



Oregon Recycling Modernization Act Commingled Recycling Processing Facility Technical Workgroup

Meeting #7

Oct. 26, 2023



Agenda

- Project updates
- Crowe LLP – Preliminary Study Results, Processor Commodity Risk Fee and Contamination Management Fee
- Discussion – Processor Commodity Risk Fee, invoicing
- Public Input
- Adjourn

Project updates

- Draft proposed rule concepts for the CRPF permit program, CRPF obligations to responsible end markets and living wage and supportive benefits to be heard by RAC on November 1st.
- Inbound contamination evaluation
 - Participants needed to test feasibility!
 - Next training session: Wednesday, Nov. 15, 8am-noon
 - Facilities receive \$300 per participant
 - To register, email arianne.sperry@deq.oregon.gov



Pic courtesy of Justin Gast



Smart decisions. Lasting value.™

Preliminary Study Results: Processor Commodity Risk Fee Contamination Management Fee

RMA Commingled Recycling Processing Facility Technical Workgroup

October 26, 2023

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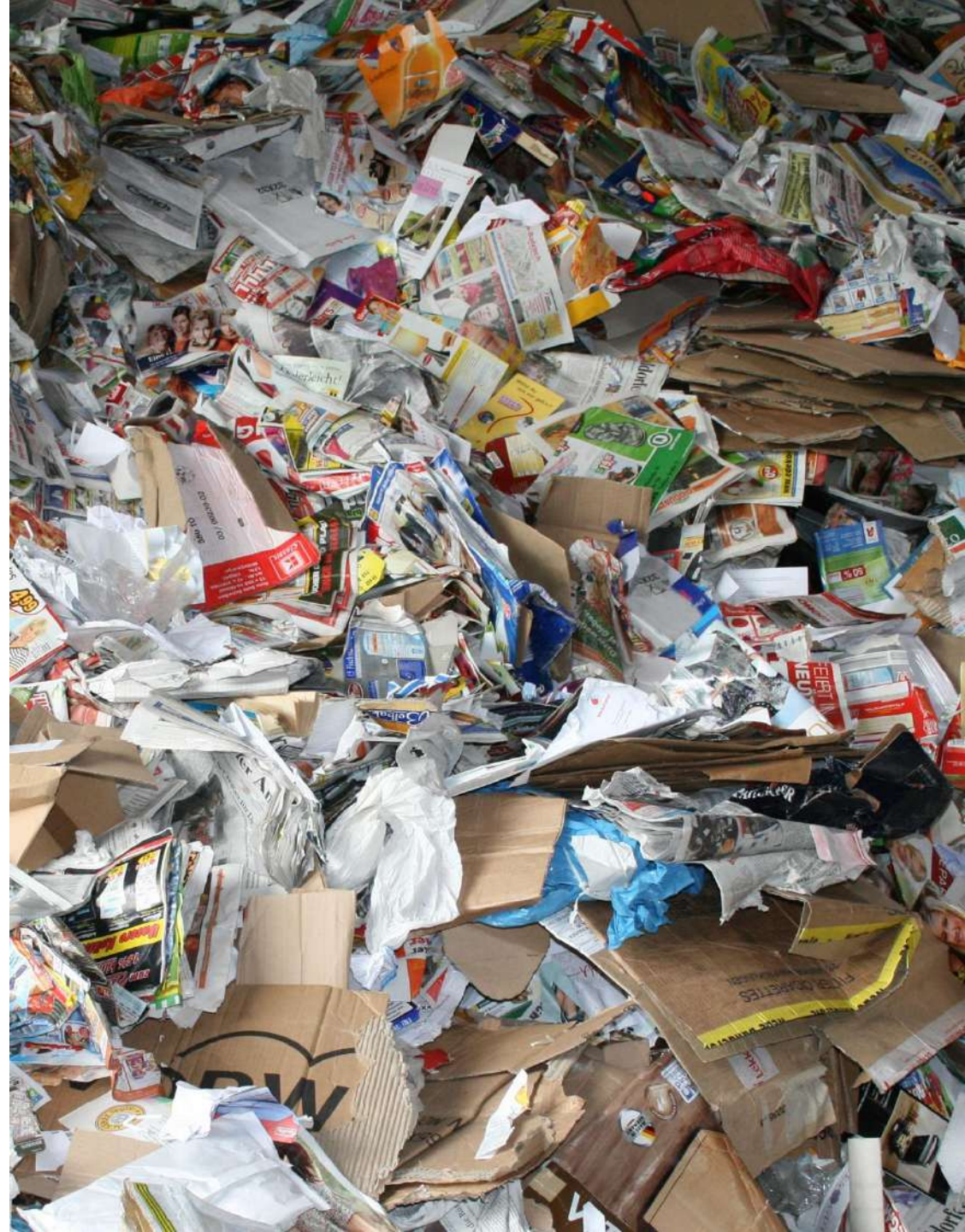
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Agenda

- 1 Study and Methodology Overview
- 2 Preliminary Results
- 3 Example Calculation of the PCRf
- 4 Average Market Pricing Data and Methodology
- 5 Anticipated Program Costs
- 6 Next Steps
- 7 Questions



Study and Methodology Overview

PCRF and CMF

- **Processor Commodity Risk Fee (ORS 459A.923)** – to be paid by producer responsibility organizations (PROs) to commingled recycling processing facilities to ensure that producers share in the costs of fully processing commingled recyclables that are covered products and to allow local governments to reduce the financial impacts on rate payers.
- **Contamination Management Fee (ORS 459A.920)** – to be paid by PROs to compensate facilities for the costs of removing and disposing of covered products that are contaminants (e.g., that are not identified as accepted in commingled programs for recycling purposes).

