2022 Solid Waste Interested Parties (SWIP) Meeting

September 22, 2022

2:00 P.M.

Waste and Materials Management Program Updates

Brad Wolbert

WMM Program Staffing

- 18% turnover during the last 12 months
- Good success in recruitment and hiring
- Currently a low vacancy rate <8%
- We have filled all the positions we can afford
- More retirements anticipated in 2023

Operations

- Most staff teleworking part of the time
- Inspections have resumed
- We routinely provide virtual option for meetings

Current themes

- Plenty of rulemaking complete and in progress
- Food waste a focus for the next several years
- Anticipating recycling funding from Bipartisan Infrastructure Law
- Continued IT enhancements in reporting, licensing, grants
- Digitization of paper files and move to all-electronic submittals
- Guidance development and publishing, including translated guidance

Recent legislation

- Great Lakes Harbor dredging – Act 93
- E-Cycle Wisconsin revisions – Act 79
- Appropriation for waste removal at former 5R properties – Act 234

Partnerships

- US EPA Region 5
- Other state agencies – DOJ, DATCP, DHS, etc.
- Local governments
- Waste and Materials Management Study Group
- Wisconsin Council on Recycling
- Professional organizations
  - FET
  - SWANA
  - AROW
  - WCSWMA
- National intergovernmental groups
  - ASTSWMO
  - ECOS

Waste and Materials Management Program Rules Updates

Kate Strom Hiorns

Solid Waste Rulemaking

Coal Combustion Residuals (CCR) Landfills

– Rule became effective Aug. 1, 2022

-- “As protective as” the federal CCR rule

-- Both state and federal rules in place for 6 WI CCR landfills until EPA approves our state permit program

-- Landfills must submit plan of operation modifications by Feb. 1, 2023

Electronics Recycling and E-Cycle Wisconsin

-- Final rule approved by Natural Resources Board and submitted for legislative review

-- Requires processing license for electronics recyclers

Solid Waste & Hazardous Waste Rulemaking

Great Lakes Dredged Material Disposal Exemption

– online public meeting on emergency rule 9/26 at 3:00

-- Disposal by municipalities and counties can be done at a non-licensed facility that meets certain criteria

Waste Diversion and Recycling

-- Scope approved in June 2022, currently writing draft rule language

-- Covering all aspects of statewide materials recycling and effective recycling programs

Solid Waste & Hazardous Waste Rulemaking

Landfill Design and Operation

-- Scope statement submitted to governor's office for approval

-- NR 500-599 landfill code language open to amendments

Three Hazardous Waste rule packages in initial phase: requesting scope statement public hearing approval at Sept. 27 Natural Resources Board meeting

DNR ADMINISTRATIVE RULE PROMULGATION PROCEDURE FOR PERMANENT RULES
2020

PHASE I – Scope Statement Approval

1. Scope statement completed and approved by the Secretary.

2. Scope statement submitted to DOA.

3. Scope statement submitted to and approved by the Governor.

4. Approved scope statement submitted to LRB, JCRAR, and NRB.

5. LRB publishes the scope statement in the Register. **Scope statement 30-month expiration starts on day of publication.**

6. Yellow Sheet submitted to reserve time on the NRB agenda for approval of scope statement, conditional approval of the notice of public hearing and the notice of submittal of the proposed rule to the Legislative Council (notices), and approval of preliminary public hearing.

7. Department may be directed to hold preliminary a public hearing on scope statement. Notify NRB Liaison by email if preliminary hearing is requested. If JCRAR does not request preliminary public hearing, move onto step 12.

8. Green Sheet package submitted to request NRB authorization to hold preliminary public hearing.

9. NRB meeting to authorize preliminary public hearing.

10. Notice of preliminary public hearing published by LRB in the Register and posted on DNR external website and hearings calendar.

11. Preliminary public hearing held. Comment period closes.

12. Green Sheet package submitted to request NRB's approval of scope statement and notices.

13. NRB meeting to approve scope statement and notices.

PHASE II – Rule Preparation

14. Proposed rule language prepared in board order format.

PHASE II – Economic Impact Analysis

15. Fiscal estimate and economic impact analysis (FE/EIA) prepared.

16. Solicitation Notice prepared for comments on EIA. Solicitation Memo to NRB prepared.

17. Solicitation Memo submitted to NRB for information.

18. Solicitation Notice posted on DNR website and published in the Register. Notice submitted to affected parties. Comment period closes.

PHASE III – External Reviews

19. Public hearing documents prepared and submitted to NRB for 15-day passive review.

20. Rule documents submitted to and reviewed by the Legislative Council.

21. Notice of public hearing published in the Register and posted on DNR external website and hearings calendar.

22. Public hearing on proposed rule held at least 10 days after publication in the Register. Public comment period closes.

23. Rule language revised based on external review.

24. Request for incorporation by reference submitted to AG if rule requires incorporation by reference.

PHASE IV – Rule Approval

25. Yellow Sheet submitted to hold a place on NRB's agenda for adoption of proposed rule.

26. Green Sheet package submitted to request NRB adoption of proposed rule.

27. NRB meeting for adoption of final rule.

28. Final rule submitted to and approved by the Governor.

PHASE V – Legislative Review

29. Report to Legislature and Notices prepared and submitted to Assembly and Senate Chief Clerks. Rule must be submitted for legislative review before the scope statement 30-month expiration date.

30. Rule referred to and reviewed by Standing Committees.

31. Rule referred to and reviewed by JCRAR.

PHASE VI – Promulgation

32. Final Rule signed by the Secretary.

33. Final Rule filed with LRB.

34. Rule proof received by LRB and reviewed by program.

35. Final rule published in the Register. Rule becomes effective the first day of the month following publication.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Wisconsin Greenhouse Gas Emissions Inventory Report

September 2022| DNR.WI.GOV

Background

- In February 2019, Governor Evers announced his plans to join the U.S. Climate Alliance.
  - By joining the climate alliance, Wisconsin committed to:
    - Implementing policies to meet the emission reduction goals of the Paris Agreement.
      - 26-28% GHG emissions reduction over 2005 levels by 2025.
    - Tracking and reporting progress toward those goals to the global community in appropriate settings.
    - Accelerate new and existing policies to reduction carbon pollution and promote clean energy deployment at the state and federal level.

- In April 2019, Governor Evers signed Executive Order 38 which committed the state to several actions related to clean energy and carbon reduction.
  - Committing the state to meeting carbon reduction goals laid out in the 2015 Paris Agreement.

State Inventory Tool

- The Air Program used EPA's State Inventory Tool (SIT) to facilitate inventory development.
- EPA developed a spreadsheet-based tool the help states develop GHG inventories or update existing inventories.
- SIT consists of 11 modules that apply a top-down approach and one module to synthesize estimates.
- The SIT is populated with default data for each state that is gathered from available federal datasets.

