Oregon Recycling Modernization Act Commingled Recycling Processing Facility Technical Workgroup

Meeting #4

June 13, 2023

Agenda

- Project updates
- Crowe LLP – Addressing question/comments from MRF Fees Study Design feedback
- Discussion – Performance standards
  - Initial and future capture rates
  - Contamination rates
- Public Input
- Adjourn

Introductions

- Introduction of alternates or new workgroup members

Project updates

- Broker roundtable discussion, part deux
- Living Wage and Supportive Benefits work coming along

Pic courtesy of Justin Gast

Smart decisions. Lasting value. ™

CMF and PCRF Study Designs

Responses to Questions

RMA Commingled Recycling Processing Facility Technical Workgroup

June 13, 2023

Anticipated Program Costs

There were several questions and comments related to identifying anticipated program costs. Crowe prepared an Appendix D to the report with additional details on this portion of the project, including a questionnaire for discussion during the site visits and subsequent virtual meetings in the fall.

- We will identify facility-specific anticipated costs in a consistent manner, and then aggregate across facilities.
- Our approach to determining anticipated program costs is to first discuss each facility's plans at a high level, then to identify current cost areas and specific areas where costs may change.
- We recognize that discussions right now are intended to provide preliminary estimates – there is still much to be determined that may shape how CRPFs respond to the RMA.
- We will consider both potential increases and decreases in staffing due to automation.
- We will look at current baseline wages and benefits and compare them to future, TBD, living wage and supportive benefit requirements.
- We consider this first round of anticipated program cost discussions as preliminary and subject to change– these discussions provide a starting point for our discussions in the fall once the rules have been further developed.
- We will conduct a virtual follow up meeting in the fall to capture updated anticipated program costs.

Presentation of Results and Aggregated Data

There were several questions and comments related to information Crowe will provide in the study reports. Crowe added a description in the Study Design summarizing additional data components to be included, in aggregated form, to the extent the data can be obtained and would not disclose proprietary information.

- Identification of each component of the PCRF – PCRF Facility Costs, Anticipated Program Costs, Reasonable Financial Return
- Cost categories as a percent of total processing costs
- Cost categories as a percent of total anticipated program costs (labor, capital investments, administration, etc.)
- Summary metrics such as average labor hours per ton and average tons per site
- Material specific costs, where data is available
- Summary assessments of current and potential future system capabilities, including by material types (to the extent possible given the data available), degree of automation, and capacity

Allocation Methodology

There was a question around Crowe's allocation methodologies and whether a capital allocation approach would be appropriate.

- Crowe's allocation methodology first identifies direct costs that can be attributed to a particular business area or material type.
- Our second allocation will utilize labor as a proven method to determine level of effort across business areas and material types.
- We recognize that at these two methods alone – direct cost and labor – will not capture all the applicable nuances in cost allocation for specific materials and/or allocating indirect costs.
- When there is information and data available, we will leverage secondary allocation methods, including but not limited to weight, capital investments, and number of loads, to further allocate costs.
- Crowe's allocation approach is appropriate given the current level of automation across Oregon MRFs.

Handling of Outliers

There was a question around how Crowe would respond if we identified a site that appeared to be an outlier, such as one with a cost category that was significantly higher or lower than other facilities.

- First, we'll contact the facility and discuss the costs in question to confirm that we had the correct information, obtaining documentation if applicable, and seeking to understand reasons for the outlier cost. This will inform whether this cost is allowable per the RMA.
- We do not intend to remove a cost because it is higher or lower than the mean.
- Our response will vary on a case-by-case basis, erring on the side of including the cost.
- If, in consultation with DEQ, a cost is determined not to be necessary to perform the functions required of a CRPF to meet RMA requirements, we would consider not including the costs within our overall calculation.

Potential for Double Counting Material Streams

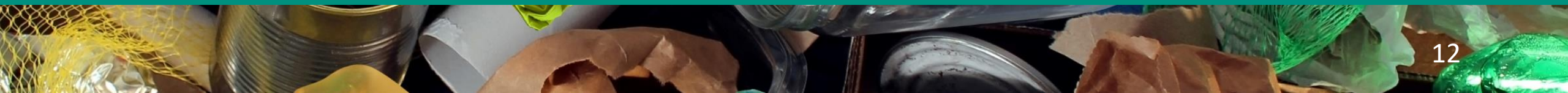
There was a comment around payment of the PCRF and CMF and the potential for double counting material streams.