Study and Methodology Overview

Preliminary Study Results for Processor Commodity Risk Fee (PCRF) and Contamination Management Fee (CMF)

- **Initial calculations** – detail the components of the PCRF and CMF, alongside initial cost per ton values for fees destined for Commingled Recyclable Processing Facilities (CRPFs).
- **Work in progress** – several outstanding items pending as rulemaking continues and more data becomes available. Preliminary results are based on extensive data compilation and analysis, sourced from interviews, research, and numerous facility-provided documents.
- **Ready for refinement** – facility cost models are set for further refinement and sensitivity analyses.

Study and Methodology Timeline

- **Project Initiation** – Crowe was engaged by Oregon Department of Environmental Quality (DEQ) in Nov 2022 to conduct the PCRFB and CMF fee study.
- **Study Design (Nov–May)** – Development of a study blueprint detailing data collection and cost calculation methods, refined with DEQ and the Commingled Recycling Processing Facilities Technical Workgroup's input.
- **Spring 2023 Outreach** – Initial calls with facilities, creation of Excel cost models.
- **Site Visits (June–Early July)** – Conducted facility site visits for hands-on data gathering.
- **Continuous Engagement (Jun–Dec)** – Ongoing discussions with CRPFs to obtain program data such as financial, labor, depreciation, and operational data.
- **Extensive Analysis (Jun–Dec)** – Rigorous data gathering, analysis, and review process, leading to the preliminary results documented in this report.



Information and Calculations Included in Draft

- Initial calculations of the following:
 - Processing costs eligible for the PCRFB
 - Rate of financial return/profit for PCRFB
 - Living wage relating to Anticipated Program Costs
 - Cost of contamination and CMF
 - Category and material-specific eligible processing costs
- Market pricing methodology and initial calculation.
- Overview of current CRPF technologies.

Information and Calculations to be Included in Future Drafts (1/2)

- Use of updated data from DEQ's 2023 Inbound and Outbound Commingled Recycling studies (Late October).
- Refinement Tasks:
 - 2022 recyclable tonnage data
 - Market pricing methodology
 - Eligible processing costs
 - Contamination management fee
 - Incorporate new facility data

Information and Calculations to be Included in Future Drafts (2/2)

- Calculate anticipated program costs:
 - Benefits, permit requirements, equipment analysis
 - CRPF interviews (Early November)
- Sensitivity analyses for PCRFB and CMFB with varied fee assumptions.
- Determine method to align tonnage totals for phase-ins: July 2025, Jan. 2027, Jan. 2028.



Field Work, Follow-up Discussions, and Data Gathering

- **Visits Conducted:** 12 on-site visits to CRPF facilities during June and July 2023.
- **Procedure:** Initial phone interviews followed by 2 to 8-hour on-site tours, engaging with site management, operations, and financial teams.
- **Follow-Up:** Virtual follow-up interviews for data clarification, engaging in an iterative data gathering process.



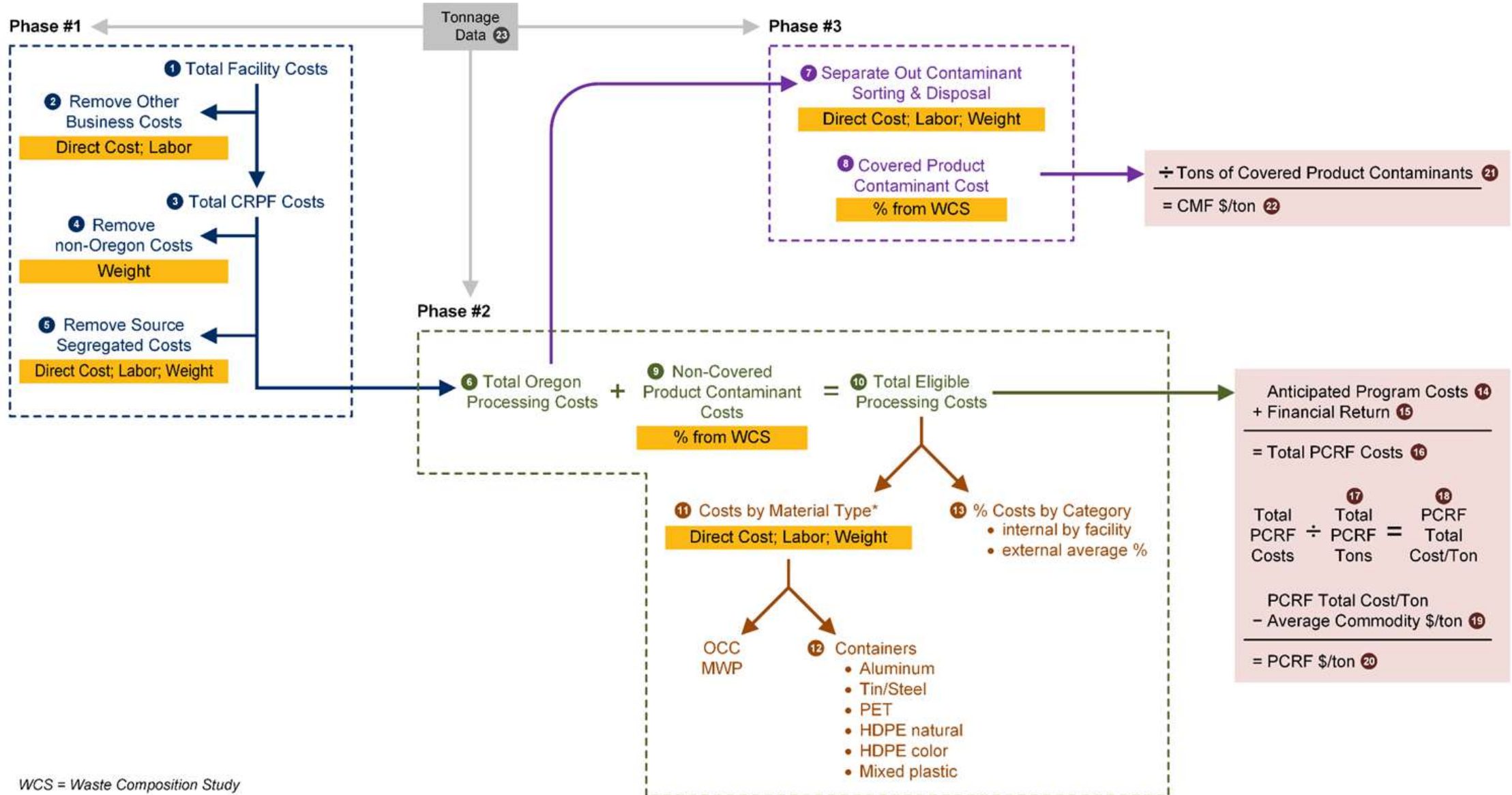
Cost Allocation Approach (1/2)

