300 feet onto base grades (> encouraged)

# Operational Requirements

- Investigation of Blockages - NR 506.075(f)
  - All blockages investigated, defined and remediation effort proposed
  - Review and approval by Dept.
- Summary Report – NR 506.075(g)
  - Cleaning and video inspection
- Rainflaps- NR 506.075(h)
  - Dams or barriers used to separate leachate
  - Summary report after removal



# Extended Leachate Collection Lines

- 1,200 – 2,000 feet – measured from end of each clean-out to toe of opposite slope
- Additional Plan of Operation Requirements –NR 514.07
- Testing Requirements - NR 516.08
  - Documentation of initial leachate collection pipe cleaning

# Jetting Extended Lines

- Difficulties with clean-out to opposite toe
  - availability of specialized vendors/equipment
  - Design considerations
- Collection line rule
  - Based on extensive stakeholder process
  - Decisions based on industry capability to clean lines up to 2,000 feet
- Key Considerations
  - Plan ahead during design

# Questions?

Valerie Joosten, P.E.  
Waste Management Engineer Plan Review  
Expert

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Resources

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# Solid Waste Program Revenue Update

Matt Matrise, Section Chief - Business  
Support and IT Section

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## Solid and Hazardous Waste Program Revenue Account Status

	FY 16	FY 17	FY 18
	Actual	Actual	Estimated
Opening Balance	\$ 174,826	\$ 211,891	\$ 246,706
<b>Revenue Sources</b>			
SW landfill license surcharge	\$ 989,291	\$ 1,016,582	\$ 1,000,000
SW landfill licenses	\$ 541,800	\$ 475,865	\$ 540,000
SW C & T licenses	\$ 504,394	\$ 239,084	\$ 390,000
SW disposal other licenses (i.e. Non-Landfill Facilities)	\$ 149,710	\$ 120,010	\$ 126,000
SW plan review fees	\$ 376,745	\$ 365,240	\$ 350,000
HW facilities licenses	\$ 99,200	\$ 89,600	\$ 67,000
HW transporter licenses	\$ 96,413	\$ 85,250	\$ 83,000
HW plan review fees	\$ -	\$ 1,600	\$ 8,000
HW manifest fee	\$ 219,744	\$ 144,978	\$ 115,000
SW Facility Oper/Mgr Cert Fees	\$ 32,505	\$ 28,795	\$ 25,000
Misc (i.e. infect & medical waste / copying sales / printing)	\$ 38,262	\$ 6,319	\$ 35,200
<b>Total Revenue</b>	\$ 3,048,064	\$ 2,573,323	\$ 2,739,200
<b>Total Available: (All Revenue Sources + Opening Balance)</b>	\$ <b>3,221,241</b>	\$ <b>2,785,214</b>	\$ <b>2,985,906</b>
Total Expenditures	\$ (2,677,573)	\$ (2,258,606)	\$ (2,591,700)
<b>Total Expenditures &amp; Budget Lapses</b>	\$ <b>(2,677,573)</b>	\$ <b>(2,258,606)</b>	\$ <b>(2,591,700)</b>
DOA adjustments to A/R Accounts	\$ (331,768)	\$ (279,904)	
<b>Closing Balance (Cash Basis)</b>	\$ <b>211,900</b>	\$ <b>246,704</b>	\$ <b>394,206</b>
	<b>FY 16</b>	<b>FY 17</b>	<b>FY 18</b>

## 20% Cap Issue – NR [NR 520.04\(1\)\(d\)5.](#)

**If, for 3 consecutive fiscal years the PR Account Balance is >20% of the Expenditure Level, the DNR must propose rule revisions to lower the landfill license fee surcharge.**

### 20% Cap Table

Fiscal Year	Expenditure Level ( <i>dg</i> )	20% Cap	PR Account Balance	Actual % (PR Account Bal / Expenditure Level)	
FY15	\$ 2,576,300	\$ 515,260	\$ 174,826	6.79%	Actual
FY16	\$ 2,576,300	\$ 515,260	\$ 211,900	8.22%	Actual
FY17	\$ 2,591,700	\$ 518,340	\$ 246,704	9.52%	Actual
FY18	\$ 2,591,700	\$ 518,340	\$ 394,206	15.21%	Estimated

# National Sword & Recycling Data Review

Jennifer Semrau, Waste Reduction &  
Diversion Coordinator

# What is National Sword?

- In 2013, China implemented “Green Fence,” an import restriction program
- US exports to China fell by 40%
- In July 2017, China announced “National Sword”
- Seeks to limit or outright ban the importation of certain recyclables, including some paper and plastics, as of Jan. 1, 2018
- Sets a new, exceedingly stringent contamination standard of 0.3%, inconsistent with global standards and effectively impossible to attain (or even measure)