- Payment of the PCRF to a facility is separate from calculating the cost. Crowe's work may provide input to the decision on fee payment; however, that is not the focus of our efforts.
- In determining costs at each facility, Crowe will incorporate applicable operational/sorting costs for all incoming materials, considering materials that may require de-baling and only considering the costs of removing contaminants for those facilities that do so.
- Transportation costs from one facility to another will be captured only at the facility that is incurring the cost.
- If a material is handled at multiple facilities, the cost of handling at each facility will be captured in the total processing costs.
- Most facilities are not self-hauling to end-markets but rather "pay" for this outbound freight in the form of a reduction in the scrap price. For these facilities, we will not capture outbound freight costs; in cases where a facility is utilizing their own trucks or hiring a third-party hauler, we will capture outbound freight.

Thank You

Discussion – Performance Standards
Capture Rates

Commingled Recycling Processing Facility Technical Workgroup
June 13, 2023



Capture Rates

- ORS 459A.955(2) A disposal site permit issued to a commingled recycling processing facility must require the facility to:

  (a) Sort all materials collected from the public so that materials do not become contaminants in other waste streams;

- How were the capture rates created?
  - Data from DEQ's 2009-2010 Outbound Commingled Recycling Study
  - Insight provided by Circular Matters and The Recycling Partnership.
  - Scenario modeling work conducted by Cascadia Consulting Group for the Materials Lists project (i.e., Scenario 24)

- Once available, data from DEQ's 2023 Outbound Commingled Recycling Study will be used to make any necessary updates to the rates.

Capture Rates – Initial (July 1, 2025)

Fiber	Rate
OCC (includes Kraft paper)	**96%**
ONP	**95%**
Other printing and writing paper (includes packaging tissue paper, telephone directories, non-metallized giftwrap, paperback books and molded pulp packaging)	**96%**
Magazines, catalogs and similar glossy paper	**96%**

Capture Rates – Initial (July 1, 2025)

Fiber	Rate
Paperboard	**96%**
Cartons	**78%**
Polycoated cups	**78%**
Paper cans with metal ends (e.g., snack nut and coffee cans)	**80%**

Capture Rates – Initial (July 1, 2025)

Plastic	Rate
PET bottles	**85%**
Other PET bottles and jars (non-deposit and non-beverage)	**85%**
PET tubs – 6 ounces to 2 gallons	**65%**
Other HDPE bottles and jars (non-deposit and non-beverage)	**93%**
HDPE tubs – 6 ounces to 2 gallons (includes Other HDPE packaging & product 6 ounces to 2 gal-not foamed)	**85%**
HDPE tubs & pails – 2 to 5 gallons	**90%**
HDPE flower pots – 4 inches to 2 gallons	**70%**

Capture Rates – Initial (July 1, 2025)

Plastic	Rate
HDPE flower pots greater than 2 gallons	**85%**
Other accepted tubs & pails – 6 ounces to 2 gallons (LDPE)	**85%**
Other PP bottles and jars (non-deposit and non-beverage)	**80%**
PP tubs – 6 ounces to 2 gallons	**85%**
PP tubs & pails – 2 to 5 gallons	**90%**
Other PP packaging & product – 6 ounces to 2 gallons	**85%**
PP flower pots greater than 2 gallons	**85%**

Capture Rates – Initial (July 1, 2025)

Metal	Rate
Deposit and accepted aluminum beverage cans	**90%**
Other aluminum cans accepted at curb	**88%**
Other rigid aluminum accepted at curb	**87%**
Deposit and other steel cans accepted at curb	**93%**
Other steel accepted at curb	**93%**
Other scrap metal (non-ferrous + mixed metal) accepted at curb	**88%**

