Fall 2016
Solid Waste Interested Parties (SWIP) Meeting

October 19, 2016
1:00 pm
Madison Area Technical College
1:00  Welcome and DNR updates                Ann Coakley
1:15  Documentation for category 30 &31 residual fee exemptions  Casey Lamenskiy
1:25  DNR non-landfill solid waste and recycling team    Casey Lamenskiy
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
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!
Category 30 & 31 Fee Exemptions

Casey Lamensky
Solid Waste Coordinator
Bureau of Waste and Materials Management
# Environmental Fees for Various Waste Categories ($/ton)

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<tr>
<th>Waste Category</th>
<th>Groundwater Fee (Paid Annually)</th>
<th>Well Comp Fee (Paid Annually)</th>
<th>Environmental Repair Fund Fee (Paid Annually)</th>
<th>Siting Board Fee (Paid Annually)</th>
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<th>Total Statutory Fees ($/ton)</th>
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• 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
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.
Non-landfill Solid Waste and Recycling Team

Casey Lamensky
Solid Waste Coordinator
Bureau of Waste and Materials Management
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](http://dnr.wi.gov/contact/hotline.html) or (608) 264-6022 or [DNRWACOMPLAINTS@wisconsin.gov](mailto:DNRWACOMPLAINTS@wisconsin.gov)
  – If an inspection is needed they will go to non-landfill SW&R Team
  – Licensed facility complaints go to site contact
Great contact for “general” questions

DNR Staff Directory

Last Name: 
First Name: 
Subject: Solid Waste Requirements
Counties Served: 

16 Records Found
Search  Reset
Revisions to NR 538
Beneficial Use of Byproducts

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

SWIP Meeting
October 19, 2016
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
  o Environmental protection standards (gw and clean-up) have changed since 1995
  o Experience with byproducts (EPA studies of both coal ash and foundry sand – DNR data)
  o Addition of new byproduct columns
Potential Changes?

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

  - 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
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
Priority Landfill Topics

- 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

Composite Score:
- Encouraging the use of alternatives: 39
- Addressing concerns with construction and demolition landfills: 34
- Improving clarity on landfill siting near wetlands: 22
- Discontinuing monitoring at closed landfills: 22
- Cleaning up long term care and closure fee language: 18
Resource Management

Resource Management Topics

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- Addressing base management
- Addressing construction and demolition recycling
- Addressing organics management
- Addressing scrap fires and use
- Addressing waste to energy (not incineration)
- Addressing recycling economic concerns
- Addressing economic concerns for stedge disposal
- Encouraging alternative options for stedge disposal
- Encouraging alternative options for stedge disposal beyond "Table 1" materials
- Adapting materials management to the changing waste stream
- Acknowledging recycling success outside of landfill banned materials
- Encouraging the use of fines/drywall as fill and for animal bedding
- Setting a state diversion target
- Fostering the most sustainable waste and materials management system possible
- Increasing options for using painted/reused wood as boiler fuel
- Determining how to define success in recycling beyond "Table 1" materials
Regulatory Topics

- Improving consistency in approvals and code interpretation: 65
- Addressing diversion of recycling funding for non-recycling purposes: 61
- Addressing recycling funding for RUs: 54
- Fostering knowledge transition at the DNR through retirement transitions: 51
- Encouraging Wisconsin’s leadership in converting waste to resources - how can NR 500 improve this?*: 50
- Discontinuing monitoring at closed landfills: 39
- Adjusting the waste hierarchy: 33
- Addressing landfill operator certification requirements: 27
- Clarification of open burning rules: 25
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
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 to 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)

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<td>54,323</td>
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<td>225,231</td>
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<td>90,232</td>
<td>79,538</td>
<td>84,430</td>
<td>81,062</td>
<td>92,297</td>
<td>98,872</td>
<td>91,724</td>
</tr>
<tr>
<td>Plastic containers #1-7</td>
<td>22,851</td>
<td>21,339</td>
<td>33,810</td>
<td>37,016</td>
<td>27,598</td>
<td>26,140</td>
<td>26,097</td>
<td>29,599</td>
<td>33,905</td>
<td>30,962</td>
</tr>
<tr>
<td>Co-mingled materials</td>
<td>33,176</td>
<td>42,004</td>
<td>50</td>
<td>54</td>
<td>24</td>
<td>66</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foam polyethylene packaging³</td>
<td>13,558</td>
<td>14,001</td>
<td>16,952</td>
<td>12,972</td>
<td>16,511</td>
<td>16,247</td>
<td>15,755</td>
<td>20,035</td>
<td>19,511</td>
<td>17,698</td>
</tr>
<tr>
<td>Total optional reporting (banned items)</td>
<td>280,896</td>
<td>255,150</td>
<td>292,821</td>
<td>283,918</td>
<td>277,258</td>
<td>258,978</td>
<td>265,776</td>
<td>279,326</td>
<td>297,466</td>
<td>296,840</td>
</tr>
<tr>
<td>Subtotal Tons (All banned material)</td>
<td>700,012</td>
<td>666,197</td>
<td>716,482</td>
<td>694,361</td>
<td>697,305</td>
<td>655,681</td>
<td>656,600</td>
<td>692,225</td>
<td>710,233</td>
<td>707,031</td>
</tr>
</tbody>
</table>