- **Allocation Strategies:**
 - Multiple allocation methods employed to best reflect facility operations.
 - Potential updates with 2023 Inbound and Outbound Commingled Recycling studies data.
- **Key Allocation Methods:**
 - **Direct Costs:** Line-item costs directly allocated to relevant categories.
 - **Labor Hours:** Utilized to allocate employee time and indirect costs.
 - **Tonnage:** Facility-specific tonnage data for cost allocation.

Cost Allocation Approach (2/2)

- **2023 Recycling Studies & Contamination Rates:**
 - Employed data to separate costs of covered and non-covered contaminants.
 - Oregon-specific contamination rates used for identifying residual tonnage.
- **Cost Classification & Allocation:**
 - Removed costs unrelated to processing commingled recyclables.
 - Allocated costs for other business activities, non-Oregon activities, and source segregated activities typically using direct costs, labor, or relative tonnage data.
 - Material-specific costs identified using a mix of labor, direct costing, and tonnage data.
 - Distinguished between covered and non-covered contaminants using inbound study results.

Models and Cost Calculations



WCS = Waste Composition Study

(DEQ's 2023 Inbound and Outbound Commingled Recycling studies)

* Costs by material will be approximate due to limited tonnage data.

Study and Methodology Overview – Questions?



Preliminary Results

Total Processing and Contamination Management Costs

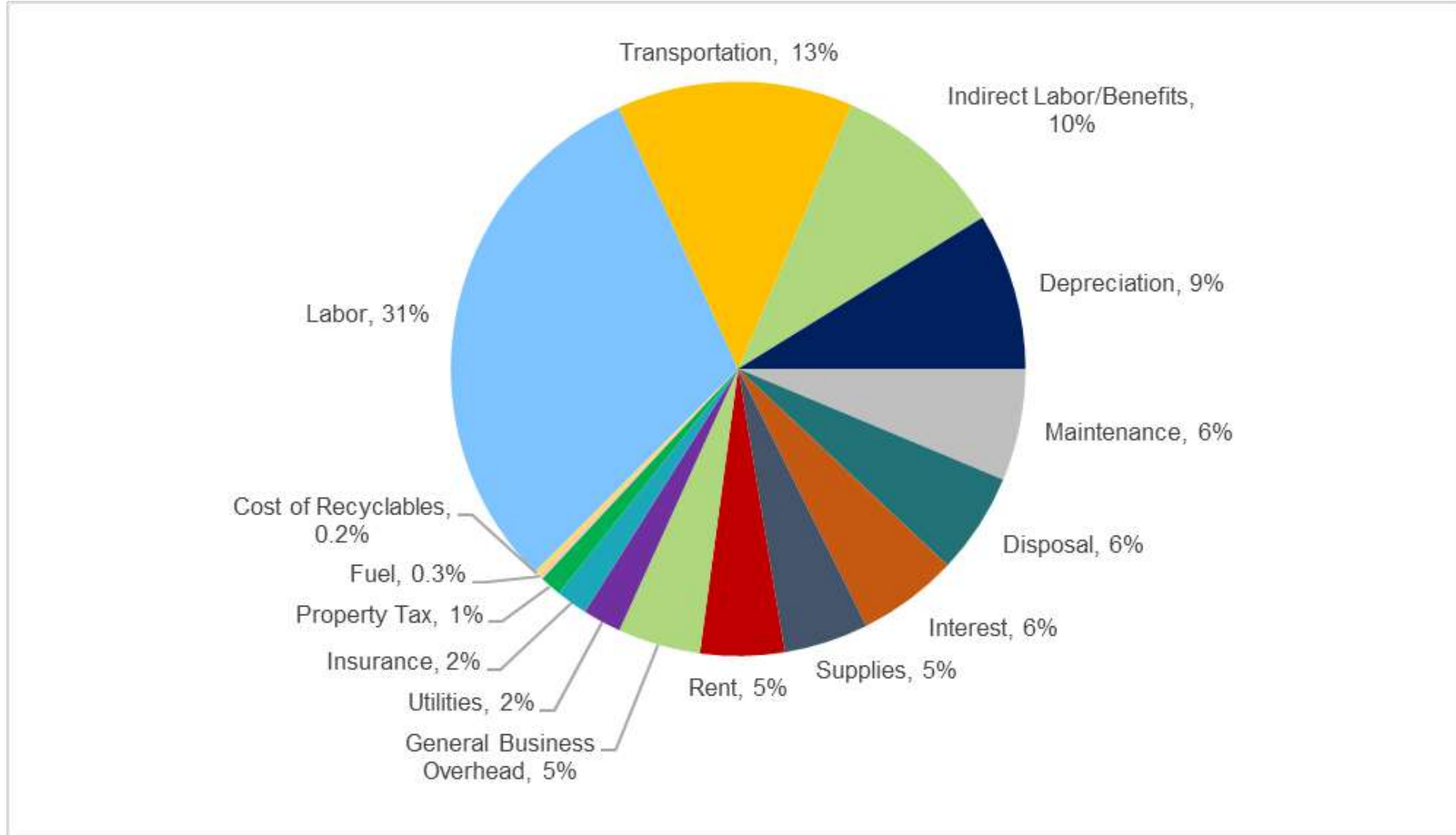
PCRF Cost

- Initial eligible processing cost: **\$34,478,294**
- Initial actual cost per ton: **\$121**
(based on 2022 tons: 285,542 tons processed, which includes 19,191 tons of non-covered product contaminants removed and disposed)

CMF Cost

- Initial contamination removal cost: **\$2,973,473**
- Initial actual cost per ton: **\$191**
(based on 2022 tons: 15,575 tons of covered product contaminants removed and disposed)

PCRFR Costs by Category



Profit / Reasonable Financial Return

Legal Basis: ORS459A.923(1)(c)(A) of RMA allows profit as an eligible processing cost.

Methodology: Analyzed profitability data from various sources: other state programs, public/private companies, regulated profit levels, and surveyed facilities.

Findings:

- Profit levels range from 7.2% to 19.7% across different sectors and regions.
- Surveyed recycling facilities' profit: 10.4% (EBT), 12.4% (EBIT).

Recommendations:

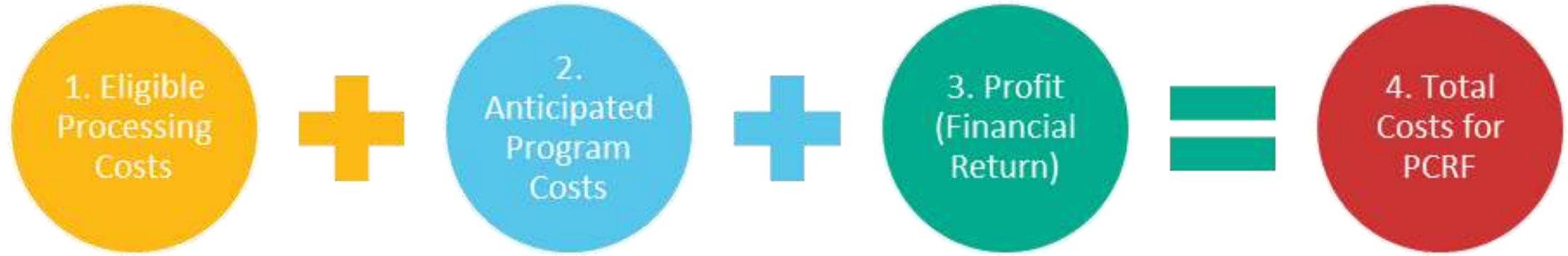
- Suggest 11% financial return (EBT) for setting the PCRf.
- Recommend annual adjustments to PCRf and CMF.
- Advise that DEQ review in 5 years for continued reasonability.