# Why National Sword?

- China seeking to prohibit import of “solid waste with major environmental hazards and intense public reaction by the end of 2017.”
- Halt imports that can be replaced with domestic resources by the end of 2019

Chinese goals:

↓ importation of “waste”

↑ domestic recovery



# Impact of National Sword

- US is the largest exporter of scrap commodities in the world at 37 million metric tons with a value of \$16.5 billion
- 30% of scrap processed in US is exported
- In 2016, the US exported \$5.6 billion to China
- In 2016, China imported 55% of the world's recovered paper/fiber and 51% of the world's plastic scrap
- Chinese import permits have not been renewed since May so material is already 'piling up' at docks here in the US and ports feeding China

# Impact of National Sword

**U.S. Recovered Paper and Fiber Export Volume  
 Top 15 Destinations (short tons)**

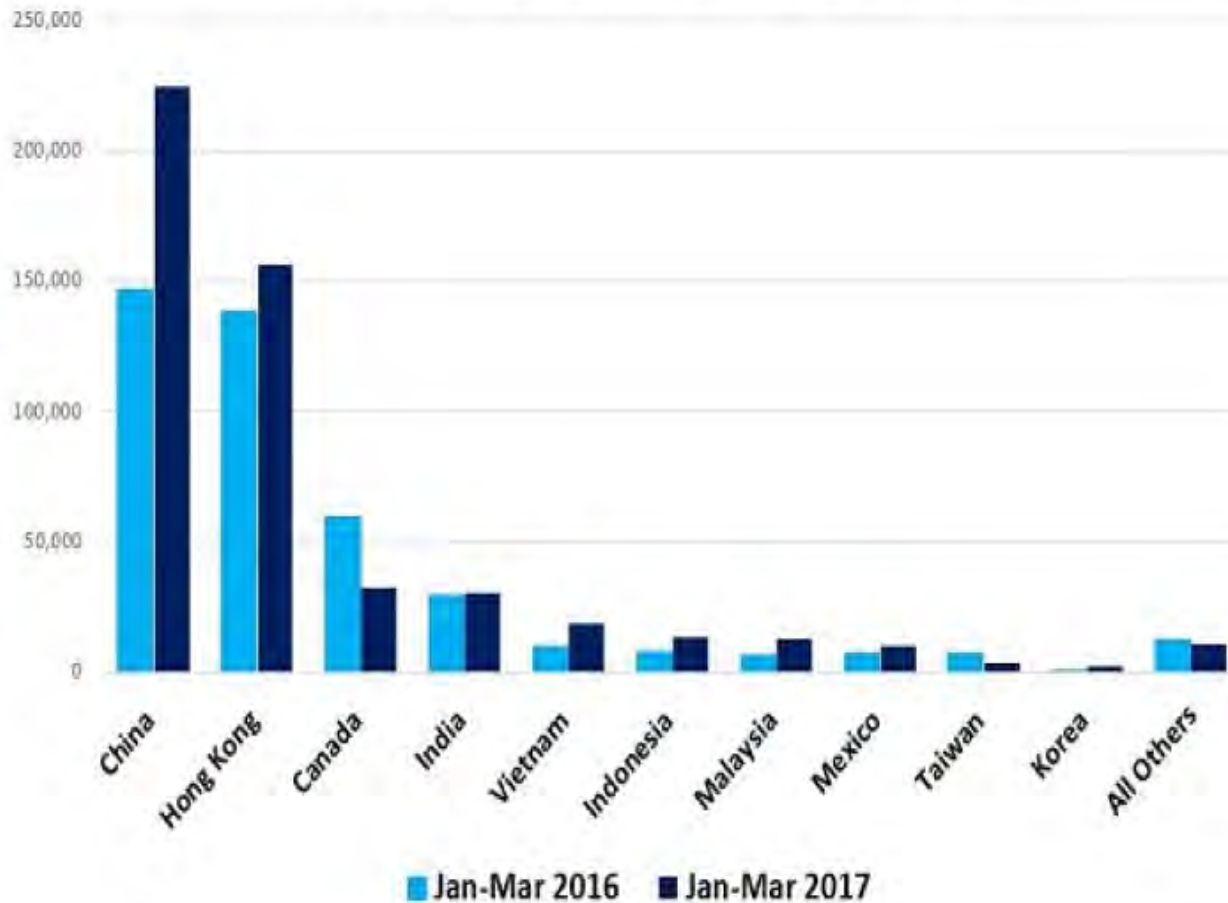
Country	2014	2015	2016	% Change 2015 to 2016
China	14,292,148	14,979,164	14,527,207	-3.00%
India	1,747,162	1,654,495	1,728,272	4.50%
Mexico	1,321,855	1,298,741	1,646,529	26.80%
Korea	1,112,355	1,120,781	1,140,405	1.80%
Canada	710,905	650,515	717,540	10.30%
Indonesia	368,863	318,884	419,583	31.60%
Thailand	202,426	308,477	324,618	5.20%
Taiwan	257,226	191,092	281,739	47.40%
Vietnam	74,237	111,118	133,807	20.40%
Italy	89,894	112,536	102,700	-8.70%
Japan	51,910	84,342	101,228	20.00%
Netherlands	80,373	90,650	88,467	-2.40%
Colombia	73,428	81,788	88,309	8.00%
Germany	36,122	53,761	52,949	-1.50%
Chile	65,279	43,963	45,048	2.50%