Activity data *x* *emissions factor* = *Total GHG emissions*

- SIT is updated every year around November to add an additional year of data and make improvements to the methodologies or default data.

2021 Inventory Development

- Includes emissions from seven major GHGs:
  - CO_2, CH_4, N_2O, HFCs, PFCs, NF_3, and SF_6. For the purposes of this report, HFCs, PFCs, NF_3, and SF_6 are reported together as “F-gases.”
- Incorporate state-specific data wherever practical.
- Air Program worked closely with sector experts around the state to understand ensure the best available data was used.
- Inventory years: 1990 and 2005-2018.

2021 Inventory Methodology

- Either default data or Wisconsin-specific activity data are selected for each module.
- The activity data is multiplied by EPA-supplied emission coefficients to produce results for each module.
- Post processing was conducted outside of the SIT. WDNR did not sure EPA's synthesis module to compile results.
- Emissions were attributed to nine commonly referenced economic sectors: agriculture, electricity generation, residential, commercial, industrial, transportation, industrial process, natural gas and oil, and waste.
- The Land-Use, Land-Use Change, and Forestry (LULUCF) sector is reported separately as it can act as either a net source or a net sink of emissions.

2021 Inventory Methodology- Solid Waste

- The Solid Waste module calculates municipal solid waste by first estimating the total CH_4 emissions expected based on tons of waste disposed and subtracting the CH_4 that is captured and used as landfill- gas-to-energy or flared.

- The module calculates landfill emissions as a function of the quantity of waste deposited in landfills over the previous 30 years.

- Due to the lack of data on industrial landfills, EPA makes a simple assumption that industrial landfills produce approximately 7% of the CH_4 emissions produced by MSWs in any given year.

Results

	1990	2005	2018	Change (2005 to 2018)	
				Amount	Percent
			MMTCO$_2$E		
Electricity	41.0	58.7	46.9	-11.8	-20.1%
Generation	33.4	48.3	39.2	-9.1	-18.8%
Import	7.6	10.4	7.7	-2.7	-26.0%
Residential	9.6	10.2	10.2	0.0*	+0.0%*
Commercial	4.9	6.2	6.7	0.5	+8.1%
Industrial	14.5	15.8	14.1	-1.7	-10.8%
Transportation	29.0	40.2	39.9	-0.3	-0.7%
Industrial Process	0.8	3.5	4.2	0.7	+20.0%
Natural Gas and Oil	0.2	0.6	0.5	-0.1	-16.7%
Waste	3.0	3.2	3.1	-0.1	-3.1%
Solid Waste	2.3	2.3	2.2	-0.1	-4.3%
Wastewater	0.7	0.9	0.9	0.0*	+0.0%*
Agriculture	17.2	16.4	19.9	3.5	+21.3%
Gross Emissions	**120.3**	**154.9**	**145.4**	**-9.5**	**-6.1%**
LULUCF	-19.3	-15.9	-19.1	-3.2	-20.1%
Total Net Emissions	**101.1**	**139.0**	**126.3**	**-12.7**	**-9.1%**

Results- Waste

Waste Emissions ($MMTCO_2E$)

	2005	2018	Percent Emissions (2018)
Solid Waste	2.3	2.2	71.0%
Wastewater	0.9	0.9	29.0%
Total	**3.2**	**3.1**	**100.0%**

Results- Solid Waste

Solid Waste Emissions by Subsector ($MMTCO_2E$)

	2005	2018
Landfills	2.2	2.1
MSW Generation	*5.2*	*6.0*
Industrial Generation	*0.4*	*0.4*
Flaring	*-1.0*	*-0.7*
Landfill Gas-to-Energy	*-2.1*	*-3.4*
Oxidation (MSW)	*0.2*	*0.2*
Oxidation (Industrial)	*0.0**	*0.0**
Waste Combustion	0.1	0.1
Total	**2.3**	**2.2**

2021 GHG Inventory- Waste

- 2021 Improvements - Waste
  - Wastewater: include industrial wastewater from pulp and paper, red meat processing, and fruit and vegetable processing
  - Solid Waste: Landfill tonnage numbers from DNR

- Opportunities for future improvements- Solid Waste
  - Improve landfill gas-to-energy and flaring estimates
  - Incorporate results of the DNR Waste Characterization Study