Preliminary Results – Questions?



Example Calculation of the PCRFB

Example Calculation of the PCRF Total Costs



Example Calculation of the PCRFB

- Recommended profit/financial return is 11%
- Hypothetical additional program costs are set at \$100 per ton (mock only)
- **PCRFB is highly sensitive to market prices:** an increase in base OCC market price to \$106 per ton (avg price Sep 2021-Aug 2022) lowers the PCRFB from \$121 to \$110 per ton.

Category	Amount	Result
Total Eligible Processing Cost	\$34,478,294	
Profit / Financial Return on Processing Costs	× 11%	= \$38,270,906
Total Anticipated Program Cost (MOCK ONLY)	\$100 per ton × 285,542 tons*	= \$28,554,200
Profit / Financial Return on Anticipated Program Costs	× 11%	= \$31,695,162
Sum of Processing Costs, Anticipated Costs and Financial Return	\$38,270,906 + \$31,695,162	= \$69,966,068
Total Processed Cost per Ton	285,542 tons*	= \$245.03 per ton
Oregon Average Commodity Price		– \$67.49 per ton
PCRFB (MOCK ONLY)		= \$177.54 per ton

*2022 tons used for initial PCRFB calculations

Example Calculations of the PCRFB – Questions?



Average Market Pricing Data and Methodology



Average Market Pricing Data and Methodology

- Crowe utilized 2022 price data from Oregon CRPFs and published scrap market pricing data for initial pricing methodology and calculations.
- Made assumptions and identified issues that need refinement (e.g., found notable differences in monthly Oregon prices compared to annual averages)
- Emphasis on understanding the price variations in monthly data for refining the average market pricing methodology.

Average Market Pricing Data and Methodology (1/3)

Statutory Basis:

- ORS 459A.923(2)(h) of the RMA mandates calculating the processor commodity risk fee based on eligible processing costs minus average commodity value of recyclables.
- DEQ to establish and periodically update methods for determining average commodity value.

Commodity Value Calculation:

- Average composition of materials in each mix, multiplied by published market values.
- Sources of published market values and adjustments to reflect Oregon conditions.

Data Utilized:

- DEQ's 2023 Inbound and Outbound Commingled Recycling studies.
- 2022 tonnage data from facility reports to DEQ.
- Internal data from each CRPF.

Average Market Pricing Data and Methodology (2/3)

Initial Analysis (by Crowe):

- Tonnage data based on DEQ reports and data reported by CRPFs.
- Addressing discrepancies in data, refining tonnage data with further study results.
- Monthly material pricing reports from CRPFs analyzed for various commodities.