Source:  
ISRI

# Impact of National Sword

**YTD U.S. Plastic Scrap Exports by Major Destination (metric tons)**

Sources: U.S. Census Bureau/U.S. International Trade Commission

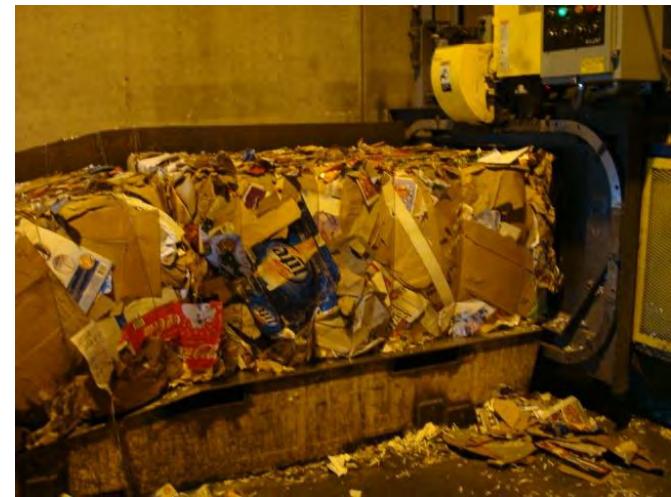


Source:  
ISRI

# How Will National Sword Affect WI?

## Paper

- Newspaper, cardboard, magazines and office paper are only materials banned from landfill disposal, but many programs collect 'mixed paper'
- Strong WI paper industry should allow for programs to still effectively market their material
- Quality will be of utmost importance; significantly increased domestic supply will allow mills to take the best feedstock
- Educate and reduce contamination





# How Will National Sword Affect WI?

## Plastic

- #1 PETE and #2 HDPE are only materials banned from landfill disposal, but some programs collect #3-7 or mixed bulky rigid plastics
- Only few domestic buyers of #3-7 bales; much mixed bulky rigid plastic is also exported
- RUs /haulers/MRFs may cease collecting certain (non-LF banned) plastics
- City of Madison recently stopped accepting mixed bulky rigid plastic



# How is industry responding?

- Institute of Scrap Recycling Industries (ISRI), Solid Waste Association of North America (SWANA), National Waste & Recycling Association (Nwra), Waste Management and others working collaboratively
- Engaging the World Trade Organization (WTO), US Commerce Dept, US Trade Relations, White House, etc.
- Commerce seeking to include this issue during President Trump's Nov. trade visit to China
- Requesting clarification on definitions/what is covered by ban and longer timeframe for implementation
- Offering education and assistance to Chinese officials from US recycling expertise

# Other Issues



## Chinese Mill Demand

- China does not have enough material within its own country to feed its mills in the near-term
- Quality of US paper fiber is superior due to longer fiber length

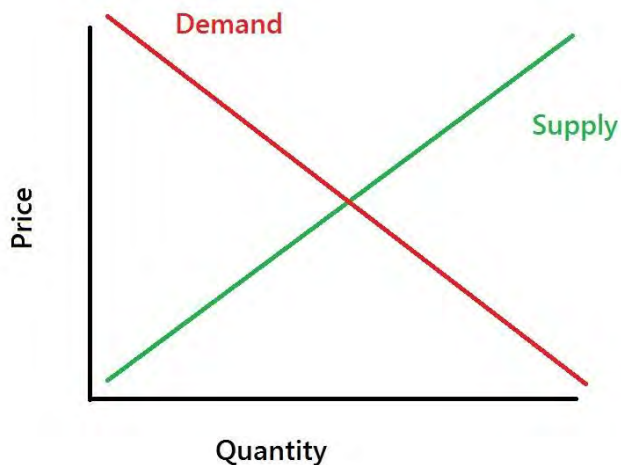
## Film Plastic/Plastic Bag Recycling

- In 2015, 52% of collected film was exported
- Currently, the US does not have sufficient domestic capacity for film collected
- May see reduction in film recycling opportunities