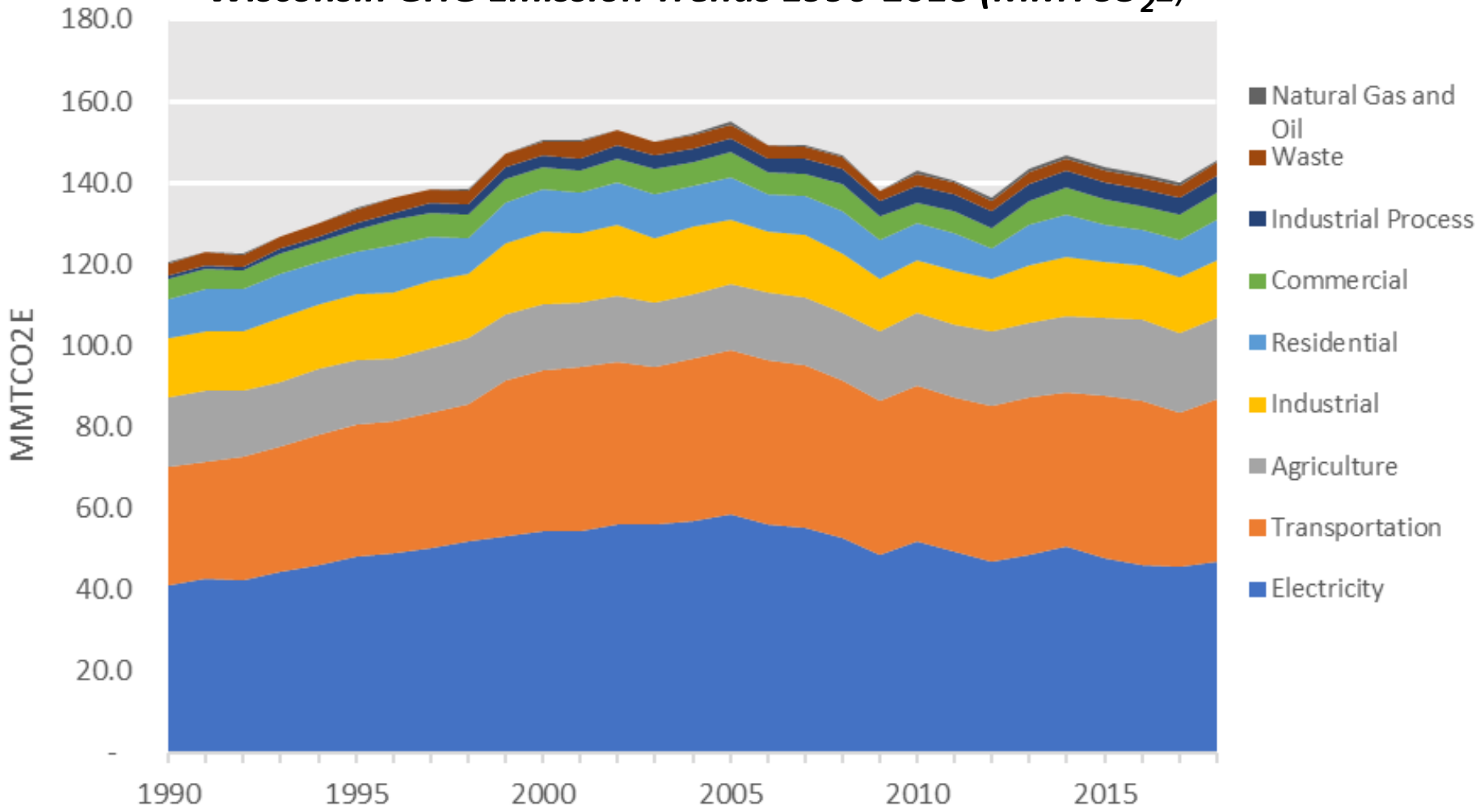
Supplemental Slides: Results and Trends

2021 GHG Inventory- Results Summary

- Gross GHG emissions decreased by 6.1 percent from 2005 to 2018, and net GHG emissions decreased by 9.1 percent from 2005 through 2018.
- The electricity sector emitted the most GHGs in 2018 (32.3 percent of gross emissions); the largest decrease in emissions from 2005 to 2018 (11.8 $MMTCO_2E$) also came from this sector.
- The transportation, industrial, natural gas and oil, and waste sectors also showed modest emission decreases from 2005 to 2018.
- Between 2005 and 2018, agriculture emissions increased by 3.5 $MMTCO_2E$, the highest increase among all sectors.
- Emissions from the residential, commercial, and industrial process sectors also increased from 2005 to 2018.
- LULUCF sector stored 19.1 $MMTCO_2E$ in 2018, a 20.1 percent increase from the carbon stored in the sector in 2005.

2021 GHG Inventory - Trends

Wisconsin GHG Emission Trends 1990-2018 ($MMTCO_2E$)



CONNECT WITH US

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GHG Inventory Report:
https://widnr.widen.net/view/pdf/o9xmpot5x7/AM610.pdf?t.download=true


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"WILD WISCONSIN: OFF THE RECORD"

Waste and Materials Management Program Financial Updates

Michael Schmit

	FY19	FY20	FY21	FY22	FY23
	Actual	Actual	Actual	Actual	Estimated
Opening Balance	$ 366,116	$ 1,126,904	$ 1,019,443	$ 531,620	$ 230,018
Revenue Sources	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**
SW landfill license surcharge	$ 1,059,706	$ 1,119,099	$ 1,068,239	$ 1,090,465	$ 1,092,601
SW landfill licenses	$ 572,550	$ 507,257	$ 477,400	$ 477,950	$ 487,536
SW C & T licenses	$ 364,490	$ 135,964	$ 393,323	$ 415,729	$ 315,005
SW Non Landfill	$ 122,210	$ 133,870	$ 131,230	$ 137,665	$ 134,255
SW plan review fees	$ 420,555	$ 356,825	$ 435,510	$ 339,090	$ 377,142
HW facilities licenses	$ 83,632	$ 96,000	$ 83,200	$ 70,400	$ 83,200
HW transporter licenses	$ 73,200	$ 3,581	$ 73,097	$ 71,600	$ 72,000
HW plan review fees	$ -	$ -	$ -	$ -	$ -
HW manifest fee	$ 65,880	$ 1,518	$ -	$ -	$ -
SW Facility Oper/Mgr Cert Fees	$ 37,300	$ 24,700	$ 36,689	$ 28,540	$ 29,976
Infectious Waste Report Fees*	$ 46,892	$ 39,050	$ 41,195	$ 45,205	$ 43,000
Misc. (i.e. copying sales/printing/etc.)	$ 804	$ 4,770	$ 6,490	$ 4,236	$ 4,000
Total Revenue	$ 2,847,219	$ 2,422,634	$ 2,746,373	$ 2,680,880	$ 2,638,715
Total Available: (All Revenue Sources + Opening Balance)	**$ 3,213,335**	**$ 3,549,538**	**$ 3,765,816**	**$ 3,212,500**	**$ 2,868,733**
Total Expenditures	$ (2,323,503)	$ (2,642,997)	$ (3,220,446)	$ (2,756,163)	$ (2,800,000)
Total Expenditures & Budget Lapses	**$ (2,323,503)**	**$ (2,642,997)**	**$ (3,220,446)**	**$ (2,756,163)**	**$ (2,800,000)**
DOA adjustments to A/R Accounts	$ 237,071	$ 112,903	$ (13,751)	$ (226,320)	$ 231,819
Closing Balance	**$ 1,126,904**	**$ 1,019,443**	**$ 531,620**	**$ 230,018**	**$ 300,552**
	FY 19	FY 20	FY 21	FY 22	FY 23

Appropriation 425

*Note: Revenue for Infectious Waste category are estimated for FY19 and FY20. Data was determined using alternative methods to currently existing systems.

		(Denominator)			(Numerator)	(Ratio)	
Fiscal Year	**Schedule**	**Authorized Expenditure Level**	**Expenses**	**DOA Adjustments**	**PR EOY Account Balance**	**Actual % (PR EOY Account Bal / Auth. Exp. Level)**	
FY17	$ 2,591,700	**$ 2,785,214**	$ (2,258,606)	$ (279,904)	**$ 246,704**	**8.86%**	Actual
FY18	$ 2,591,700	**$ 3,024,616**	$ (2,740,129)	$ 81,629	**$ 366,116**	**12.10%**	Actual
FY19	$ 2,591,700	**$ 3,213,335**	$ (2,323,503)	$ 237,071	**$ 1,126,904**	**35.07%**	Actual
FY20	$ 2,728,600	**$ 3,549,537**	$ (2,642,997)	$ 112,903	**$ 1,019,443**	**28.72%**	Actual
FY21	$ 2,728,600	**$ 3,765,817**	$ (3,220,446)	$ (13,750)	**$ 531,620**	**14.12%**	Actual
FY22	$ 2,751,800	**$ 3,212,500**	$ (2,756,163)	$ (226,320)	**$ 230,017**	**7.16%**	Actual
FY23 - estimated	$ 2,751,800	**$ 2,868,733**	$ (2,800,000)	$ 231,819	**$ 300,552**	**10.48%**	Estimated

