



Oregon Department of Environmental Quality

Rule Concept: Responsible End Markets: Commingled Recycling Processing Facility Obligations

Plastic Pollution and Recycling Modernization Act (SB 582, 2021)

Rulemaking Advisory Committee Meeting 3, Rulemaking 2

Background

This memo provides background information for the Rulemaking Advisory Committee on the topic of the commingled recycling processing facilities' obligation to send materials collected for recycling to "responsible end markets." It includes the following topics:

- I. Applying PRO rules to the CRPFs
- II. Preventing duplication of effort
- III. Additional pre-step for non-mechanical recycling
- IV. Clarifying when multiple materials within a bale require individual verification of yield
- V. Quarterly disposition reporting for CRPFs

The Recycling Modernization Act requires both producer responsibility organizations and commingled recycling processing facilities to send materials collected for recycling to responsible end markets. This was intended to address the negative environmental, social, economic and health impacts that can result from irresponsible recycling. In an interconnected world, irresponsible recycling can cause negative impacts to Oregon's communities and environment, even when the disposition of materials is taking place at an overseas location. It can also damage reputations and reduce people's participation in recycling, impeding the environmental benefits that responsible recycling can provide.

"Responsible end market" is defined under ORS 459A.863(29) as, "a materials market in which the recycling or recovery of materials or the disposal of contaminants is conducted in a way that benefits the environment and minimizes risks to public health and worker health and safety."

The soon-to-be-created CRPF permit and certification programs will require that a CRPF either accurately report to DEQ the final end market of all materials they manage or obtain a certification that the responsible end markets for the materials meet standards for environmental and social sustainability established by a program approved by the commission in rule.

For the majority of materials managed by CRPFs, PROs bear a joint responsibility with CRPFs to ensure that material only goes to responsible end markets—in particular, for covered products identified on the Uniform Statewide Collection List, as well as covered products counted toward the statewide plastic recycling goals established under ORS 459A.926.

Rules regarding the PROs' responsible end markets obligation were proposed during Rulemaking 1 and are scheduled for consideration and possible adoption by the Environmental Quality Commission during its November 16-17, 2023 meeting. While some of those [draft rules](#) are cross-referenced in the rule concept below, the concept is specific to the CRPFs' obligation.

DEQ cannot discuss how public comment has been taken under consideration in editing the PRO obligation rules until the Commission adopts those rules.

Concepts for discussion at November 1, 2023 RAC meeting

DEQ seeks feedback from Rulemaking Advisory Committee members on the following:

I. Rule concept for discussion: Applying PRO rules to the CRPFs

Overview

PROs and CRPFs are jointly obligated by statute to send materials collected for recycling to responsible end markets. Under this rule concept a common set of definitions for “end market” and a common “responsible” standard would apply to both sets of obligated parties. Both PROs and CRPFs would need to obtain self-attestations from all downstream entities receiving obligated materials as a pre-step before starting the program or sending materials to a market. The program starts on July 1, 2025 and PROs would be solely responsible for verifying all downstream entities and updating audits annually until a third-party certification is approved through a future rulemaking. The PROs would also be solely responsible for overall auditing of verification results. Assigning these obligations solely to the PROs will eliminate redundancy and improve efficiency. Meanwhile, CRPFs would be required to report their full disposition to DEQ, so DEQ can confirm that the end markets are accurately reported, as required by ORS 459A.955(2)(h)). DEQ would share this disposition data with the PROs in anonymized format so that the PROs would know which facilities require verification.

Proposal

DEQ proposes to apply the following PRO rules directly to the commingled recycling processing facilities:

- Material-specific end market definitions in proposed rule 340-090-0670(1).
- The four-element “responsible” standard in proposed rule 340-090-0670(2) (compliant, transparent, environmentally-sound, achieving 60% minimum yield).
- Obtain self-attestations from end markets and all other entities downstream of the commingled recycling processing facilities that are receiving CRPF-origin materials before the program start date. This also covers sending materials to a market when a new market comes online within a program period. The relevant proposed rules are 340-090-0670(3)(a)(A) and (b). A draft self-attestation form can be found in the [internal management directive on program plans](#) on page 56.
- The requirement, per proposed rule 340-090-0670(6), to submit self-attestations, market verification reports, and third-party certification reports completed in a given quarter to DEQ with quarterly disposition reporting.

