WISCONSIN DNR
Department of Natural Resources

Fall 2016
Solid Waste Interested Parties (SWIP) Meeting

October 19, 2016

1:00 pm

Madison Area Technical College

WISCONSIN DNR
Department of Natural Resources

Agenda

1:00	Welcome and DNR updates	Ann Coakley
1:15	Documentation for category 30 &31 residual fee exemptions	Casey Lamensky
1:25	DNR non-landfill solid waste and recycling team	Casey Lamensky
1:35	Ch. NR 538 beneficial use rule rewrite update	Phil Fauble
1:45	Waste and Materials Management Study Group overview	Chad Doverspike
2:00	DNR recycling updates	Jennifer Semrau
2:15	WRAP resources for landfills	Jennifer Semrau
2:25	Groundwater monitoring well abandonment at landfills	Joe Lourigan
2:35	Reminder of storm water permit requirements for landfills	Joe Lourigan
	Adjourn	

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Department of Natural Resources

DNR Updates

Ann Coakley

Director

Bureau of Waste and Materials Management

WDNR Updates

- WMM Study Group
- WMM Program Evaluation
- WDNR Agency Alignment
- Landfill Training Focus
- NR 538 Rule Revision
- NR 600 Package
- End of an era – Bob Grefe is retiring.
- Staffing…

WDNR Updates

- 8 of 74 positions currently vacant
- 6 retirements expected in the next 8 months
- Recent Hires (since last SWIP):
  - Waste Reduction and Diversion Coordinator – Madison (Jennifer Semrau)
  - WMM Field Supervisor – Waukesha (Matt Matrise)
  - Solid Waste & Recycling Section Chief (Joe Van Rossum)
  - Solid Waste Engineer – Green Bay (Tess Beuge)
  - Waste and Materials Management Specialists – Green Bay (Dan Kroll) and Fitchburg (Dan Werner)
  - New LTEs: Amy, Alexis, Travis, Abigail

WDNR Updates

- Currently under recruitment:
  - Hydrogeologist – Green Bay
  - Hazardous Waste Plan Review Specialist – Madison
- Under recruitment in 2017:
  - Lead Program Engineer
  - Hazardous Waste and Mining Section Chief
  - Business Services Section Chief
  - Solid Waste Engineer
  - There will likely be others!

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Category 30 & 31 Fee Exemptions

Casey Lamensky

Solid Waste Coordinator

Bureau of Waste and Materials Management

WISCONSIN DNR
Department of Natural Resources

Environmental Fees for Various Waste Categories ($/ton)

rev. 12/14

	Fees Authorized in Statutes						Fee Authorized by Adm. Code	
Waste Category	Groundwater Fee (Paid Annually)	Well Comp Fee (Paid Annually)	Environmental Repair Fund Fee (Paid Annually)	Siting Board Fee (Paid Annually)	Recycling Fee (Paid Quarterly)	Total Statutory Fees ($/ton)	Landfill Licensing Fee Surcharge (Paid Quarterly)	Total Fees ($/ton)
1	$0.10	$0.04	$5.70	$0.007	$7.00	$12.847	$0.15	$12.997
2	$0.10	$0.04	$0.20	$0.007	Exempt	$0.347	$0.15	$0.497
3	$0.10	$0.04	$0.20	$0.007	Exempt	$0.347	$0.15	$0.497
4	$0.10	$0.04	$0.20	$0.007	Exempt	$0.347	$0.15	$0.497
5	$0.10	$0.04	$5.70	$0.007	$7.00	$12.847	$0.15	$12.997
6	$0.10	$0.04	$5.70	$0.007	$7.00	$12.847	$0.15	$12.997
15	$0.01	Exempt	$0.01	$0.007	$7.00	$7.027	Exempt	$7.027
17	$0.01	Exempt	$0.01	$0.007	$7.00	$7.027	Exempt	$7.027
18	$0.01	Exempt	$0.01	$0.007	$7.00	$7.027	Exempt	$7.027
19	Exempt from all statutory fees					$0.000	Exempt	$0.000
20	$0.10	$0.04	$0.20	$0.007	Exempt	$0.347	$0.15	$0.497
21	Exempt from all statutory fees					$0.000	Exempt	$0.000
22	Exempt from all statutory fees					$0.000	Exempt	$0.000
23	Exempt from all statutory fees					$0.000	Exempt	$0.000
24	$0.10	$0.04	$5.70	$0.007	Exempt	$5.847	$0.15	$5.997
25	$0.10	$0.04	$5.70	$0.007	$7.00	$12.847	$0.15	$12.997
26	$0.10	$0.04	$4.05	$0.007	Exempt	$4.197	$0.15	$4.347
27	$0.10	$0.04	$5.70	$0.007	Exempt	$5.847	$0.15	$5.997
28	Exempt from all statutory fees					$0.000	Exempt	$0.000
29	Exempt from all statutory fees					$0.000	$0.15	$0.15
30	Exempt from all statutory fees					$0.000	$0.15	$0.15
31	Exempt from all statutory fees					$0.000	$0.15	$0.15

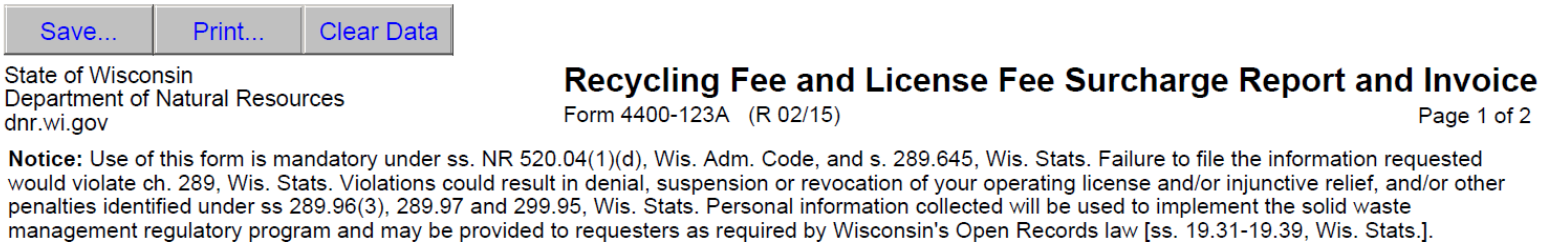
- Residuals up to 10% for traditional MRFs or 30% for C&D MRFs
- Effective January 2015
- Exempt from all statutory fees

Certifying that a materials recovery facility qualifies for the exemption

- MRFs claiming the fee exemption shall provide written certification to the operator of all landfills to which they will send their residuals
- Meet the definition of a qualified MRF
- For the entire period of claiming fee exemptions

Determining the residual rate

- Residual rate calculated quarterly
  - March 31, June 30, September 30, December 31
- MRF reports to landfill quarterly
- Documentation of residual rate must be submitted to the DNR from the landfill with DNR Form 4400-123A "Recycling Fee and Landfill Surcharge Fee report and Invoice"
- Residual reporting form to come



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State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Recycling Fee and License Fee Surcharge Report and Invoice
Form 4400-123A (R 02/15) Page 1 of 2

Notice: Use of this form is mandatory under ss. NR 520.04(1)(d), Wis. Adm. Code, and s. 289.645, Wis. Stats. Failure to file the information requested would violate ch. 289, Wis. Stats. Violations could result in denial, suspension or revocation of your operating license and/or injunctive relief, and/or other penalties identified under ss 289.96(3), 289.97 and 299.95, Wis. Stats. Personal information collected will be used to implement the solid waste management regulatory program and may be provided to requesters as required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

Note that under Act 301, a MRF operator that claims the exemption for residue that exceeds the applicable cap of 10 percent or 30 percent is ineligible for the exemption for any additional residue until it pays the balance of the fees owed.

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Department of Natural Resources