Capture Rates – Future

Transition Period – Phase-In Date

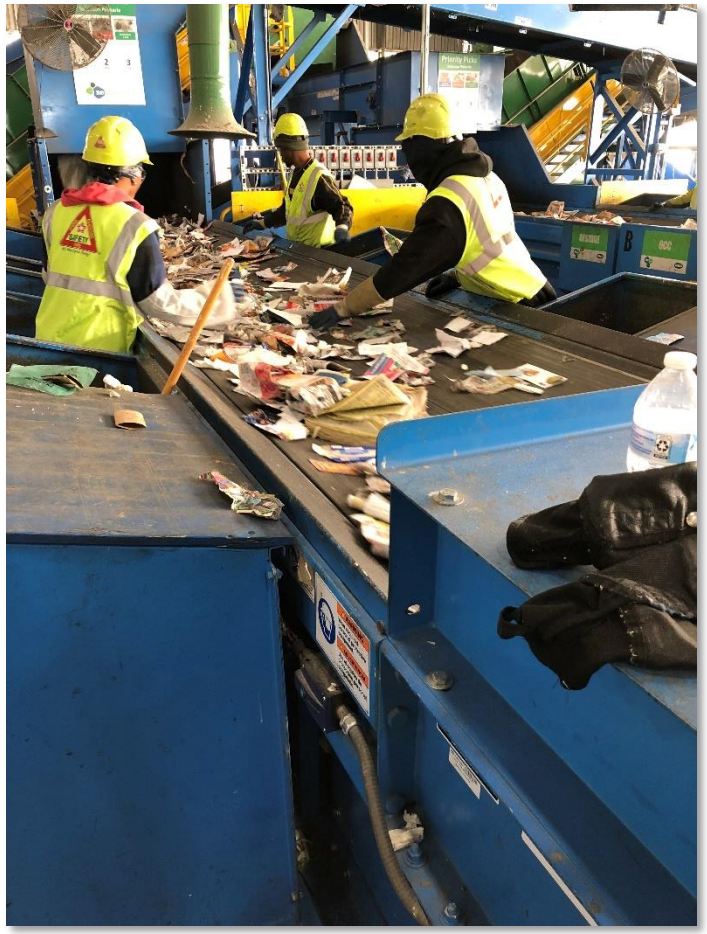
Capture Rates – Future

Transition Period – Phase-In Date

- Held conversations with numerous equipment manufacturers, discussing lead time associated with procurement, permitting, installation, etc., in relation to the TBD phase-in date.

- Equipment manufactures agreed, even when taking into account increased business activity that will come from facilities in CA and CO as well (OR, CO and CA all come online relatively close to each other), 1.5 years is a realistic timeline to have any piece of equipment purchased, installed and ready for operation.

- A phase-in date of January 1, 2027 aligns with the Living Wage and Supportive Benefits requirement, which takes effect the same date.



Pic courtesy of Justin Gast

Capture Rates – Future (Jan 1, 2027)

Fiber	July 1, 2025 Rate	January 1, 2027 Rate
OCC (includes Kraft paper)	**96%**	**97%**
ONP	**95%**	**96%**
Other printing and writing paper (includes packaging tissue paper, telephone directories, non-metallized giftwrap, paperback books and molded pulp packaging)	**96%**	**97%**
Magazines, catalogs and similar glossy paper	**96%**	**97%**

Capture Rates – Future (Jan 1, 2027)

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Paperboard	**96%**	**97%**
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Polycoated cups	**78%**	**88%**
Paper cans with metal ends (e.g., snack nut and coffee cans)	**80%**	**90%**

Capture Rates – Future (Jan 1, 2027)

Plastic	July 1, 2025 Rate	January 1, 2027 Rate
PET bottles	**85%**	**93%**
Other PET bottles and jars (non-deposit and non-beverage)	**85%**	**93%**
PET tubs – 6 ounces to 2 gallons	**65%**	**85%**
Other HDPE bottles and jars (non-deposit and non-beverage)	**93%**	**95%**
HDPE tubs – 6 ounces to 2 gallons (includes Other HDPE packaging & product 6 ounces to 2 gal-not foamed)	**85%**	**94%**
HDPE tubs & pails – 2 to 5 gallons	**90%**	**93%**
HDPE flower pots – 4 inches to 2 gallons	**70%**	**89%**