The following rules would apply only to the PROs and not to the processors:

- Per proposed rule 340-090-0670(3)(a)(B), conduct detailed assessment of whether or not an end market or other downstream entity meets the “responsible” standard, either through use of a third-party certification approved in rule or through a self-operated (first-party) verification program approved as part of the program plan review process.
- Per proposed rule 340-090-0670(4), conduct detailed auditing on the results of certifications or verifications, including random bale tracking.
- The definition of “practicable” at proposed rule 340-090-0670(5).

Discussion Prompt: Will the rule concept enable an appropriate division of labor and joint obligation among PROs and CRPFs?

II. Rule concept for discussion: Preventing duplication of effort

Overview

The rule concept envisions PROs and CRPFs holding joint obligation to obtain self-attestations from all downstream entities that receive Oregon-origin waste collected for recycling, beginning on July 1, 2025. There could be considerable duplication of effort as several CRPFs may use the same markets, and multiple PROs may operate in Oregon. The same facility could be asked to fill out the same self-attestation form multiple times. This duplication of effort could occur with PRO verification if two different PROs verify the same market, and also with third-party certification (if a certification is approved for use in a subsequent rulemaking), which could be applied to the same facility by multiple CRPFs and/or PROs.

Proposal

To avoid duplicated effort, DEQ proposes a rule that would require only one self-attestation and one verification or certification (and associated annual audits) for each downstream entity that receives Oregon-origin waste collected for recycling. PRO(s) and CRPFs could provide documentation to DEQ verifying markets as either individual or coordinated entities.

To take advantage of this option, obligated CRPFs and PROs would need to coordinate with one another to determine who would be responsible for what. In the case of multiple PROs, this coordination could take place in the context of the coordination planning process described in proposed rule 340-090-0680. Coordinated PROs might choose to operate a “clearinghouse” of self-attestations that individual CRPFs could both reference, and supplement.

Discussion Prompt: Is it reasonable to expect that CRPFs and PROs could coordinate to avoid duplication of effort in verification of markets?

III. Rule concept for discussion: Additional pre-step for non-mechanical recycling

Overview

Per ORS 459A.875(2)(a)(I), if PROs want to send materials collected for recycling to a non-mechanical recycling method, they must complete an additional pre-step associated with the responsible end market obligation. This provides the following information to DEQ in their program plan for review and approval:

- A description of how the proposed method will affect the ability of the material to be recycled into feedstock for the manufacture of new products;
- A description of how the proposed method will affect the types and amounts of plastic recycled for food and pharmaceutical-grade applications;
- A description of any applicable air, water and waste permitting compliance requirements; and
- An analysis of the environmental impacts for the proposed method compared to the environmental impacts of mechanical recycling, incineration and landfill disposal as solid waste.

Proposal

This rule concept would apply the same requirements to a CRPF seeking to market materials to non-mechanical recycling method. While materials on the proposed PRO acceptance list, such as polyethylene film, are more likely candidates for non-mechanical recycling than materials proposed for the uniform statewide collection list, the acceptance lists may change over time. Furthermore, nothing prohibits CRPFs from marketing materials removed as contaminants from incoming material, such as films, even though they are not on the uniform statewide collection list.

IV. Rule concept for discussion: Clarifying when multiple materials within a bale require individual verification of yield

Overview

Yield verification is intended to ensure that materials accepted for recycling in Oregon are actually recycled, rather than being diverted toward landfill or incineration by a market. For example there is a risk of this happening with recycling bales that contain a secondary component, such a bale made up of mixed paper that also contains aseptic cartons. Per proposed rule 340-090-0670(2)(c)(D), performance against the 60% minimum yield threshold must be evaluated individually for some materials when they are mixed together in a bale, rather than measuring overall yield for the bale.

A key question is how to differentiate between a mixed-material bale (requiring verification of yield for multiple materials within the bale) and a mono-material bale containing contamination (requiring verification of yield for the bale as a whole).

Proposal

Only materials counted by a CRPF towards meeting its capture rates would be subject to downstream yield verification within a bale. This is part of the performance standards applied to CRPFs through the new CRPF permit program.