Non-landfill Solid Waste and Recycling Team

Casey Lamensky

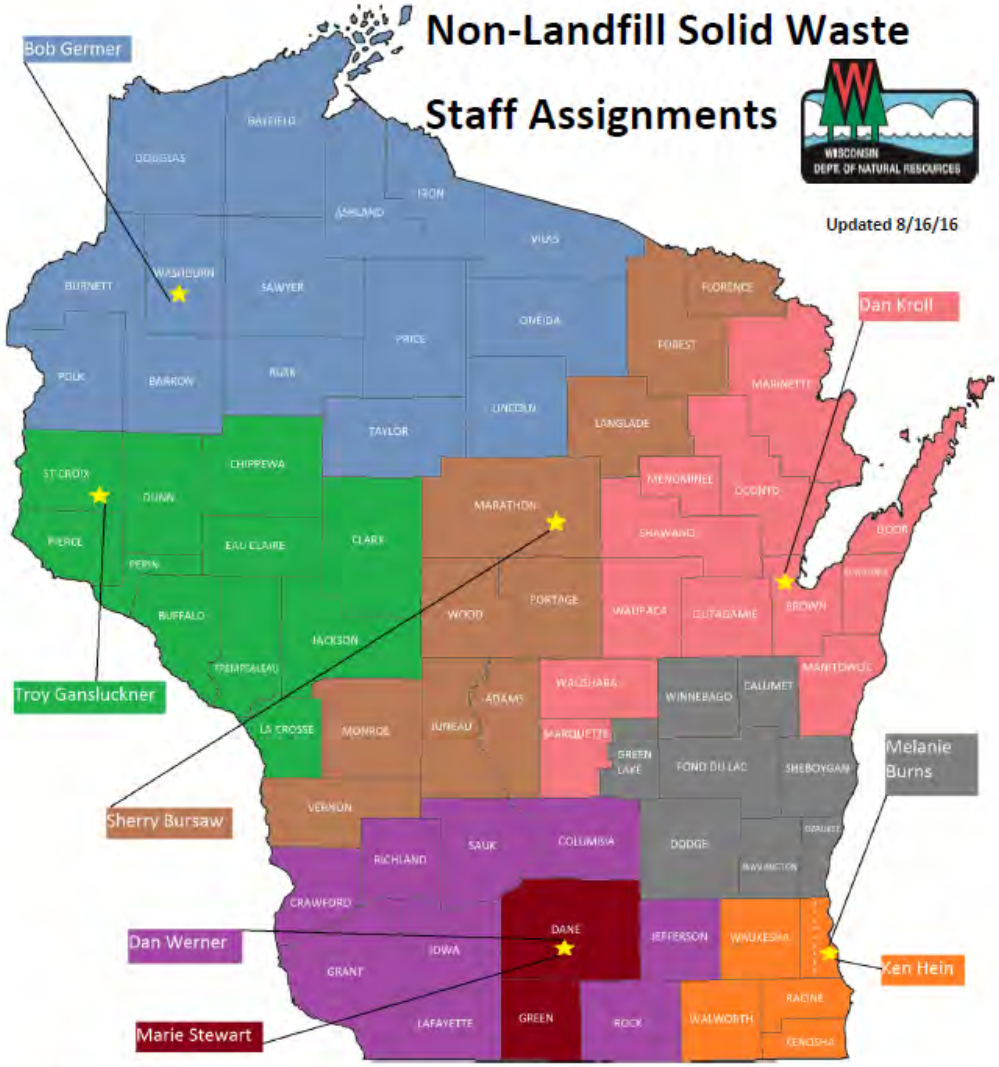
Solid Waste Coordinator

Bureau of Waste and Materials Management

WISCONSIN DNR
Department of Natural Resources

Non-Landfill Solid Waste Staff Assignments

Updated 8/16/16



STAFF NAME	PHONE NUMBER	CONTACT EMAIL	OFFICE LOCATION
Bob Germer	(715) 635-4060	Robert.Germer@wisconsin.gov	Spooner
Dan Kroll	(920) 662-5488	Daniel.Kroll@wisconsin.gov	Green Bay
Melanie Burns	(414) 263-8652	Melanie.Burns@wisconsin.gov	Milwaukee
Ken Hein	(414) 263-8714	Kenneth.Hein@wisconsin.gov	Milwaukee
Marie Stewart	(608) 275-3298	Marie.Stewart@wisconsin.gov	Fitchburg
Dan Werner	(608) 273-5608	Daniel.Werner@wisconsin.gov	Fitchburg
Sherry Bursaw	(715) 355-1005	Sherry.Bursaw@wisconsin.gov	Wausau
Troy Gansluckner	(715) 684-2914 Ext. 132	Troy.Gansluckner@wisconsin.gov	Baldwin

Intent

- Consistency
- Communication
- Experts focusing on this type of work
- Training efficiencies
- Statewide coverage rather than regional

Method

- Filled vacancies!
- Monthly calls on emerging issues and round robin calls for precedent setting decisions
- Monthly training topic calls
- Creation of an approval template library
- Increased guidance and training documents
- Environmental Program Associate plan of op and plan mod intake process

What type of work?

- Inspections, questions and plan review for
  - Storage
  - Transfer
  - Processing
  - MSW combustor
  - Incinerator
  - Woodburning
  - Composting
  - Landspreading

License exempt facilities

- Is a license needed?
- What is required to be exempt?

Ex.

- Clean fill
- Residential burning
- Municipal drop off sites
- Shingle grinding
- Wood chipping
- <20 tons per year waste haulers

- Low Hazard Exemption reviews
  - ✓ Lead painted concrete
  - ✓ Street sweepings
  - ✓ Glass
  - ✓ Others
  - ⊘ Dredge (please contact the regional supervisor – info on next slide)
  - ⊘ Contaminated soil (please contact the regional supervisor – info on the next slide)

Regional Supervisor Contacts

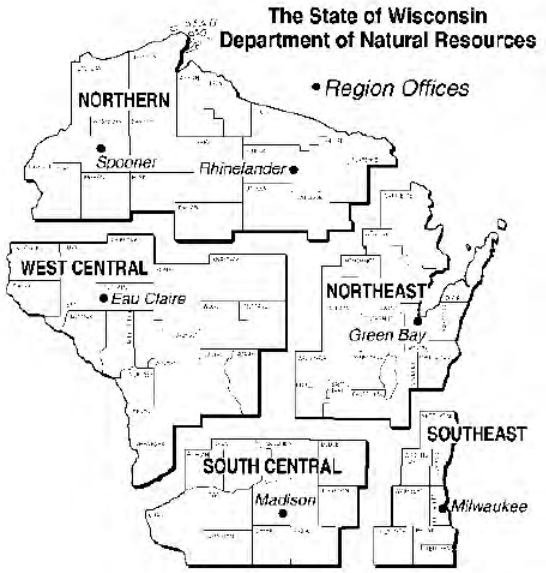
- Northeast Region
  2984 Shawano Ave.
  Green Bay WI 54313-6727
  920-662-5431 - Waste Program Manager

- Northern Region
  East half: call Northeast Region
  West half: call West Central Region

- South Central Region
  3911 Fish Hatchery Road
  Fitchburg, WI 53711
  608-275-3466 - Waste Program Manager

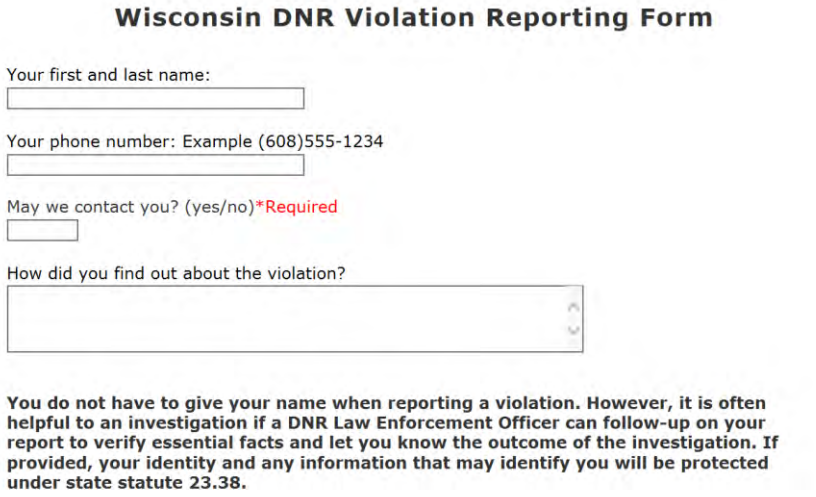
- Southeast Region
  2300 N. Martin Luther King Jr. Drive
  Milwaukee, WI 53212
  414-263-8694 - Waste Program Manager

- West Central Region
  1300 W. Clairemont Ave.
  Eau Claire, WI 54702
  715-839-2788 - Waste Program Manager



- MRFs
  - ✓ Inspections
  - ✓ Compliance questions
  - ✓ Universal waste assessments
  - ⊘ Universal waste inspections (hazardous waste staff)
  - ⊘ Annual reports (Angie Carey)
  - ⊘ Markets (Jennifer Semrau)

- Complaints
  - All start with complaint coordinator http://dnr.wi.gov/contact/hotline.html or (608) 264-6022 or DNRWACOMPLAINTS@wisconsin.gov
  - If an inspection is needed they will go to non-landfill SW&R Team
  - Licensed facility complaints go to site contact



Wisconsin DNR Violation Reporting Form

Your first and last name:

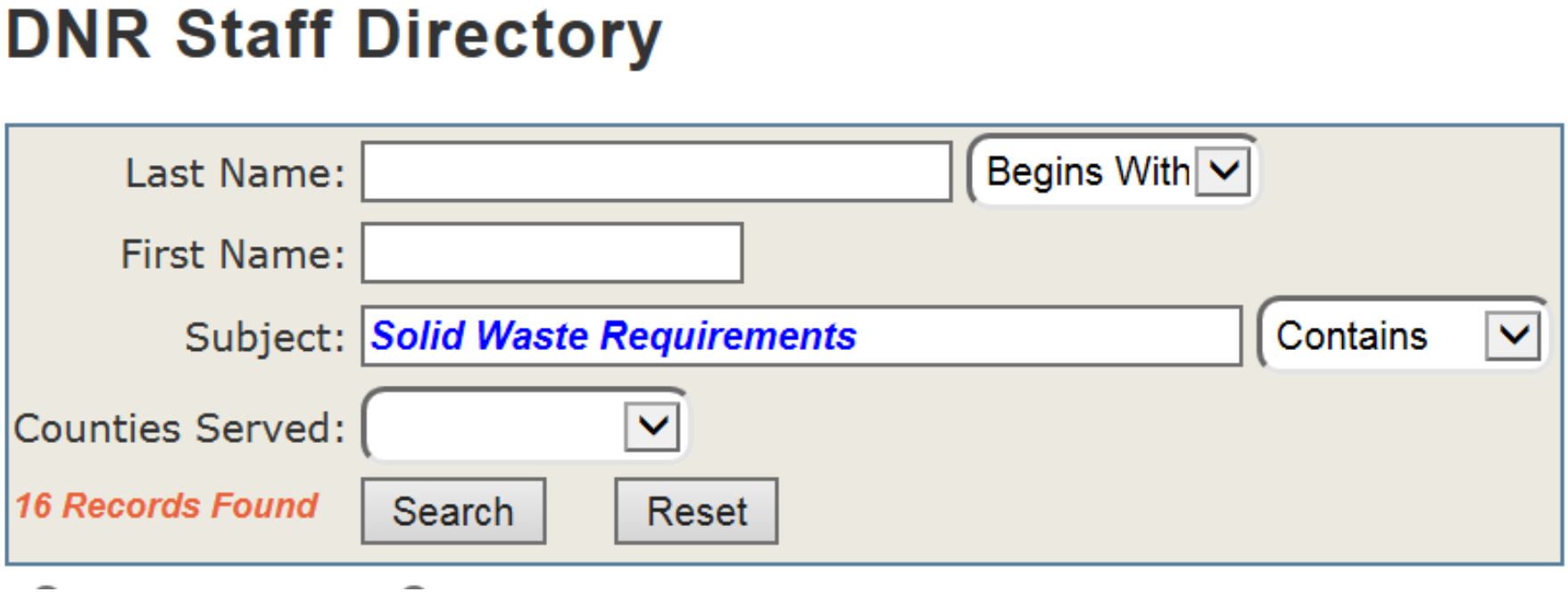
Your phone number: Example (608)555-1234

May we contact you? (yes/no)*Required

How did you find out about the violation?