Market Pricing Data Sources: Blended market pricing data for OCC and mixed paper.

Selected Sources:

- RecyclingMarkets.net (SMP): Weekly price reports, subscription-based.
- Waste Paper Composite Index: Tracks paper recycling markets, monthly subscription.

Average Market Pricing Data and Methodology (3/3)

Other Evaluated Sources:

- Fastmarkets: Global pricing data, high cost, limited regional data.
- ScrapIndex.com: Broader range of recyclables, higher cost, no regional data.
- Secondary Commodity Composite Index: Blended index of scrap materials, subscription-based.
- Resource Recycling: Monthly pricing information summarized by SMP staff.
- Plastics News: Pricing for flakes and pellets, annual subscription.

Recommendations (by Crowe):

- Further analysis with additional study results and discussions with DEQ.
- Evaluating better published pricing sources aligned closely with Oregon CRPFs.
- Revisit methodology for including scrap metal in calculations.

Overview of Initial Oregon-Specific Average Commodity Value (ACV) Differential (1/2)

1. Data Compilation:

- 2022 scrap market data for selected commodities.
- Monthly scrap data from CRPFs.
- DEQ 2022 material-specific tonnage data.

2. Tonnage Analysis:

- Determine percent of total for each facility, by commodity.
- Utilize resin-specific split for plastics tonnage.

3. Market Price Analysis:

- Determine market data commodity price.
- Calculate weighted average market data commodity price.

4. Oregon Price Analysis:

- Calculate annual Oregon-specific differential between market and Oregon price for 2022.

5. Price Adjustment and Pro-rating:

- Apply Oregon adjustment factor to current source market price for each commodity.
- Multiply the percent of outbound tons by the Oregon price for pro-rated tonnage price.

6. Final Calculation:

- Sum pro-rated tonnage prices for Oregon specific price per ton.
- Calculate overall differential between Oregon ACV and market data ACV (2.77%).

Overview of Initial Oregon-Specific Average Commodity Value (ACV) Differential (2/2)

Material	Total Outbound Tons (2022)	Percent of Tons (2022)	Source Market Price August 2023	Weighted Average Market Price	Adjustment Between Market and Average Oregon Price	Calculated Oregon Price	Ton Price Share (Percent of Tons × Oregon Price)	Source Market Price Description/Calculation
Cardboard (OCC)	140,319	54.3%	\$37.50	20.35	15.0%	\$43.14	\$23.41	Blended average between recyclingmarkets.net* OCC PS11 and Waste Composite baled OCC.
Paper Fiber (FIB)	92,645	35.8%	\$49.32	17.67	2.9%	\$50.73	\$18.18	Blended average between recyclingmarkets.net PS54 and PS56 and Waste Composite baled mixed paper and baled sorted office papers.
PET	9,170	3.5%	\$130.00	4.61	25.4%	\$162.99	\$5.78	Recyclingmarkets.net baled PET picked up.
HDPE Natural	3,413	1.3%	\$498.33	6.58	4.0%	\$518.27	\$6.84	Recyclingmarkets.net baled HDPE Natural picked up.
HDPE Color	5,474	2.1%	\$91.67	1.94	35.8%	\$124.46	\$2.63	Recyclingmarkets.net baled HDPE Color picked up.
Mixed Plastic	1,193	0.5%	-\$36.67	-0.17	-152.2%	\$19.13	\$0.09	Recyclingmarkets.net baled #3-#7 baled, picked up.
Tin/Steel Cans (TC)	4,051	1.6%	\$225.00	3.53	-1.4%	\$221.94	\$3.48	Recyclingmarkets.net steel cans, sorted, baled, picked up.
Aluminum (AL)	2,310	0.9%	\$1,250.00	11.16	-36.6%	\$792.36	\$7.08	Recyclingmarkets.net aluminum cans, sorted, baled, picked up.
Total	258,575	100.0%		\$65.67	2.77%		\$67.49	

Average Market Pricing Data and Methodology – Questions?



Anticipated Program Costs



Anticipated Program Costs – Overview

- Anticipated program costs is our primary outstanding component of the Fee Study, which relies on key information from DEQ's 2023 Inbound & Outbound Commingled Recycling studies and requirements still pending or preliminary.
- Future discussions will leverage information provided during the initial Crowe site visits and focused interviews in early November.
- Three crucial areas of anticipated program-related costs: administrative requirements, equipment and capital investments, and living wage and supportive benefits.

Anticipated Program Costs – Overview

Preliminary Analysis:

- Conducted facility visits to discuss anticipated costs and program requirements.
- Initial plans regarding changes for program requirements gathered.
- Further discussions planned for the fall to refine cost estimations.

Cost Categories:

- Administrative and reporting for permit compliance: Monthly reports to DEQ, invoicing to PROs, assessments and various reporting needs.
- Operational changes for enhanced sorting: Facility upgrades for specific material sorting.
- Quality enhancements to meet permit requirements: Re-running materials, staffing adjustments, equipment upgrades, and capacity expansions.

Anticipated Program Costs – Overview

Compliance Cost Estimations:

- Meeting proposed contamination standards of 5% by 2025 and TBD by 2028.
- Achieving capture rate standards between 70% and 96% (varies by material).

Disposition and Equipment Costs:

- Potential changes in material disposition to adhere to “responsible end markets” standards.
- System-wide equipment costs, exploring high-tech, low-tech, and Future System upgrade scenarios.

Living Wage and Benefits (Effective Jan 1, 2027):

- Wage increases based on current and potential future employee counts.
- Enhanced benefits, especially for contract sort line workers.
- Addressing wage compression issues to be expanded in the next draft.