Diversion Updates & Annual Recycling Data

Jennifer Semrau

September 22, 2022

Priority Projects

- NR 544 Revision
- BIL EPA Funding (Solid Waste Infrastructure for Recycling, Education and Outreach Grants)
- HH Recycling Survey Report, Executive Summary & Infographic
- Recycling Excellence Awards
- RU Grant Application, Annual Reports MRFs and RUs
- MRF and Hauler Stakeholder Meetings
  - MRF: 10/24 9:00 a.m. via Zoom
  - Hauler: TBD

Material Recovery Facility (MRF) Stakeholder Meeting

9:00	**Welcome/Introductions**
9:05	**DNR Recycling Updates** *Jennifer Semrau, DNR Waste Reduction and Diversion Coordinator*
9:25	**Guidance for MRFs: Category 30 Residual Tip Fee Exemption** *Casey Lamensky, DNR Solid Waste Coordinator*
9:40	**Advances in Paper Cup Recycling** *Matt Todd, Senior Consultant, RRS*
10:00	**New Tool for Commodity Marketing: hubbIT** *Blake Gordon, Director of Innovation, Georgia-Pacific Recycling*
10:30	**Break**
10:40	**MRF Presentations/Discussion: Reflections on Markets, Labor, Supply Chain Impacts & Operations** 1. Green Circle Recycling, *Mathias Harter* 2. Hilltopper Refuse & Recycling, *Brandon Knudtson* 3. John's Disposal, *Ron Jongetjes* 4. Outagamie (Tri) County MRF, *Alex Nett* 5. Pellitteri Waste Systems, *David Pellitteri* 6. Waste Management, *Lynn Morgan*
11:45	**Open MRF Discussion**
12:00	**Wrap-up/Adjourn**

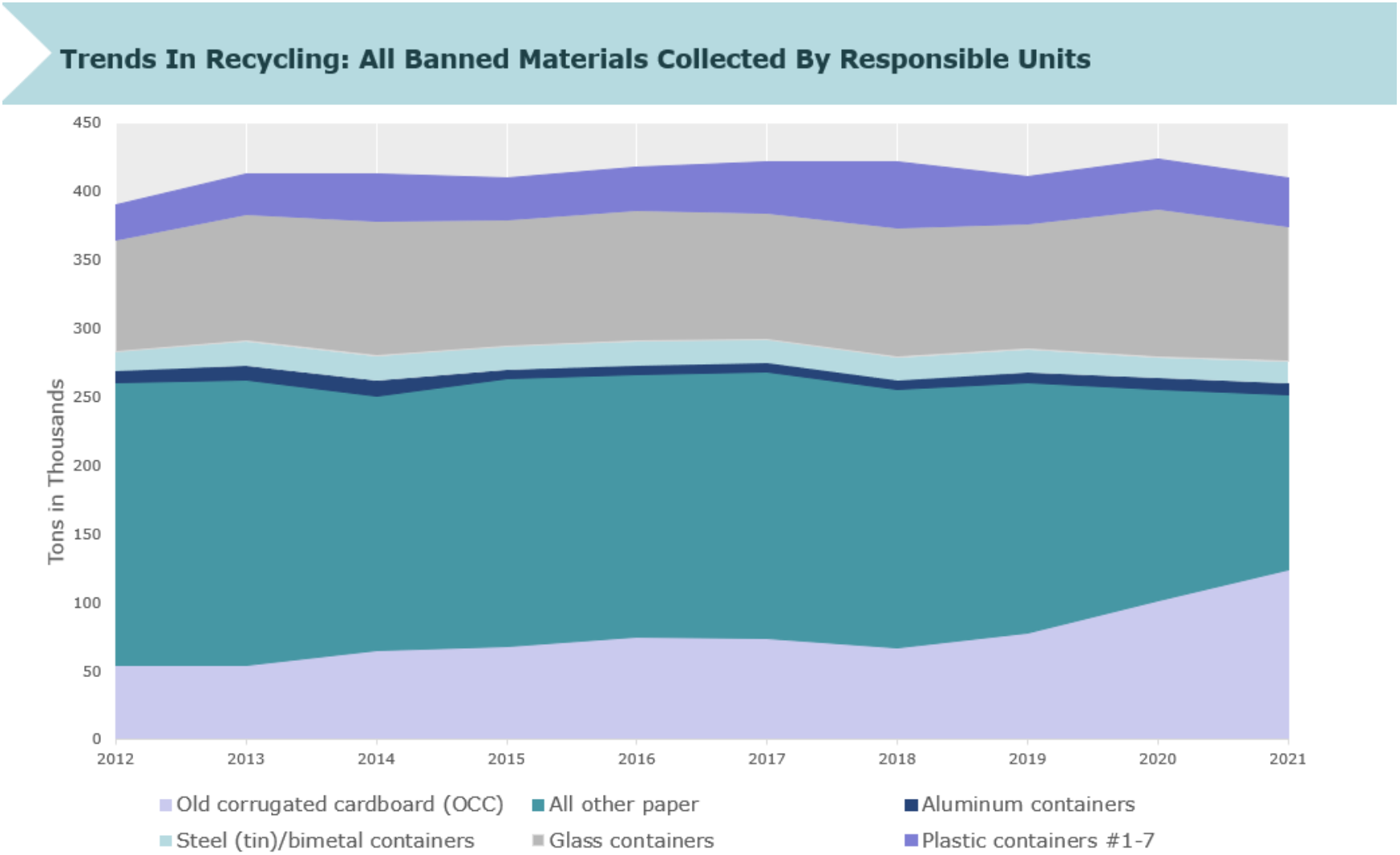
Recycling Data:

Recyclable Materials Collected by Wisconsin Responsible Units (in tons)

Mandatory Reporting - Banned[1]	2021	% Change from 2020
Old corrugated cardboard (OCC)	124,397	↑ 22.2%
All other paper	127,485	↓ -17.3%
Aluminum containers	8,082	↑ 3.8%
Steel (tin)/bimetal containers	16,164	↓ 3.8%
Glass containers	98,431	↓ -8.6%
Plastic containers #1-7	35,452	↓ -2.6%
Total Mandatory Reporting	**410,011**	↓ **-3.2%**
WI Population	5,942,193	↑ 1.1%
Per capita mandatory reporting (lbs)	**138**	↓ **-4.2%**

Note: Wisconsin law bans these materials from landfills, however, these totals may contain incidental amounts of non-banned materials such as residential mixed paper, plastic #3-7 containers, and foam polystyrene.