You do not have to give your name when reporting a violation. However, it is often helpful to an investigation if a DNR Law Enforcement Officer can follow-up on your report to verify essential facts and let you know the outcome of the investigation. If provided, your identity and any information that may identify you will be protected under state statute 23.38.

Great contact for “general” questions



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Department of Natural Resources

Revisions to NR 538 Beneficial Use of Byproducts

Philip Fauble, Beneficial Use Coordinator
Bureau of Waste and Materials Management

SWIP Meeting
October 19, 2016

1995 Wisconsin Act 27

- **s. 289.05, Stats. Solid waste management standards.**
- **(4)** The department shall promulgate, by rule, standards for the reuse of foundry sand and other high-volume industrial waste, including high-volume industrial waste that qualifies for an exemption from regulation under s. 289.43(8). **The department shall design the rules under this subsection to allow and encourage, to the maximum extent possible consistent with the protection of public health and the environment, the beneficial reuse of high-volume industrial waste, in order to preserve resources, conserve energy and reduce or eliminate the need to dispose of high-volume industrial waste in landfills.** In developing rules under this subsection, the department shall review methods of reusing high-volume industrial waste that are approved by other states and incorporate those methods to the extent that the department determines is advisable. In developing rules under this subsection, the department shall also consider the analysis and methodology used under 40 CFR 503.13 (*sewage sludge pollutant limits*) in determining the impacts on groundwater from various methods of reusing high-volume industrial wastes.

Technical Advisory Committee

- **Section 9142(6t)(a) [non-statutory provisions]**
- The department of natural resources shall create a committee under section 227.13 of the statutes to advise the department with respect to the promulgation of rules under section 289.05(4) of the statutes. The advisory committee shall consist of the following members:
  - Wisconsin Cast Metals Association (2)
  - Wisconsin Paper Council
  - Wisconsin Utilities Association
  - WisDOT, Development, DOA
  - Private Environmental Protection Group
  - Construction Industry
  - DNR Members

What Works

- Is successfully diverting byproducts from landfills into beneficial uses; geotechnical fill, DOT projects, cement, wallboard, agricultural uses
- Being used as a model for other states:
  - Michigan
  - Minnesota
  - EPA citations

What Works

- Basic Framework:
  - Initial Certification
  - Assign categories based on analytical data
  - List acceptable uses for each category
  - Mostly self-implementing (concurrence for certain applications)
  - Annual reporting
  - Periodic re-characterization
  - Case-specific for certain projects

Potential Changes?

- Standards in Appendix I tables
  - Environmental protection standards (gw and clean-up) have changed since 1995
  - Experience with byproducts (EPA studies of both coal ash and foundry sand – DNR data)
  - Addition of new byproduct columns

Potential Changes?

- New Byproducts
- New or Revised Beneficial Uses under NR 538.10
- Incorporate Interpretations from the Guidance Document
  - Excavations of Fill Material
  - Storage Sites (impervious surface)
  - Mixture Rule

Potential Changes?

- New Standards (ASTM, DOT, NRCS) to Incorporate
- New Analytical Methods (totals, water leach)
- New DNR Regulations (storage sites and stormwater management)
- Reporting Requirements (better locational information)

Federal CCR Rules

- Dec. 19, 2014, EPA promulgates new CCR disposal rules (40 CFR Part 257, RCRA Subtitle D); EPA-HQ-RCRA-2009-0640
  - New federal definition of “beneficial use” for CCRs
  - Defines “encapsulated” uses
  - Defines placement of CCRs in any quarry setting as “disposal”
  - Four “legitimacy” criteria must be met

Progress To Date

- TAC has met 3 times since March
- Currently working on beneficial uses (DOT) and table revisions (Dept. of Health)
- Next meeting tentatively scheduled for December
- Public is always invited and comments are always welcome.

Questions?

Philip Fauble, WDNR, Beneficial Use Coordinator

(608) 267-3538

philip.fauble@wisconsin.gov

WISCONSIN DNR
Department of Natural Resources

DNR Waste Study Group

Advise, Guide, Facilitate

Chad Doverspike
Operations Manager
Brown County Port & Resource Recovery
Waste and Materials Management Study Group
Co-chair

How it came to be…

- Conversations with Brad Wolbert 1st Qtr. 2015 –looking for External Stakeholders
- Appointed by Sec. Stepp 4th Qtr. 2015
- 10 Public and private industry representatives from landfills, MRF's, haulers, C&D processing facilities, consulting firms and advocacy

Who We Are

- Alan Albee, President-Eagle Waste & Recycling
- Tim Curry, Midwest Regional Manager-Advanced Disposal
- Chad Doverspike, Operations Manager-Brown County Port & Resource Recovery
- Meleesa Johnson, Director-Marathon County Solid Waste Dept.

Who We Are

- Tom Karwoski, Senior Hydrogeologist-SCS Engineers
- Lynn Morgan, Public Affairs Manager-Waste Management
- Andy Nickodem, North American Business Line Leader-Golder Associates

Who We Are

- Jason Salisbury, President-Landfill Reduction and Recycling
- Amber Meyer Smith, Director of Programs/Gov. Relations Clean Wisconsin
- John Welch, Manager-Dane County Solid Waste

Waste Study Group Charter

- The WMM Study Group is an advisory group to the DNR's Waste and Materials Management Program.
  - Initial scope = solid waste management

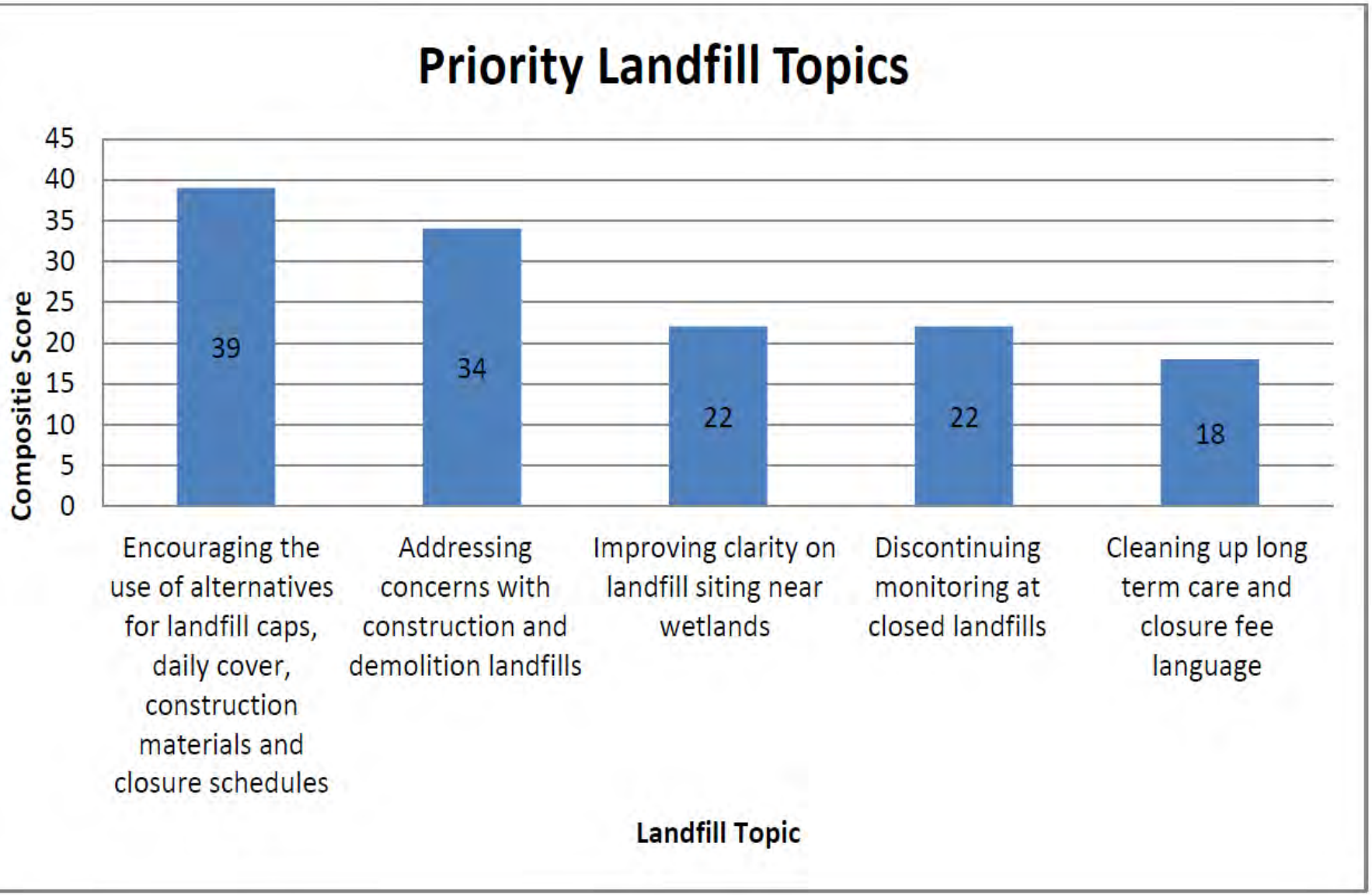
Purpose

- Advising/providing feedback to WMM program …
- Providing WMM program with a sounding board…
- Facilitating processes to tackle issues…