## Optional Reporting

### Mandatory Reporting - Banned¹

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13,558</td>
<td>14,001</td>
<td>16,952</td>
<td>12,972</td>
<td>16,511</td>
<td>16,247</td>
<td>15,755</td>
<td>20,035</td>
<td>19,511</td>
<td>17,698</td>
</tr>
<tr>
<td>Total optional reporting (banned w/o yard waste)</td>
<td>280,896</td>
<td>255,150</td>
<td>292,821</td>
<td>283,918</td>
<td>277,258</td>
<td>258,978</td>
<td>265,776</td>
<td>279,326</td>
<td>297,466</td>
</tr>
</tbody>
</table>

### Subtotal Tons (All banned items) | 700,012 | 666,197 | 716,482 | 694,361 | 697,305 | 655,681 | 656,600 | 692,225 | 710,233 | 707,031 |

### Optional Reporting - Non-Banned

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18,538</td>
<td>23,521</td>
<td>19,705</td>
<td>16,000</td>
<td>23,269</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>WI population</td>
<td>5,617,744</td>
<td>5,548,124</td>
<td>5,675,156</td>
<td>5,686,040</td>
<td>5,686,986</td>
<td>5,654,236</td>
<td>5,703,525</td>
<td>5,717,110</td>
<td>5,753,810</td>
</tr>
<tr>
<td>Per capita mandatory reporting (lbs)</td>
<td>149</td>
<td>146</td>
<td>149</td>
<td>144</td>
<td>148</td>
<td>139</td>
<td>137</td>
<td>144</td>
<td>143</td>
</tr>
<tr>
<td>Per capita total (lbs)</td>
<td>256</td>
<td>244</td>
<td>259</td>
<td>250</td>
<td>253</td>
<td>230</td>
<td>230</td>
<td>242</td>
<td>247</td>
</tr>
</tbody>
</table>

---

¹ Wisconsin recycling law bars these materials from landfills
² Includes some non-banned paper, primarily red mixed paper
³ Variance - released from bars
⁴ Electronics were banned from landfills starting in 2010

Note: from 2008 to 2010, the DNR changed the format of the Recycling Accomplishments and Actual Costs Annual Report completed by recycling responsible units (RU). 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.
Recycling Updates: RU Data

All Recyclable Materials Collected by Responsible Units 2006-2015
Recycling Updates: RU Data

RU Table 1 Material Tonnages 2008-2015

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

Trends of Table 1 Recyclable Materials by Commodity 2006-2015
Recycling Updates: MRF Data

### MRF Table 1 Material Tonnages 2008-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>All other paper</th>
<th>OCC</th>
<th>Glass containers</th>
<th>Plastic containers #1-7</th>
<th>Steel (tin)/bimetal containers</th>
<th>Aluminum containers</th>
<th>Total Tonnages (from MRF reports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>351,450.35</td>
<td>246,286.16</td>
<td>96,445.73</td>
<td>34,416.08</td>
<td>14,526.44</td>
<td>6,524.16</td>
<td>749,715.63</td>
</tr>
<tr>
<td>2009</td>
<td>329,251.16</td>
<td>236,718.43</td>
<td>89,869.38</td>
<td>35,281.17</td>
<td>15,801.67</td>
<td>6,921.64</td>
<td>714,136.60</td>
</tr>
<tr>
<td>2010</td>
<td>324,957.00</td>
<td>245,755.35</td>
<td>96,607.63</td>
<td>33,441.51</td>
<td>15,381.74</td>
<td>6,865.03</td>
<td>723,416.67</td>
</tr>
<tr>
<td>2011</td>
<td>396,185.49</td>
<td>190,980.98</td>
<td>98,607.08</td>
<td>43,690.59</td>
<td>18,044.46</td>
<td>7,152.53</td>
<td>754,897.63</td>
</tr>
<tr>
<td>2012</td>
<td>340,421.58</td>
<td>242,912.88</td>
<td>102,808.63</td>
<td>42,471.44</td>
<td>15,520.22</td>
<td>8,425.12</td>
<td>752,563.77</td>
</tr>
<tr>
<td>2013</td>
<td>367,312.18</td>
<td>234,042.44</td>
<td>121,675.57</td>
<td>43,868.07</td>
<td>18,330.26</td>
<td>10,011.80</td>
<td>795,243.59</td>
</tr>
<tr>
<td>2014</td>
<td>374,579.22</td>
<td>244,590.50</td>
<td>133,836.08</td>
<td>47,239.11</td>
<td>20,382.51</td>
<td>9,394.82</td>
<td>830,025.58</td>
</tr>
<tr>
<td>2015</td>
<td>304,613.35</td>
<td>234,108.39</td>
<td>126,301.47</td>
<td>41,482.39</td>
<td>23,435.81</td>
<td>8,316.12</td>
<td>738,261.54</td>
</tr>
</tbody>
</table>