Clarification

While this concept creates a link between capture rates at CRPFs and yield at end markets, it is important to understand that these two targets apply to different entities (Figures 1 and 2).

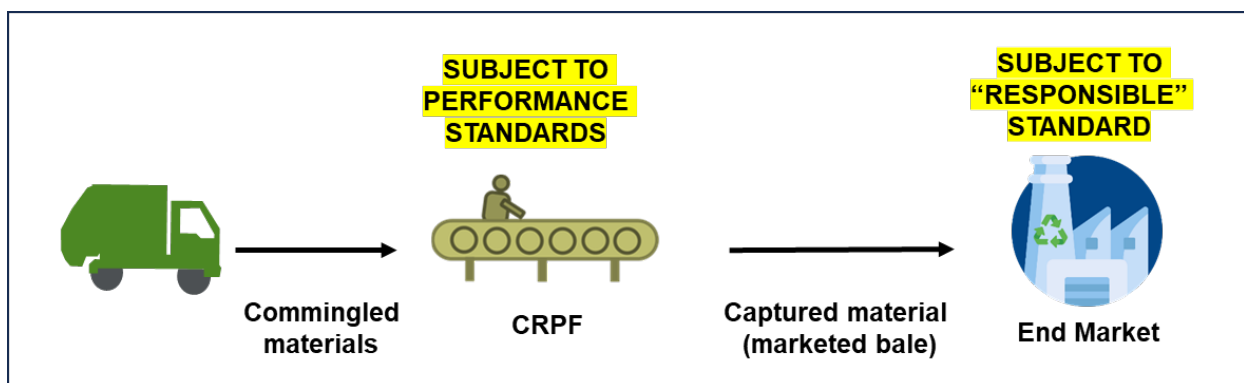


Figure 1: Commingled processing recycling facilities are subject to performance standards, including capture rates. Downstream entities, including end markets, are subject to the “responsible” standard, including the 60% minimum yield threshold.

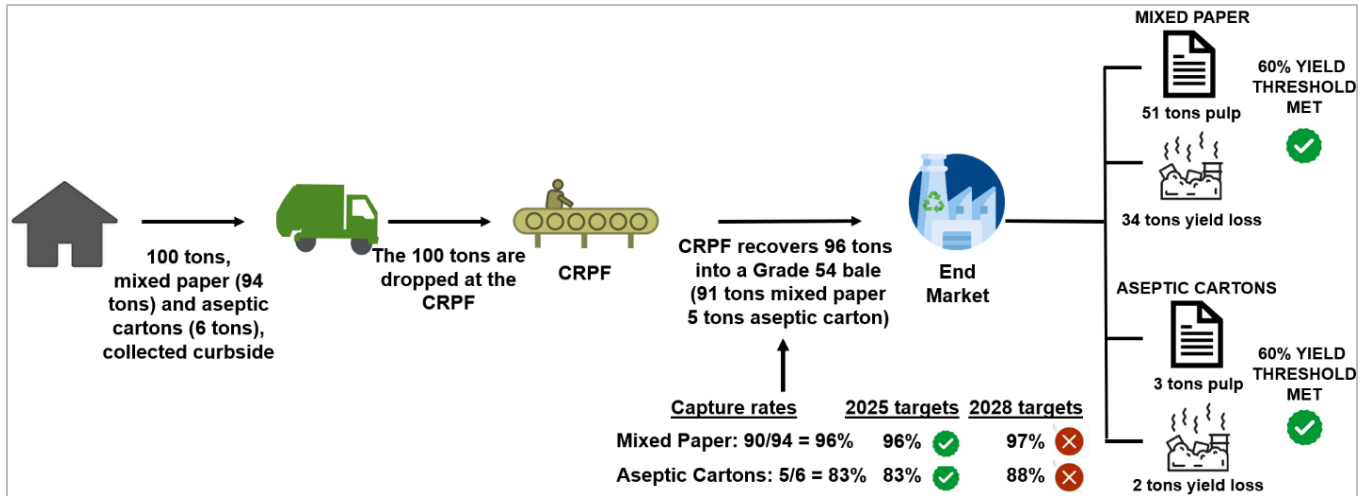


Figure 2: To further illustrate where and which capture rates and yield targets apply, this graphic follows 100 tons of mixed paper and aseptic tons from curbside collection via a CRPF through to a pulp mill end market, which it reaches via mixed paper bale. The capture rate targets for mixed paper and aseptic cartons apply at the CRPF (proposed targets for 2025 and 2028 are indicated). The 60 % minimum yield threshold applies individually to mixed paper and aseptic cartons at the paper mill.