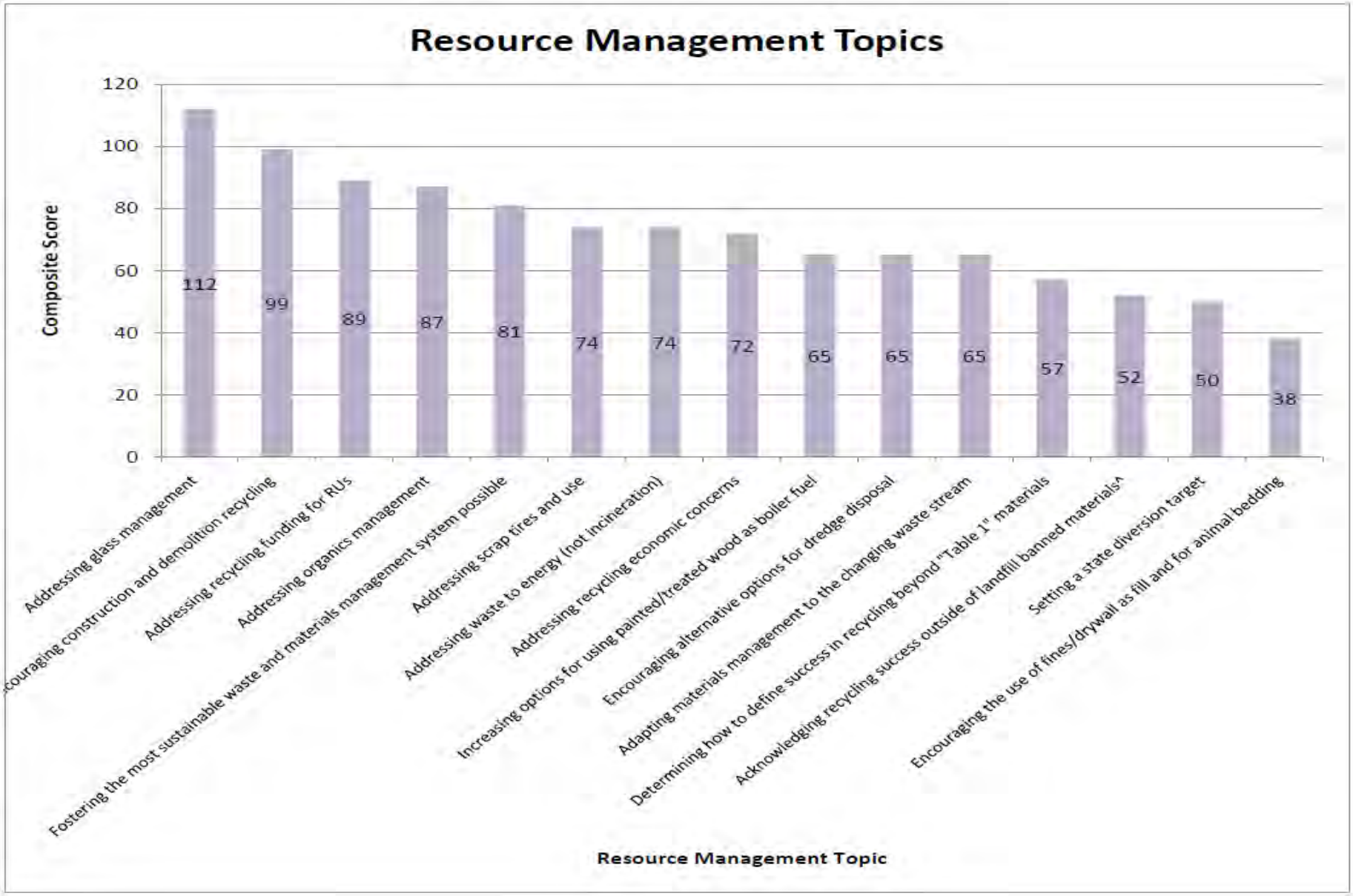
Brainstorming

- What do we research?
- Brainstorming – no bad ideas or topics
- 29 topics
- Sorted topics into 3 groups:
  - ✓Landfill
  - ✓Resource Management
  - ✓Regulatory

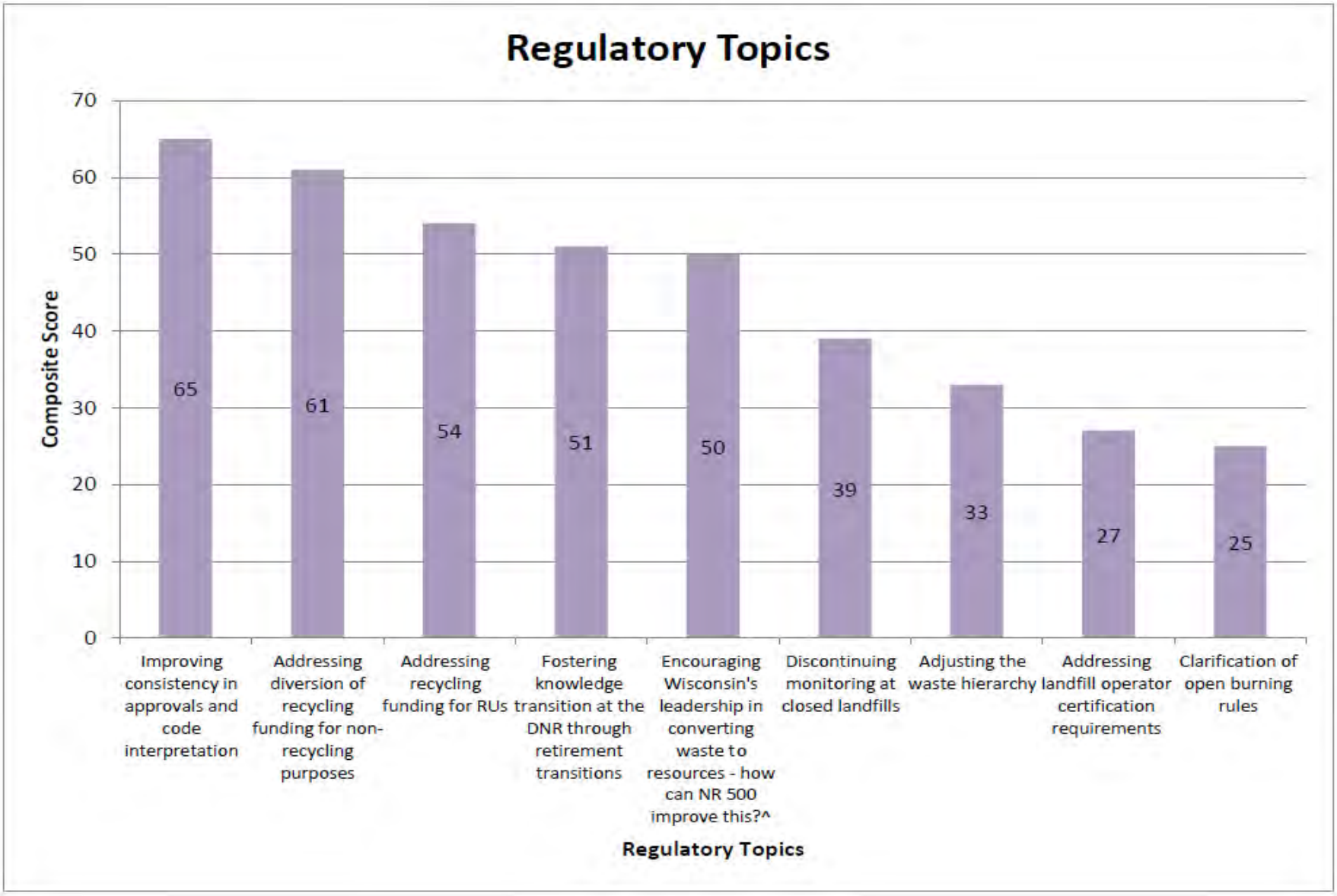
Landfill


Priority Landfill Topics
Compositie Score
45
40
35
30
25
20
15
10
5
0
39
34
22
22
18
Encouraging the use of alternatives for landfill caps, daily cover, construction materials and closure schedules
Addressing concerns with construction and demolition landfills
Improving clarity on landfill siting near wetlands
Discontinuing monitoring at closed landfills
Cleaning up long term care and closure fee language
Landfill Topic

Resource Management



Regulatory


Regulatory Topics
Composite Score
70
60
50
40
30
20
10
0
65
61
54
51
50
39
33
27
25
Improving consistency in approvals and code interpretation
Addressing diversion of recycling funding for non-recycling purposes
Addressing recycling funding for RUs
Fostering knowledge transition at the DNR through retirement transitions
Encouraging Wisconsin's leadership in converting waste to resources - how can NR 500 improve this?^
Discontinuing monitoring at closed landfills
Adjusting the waste hierarchy
Addressing landfill operator certification requirements
Clarification of open burning rules
Regulatory Topics

What to research?

- Survey completed by 10 members, not WDNR staff
- Researched by others in state?
  - Ex. Glass recycling

Top 5

- Organics Management
- C&D Landfills & C&D Recycling
- Recycling Funding
- Discontinuing Monitoring at Closed LF's
- Alternative Landfill Caps

Organics Subcommittee

- How do we reduce food waste & manage organics outside of disposal?
  - Landfill bans?
  - Infrastructure needs?
  - Costs?
  - Role of SW professionals in reducing wasted food.
  - Diversion to…" Compost? Digestion? Animal food? Food insecure populations?

Construction & Demolition Subcommittee

- Would local ordinances against disposal advance C&D recycling?
- Are C&D landfills barriers to C&D recycling?
- Wood waste as boiler fuel & challenges of air permitting?
- Markets for materials?

Recycling & RUs Subcommittee

- Are landfill tipping fees the solution?
- Does RU spending equate with positive recycling program outcomes?
- How are optional materials incorporated into programs as measures of success?
- How do we sustain a robust, productive recycling program that encourages innovation & improvements?