# Adapting to National Sword

- Keep in communication with your hauler/MRF
- Communicate with the public: “Some programs go above & beyond & collect additional materials not banned from landfills. These materials have less stable markets & are recycled when markets are available.”
- Emphasize clean, properly prepared recyclables; reduce contamination



- Pricing for many recyclables (paper, plastics, metal) expected to decrease
- May result in additional domestic processing

# National Sword & DNR

- Clarify what is included (and not included) in WI recycling law
  - Can MRFs legally landfill collected, sorted & processed (baled) #3-7 plastics? Yes
- Monitor work of ISRI, SWANA, NWRA & other US/international associations
- Work with a group of industry leaders (AROW, large MRFs, haulers, recycling programs) on consistent messaging for educating communities, RUs and the general public

# Recycling Data: RU

**PRELIMINARY DRAFT  
2016 DATA NOT FINAL**

## Recyclable Materials Collected by Wisconsin Responsible Units (in tons)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Mandatory Reporting - Banned<sup>1</sup></b>											
Old corrugated cardboard (OCC)	40,830	40,899	58,294	49,155	71,716	45,556	54,323	53,974	65,181	68,041	73,185
All other paper <sup>2</sup>	223,281	215,379	222,684	218,036	225,231	213,714	206,659	208,220	185,267	195,460	188,098
Aluminum containers	6,063	5,715	3,611	4,043	4,081	11,123	8,092	10,752	11,494	6,162	6,106
Steel (tin)/bimetal containers	19,107	16,931	11,860	11,959	11,884	15,690	14,536	18,032	18,282	17,763	17,607
Glass containers	73,803	68,777	93,402	90,233	79,538	84,430	81,062	92,297	98,572	91,724	93,562
Plastic containers #1-7	22,855	21,339	33,810	37,016	27,598	26,140	26,097	29,599	33,905	30,962	39,499
Co-mingled materials	33,176	42,004									
Foam polystyrene packaging <sup>3</sup>	1	3				50	54	24	66	79	277
<b>Total Mandatory Reporting</b>	<b>419,116</b>	<b>411,047</b>	<b>423,661</b>	<b>410,443</b>	<b>420,047</b>	<b>396,703</b>	<b>390,824</b>	<b>412,899</b>	<b>412,767</b>	<b>410,192</b>	<b>418,333</b>
<b>Optional Reporting - Banned<sup>1</sup></b>											
Appliances	5,291	5,869	5,271	4,322	4,045	4,204	3,769	4,512	4,793	4,844	11,917
Tires	4,367	4,790	5,512	5,297	6,923	5,207	5,314	5,460	4,812	6,023	8,329
Batteries (lead acid)	488	490	962	604	468	728	378	304	3,132	328	225
Used oil	3,412	2,852	5,206	2,750	2,709	2,536	2,589	2,207	2,260	2,026	1,942
Electronics <sup>4</sup>					2,366	3,572	3,705	7,552	4,513	4,478	5,105
<b>Subtotal Option Reporting - Banned w/o Yard Waste</b>	<b>13,558</b>	<b>14,001</b>	<b>16,952</b>	<b>12,972</b>	<b>16,511</b>	<b>16,247</b>	<b>15,755</b>	<b>20,035</b>	<b>19,511</b>	<b>17,698</b>	<b>27,518</b>
Yard waste	267,338	241,149	275,869	270,946	260,747	242,731	250,021	259,291	277,955	279,141	251,394
<b>Total optional reporting (banned items)</b>	<b>280,896</b>	<b>255,150</b>	<b>292,821</b>	<b>283,918</b>	<b>277,258</b>	<b>258,978</b>	<b>265,776</b>	<b>279,326</b>	<b>297,466</b>	<b>296,840</b>	<b>278,912</b>
<b>Subtotal Tons (All banned material)</b>	<b>700,012</b>	<b>666,197</b>	<b>716,482</b>	<b>694,361</b>	<b>697,305</b>	<b>655,681</b>	<b>656,600</b>	<b>692,225</b>	<b>710,233</b>	<b>707,031</b>	<b>697,246</b>
<b>Optional Reporting - Non-Banned</b>											
Scrap metal	17,231	13,399	18,047	13,808	22,849						
Used clothing/textiles	165	355	351	559	420						
Electronics <sup>4</sup>	846	1,023	1,307	1,633							
Miscellaneous recyclables	296	8,744									
<b>Total Optional Non-Banned</b>	<b>18,538</b>	<b>23,521</b>	<b>19,705</b>	<b>16,000</b>	<b>23,269</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Mandatory Reporting</b>	<b>419,116</b>	<b>411,047</b>	<b>423,661</b>	<b>410,443</b>	<b>420,047</b>	<b>396,703</b>	<b>390,824</b>	<b>412,899</b>	<b>412,767</b>	<b>410,192</b>	<b>418,333</b>
<b>Total All Optional Reporting</b>	<b>299,434</b>	<b>278,671</b>	<b>312,526</b>	<b>299,918</b>	<b>300,527</b>	<b>258,978</b>	<b>265,776</b>	<b>279,326</b>	<b>297,466</b>	<b>296,840</b>	<b>278,912</b>
<b>Total tons reported</b>	<b>718,550</b>	<b>689,718</b>	<b>736,187</b>	<b>710,361</b>	<b>720,574</b>	<b>655,681</b>	<b>656,600</b>	<b>692,225</b>	<b>710,233</b>	<b>707,031</b>	<b>697,246</b>
WI Population	5,617,744	5,648,124	5,675,156	5,688,040	5,686,986	5,694,236	5,703,525	5,717,110	5,753,810	5,771,098	
Per capita mandatory reporting (lbs)	149	146	149	144	148	139	137	144	143	142	
Per capita total (lbs)	256	244	259	250	253	230	230	242	247	245	