Considerations by CRPF Representatives

Contamination & Material Sorting:

- Lower contamination rate targets may necessitate re-running material, additional labor, and/or slowed sort line.
- Cost concerns for sorting cartons; suggestion for depot collection.
- Preference for receiving partially sorted material loose to reduce contamination.

Equipment & Technology:

- Robots and optical equipment seen as labor-reducing, not eliminating.
- One robot/optical sorter could replace at least two people; transition driven by staffing challenges.
- Need for stronger magnets to efficiently capture metal cans.
- Need for additional maintenance to support facilities.
- Licensing for AI software.
- Impact on other cost categories, for example interest for equipment loans.



Considerations by CRPF Representatives (cont'd)

Labor & Wage:

- Significant concerns on wage compression impacting positions of higher responsibility.
- Current and future challenges in filling vacant positions.
- Greater wage compression impacts for facilities with multiple business units and operations in other nearby states.

Reporting & Compliance:

- Cost concerns on data tracking for compliance with capture and contamination rates.
- Monthly reporting could necessitate up to an additional Full-Time Equivalent (FTE) personnel for RMA-related reporting.

Specific Material Concerns:

- Low value of molded pulp packaging and issues caused by scrap metal on the sorting line.

Administrative Costs

Fees and Permits:

- Paying permit fees associated with the new permit for Oregon CRPFs.
- Paying certification fees associated with out-of-state CRPF certification.

Compliance and Inspections:

- Participating in inspections, assessments, and demonstrating compliance with capture rates and outbound contamination rate performance standards.
- Demonstrating compliance with responsible end market requirements, including accurately reporting the final end market of materials.
- Evaluating and reporting on inbound material quality and contamination.

Reporting Requirements:

- Preparing and submitting monthly tonnage reports to DEQ and PROs.
- Reporting associated with living wage and supportive benefit requirements.

Summary of CRPF Sort Line Equipment

Equipment	Number in Operation	Notes
AI Vision System*	X	Potential for additional systems to increase quality and automating assessment
OCC Screen	9	Existing in most facilities
Paper Screens / Polishing Screens	18	Existing in all facilities; more screens could be added
Glass Screen/Nihot	3	Limited use in Oregon
Unders Recovery System	1	Potential for additional systems to increase capture rates
OCC and Paper Optical Sorters	4	Potential for additional systems to increase quality
Paper Robots	6	Potential for additional systems to increase quality and capture rates
Magnet	7	Potential for additional and/or stronger magnets
Eddy Current	5	Potential for additional if more container lines are added
Container Optical Sorters	3	Potential for additional systems to increase quality and capture rates and to sort additional plastics
Container Robots	5	Potential for additional systems to increase quality and capture rates and to sort additional plastics
Baler	16	Existing in all facilities; several have been upgraded in recent years

**Multiple facilities are in the process of obtaining an AI system*

Oregon Commingled Recyclables Material Flow

Material Sorting Facilities:

- “Full Sort” Facilities: Sort and remove fiber and containers, handles 90% of Oregon’s commingled recyclables.
- “Partial Sort” Facilities: Remove only OCC and/or paper fiber, handles 10% of Oregon's commingled recyclables, with 25% of tonnage sent to full sort facilities for further processing.

Technology Utilization:

- Low-tech Facilities: Lack optical sorters/robots, processing 40% of Oregon’s recyclables.
- High-tech Facilities: Equipped with optical sorters/robots, processing 60% of Oregon’s recyclables.
- There is not a clear alignment between tech level and sort type.

Upcoming Compliance Goals:

- Outgoing Bale Contamination Rates: Target of 5% by July 1, 2025, and TBD by January 1, 2028.
- Initial Capture Rates: Range between 70% (smaller HDPE and PP flowerpots) to 96% for OCC/Printed Paper.

Proposed Capture Rates and Contamination Rates

Proposed Standards – Capture Rates

Material	Initial (July 1, 2025)	Future (January 1, 2028)
OCC (includes Kraft paper)	96%	97%
Printing and writing paper (includes ONP, magazines, etc.)	96%	97%
Cartons	78%	88%
Polycoated cups	78%	88%
PET bottles and containers (6 ounces to 2 gallons)	85%	93%
HDPE bottles and containers (6 ounces to 2 gallons)	88%	95%
HDPE and PP tubs & pails (2 to 5 gallons) and PP bottles and containers (6 ounces to 2 gallons)	83%	93%
HDPE and PP flower pots (4 inches to 2 gallons)	70%	89%
HDPE and PP flower pots (>2 gallons)	85%	92%
Accepted aluminum (beverage and food)	88%	96%
Deposit and other steel cans accepted at curb	93%	98%
Other scrap metal (non-ferrous + mixed metal) accepted at curb	88%	98%

Proposed Standards – Contamination Rates

Material	Initial (July 1, 2025)	Future (January 1, 2028)
Overall, for all materials	5%	TBD

Equipment Cost Example Utilizing RMA Modeling Study

Equipment	Number	Per Unit Cost	Total System Cost (One Time)
Fiber Line Upgrade – Screens	6	\$527,700	\$3,166,200
Fiber Line Upgrade – Robots	3	\$407,600	\$1,222,800
Fiber Line Upgrade – Optical Sorters	3	\$1,400,000	\$4,200,000
Metal Line Upgrade – Magnets	4	\$75,000	\$300,000
Metal Line Upgrade – Eddy Current	1	\$90,000	\$90,000
Metal Line Upgrade – Container Optical Sorters	3	\$869,000	\$2,607,000
Metal Line Upgrade – Container Robots	3	\$407,600	\$1,222,800
PET Thermoform Upgrade	1	\$869,000	\$869,000
Unders Recovery Systems	6	\$650,000	\$3,900,000
AI Visioning Systems (for QC)	8	\$106,000	\$848,000
Container Sort Line	1	\$3,178,000	\$3,178,000
Total Cost (One Time)			\$21,603,800

Source: RMA Modeling Study prepared by the Cascadia Consulting Group, Bell & Associates, and Circular Matters. March 2023.