An implication of this rule concept is that an end market could be deemed responsible in the context of one supply chain but not in another. Five example scenarios of CRPFs handling aseptic cartons are provided in Figure 3 to help explore this and illustrate how it will work.

Discussion prompt: Is the Rulemaking Advisory Committee comfortable with an end market that diverts a material collected for recycling in Oregon to landfill being declared “responsible” as long as the material it receives is not being counted by the source CRPF toward its capture rate?

V. Rule concept for discussion: Quarterly disposition reporting for CRPFs

Overview

As described above, CRPFs must report recyclables’ full disposition to DEQ to fulfill obligations per ORS 459A.955(2)(h) to accurately report the final end market of all materials handled. Rules are needed to specify when this reporting must occur, the data that must be reported, the material unit of reporting, who can submit the reporting, accounting rules for when materials mix, and how material tracking is to be accomplished.

Proposal

Concepts for these rules follow:

- *Reporting calendar:* The first reporting deadline is July 1, 2025. By this date, CRPFs must submit signed self-attestations from all downstream entities that will receive their materials confirming that they meet the “responsible standard. By Nov. 1, 2025, CRPFs must submit disposition data for the first quarter of the program (July-September 2025). Thereafter, the CRPFs must report at quarterly intervals (i.e., subsequent reporting deadlines are Feb. 1, 2026; May 1, 2026; Aug. 1, 2026; etc.) regarding the quarter that ended one month prior to the reporting deadline.















CRPF	Bales Made	Counted by CRPF Toward Carton Capture Rate	End Market	Application of Yield Threshold	Likelihood Yield Threshold is Achieved
CRPF 1	Recovers 100% of cartons received in a given quarter into Grade 52 carton bales 	✓	 End market specialized in carton processing	60% yield threshold applied to recovery of cartons at end market	✓
CRPF 2	Recovers 100% of cartons received in a given quarter into Grade 54 mixed paper bales 	✓	 Paper mill that processes cartons	60% yield threshold applied individually to mixed paper and to cartons at end market	✓
CRPF 3	Recovers 100% of cartons received in a given quarter into Grade 54 mixed paper bales 	✓	 Paper mill that diverts cartons to landfill	60% yield threshold applied individually to paper and to cartons at end market.	✗
CRPF 4	Recovers 85% of cartons into Grade 52 carton bales  Recovers 15% of cartons into Grade 54 mixed paper bales 	✓	 End market specialized in carton processing	60% yield threshold applied to recovery of cartons at end market	✓
		✗	 Paper mill that diverts cartons to landfill	60% yield threshold applied to recovery of mixed paper (including cartons) at end market	✓
CRPF 5	Recovers 85% of cartons into Grade 52 carton bales  Sends 15% of cartons to landfill 	✓	 End market specialized in carton processing	60% yield threshold applied to recovery of cartons at end market	✓
		✗	 Landfill	Yield threshold not applied	N/A

Figure 3: Five CRPFs handle aseptic cartons and all meet the 2025 carton capture rate (proposed at 83%) variously. They market the cartons to three different types of end markets (a market that specializes in cartons, a pulp mill that can recover cartons, and a pulp mill that diverts cartons to landfill). Notably, the very same pulp mill that diverts cartons to landfill is a responsible end market in CRPF 4's supply chain, but not in CRPF 3's supply chain (even if it is a responsible end market for mixed paper), because CRPF 4 does not count the material it sends to the pulp mill toward its capture rate. The way CRPF 4 and CRPF 5 handle their cartons are functionally equivalent under this rule concept. In both cases the CRPF achieves the capture rate for cartons and the cartons used to achieve that capture rate go to an end market that achieves at least 60% yield of those cartons.