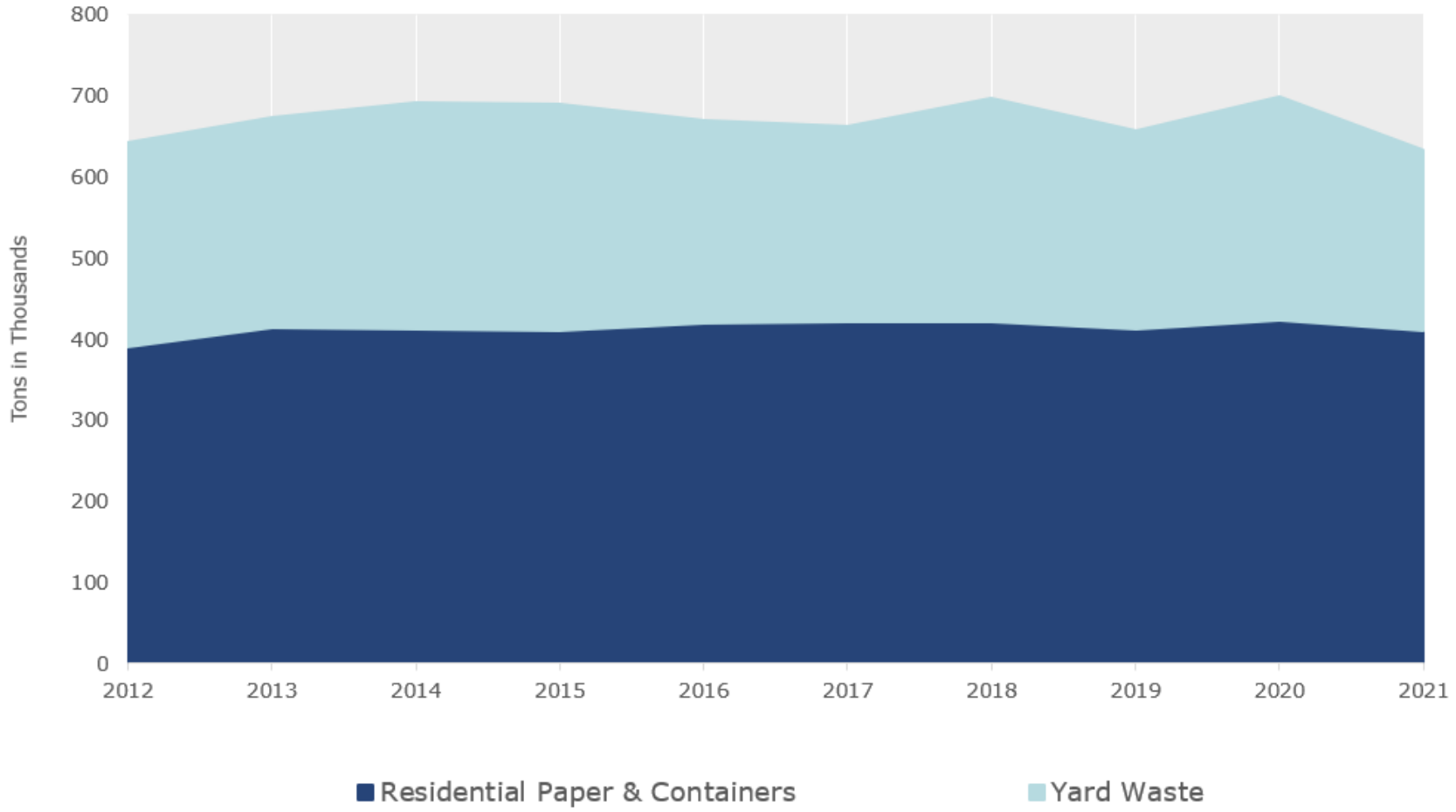
Responsible Unit Data Trends: Mandatory Reporting- Banned Materials



Note: Wisconsin law bans these materials from landfills, however, these totals may contain incidental amounts of non-banned materials such as residential mixed paper, plastic #3-7 containers, and foam polystyrene.

Responsible Unit Data Trends: Yard Waste

Trends In Recycling: Other Materials Collected By Responsible Units



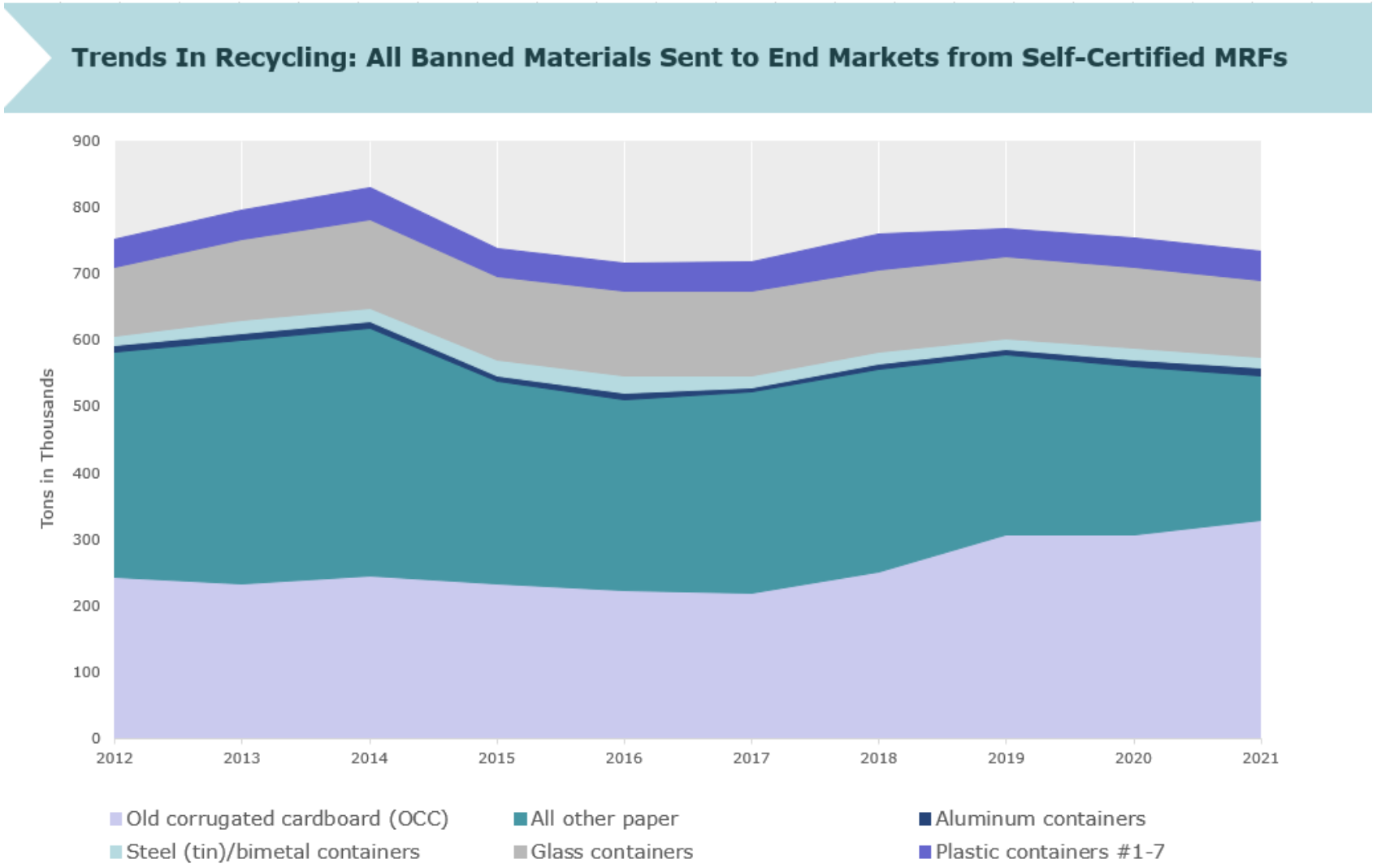
Note: Wisconsin law bans these materials from landfills, however, these totals may contain incidental amounts of non-banned materials such as residential mixed paper, plastic #3-7 containers, and foam polystyrene.