* 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.

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

- A family of four spends $1500 a year on food they don’t eat.
  - Cook it, store it, share it. Just don’t waste it.
  - SAVE THE FOOD.COM

- Every American wastes 290 pounds of food a year.
  - Cook it, store it, share it. Just don’t waste it.
  - SAVE THE FOOD.COM

- Trashing one egg wastes 55 gallons of water.
  - Cook it, store it, share it. Just don’t waste it.
  - SAVE THE FOOD.COM

- 40% of food in America is wasted.
  - Cook it, store it, share it. Just don’t waste it.
  - SAVE THE FOOD.COM
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 litter 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](http://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

**Recycle clean, dry, plastic bags and film packaging**

Look for this label on Film products like Home...

- Snack Bags
- Bread Bags
- Dry Cleaning Bags
- Air Pillows
- Polyethylene, Paper Towel, Kitchen Tissue and Diaper Wrap (nappies)

Recycle if Clean & Dry

**Store Drop-off**

PLASTIC BAGS / FILM / WRAP

how2recycle.info

Recycled plastic bags and wraps can become new packaging or durable home building products.

plasticfilmrecycling.org

**RECYCLE clean & dry plastic film packaging, bags & wraps**

**HERE**

**NOT in Curbside Recycling**

- Produce Bags
- Plastic Shipping Envelopes
- Bread Bags
- Dry Cleaning Bags
- Can Wrap
- Air Pillows
- Newspaper Bags
- Food Storage Bags
- Produce Drawers
- Bubble Wrap

Also look for any packaging with this How2Recycle label:

NO candy bar wrappers, chip bags, size-pack rings or degradable bags.

PlasticFilmRecycling.org
WRAP for Landfills

Recycle clean, dry plastic bags and film packaging

Include these materials:
- Bread Bags
- Newspaper Bags
- Produce Bags
- Grocery Bags
- Plastic Air Pillows
- Food Storage Bags
- Retail Bags
- Bags or Clothing
- Plastic Air Pillows

DO NOT include with bags and film:
- Wet, wrinkled, or dirty bags
- Bags with adhesive
- Bags that have plastic-
  containing food
- Plastic in an equal
  ratio to its

Recycled plastic bags and wraps can become new packaging for reusable home building products.

plasticfilmrecycling.org
WRAP for Landfills

Recycle clean, dry plastic bags and film packaging

One stop recycling. You can now bring even more plastic items to wherever plastic bags are recycled!

Just put your other film packaging in a single bag and make sure bags are clean and dry. Do not include degradable bags, pre-washed salad bags, frozen food bags, or material that has been painted or glued, as other substances can contaminate the recycled material.

You can recycle film packaging with labels if you first remove them, the tape, and adhesive strips.

Do not include frozen food or prewashed salad bags because the barrier polymers or other additives they contain to help protect the food and extend its shelf life are contaminants for film recycling.

Do not include candy wrappers or pet food bags because these are made from plastic that is incompatible with the other recyclable film packaging.

plasticfilmrecycling.org
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](http://dnr.wi.gov/topic/Recycling/Bags.html)
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.

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.

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.

Contact information

For information on recycling, contact:

DNRRecycling@Wisconsin.gov
608-266-2111
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.
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.

Where do I RECYCLE plastic bags and wraps? NOT curbside.
FIND A STORE OR OTHER DROP-OFF LOCATION NEAR YOU.
CLICK TO FIND

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

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

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

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

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

Jennifer Semrau
Waste Reduction and Diversion Coordinator
608-267-7550
Jennifer.Semrau@wisconsin.gov
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.
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.
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

• Dave Johnson - Hydrogeologist, Drinking Water and Groundwater, Groundwater Section
  - Phone (608) 261-6421
  - E-mail: Dave.Johnson@Wisconsin.gov

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Storm Water Permit Requirements for Landfills

Joe Lourigan
Hydrogeologist Plan Review Expert
Bureau of Waste and Materials Management
SWIP SWPPPP 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.