Discontinuing Monitoring at Closed LF's Subcommittee

- Review DNR guidance on "Reducing or Terminating GW Monitoring at SW LF's"
  - Reduction of monitoring frequency & parameters
  - Termination of monitoring
- Educate LF owners on use of guidance
- Provide suggestions future code revisions

Alternative Landfill Caps Subcommittee

- Goals
  - Understand NR 500 process for Alt cap approval
  - Data base of Alt capping projects in US
  - Equivalency requirements
  - Delay closure & delay for reuse of air space

WISCONSIN DNR
Department of Natural Resources

Recycling Updates

Jennifer Semrau
Waste Reduction and Diversion Coordinator
Bureau of Waste and Materials Management

Recycling Updates: Responsible Unit (RU) Program Changes

- RU work has been consolidated
  - Prior to 2016, regional recycling specialists handled RU work (technical assistance, compliance, annual reports, etc.)
  - Now, work is centralized in Madison for efficiency and consistency
  - Regional waste management specialists handle compliance and inspections at non-landfill facilities including MRFs, compost sites, transfer facilities, woodburning facilities and others
- Key RU staff
  - Recycling grants: Kari Beetham
  - Annual reports: Angie Carey
  - General recycling questions/policy: Jennifer Semrau

Recycling Updates: Annual Report Changes

- Currently working to simplify RU annual report
  - Reduce potential errors with prompts
  - No longer ask if programs have ordinance or CAP; only if they were changed last year
  - Eliminate many optional reporting questions
  - Reword/clarify other report questions
  - Report will 'self-check' certain sections
- Goal: shorter, less confusing Annual Report for RUs by Feb., 2017!

Recycling Updates:
RU Evaluation Changes

- Prior to 2016, regional recycling specialists handled RU program evaluations via individual visits or group evaluations
- Moving forward, program evaluations will be primarily via phone and/or email
- Purpose of RU evaluations is assess the operation of the RU program, ensure compliance and offer assistance to improve overall program performance

- Topics covered will include the RU recycling ordinance, CAP, education, enforcement and overall program operation

Recycling Updates: Misc

- Program will see jump in # of RUs in 2017, as a result of number of municipalities leaving a County RU
- Modifications of the MRF Annual Report are also planned for 2017 release, including clarifying glass questions
- DNR issued a household survey in early 2016
  - Included questions on behavior and attitudes towards general recycling, WRAP and e-cycle
  - Results should be available by Dec.; presented at WIRMC in Mar.
- Council on Recycling
  - Only one current member was on the Council in 2015
  - 4 new Council members appointed in 2016; 1 resigned in 2016
  - Still 2 vacancies; no local government representation

Recycling Updates: Data

- RU and MRF annual report data has been compiled
- RU total tonnage is on par with previous years
- MRF annual report data is down ~11%, primarily in 'All Other Paper' (non-cardboard)
- MRF data is only required from facilities that at least partially service RUs; reduction in tonnage is a reflection of who was required to report in 2015, not necessarily of the actual amount of material collected by the recycling industry
- RU data reflected increases in both OCC and other paper; MRF data reflected decreases in both of these categories
- Decreases in aluminum, plastic and glass reflected by both reports; steel increased by MRFs, decreased slightly by RUs

Recycling Updates: RU Data

Recyclable Materials Collected by Wisconsin Responsible Units (in tons)

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

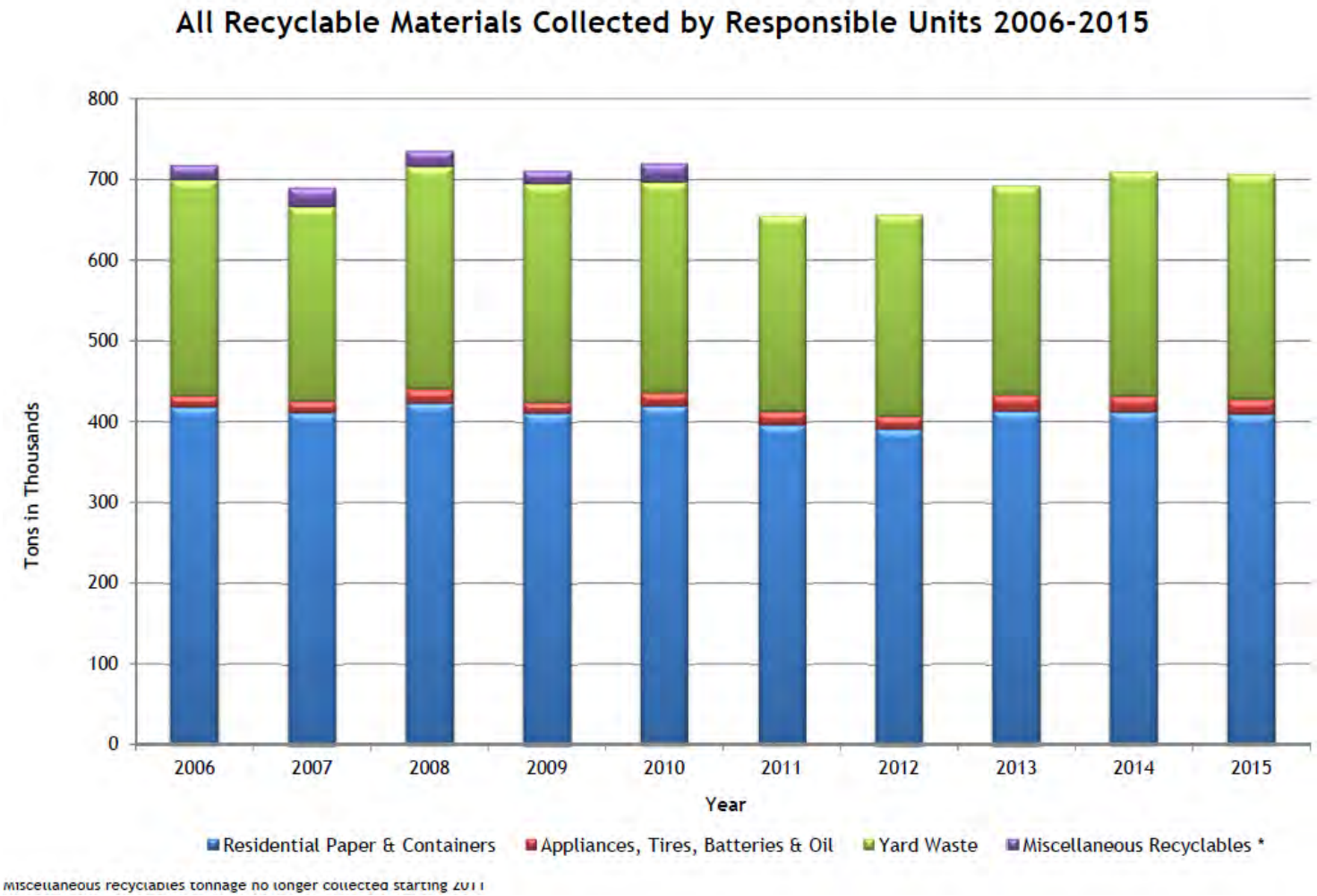
[1] Wisconsin Recycling Law bans these materials from landfills