Recyclable Materials Collected by Wisconsin Self-Certified MRFs (in tons)

Mandatory Reporting - Banned	2021	% Change from 2020
Old corrugated cardboard (OCC)	329,095	6.9%
All other paper	217,343	-13.9%
Aluminum containers	11,545	6.4%
Steel (tin)/bimetal containers	16,952	-2.4%
Glass containers	116,103	-4.4%
Plastic containers #1-7	43,256	-2.2%
Total Mandatory Reporting	**734,293**	**-2.6%**

Note: Wisconsin law bans these materials from landfills, however, these totals may contain incidental amounts of non-banned materials such as residential mixed paper, plastic #3-7 containers, and foam polystyrene.

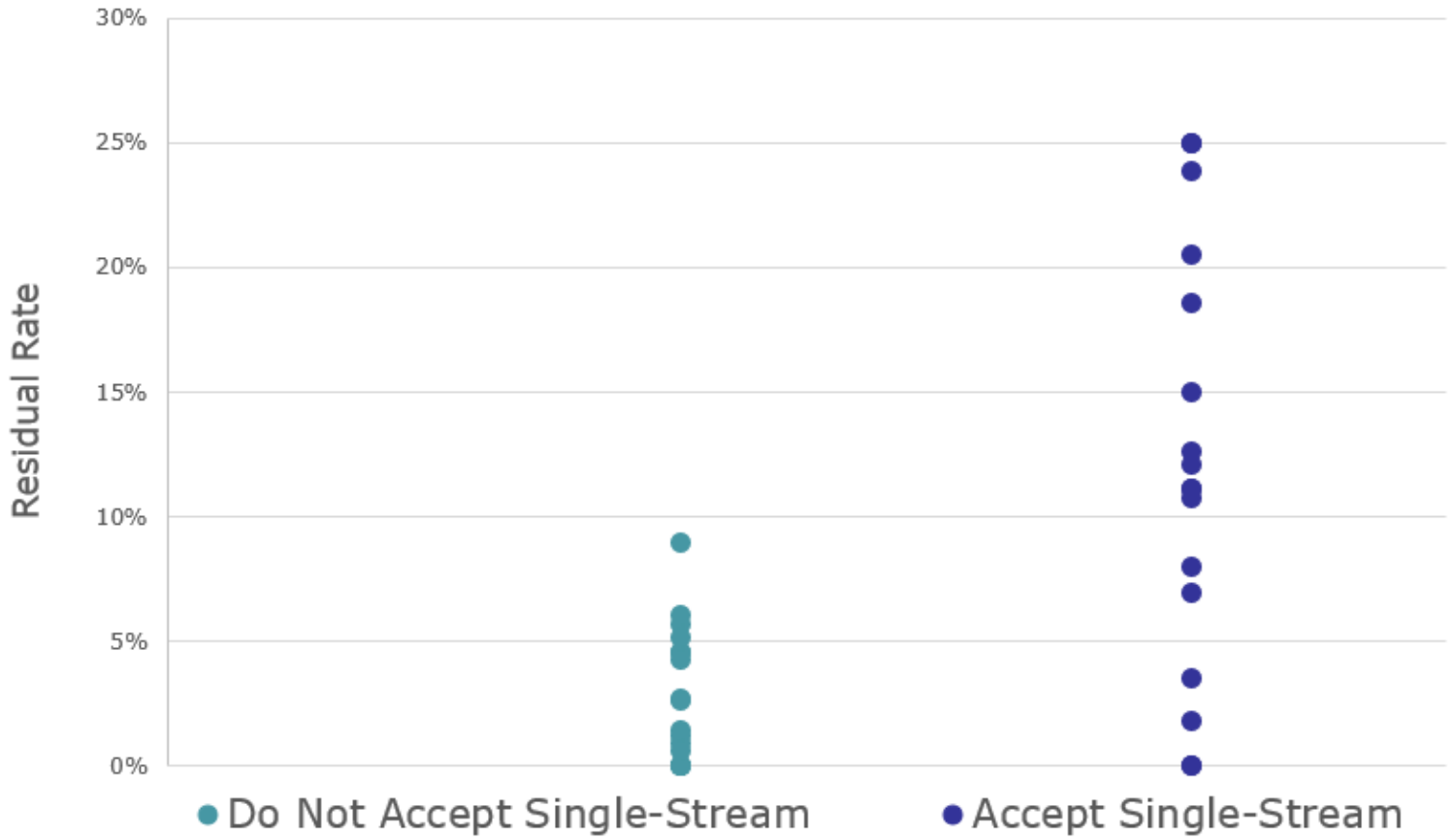
Self-Certified MRF Data Trends: Mandatory Reporting- Banned Materials



Note: Wisconsin law bans these materials from landfills, however, these totals may contain incidental amounts of non-banned materials such as residential mixed paper, plastic #3-7 containers, and foam polystyrene.