Living Wage and Supportive Benefits Costs

#	State	County	1 Working Adult, 0 Dependents at 35%		2 Working Adults, 2 Dependents at 65%		Combined Wage	
			Dec 2022	Jan 2027	Dec 2022	Jan 2027	Dec 2022	Jan 2027
1	Oregon	Washington	\$21.85	\$24.91	\$28.09	\$32.03	\$25.91	\$29.54
2	Oregon	Multnomah	21.85	24.91	28.09	32.03	25.91	29.54
3	Oregon	Clackamas	21.85	24.91	28.09	32.03	25.91	29.54
4	Oregon	Marion	17.56	20.02	24.82	28.30	22.28	25.40
5	Oregon	Lane	17.46	19.91	25.89	29.52	22.94	26.16
6	Oregon	Klamath	15.75	17.96	24.12	27.50	21.19	24.16
7	California	Humboldt	16.41	18.71	25.76	29.37	22.49	25.64
8	Washington	Clark	20.94	23.88	26.98	30.76	24.87	28.35

Living Wage and Supportive Benefits Costs

- Excludes proportional benefits increases
- Same/similar impact to CMF costs
- Greater impact on facilities with higher labor costs as a percentage of total costs and lower hourly rates.
- Facilities' varied management and operational structures may see a 'ripple effect' through pay structures beyond CRPF operations.

Category	PCRF Costs	PCRF Tons (2022)	PCRF Cost per Ton
PCRF Costs	\$34,478,294	285,542	\$121
PCRF Costs with Living Wage Adjustment	\$38,003,405	285,542	\$133
Difference	\$3,525,111	–	\$12 per ton
% Difference			10% higher costs

Note: includes an adjustment to workers that are above the living wage equal to the average living wage differential of workers paid below the living wage level. For our updated results, we will re-calculate the living wage excluding this additional adjustment.

PCRPF and CMF Phase-in Period

Effective Date Range	CRPF Requirement	Anticipated PCRPF Level	Anticipated CMF Level
July 1, 2025, to December 31, 2026	Initial performance standards	\$	\$
January 1, 2027, to December 31, 2027	Living Wage and Supportive Benefits	\$\$	\$
January 1, 2028, and on	Living Wage and Supportive Benefits + Higher performance standards	\$\$\$	\$

Anticipated Program Costs – Questions?



Next Steps

PCRf Results Status

PCRf Cost Components	Status	Results
Actual Costs		
PCRf Costs (2022)	Near Complete / Refining	\$34,478,294
PCRf Tons (2022)	Near Complete / Refining	285,542 tons
PCRf Actual Cost per Ton		\$121 per ton
Anticipated Program Costs		
Living Wage Costs	Refining	\$V
Supportive Benefits Costs	In Process	\$W
Equipment Costs	In Process	\$X
Admin Costs	In Process	\$Y
Other Operational Costs	In Process	\$Z
PCRf Anticipated Program Cost per Ton		\$XX
Total PCRf Cost per Ton		\$ZZ

Note: On July 1, 2025, the PCRf and CMF will be based on estimated 2025 tons

CMF Results Status

CMF Cost Components	Status	Results
Actual Costs		
CMF Costs (2022)	Near Complete / Refining	\$2,973,473
CMF Tons (2022)	Near Complete / Refining	15,575 tons
CMF Actual Cost per Ton		\$191 per ton

Note: On July 1, 2025, the PCRf and CMF will be based on estimated 2025 tons

Next Steps (1/3)

Administrative and Reporting Assessment:

- Evaluate permit administration and reporting requisites, including staffing, software systems, and measuring/reporting of capture and contamination rates.
- Assess permit and certification fees for CRPF operation.

Accepting and Sorting New Materials:

- Explore facility plans for sorting new materials like cartons and specific plastic containers.
- Assess varied approaches: additional sort line employees, storage bunkers, equipment, or material transportation to other CRPFs.

Meeting Performance Standards: Identify facility plans for additional equipment like robots, optical sorters, AI vision systems to meet specified capture and contamination rates by July 1, 2025, and January 1, 2028.

Operational Changes for RMA Compliance: Explore other operational adjustments under consideration to meet RMA requisites and the associated cost implications.

Next Steps (2/3)

- **Living Wage Requirement Assessment:** Review initial living wage calculations per facility, discussing facility responses and decisions on staffing versus equipment purchases.
- **Supportive Benefits Requirement Assessment:** Determine extra costs associated with supportive benefits based on baseline benefit data obtained earlier, to meet future benefit needs.
- **Documentation and Rationale:** Aim to obtain supporting documents and rationales for cited approaches and costs from CRPF representatives.
- **Research on Equipment Procurement:** Conduct interviews with equipment manufacturers and secondary research to inform program cost calculations, leveraging data from initial facility visits.

Next Steps (3/3)

- **Cost Estimation and Categorization:** Compile anticipated program costs, categorizing into four key areas: administrative requirements, equipment and capital investments, operational changes, and living wage and supportive benefits.
- **Sensitivity Analyses and Scenario Identification:** Conduct analyses to provide a range of anticipated program costs across various scenarios based on research and facility discussions, aiding in better understanding of the scale and scope of facility responses.
- **Contamination Removal Clarification:** Explore labor and other costs associated with different types of contaminants for potential refinement of CMF.