Note: from 2008 to 2010, the DNR changed the format of the Recycling Accomplishments and Actual Costs Annual Report completed by recycling responsible units (RUs). As a result, the breakdown by material for the mandatory reporting was based on percentages of these materials shipped by the facilities that process residential recyclables. Direct comparisons of tons by material type for 2008 through 2010 and other years should be made with caution.

<sup>1</sup> Wisconsin Recycling Law bans these materials from landfills

<sup>2</sup> Includes some non-banned paper, primarily resi mixed paper

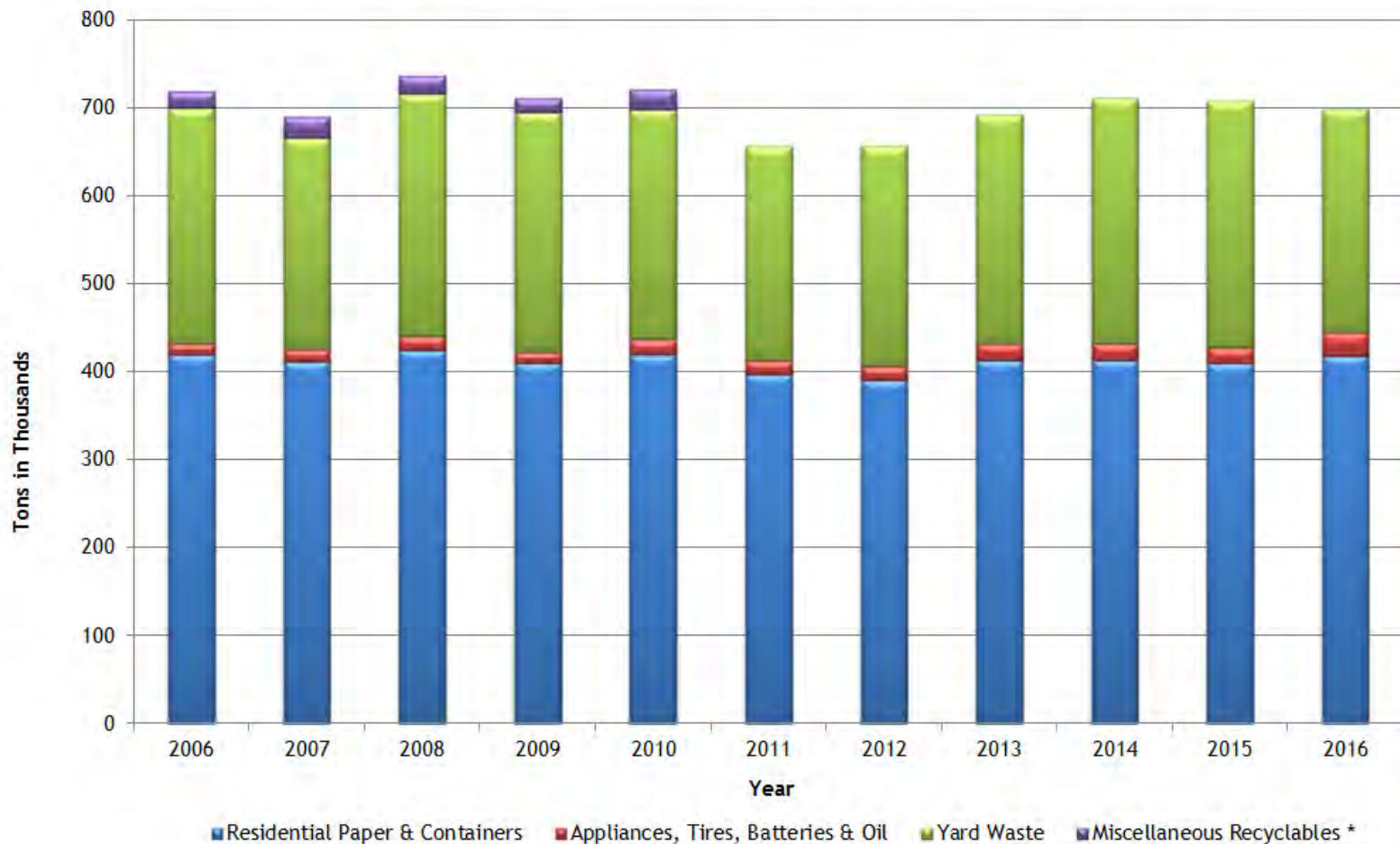
<sup>3</sup> Variance - released from bans