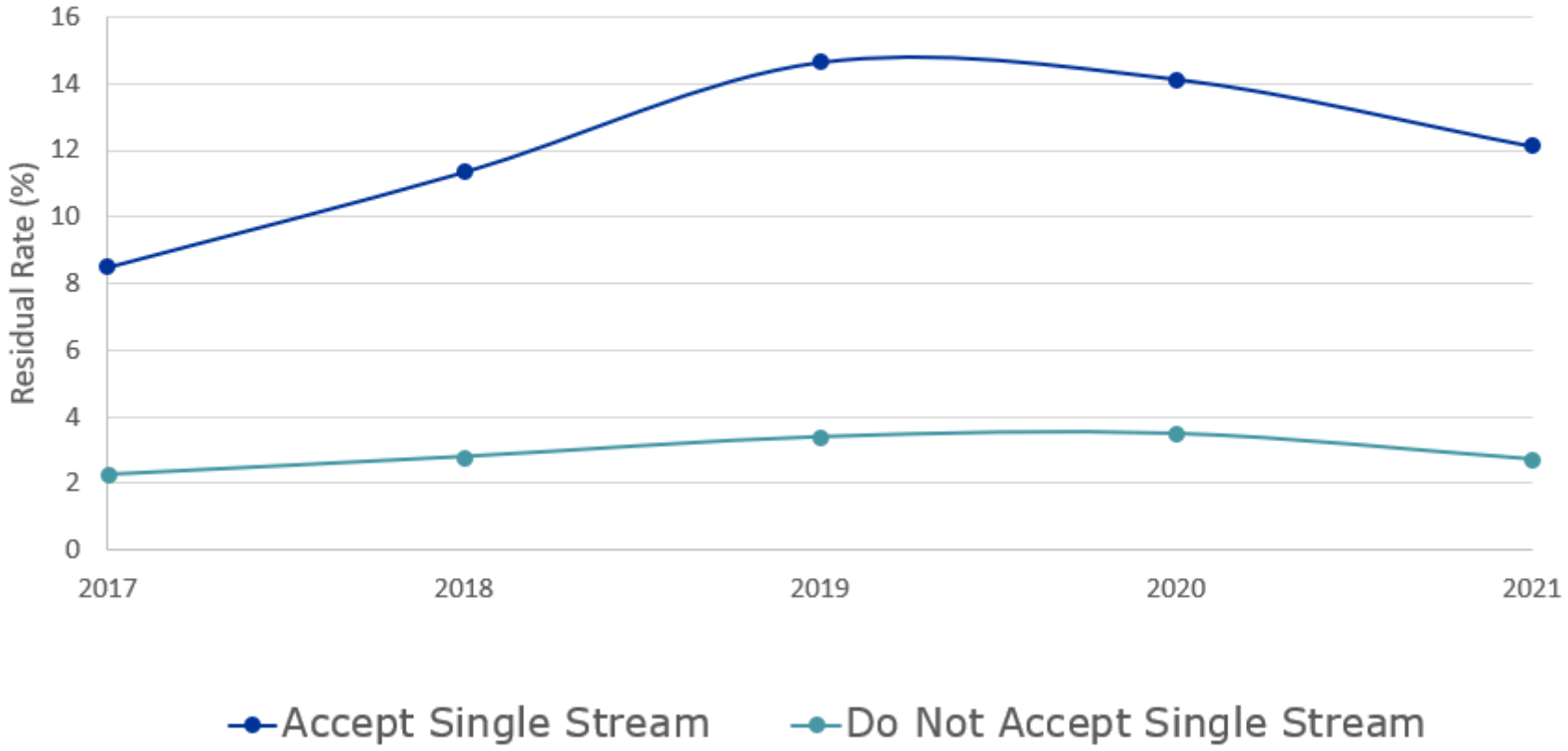
WI Self-Certified MRF Residual Rate Comparison

Residual Rates Based on % Received for All Self-Certified MRFs Located in WI in 2021