Follow Up Schedule

A quick turn around is needed to meet the required timeline; below is a schedule of immediate Crowe follow-up activities:

- **October 31st** – DEQ to provide facility-specific capture rates and contamination rates.
- **November 2nd to 10th** – Conduct follow up calls with facilities focused on anticipated program costs, we will be requesting additional information from facilities.
- **November 13th to 17th** – Obtain new/updated facility data. Conduct additional follow up calls as needed with facilities, employment agencies, and/or equipment manufacturers.
- **November 20th to 30th** – Crowe to conduct additional analysis and generate updated results.
- **December 1st to 12th** – Crowe to develop updated PCRf and CMF study report.



Anticipated Operational Changes

Capacity and Material Acceptance

The Uniform Statewide Collection List (USCL) will include materials that are currently not being marketed. Starting July 2025, facilities can decide whether it makes sense for them to market additional materials by expanding sorting capabilities and potentially capacity. A facility will likely need to undergo a series of changes to process additional material, and the extent to which a facility would need to change would heavily depend on the material(s) being added.

Meeting Performance Standards

By comparing the capture rates and contamination rates as measured by DEQ and the initial performance standards starting July 1, 2025 (e.g., 5% contamination, 96% OCC), and higher performance standards starting January 1, 2028 (e.g., OCC 97%), facilities can anticipate what they will need to meet those standards given what is known today. Making changes to meet those requirements could mean a combination of adjusting labor needs and/or adding or upgrading equipment components or systems.



Capacity and Material Acceptance

Based on whether your facility will market new materials, the material(s) being added will drive operational changes such as potential changes to disposal patterns, equipment needs, labor needs, and capacity and throughput requirements.

1. New materials – What material(s) do you plan on adding?
2. Overall changes – What overall operational changes do you plan on making?
3. Disposal costs – How much more disposal to achieve the required quality (e.g., 5%)?
4. Equipment changes – What types and the number of additional equipment is needed?
5. Labor changes – Planned increases or decreases in staff?
6. Capacity and throughput – Will you adjust either in response to new requirements?

Meeting Performance Standards – Equipment Changes

The gap (if any) between your facility's performance and the initial or future performance standards will determine the extent in which sort line changes need to be made. The larger the gap, the more changes and the higher anticipated program costs. The smaller the gap, the less changes and the lower anticipated program costs.

1. Upgrading and/or adding equipment – What components or systems? What will it take to install, are there other components that need be replaced?
2. Other related equipment costs – Understand costs associated with equipment such as permits, electricity costs, maintenance, licensing, installation (if not in quotes), interest, expected equipment life (for depreciation purposes).
3. Support for anticipated equipment costs – Provide invoices, purchase orders, or quotes for equipment needs that includes component/system and installation pricing and specifications such as expected performance and material specificity.
4. Internal calculations – Provide internal modeling and calculations to meet the requirements.



Meeting Performance Standards – Labor Changes

Meeting performance standards could mean adding sort line workers to increase manual sorting or reducing sort line workers due to automation equipment such as robotic arms. Adding equipment could also require adding workers with specialized skills or certifications to operate or maintain the equipment.

1. Will your facility be adding labor (sorters, equipment operators, technicians, mechanics) – How many and what types? Additional shift(s) needed?
2. Will your facility be reducing labor (due to automation) – how many and what types? Reducing an employee shift or two?
3. How will labor changes influence use of contract labor?
4. Have you obtained information from labor contractors on impacts of the supportive benefits requirements?



Questions?

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Break

The meeting will resume at approximately 12:05 p.m.





Discussion – Processor Commodity Risk Fee Invoicing

Commingled Recycling Processing Facility Technical Workgroup
October 26, 2023



PCRFB – Invoicing



Pic courtesy of Dylan de Thomas

- Only permitted or certified CRPFs will be eligible for PCRFB funding.
 - Per ORS 459A.863(3)(b), facilities that are not CRPFs include but are not limited to:
 - Recycling depots
 - Recycling reload facilities
 - Limited sort facilities (still to be defined)
- The PCRFB to be paid to the initial CRPF on all first tons in. For any material moved from the initial CRPF to a secondary processor, the two processing facilities will work together to negotiate a price and come to a mutual agreement on the price paid.
- A processing facility may not invoice the PRO for any tons processed until the month has concluded. And, CRPFs cannot invoice more than once per month.

PCRf – Invoicing

- Crowe will recommend scrap price data sources to use with monthly updating of the average commodity value.
 - RecyclingMarkets.net
 - Waste Composite Index for baled OCC, mixed paper, and sorted office papers).
- Calculated Oregon price will consist of:
 - Weighted average market price X adjustment between market and average Oregon Price (2.77%) = \$ figure
 - \$ figure + weighted average market price = Calculated Oregon price
 - **Calculated Oregon price provided to CRPFs for use with invoicing to PROs**



Pic courtesy of Dylan de Thomas

PCRPF – Invoicing

- Total tons received by [CRPF name here] for [month and year]: **10,000 tons**
 - Tons processed for Processor Commodity Risk Fee funding breaks down as follows:
 - Tons of commingled USCL material received from local government recycling collection programs: **6,000 tons**

Total [month and year] tons for PCRPF invoicing: 6,000 tons

- Total tons ineligible for Processor Commodity Risk Fee funding: **4,000 tons**
 - Tons ineligible for Processor Commodity Risk Fee funding breaks down as follows:
 - Tons of out-of-state-generated material processed: **1,000 tons**
 - Tons of non-RMA-program material processed: **1,000 tons**
 - Tons of non-commingled recyclable material processed: **1,000 tons**
 - Tons of commingled USCL material acquired from other CRPFs: **1,000 tons**

(Statewide average per-ton operating cost – average commodity value) X eligible tons for [month and year] = \$ to be paid.



Public Input

Commingled Recycling Processing Facility Technical Workgroup
October 26, 2023