<sup>4</sup> Electronics were banned from landfills starting in 2010

# Recycling Data: RU

**PRELIMINARY DRAFT  
2016 DATA NOT FINAL**

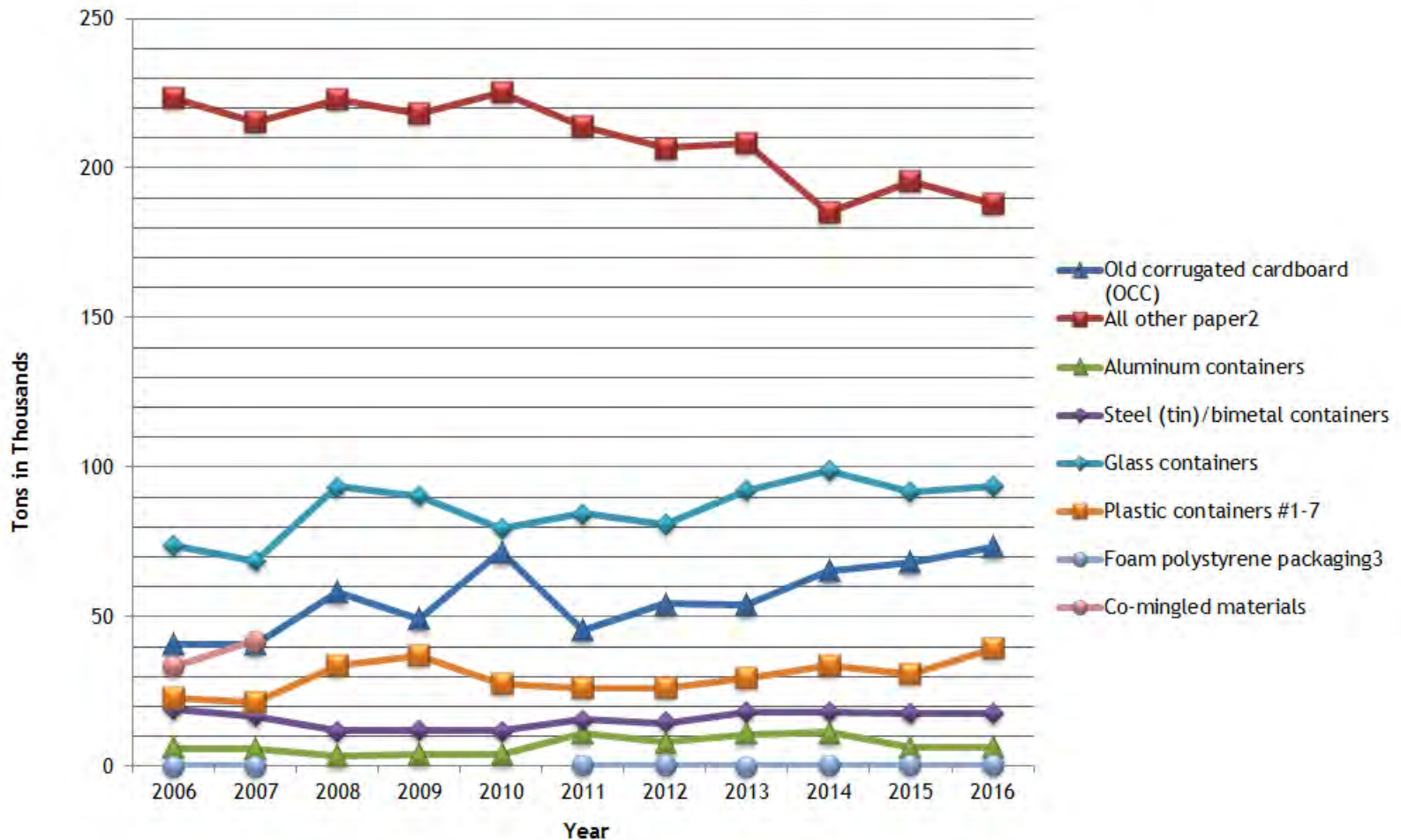
All Recyclable Materials Collected by Responsible Units 2006-2016