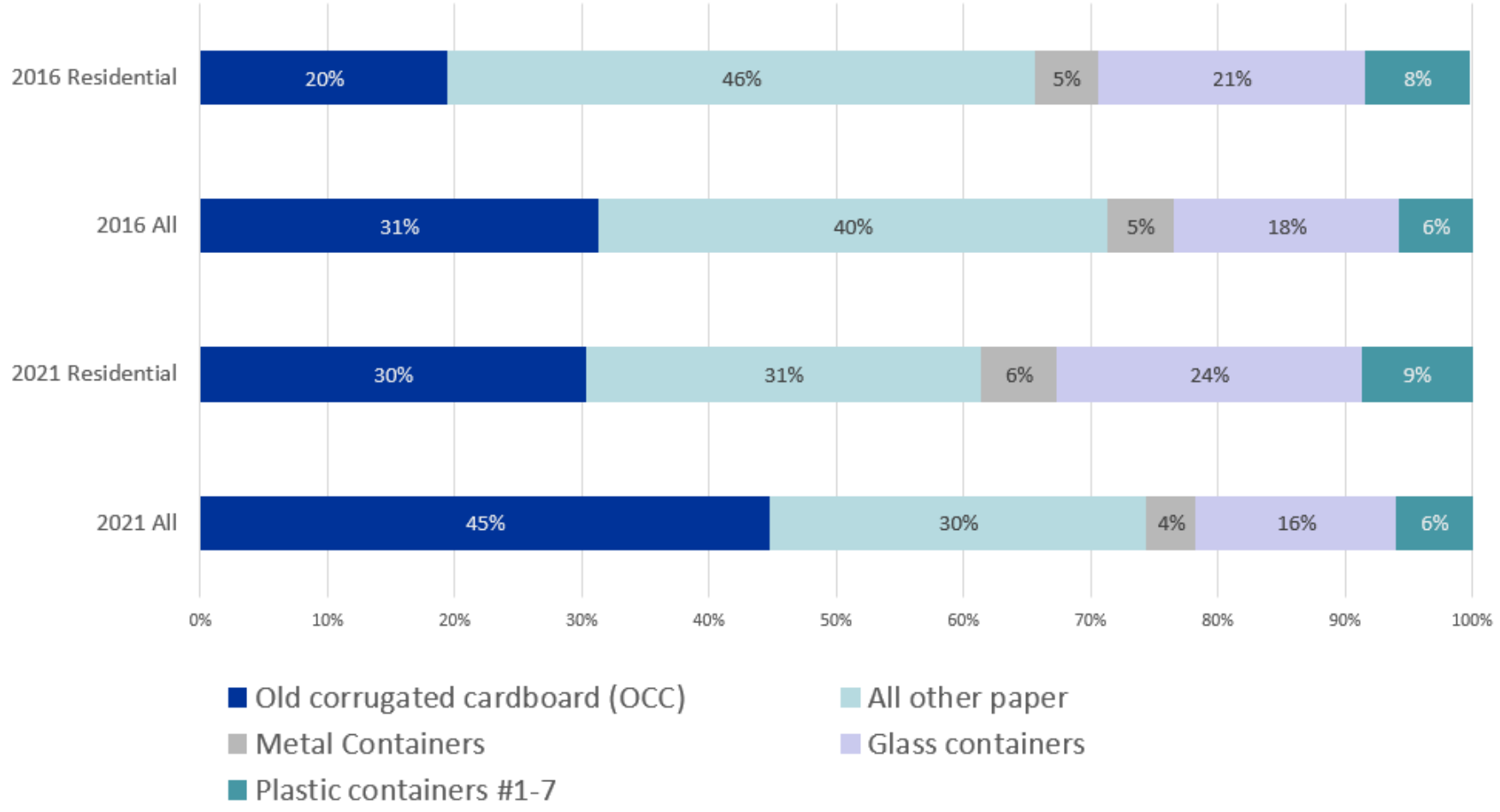
Self-Certified MRF Residual Trends

Residual Rate Trends Based on % Received for All Self-Certified MRFs Located in WI in 2021



Self-Certified MRF Data: Materials Breakdown

Breakdown of Materials Sent to End Markets by WI Self-Certified MRFs- 2016 vs 2021



MRFs by the Numbers

42 self-certified MRFs

- 40 processed WI materials in 2021,
- 35 MRFs located in WI
- 7 in MN/IL/IA

Used 68% of processing capacity (40 MRFs)

84% of inbound materials sent to end markets

Average residual rates

- 12.12%- accept single stream
- 2.72%- do not accept single stream

Commodity Market Rollercoaster

	Sep-21	Mar-22	Sep-22
OCC	$190	$160	$95
Mixed	$115	$90	$30
Alum	$1,640	$2,560	$1,560
Steel	$220	$220	$195
PETE	$580	$840	$220
HDPE nat	$2,260	$1,000	$840
HDPE col	$1,260	$600	$140

Questions?

Jennifer Semrau

Waste Reduction & Diversion Coordinator

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608-381-0960

Firefighting Foam Collection Update

Solid Waste Interested Parties Meeting

9/22/2022

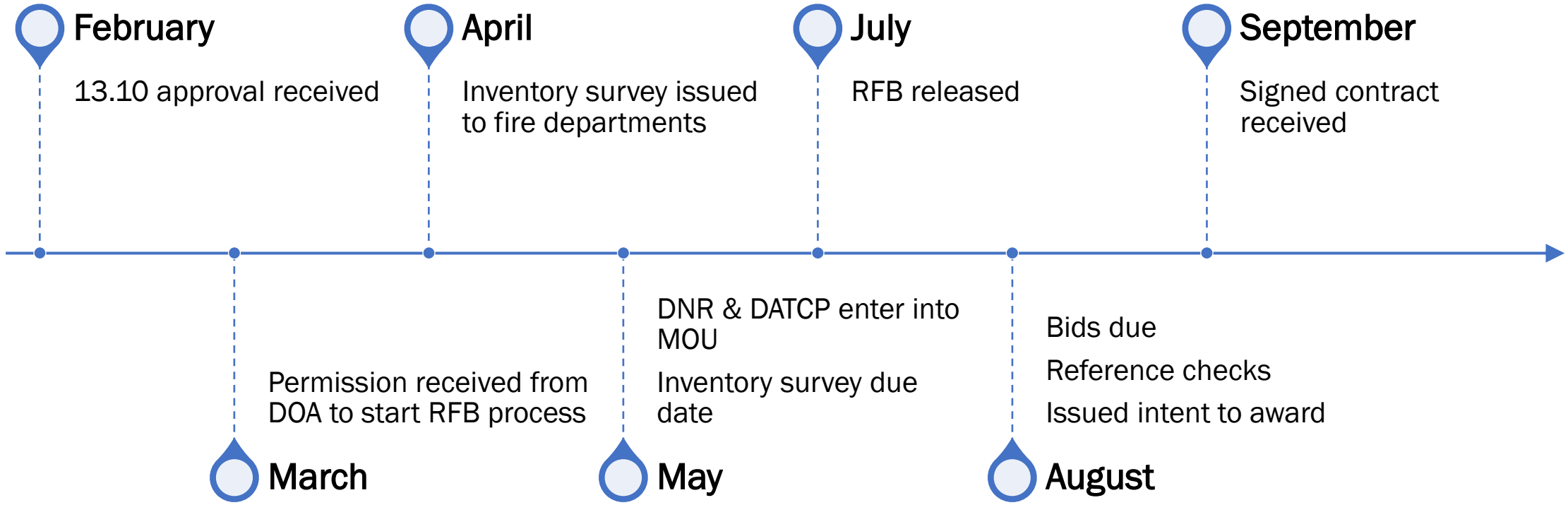
Background

PFAS-CONTAINING FIREFIGHTING FOAM COLLECTION AND DISPOSAL PROGRAM

$1 MILLION PROVIDED IN BIENNIAL BUDGET

REQUIRED DNR TO COORDINATE WITH DATCP ON PROGRAM

Timeline


February
13.10 approval received
March
Permission received from DOA to start RFB process
April
Inventory survey issued to fire departments
May
DNR & DATCP enter into MOU
Inventory survey due date
July
RFB released
August
Bids due
Reference checks
Issued intent to award
September
Signed contract received

Inventory Survey Results

Worked with state fire associations
~325 fire departments replied
Handful of airports
Identified ~24,000 gallons for disposal, of which ~2,000 gallons is at airports
Participation required switching to PFAS-free foam
WEM- county consolidation points

Request for Bid

- Issued in July, due Aug. 11
- Required disposal in Subtitle C landfill
- 10 bidders submitted (1 of which withdrew)
- Bids ranged from $304,600 to $1,643,068
- Low bidder: North Shore Environmental
- Checked references, received signed contract
- Held initial kick-off meeting

Next Steps

- North Shore to coordinate with fire departments for foam pick-up
- Material will be consolidated by North Shore in Germantown prior to shipment
- Utilizing Waste Management Subtitle C Landfill, Emelle, Alabama
- Will receive weekly reports of pick-ups and plans for following week
- Anticipate starting collection in October

Questions?

Jennifer Semrau

Jennifer.Semrau@wisconsin.gov

608-381-0960

Questions?

Slides and future meeting information will be shared at:

https://dnr.wisconsin.gov/topic/Waste/SWIP.html

Please sign up for “Solid Waste News” for meeting notices:

https://public.govdelivery.com/accounts/WIDNR/subscriber/new?topic_id=WIDNR_659