[2] Includes some non-banned paper, primarily resi mixed paper

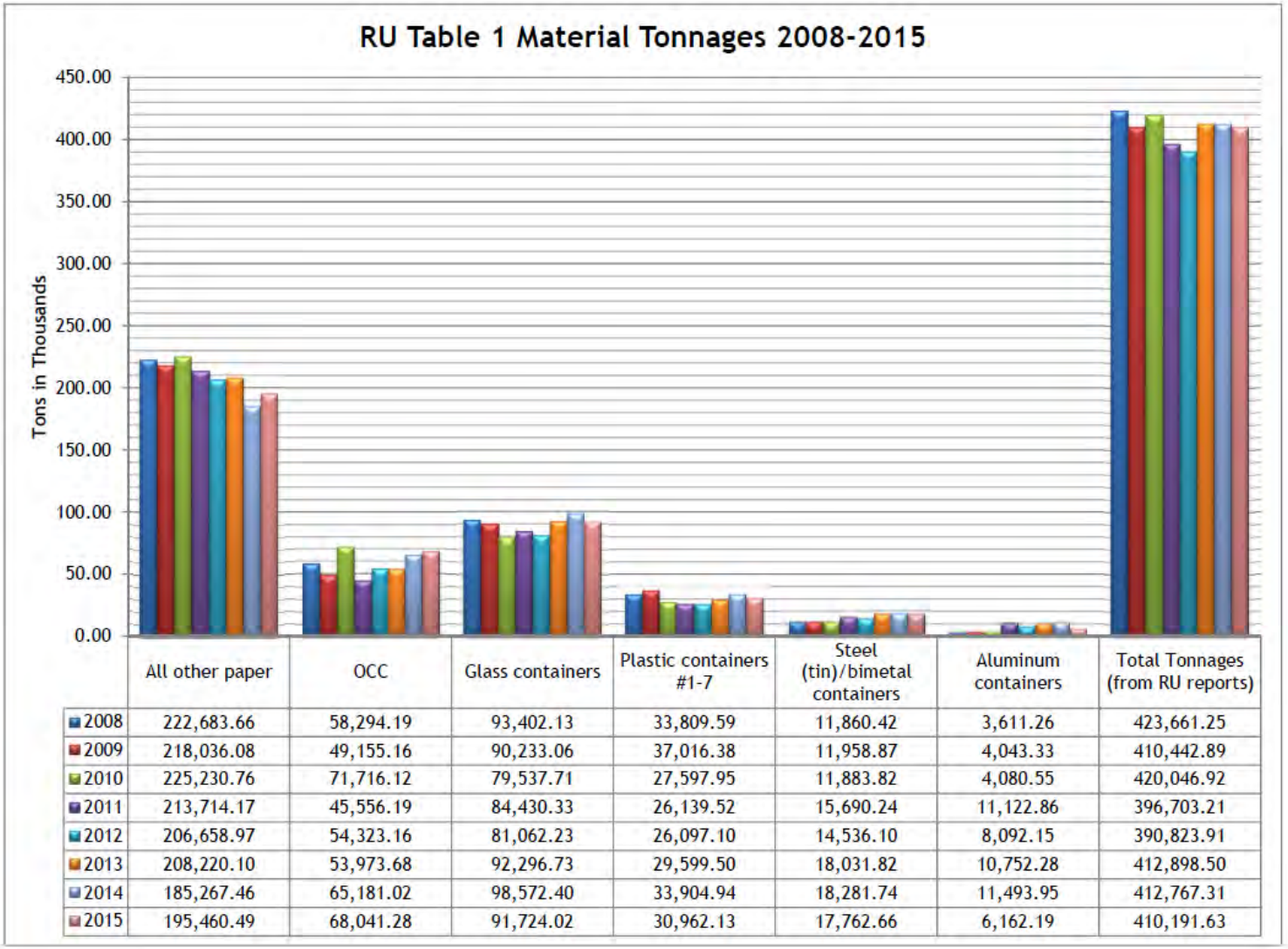
[3] Variance - released from bans

[4] Electronics were banned from landfills starting in 2010

Recycling Updates: RU Data

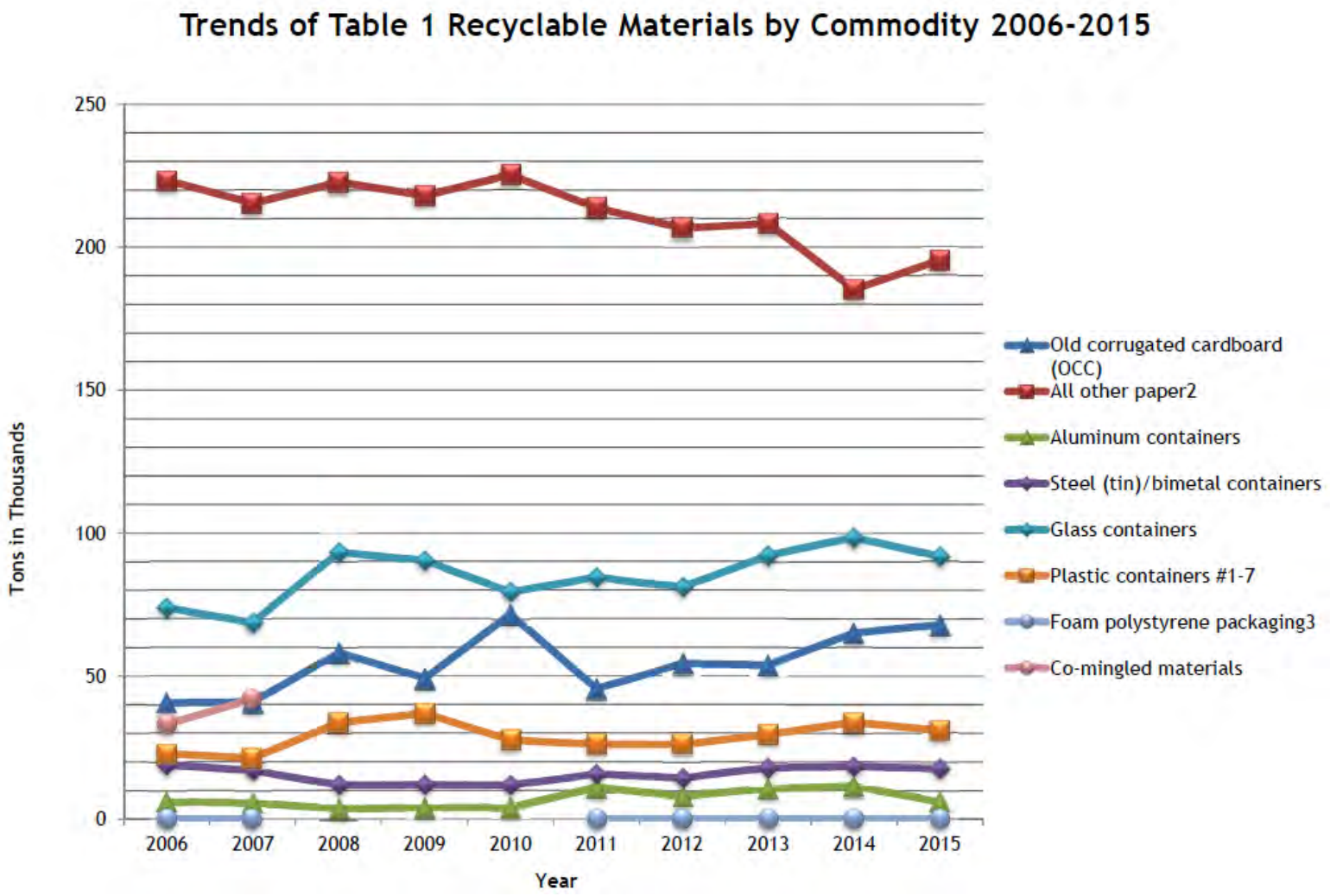


Recycling Updates: RU Data

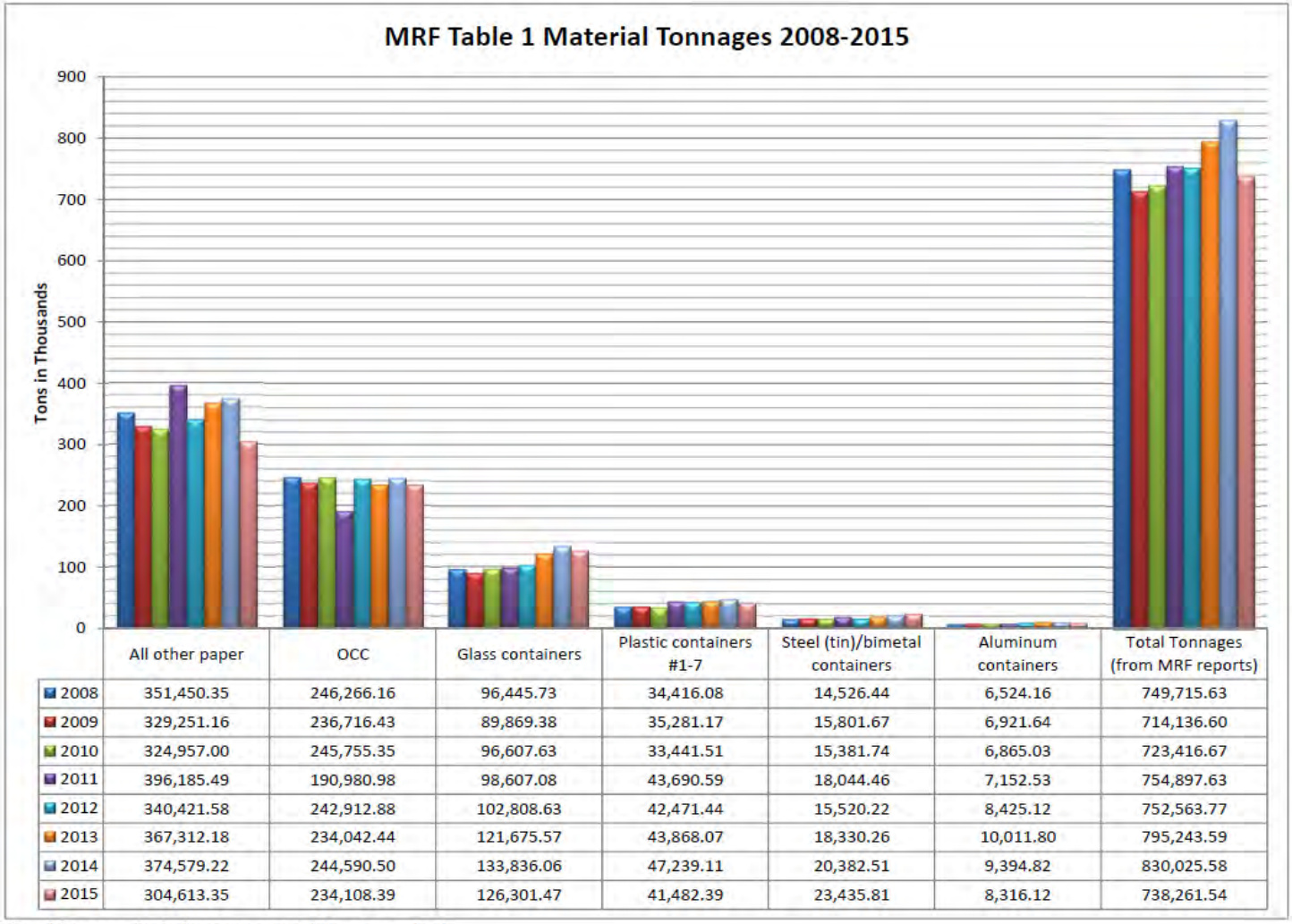


	All other paper	OCC	Glass containers	Plastic containers #1-7	Steel (tin)/bimetal containers	Aluminum containers	Total Tonnages (from RU reports)
2008	222,683.66	58,294.19	93,402.13	33,809.59	11,860.42	3,611.26	423,661.25
2009	218,036.08	49,155.16	90,233.06	37,016.38	11,958.87	4,043.33	410,442.89
2010	225,230.76	71,716.12	79,537.71	27,597.95	11,883.82	4,080.55	420,046.92
2011	213,714.17	45,556.19	84,430.33	26,139.52	15,690.24	11,122.86	396,703.21
2012	206,658.97	54,323.16	81,062.23	26,097.10	14,536.10	8,092.15	390,823.91
2013	208,220.10	53,973.68	92,296.73	29,599.50	18,031.82	10,752.28	412,898.50
2014	185,267.46	65,181.02	98,572.40	33,904.94	18,281.74	11,493.95	412,767.31
2015	195,460.49	68,041.28	91,724.02	30,962.13	17,762.66	6,162.19	410,191.63

Recycling Updates: Data



Recycling Updates: MRF Data



	All other paper	OCC	Glass containers	Plastic containers #1-7	Steel (tin)/bimetal containers	Aluminum containers	Total Tonnages (from MRF reports)
2008	351,450.35	246,266.16	96,445.73	34,416.08	14,526.44	6,524.16	749,715.63
2009	329,251.16	236,716.43	89,869.38	35,281.17	15,801.67	6,921.64	714,136.60
2010	324,957.00	245,755.35	96,607.63	33,441.51	15,381.74	6,865.03	723,416.67
2011	396,185.49	190,980.98	98,607.08	43,690.59	18,044.46	7,152.53	754,897.63
2012	340,421.58	242,912.88	102,808.63	42,471.44	15,520.22	8,425.12	752,563.77
2013	367,312.18	234,042.44	121,675.57	43,868.07	18,330.26	10,011.80	795,243.59
2014	374,579.22	244,590.50	133,836.06	47,239.11	20,382.51	9,394.82	830,025.58
2015	304,613.35	234,108.39	126,301.47	41,482.39	23,435.81	8,316.12	738,261.54

* Total Tonnage includes some materials not graphed

Recycling Updates: Challenging Materials

Ag Plastics

- Began in south central area of state, but expanding currently to Eau Claire & Fox Valley
- Farmers can sign up to receive free dumpster for used bale wrap, ag bags, barrier film, etc.