If a CRPF wants to send materials to a new market that has not self-attested that it meets the “responsible” standard, it will need to submit the signed self-attestation for

that market before sending materials. These self-attestations can be submitted outside of the reporting schedule, the CRPF need not wait for the next quarterly reporting deadline).

- **Required reporting contents:** CRPF reporting must list all entities that took possession of CRPF-origin scrap material (i.e., business or person name; city, state, region, and country) and the amounts received during a given quarter. Amounts will be reported in tons. Reporting must extend up through the responsible end market or through to a disposition besides recycling (e.g. landfill, incinerator, etc.). If a supply chain contains more than one node downstream of the CRPF, tonnages received by each entity must be grouped together to allow DEQ to see how material was routed through to the end market.
 - **Material unit of reporting (discussion prompt):** DEQ seeks feedback from the Rulemaking Advisory Committee regarding the granularity at which materials must be tracked. Options include requiring reporting by:
 - the material categories defined in the local government recycling lists;
 - capture rate categories; or
 - bale typesDEQ intends to define the material unit of reporting in a way that would best enable accurate reporting underlying the implementation of the responsible end market obligation, but without being so granular as to place an undue tracking burden on the CRPFs.
- **Who can report (discussion prompt):** DEQ seeks feedback from the Rulemaking Advisory Committee regarding who may report disposition data for CRPF-origin scrap material to DEQ:
 - Only CRPFs; or
 - CRPFs and other entities designated by CRPFs as being able to report on a CRPF's behalf, provided that those entities are either not receiving CRPF-origin scrap material or are receiving material directly from a CRPF (i.e., they are a first receiver).
 - For example, a CRPF could designate brokers to report disposition data for the materials they broker on behalf of the CRPF, or a CRPF could designate a PRO or the PRO coordination body if PROs and CRPFs forge an agreement by which PROs will handle the tracking of materials marketed by CRPFs. One example of who would not be allowed to report under this rule concept is if a CRPF sends material to a broker who then markets materials to eight end markets, the eight end markets would not be allowed to report their individual volumes received to DEQ because they are second receivers. Only the broker as the first receiver would be able to report on behalf of the CRPF. If a broker receives materials from multiple CRPFs, it would need to report for each CRPF's volumes separately, although the materials may be mixed (see accounting rules subsection below).

DEQ seeks an approach that balances flexibility for the CRPFs with the administrative burden for DEQ to reconcile data reported by multiple sources.

- For example, when reconciling a CRPF's reporting of volumes of scrap material sent to a broker with the broker's reporting of where that material went to an end market, DEQ would need to investigate any discrepancies.

- *Accounting rules for when materials mix:* When recyclables from Oregon mix with materials from elsewhere downstream of CRPFs, controlled blending¹ must be used to determine the tonnages attributable to Oregon.
 - For example, if a broker mixes 10 tons of scrap material from Oregon with 50 tons of scrap material from Washington, then sells 30 tons each to two markets, $(1/5)*30 = 6$ tons of Oregon-generated scrap material should be indicated in disposition reporting as having gone to each market.

A de-minimis threshold will be defined for the amount of a particular material going to a particular entity in a given quarter below which the CRPF need not report.

- If the unique disposition to a particular entity amounts to less than 1% by weight of the total weight of that material marketed to all destinations by the CRPF in a given quarter, that unique disposition need not be reported, provided that such exemptions comprise no more than 10% of the material sent out in a given quarter.

Controlled blending accounting should also be used when materials from two or more CRPFs mix. For example, if materials from multiple CRPFs are marketed by the same broker and consolidated into a shipment.

Discussion prompt: Should these rules allow for mass balance accounting to be used in some instances? If yes, in which instances, and why?

- *How material is tracked:* CRPFs may choose the approach for tracking materials (e.g. a manifest system, a chain of custody system, RFID tracking, etc.) and generating the required data for reporting. A CRPF must, in its operation plan associated with the permit and certification programs, inform DEQ of its approach and must allow DEQ and PROs access to their facilities for the purpose of performing random bale tracking per proposed rule 340-090-0670(4).

Discussion prompt: Does the concept for material tracking allow enough flexibility and rigor for oversight?

Translation or other formats

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¹ as defined in International Organization for Standardization Chain of Custody standards ISO 22095