# Recycling Data: RU

**PRELIMINARY DRAFT  
2016 DATA NOT FINAL**

Trends of Table 1 Recyclable Materials by Commodity 2006-2016

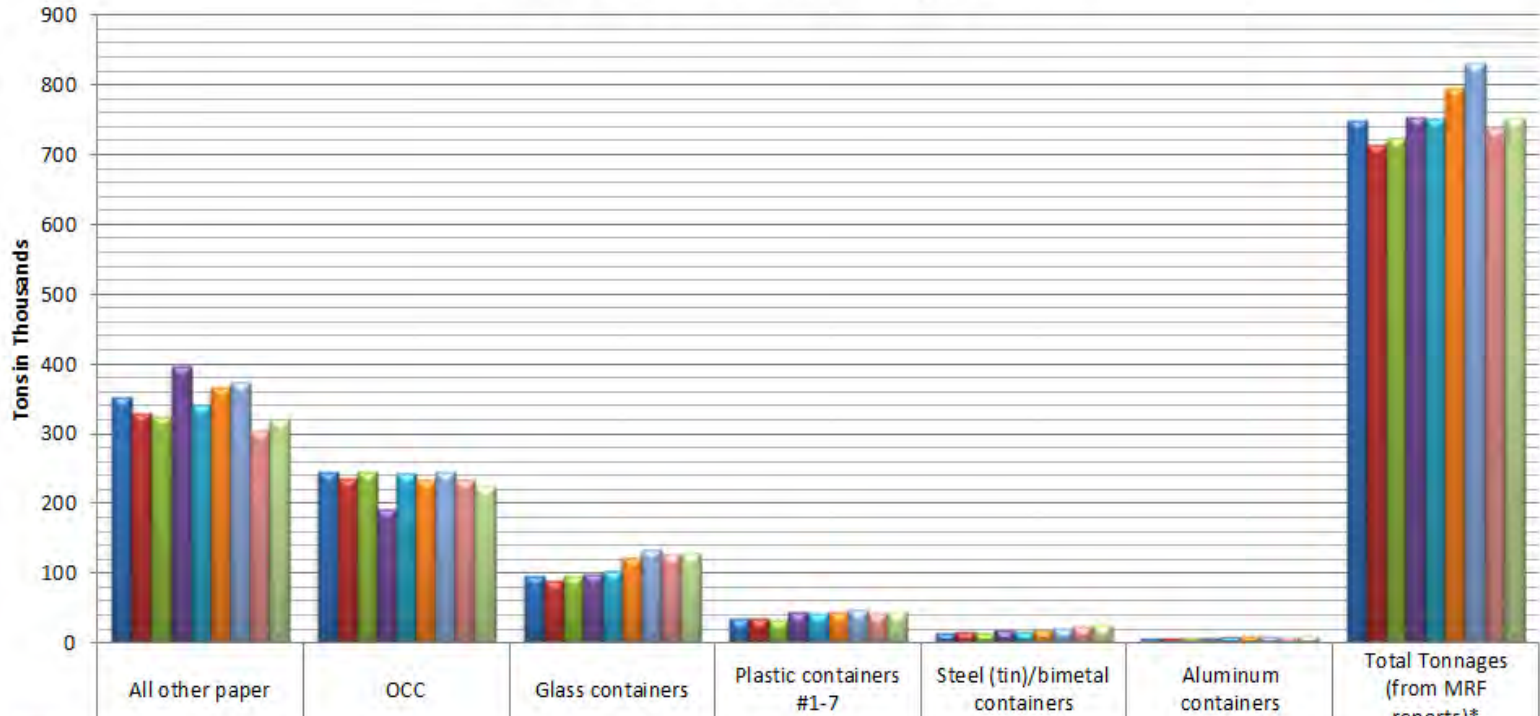




# Recycling Data: MRF

**PRELIMINARY DRAFT  
2016 DATA NOT FINAL**

MRF Table 1 Material Tonnages 2016





# Questions

Jennifer Semrau

Waste Reduction and Diversion Coordinator

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# DNR Waste & Materials Management Study Group

Chad Doverspike and Meleesa Johnson,  
WMM Study Group Co-Chairs





## What we are...

- The Waste and Materials Management Study (WMM) Group is:
  - A stakeholder working group
  - Serves as a forum for the WMM program to receive input from, and provide information to, stakeholder organizations.
  - Provides the WMM Program with constructive feedback on policy and technical issues and works collaboratively with DNR staff to find workable solutions.