AG PLASTICS

We accept used irrigation tape and tubing and cover, fumigation, greenhouse and hoophouse films.

SILAGE PLASTICS

We accept used bale wrap, ag/grain bags, most bunker covers and oxygen barrier film.

OTHER MATERIAL

We do not accept bunker cover with nylon scrim, twine, net wrap or other mixed plastics.

REVOLUTION PLASTICS

CONTACT INFO

Toll-Free: (844) 490-7873
Collections@RevolutionPlastics.com

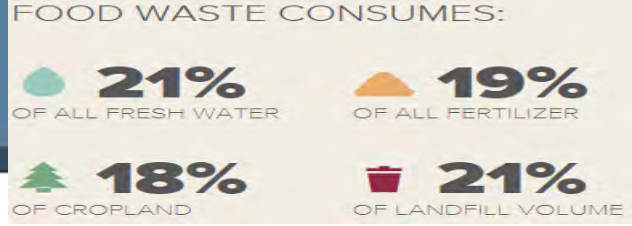
Recycling Updates: Challenging Materials

Paint

- Associated Recyclers of WI (AROW) is working with the American Coatings Association to bring Paintcare to WI
- Paintcare is an industry sponsored paint management program which establishes take-back program for paint

Glass

- With movement to single stream, recycling glass has become more challenging
- AROW established Glass Taskforce to come up with recommendations
- Amongst draft recommendations is for DNR to clarify existing allowable alternative uses



Recycling Updates: Challenging Materials

Food waste reduction

- ReFED.com
  - Collaboration of over 30 businesses, non-profits, foundation and government leaders committed to reducing food waste
  - In 2015 created Roadmap to Reduce US Food Waste
  - Goal of 50% reduction by 2030
- Savethefood.com
  - Developed FREE to use PSAs on food waste reduction including TV ads, billboards, posters, social media posts
  - Tips for food waste reduction, deciphering dates, shopping guidelines, meal planning, food storage

Recycling Updates: Challenging Materials

WISCONSIN DNR
Department of Natural Resources

WRAP Resources for Landfills

Jennifer Semrau
Waste Reduction and Diversion Coordinator
Bureau of Waste and Materials Management

WRAP for Landfills
WHY?

- The other ‘landfill bird’
- Significant liter issue
- Clogs, tangles in equipment
- Expense/time of site clean-up, equipment issues
- Every bag recycled is NOT along your fence, in a tree or ditch

WRAP for Landfills

- Wrap Recycling Action Program (WRAP)
- Encourages recycling of plastic bags and other film plastic at drop-off locations
- Not just for plastic retail shopping bags, but also includes:
  - Bread, produce, newspaper, dry cleaning, ice, food storage bags (zip top bags), plastic cereal box liners
  - Plastic packaging (wrap) from around napkins, paper towel, bathroom tissues and diapers
  - Wrap from around cases of water/beverages, snacks
  - Air pillows, bubble wrap, bags from shipped clothing, plastic shipping envelopes (including Tyvek)
  - Pallet wrap, stretch wrap, furniture/electronic wrap
- Recycle if CLEAN and DRY

WRAP for Landfills

- www.PlasticFilmRecycling.org has many print ready resources for promoting recycling of film and plastic bags
- Designs available for posters, magnets and 2-sided tip card
- Promotion ideas:
  - Place posters at your drop-off area, scale house, educational area
  - Include WRAP information with a monthly invoice or with scale tickets
  - Include information on plastic bag/film recycling on your website
  - Don't forget to educate your own employees
  - Consider becoming a drop-off location yourself
- Plastic film is often recycled into composite lumber or pelletized as feedstock for variety of products including new bags, pallets, containers, crates and pipes

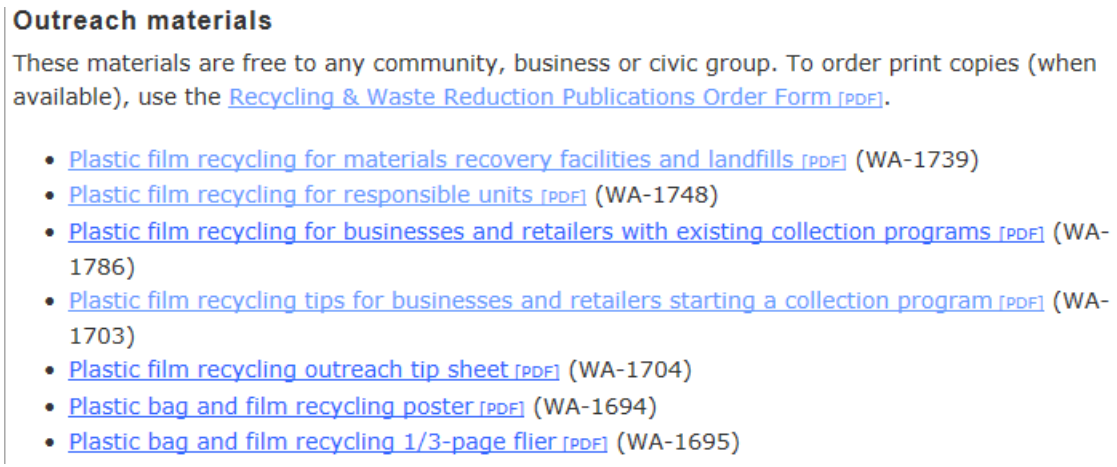
WRAP for Landfills

WRAP for Landfills

WRAP for Landfills

WRAP for Landfills

- DNR created customized WRAP materials for various audiences:
  - Landfills and MRFs
  - RUs
  - Businesses and retailers
  - Outreach tip sheet
- http://dnr.wi.gov/topic/Recycling/Bags.html



Outreach materials

These materials are free to any community, business or civic group. To order print copies (when available), use the Recycling & Waste Reduction Publications Order Form [PDF].

- Plastic film recycling for materials recovery facilities and landfills [PDF] (WA-1739)
- Plastic film recycling for responsible units [PDF] (WA-1748)
- Plastic film recycling for businesses and retailers with existing collection programs [PDF] (WA-1786)
- Plastic film recycling tips for businesses and retailers starting a collection program [PDF] (WA-1703)
- Plastic film recycling outreach tip sheet [PDF] (WA-1704)
- Plastic bag and film recycling poster [PDF] (WA-1694)
- Plastic bag and film recycling 1/3-page flier [PDF] (WA-1695)

WRAP for Landfills

WISCONSIN DNR
Department of Natural Resources

Business | Licenses & Regulations | Recreation | Education | Contact | Join DNR | Search or Keywords

Reducing, reusing and recycling plastic bags and wrap

Plastic film, which includes many types of bags and wrap, is everywhere in our lives. In part because of their convenience and abundance, though, these valuable resources are often used in excess, wasted, buried in landfills or littered in our streets.

There are easy and cost effective ways to reduce waste and recapture the benefits of plastic bags and wrap after their initial use. Individuals and businesses can reduce excessive use of bags and wrap, reuse them or recycle them. Industrial shrink wrap used in packaging can be recycled and is in high demand by manufacturers as a raw material. Individuals, schools, non-profits, workplaces and communities can collect plastic bags and wrap for recycling or promote local recycling programs. One opportunity for involvement is through Wisconsin WRAP, the Wrap Recycling Action Project.

Take action | Wisconsin WRAP | Recycling benefits | Compostable plastics

Reduce the number of bags you use and reuse plastic bags

The first and best option for reducing plastic waste is to minimize single-use plastics in your daily life. Actions you can take include:

- Reduce your use of disposable shopping bags by using a reusable bag or container when shopping.
- Reuse old plastic bags for multiple shopping trips.
- Re-purpose plastic bags as trash liners or pet waste bags.
- Refuse a bag for easy-to-carry purchases.
- Buy products in bulk.

Many grocery stores offer durable, washable bags to customers at an affordable price. Using these bags on a regular basis can create less waste than paper or plastic, and washing them regularly helps prevent the spread of dirt and germs.

Look for this poster at a Wisconsin collection site near you. Poster courtesy of plasticfilmrecycling.org.

What can be recycled: more than shopping bags

If you have plastic bags and wrap you can't reuse, you can often recycle them at stores or other drop-off sites if they are clean and dry.

Recycling & composting

Find
a drop-off location to recycle plastic bags and wrap [exit DNR].

Subscribe
to the Recycling Updates email list.