Capture Rates – Future (Jan 1, 2027)

Plastic	July 1, 2025 Rate	January 1, 2027 Rate
HDPE flower pots greater than 2 gallons	**85%**	**92%**
Other accepted tubs & pails – 6 ounces to 2 gallons (LDPE)	**85%**	**92%**
Other PP bottles and jars (non-deposit and non-beverage)	**80%**	**88%**
PP tubs – 6 ounces to 2 gallons	**85%**	**92%**
PP tubs & pails – 2 to 5 gallons	**90%**	**93%**
Other PP packaging & product – 6 ounces to 2 gallons	**85%**	**92%**
PP flower pots greater than 2 gallons	**85%**	**92%**

Capture Rates – Future (Jan 1, 2027)

Metal	July 1, 2025 Rate	January 1, 2027 Rate
Deposit and accepted aluminum beverage cans	**90%**	**96%**
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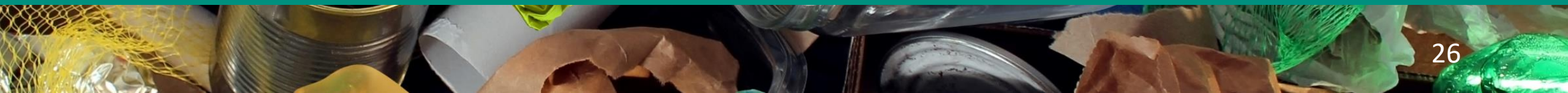
Deposit and other steel cans accepted at curb	**93%**	**98%**
Other steel accepted at curb	**93%**	**98%**
Other scrap metal (non-ferrous + mixed metal) accepted at curb	**88%**	**98%**

Break

The meeting will resume at approximately 12:55 p.m.



Discussion – Performance Standards Contamination Rates

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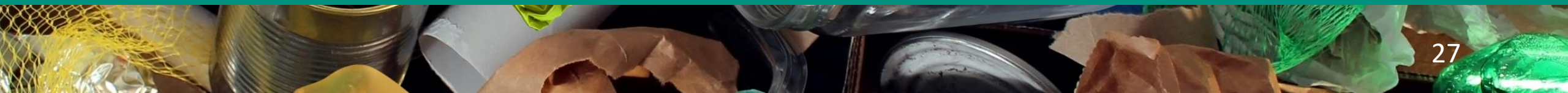

Contamination Rates

- ORS 459A.955(2) A disposal site permit issued to a commingled recycling processing facility must require the facility to:

  (c) Manage contaminants to avoid impacts on other waste streams or facilities;

- Reached out to roughly two dozen major paper and plastics end markets throughout North America, asking them:
  - What is the max contamination percentage their facility(ies) will accept in inbound bales?
  - What's their realistic, desired contamination rate for inbound material?

Pic courtesy of Justin Gast

Contamination Rates

Pic courtesy of Justin Gast

- Most end markets noted contamination standards recognized by ISRI/APR bale specs.
  - “Creating a standard that is cleaner than ISRI at this point may not bring better value than the cost involved.”
  - “The MixPaper from MRFs periodically exceeds our total prohibitive and outthrow limits of 5%. MRFs really do want to sort well enough to keep us as happy customers, but 5% is a LARGE number.”
  - “We accept a wide range of contamination and can process the material…our facilities just pay less for it.”

- Crowe will do scenario modeling that puts an estimated cost to reaching the outbound contamination standards (as noted in Appendix D – Anticipated Program Costs doc).

Contamination Rates

- Internal conversations around standards for addressing outbound bale contamination:
  - ISRI + (recognition and strengthening of current ISRI specs)
  - Only allowing Grade A plastics bales to be created/marketed (standards would not pertain to materials not proposed for inclusion on USCL)
  - Establish contamination rates per bale grade created
    - What about non-ISRI recognized bales being created specifically for certain buyers?

- DISCUSSION: Thoughts from the group as we consider contamination standards for outbound bales.

Pic courtesy of Justin Gast

Public Input

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