# Who we are...

- Alan Albee, Eagle Waste and Recycling
- Tim Curry, Advanced Disposal
- Chad Doverspike, Brown County
- Meleesa Johnson, Marathon County
- Tom Karwoski, SCS Engineers
- Lynn Morgan, Waste Management
- Andy Nickodem, Golder Associates
- Amber Meyer Smith, Clean Wisconsin
- Bart Sexton, Sand Creek Consultants
- John Welch, Dane County

# What were the priorities?

- 27 issue/topics were identified-grouped into 3 categories
  - Landfills
  - Resource management
  - Regulatory
- 5 priorities selected-subcommittees created
  - Construction & demolition materials management
  - Alternative landfill caps
  - Organics management
  - Groundwater monitoring at closed sites
  - Recycling innovations

# C&D Materials Management

- Evaluate barriers to & explore options for a more robust C&D recycling industry
  - Markets for wood waste
    - Restrictions for use at boilers (air permitting)
    - Work to determine what concerns, if any, pertain for mixing OSB w/clean wood
    - Inexpensive natural gas reduces value of wood waste for boilers
    - Build other markets-animal bedding, silt socks, landscaping, etc.
- Evaluate limitations of C&D landfills
  - Small C&D sites: Increase GW monitoring & match performance criteria to that of intermediate sites
  - Possibly require state fees (\$13/ton)
  - Bring in owner of well-managed intermediate C&D site to help develop recommendations
- Methods of increasing C&D materials from landfill disposal
  - Education/outreach
  - Model ordinances that require/encourage C&D recycling

## Alternative landfill caps

- 8 member Subgroup, Engineering Consultants, Public & Private LF owners & haulers, & University Professors
- Looking for LF benefits beyond those provided under NR 504.07 Ad Code

## Benefits may include:

- Support goals of Organic Stability Rule under NR 514.07(9)
- Reduce final cover cost
- Reduce final cover maintenance/costs(reduce LTC costs)
- Improve access to below-cover features (LF gas collection system, air lines) for repairs
- Support LF sustainability & asset management
- Potential revenue source (solar?)

## 6 Recommendations:

- WDNR prepare guidance document for proposing & implementing Alternative final cover (AFC)
- WDNR work with US EPA to modify the infiltration equivalency requirement - other performance objectives in place (head on liner/fugitive emissions) to protect health & environment
- WDNR identify committee to recommend changes to state and federal code

## 6 Recommendations:

- WDNR modify NR 500 – ability to approve AFC designs based on performance results of projects constructed under RDD program.
- WDNR to allow longer delay in final cover system construction (POO 2 vs. 5 yrs) – delaying supports goals of OSR's
- WDNR allow alternative closure phasing, sacrificial covering & reclaiming airspace from settlement prior to final cover construction.



# Food & Organics Residual Reduction Management (FORRM)

- Dismissed “landfill ban” on food waste
  - Likely met with opposition
  - No sound infrastructure in place to manage food waste outside of landfills
- Used EPA’s Food Recovery Hierarchy as framework
  - Source reduction; Feed hungry people; Feed animals; Industrial uses; Composting; Landfill/Incineration
- Moved forward with...
  - Source Reduction
  - Landfill diversion

# FORM

- Action steps
  - Build partnerships
  - Develop map of current infrastructure (landfills, compost sites, digesters, etc.)
    - Where are the gaps-what do we need?
    - Connecting food waste with infrastructure
  - Foster collaboration with ag industry (feedstock for animals; feedstock for manure digesters; feedstock for windrow manure compost piles)
  - Statewide education program-normalize or “make cool” the idea of diverting food waste from landfills
  - Educational programs that help consumers and commercial sector reduce waste food

# Reducing GW Monitoring at Closed Landfills

- Subcommittee focused on revisions to current guidance
  - Seven subcommittee members from DNR, MSW companies, and consulting
- Guidance for reducing or terminating groundwater monitoring at solid waste landfills has been in place for many years
- Existing guidance PUB – WA 1013 was last revised in 2014
- Currently the Guidance focuses on steps to reduce monitoring frequency

# Subcommittee Recommendations

- Create a road map within the guidance for:
  1. Reducing frequency of monitoring rounds
  2. Reducing the size of the monitoring network
  3. Elimination of specific parameters
  4. Termination of monitoring
- Consider reducing monitoring frequency beyond current minimum of 1 year for landfills that qualify (i.e., 2-year or 5-year frequency)
- Potential to set up review committees within DNR to review requests for monitoring reductions/termination

# Status of Draft Revised Guidance

- WMM Study Group accepted draft Guidance
- Draft Guidance was submitted to DNR
- Guidance is currently undergoing internal DNR review process
- Public review will follow after DNR completes their review

# Recycling Innovations

- Began with a focus on preserving Recycling Fee for recycling purposes
- Need for rebrand in advance of 30<sup>th</sup> anniversary of Recycling Law
  - Reflect job creation and economic benefit, while retaining environmental message
  - Engage broader group of stakeholders (not just RUs & MRFs)