Related links

- What to recycle
- Recycling at home
- Recycling away from home
- Business recycling
- Recycling law
- Ag plastics

Additional resources

- Local government recycling contacts
- DNR recycling contacts
- Managing waste & materials
- Wisconsin Recycling Markets Directory [exit DNR]
- Recycle More Wisconsin [exit DNR]

Contact information
For information on recycling, contact:

DNRRecycling@Wisconsin.gov
608-266-2111

WISCONSIN DNR
Department of Natural Resources

Plastic Film Recycling for Materials Recovery Facilities (MRFs) and Landfills

PUB-WA-1739 2014

Plastic film recycling in Wisconsin

The plastic film recycling industry is growing and manufacturers are seeking clean, dry plastic bags and wrap to make new products, including lightweight packaging, composite lumber and playground equipment. Film recycling recovers valuable material, spurs economic activity, prevents litter and promotes new jobs.

The role of MRFs and landfills

MRFs and landfills can encourage consumers, businesses and other clients to use **drop-off collection points** for recycling their plastic film, bags and wrap, separate from other household or business recyclables. Promoting drop-off collection at local stores and other sites benefits MRF and landfill operations in a number of ways.

Benefits for MRFs

It prevents machinery clogs. Drop-off collection helps to keep plastic bags and film out of sorting machinery and avoid costly delays.

It preserves material value. Plastic film contaminated with other materials loses value; drop-off collection keeps value high.

It promotes buyer interest. Drop-off collection ensures that buyers can find regular, large loads of clean, dry material in each community.

Benefits for landfills

It reduces windblown debris. Plastic film recycling reduces the labor costs of keeping windblown debris out of fence lines and the surrounding environment.

It prevents equipment failures. Plastic film can tangle in engines and axles; keeping it out of landfills prevents this problem.

It extends landfill lifespan. Plastic film recycling keeps bags, film and wrap out of landfills, preserving space for other, denser materials.

Resources and how your facility can contribute

MRFs and landfills can post links to information on their websites, spread word to their customers or, if able to keep film separate, register as a drop-off themselves.

www.plasticfilmrecycling.org - Learn about plastic film recycling, set up a collection program and register as a drop-off site.

dnr.wi.gov - Search "plastic film" to access free information and promotional materials to give to consumers and businesses.

MRFs and landfills can add this "badge" link to the Drop-Off Directory on their own websites by visiting www.plasticfilmrecycling.org.

Drop-off collection keeps plastic film material clean and valuable to manufacturers.

Plastic bags and film can tangle, clog and damage MRF sorting machinery.

Retail drop-off collection makes plastic film recycling beneficial to all.

WRAP for Landfills

Educate with Downloadable Badge

Display this badge on your webpage to inform residents not to put bags/wraps in curbside collection *and* to find a local Drop Off. Simply copy and paste the code at right into the HTML of your site.
Please do not alter the code or image.

Insert the code below to place the 300 x 250 badge on your site

```
<div style="width:300px; height: 250px;"><a
href="http://www.plasticfilmrecycling.org/s01/s01dropoff.html><img
src="http://www.plasticfilmrecycling.org/images/badges/comm-badge_300x250.jpg" width="300"
height="250" /></a></div>
```

Insert the code below to place the 728 x 90 badge on your site

```
<div style="width:728px; height: 90px;"><a
href="http://www.plasticfilmrecycling.org/s01/s01dropoff.html"><img
src="http://www.plasticfilmrecycling.org/images/badges/comm_leader-board_728x90.jpg" width="728"
height="90" /></a></div>
```

http://www.plasticfilmrecycling.org/s03/s03facilitate.html

Questions

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Waste Reduction and Diversion Coordinator

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WISCONSIN
DEPT. OF NATURAL RESOURCES

Ground Water Monitoring Well Abandonment at Landfills

Joe Lourigan

Hydrogeologist Plan Review Expert

Bureau of Waste and Materials Management

Monitoring Well Abandonment

- s. NR 141.25 (2) (c), Wis. Adm. Code requires that monitoring wells not known to have an impermeable annular space seal or located in an existing or planned future waste disposal or treatment area shall be abandoned by removing the protective cover pipe and ground surface seal and then completely removing the well casing.

that the well is noncomplying.

(2) ABANDONMENT PROCEDURES. (a) *Boreholes.* Any borehole intersecting the water table or greater than 10 feet deep, whose use has been discontinued, shall be abandoned according to the requirements of par. (d).

(b) *Monitoring wells − impermeable annular space seals.* A permanent groundwater monitoring well known to be constructed with an impermeable annular space seal shall be abandoned according to the requirements of par. (d) after the protective cover pipe and ground surface seal have been removed and the well casing cut off at least 30 inches below the ground surface. The well casing may be completely removed during abandonment by pulling the well casing, overdrilling around the casing and then pulling the well casing out of the ground or by drilling out the well casing completely. If the well casing is to be removed, the well shall be sealed as the casing is removed.

(c) *Monitoring wells − permeable annular space seals and wells in waste areas.* A groundwater monitoring well not known to be constructed with an impermeable annular space seal or located in an existing or planned future waste disposal or treatment area shall be abandoned by removing the protective cover pipe and the ground surface seal and then completely removing the well casing. The well casing shall be pulled out of the ground as the well is filled according to the requirements of par. (d).

(d) *Sealing requirements.* Boreholes and groundwater monitoring wells shall be abandoned by complete filling with neat cement grout, bentonite−cement grout, sand−cement grout, concrete or bentonite−sand slurry. When a tremie pipe is used to place the sealing material, the procedures of s. NR 141.10 (2) shall be followed. A tremie pipe shall be used to abandon groundwater wells and boreholes greater than 30 feet in depth or with standing water. Groundwater monitoring wells and boreholes greater than 100 feet in depth shall be sealed with a tremie pipe−pumped method. Bentonite may be used as a sealing material without the use of a tremie pipe under the following conditions:

1. Bentonite granules may be used for abandonment of boreholes and groundwater monitoring wells less than 25 feet deep and

NR 141.27 Driven point wells. Driven point wells with galvanized steel drive pipes and contaminant compatible well screens may be used as permanent groundwater monitoring wells if prior department approval is obtained. Written documentation shall be supplied to the department prior to installation indicating:

(1) That the well is to be used only for water table elevation measurements or to monitor for parameters for which the well casing and screen material will not interfere with the analytical results;

(2) That the well will not provide a conduit for contaminants to enter the groundwater; and

(3) That information on subsurface stratigraphy is not needed. In situations where subsurface geologic information is needed, a separate borehole shall be constructed to collect the required data.

History: Cr. Register, January, 1990, No. 409, eff. 2−1−90.

NR 141.29 Temporary groundwater monitoring wells. Temporary groundwater monitoring wells may be installed according to less stringent standards than specified for permanent groundwater monitoring wells. Any temporary monitoring well construction shall be approved by the department prior to its installation. All temporary monitoring wells shall be abandoned in accordance with s. NR 141.25 within 120 days after their installation.

History: Cr. Register, January, 1990, No. 409, eff. 2−1−90.

NR 141.31 Special circumstances and exceptions. **(1)** The department may require or approve more restrictive or alternative well material, assembly, installation, development or abandonment if the contaminant concentrations or geologic setting require alternative construction. Prior written approval is required before any alternative materials are used in monitoring well installation.

(2) Exceptions to the requirements of this chapter may be approved by the department prior to installation or abandonment. An exception request shall state the reasons why compliance with the rule requirements is infeasible. The department may condi-

- The well casing and screen may be able to be pulled out.

- The well casing and screen could be drilled out – either by using an oversized hollow stem auger or by grinding the casing out (e.g. tri-cone drill bit).

Things to know

- When pulling the casing, if the pipe breaks, then the well will need to be overdrilled to remove the remaining casing.
- A steel rod attached to a cable can be used to drop down the well to push the screen plug out. Then the well can be backfilled while pulling casing.
- If overdrilling using tri-cone bit, a rod through the center of the tri-cone can be used to help prevent drift.

- Backfill with bentonite chips or cement as you pull casing or drill pipe out to prevent caving.
- Bentonite chips generally provide a better seal than cement, but can be a problem if they bridge when they hit the water table.
- Using frozen bentonite chips helps prevent bridging.
- Groundwater upwelling may occur in wells cased through a confining layer (e.g. clay) and screened in a permeable layer (e.g. sand) below. The upwelling may create challenges when using bentonite.

- For wells located in areas of planned landfill development, suggest placing copy of well abandonment report in the pre-construction report and including well abandonment with casing removal as an agenda item to the liner pre-con meeting to be checked off.

- Water supply wells need to be abandoned according to s. NR 812.26, Wis. Adm. Code. If located in an area of planned landfill development, they should have their casings removed or perforated.

Photos provided by SEH, Inc.


+Minus)


l+Minus)

- When filling out well forms, even if for a replacement well, please include all of the information required on the form, such as well location and elevation data.

- All wells (including replacement wells) need to be surveyed to obtain horizontal location and vertical elevations (e.g. ground surface and top of casing). – s. NR 141.065, Wis. Adm. Code

Contacts

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  - Phone (608) 261-6421
  - E-mail: Dave.Johnson@Wisconsin.gov

- Joe Lourigan – Hydrogeologist, Waste and Materials Management
  - Phone (608) 267-9386
  - E-mail: Joseph.Lourigan@Wisconsin.gov

Storm Water Permit Requirements for Landfills

Joe Lourigan

Hydrogeologist Plan Review Expert

Bureau of Waste and Materials Management

SWIP SWPPP Reminder

Storm water training for landfills webinar:

Wednesday, November 2, 2016

10:30 a.m. – 12:00 p.m.

Participation information will be posted on the SWIP website: http://dnr.wi.gov/topic/Waste/SWIP.html

Storm water permit webpage:
http://dnr.wi.gov/topic/stormwater/

Questions?

The next meeting will be in the spring of 2017 and will be held as a webinar.

Go to DNR.wi.gov and search “SWIP” for slides from this meeting and notices on future meetings.

Contact Casey Lamensky at Casey.Lamensky@Wisconsin.gov or 608-267-7574 with topic and presentation ideas.