

Oregon Recycling Modernization Act Producer Responsibility Organization Program Plan Application Form

2025-2027 Program Plan Period

Prospective PRO contact information

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Prospective	e PRO qualifications			
✓ Yes [Is the organization a 501(c)3 nonprofit legally operating in Oregon? ✓ Yes □ No Corroborating documents appended (check all that have been provided):			
 ✓ The organization's articles of incorporation ✓ 501(c)3 letter of determination ✓ Proof of registration with the Oregon Department of Justice as a charitable organization ✓ Proof of registration with the Oregon Secretary of State as a foreign corporation operating in Oregon (if applicable) 				
Are the organization's producer members likely to comprise at least 10% of Oregon's market share? Ves No Indicate corroborating information provided:				
Has the payment of the program plan review fee been remitted to the department? ☑ Yes ☐ No				
Program information				
Program nam	Program name: Oregon Program Plan Date of submission: March 31, 2024			
Executive Summary: The attached Circular Action Alliance (CAA) Oregon Program Plan 2025 – 2027 is submitted in				

Executive Summary: The attached Circular Action Alliance (CAA) Oregon Program Plan 2025 – 2027 is submitted in accordance the requirements for producer responsibility organizations under ORS 459A.875. The plan describes how CAA will fulfill the obligations of a producer responsibility organizations under Oregon's Recycling Modernization Act (RMA) for the period from July 1, 2025 to December 31, 2027 if the submitted plan is approved by the Department of Environmental Quality. The plan describes CAA's approach to implementing RMA requirements including: the provision of funding support for both local governments and recycling participants for recycling activities and system improvements; the creation of a network for the collection of PRO acceptance list materials; ensuring collected materials are recycled responsibly and education and outreach activities to communicate recycling changes and opportunities to Oregonians.

Certification and Attestation

I/we hereby declare under penalty of false swearing (Oregon Revised Statute 162.075 and ORS 162.085) that the above information and all the statements, documents and attachments submitted with this plan are true and correct.

Signed:

Printed name: Charles Schwarze

Date: March 31, 2024

Oregon Program Plan

(2025 - 2027)





Oregon Program Plan

(2025 – 2027)

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Executive Summary

Oregon's Plastic Pollution and Recycling Modernization Act (RMA) creates important changes in how materials management is undertaken and funded within the state. The legislation strives to improve the overall effectiveness of Oregon's recycling collection and processing ecosystem through a shared responsibility model.

A key element of this new framework is the concept of a producer responsibility organization (PRO), the entity through which producers of covered materials will fund recycling services, support innovation and manage collection of certain materials through a depot system.

To achieve the objectives of the RMA, Circular Action Alliance (CAA) submits this draft program plan to the Oregon Department of Environmental Quality (DEQ) for consideration.

As a prospective PRO, CAA has developed a detailed approach to managing and administering an extended producer responsibility (EPR) program to fulfill key obligations pursuant to the RMA. The team behind this program plan includes a wide range of recycling industry and policy experts with extensive knowledge in program plan development, implementation, operations, education and outreach, and local government structure. The CAA team has spent a great deal of time engaging with stakeholders in Oregon and referencing a wide range of applicable studies to formulate strategies and cost estimates tailored to Oregon's unique and dynamic materials recovery landscape.

CAA has taken DEQ's Internal Management Directive (IMD) on the RMA PRO Program Plans as a basis for the structure of this submission. Some adaptations have been made to the proposed IMD outline to improve narrative flow.

The table of contents, charts, and subheadings in the document will help readers effectively navigate all the plan's content, and brief overviews of core sections are provided below.

Goals of the Program

CAA's overarching objective is to support the successful implementation of the RMA in collaboration with DEQ and all other key stakeholders. It is the view of CAA that this program plan will result in successful implementation to achieve four high-level goals:

- 1. Reduce the negative environmental, social, and health impacts from the end-of-life management of products and packaging
- 2. Increase the diversion of recyclable materials from disposal.
- 3. Improve public participation, understanding and equity in the state's recycling system.
- 4. Create a system that fulfills the needs and regulatory requirements of the PRO, its members, and all other relevant stakeholders.

These top-line objectives are defined in further detail in the Goals of the Program section, along with key metrics and measures to help chart progress and determine success.



Operations Plan

The operations plan segment delves into the specific steps and strategies that CAA will employ to meet RMA requirements and help catalyze a range of recycling system expansions and improvements that can lead to a stronger, more efficient framework of materials management. This includes detailed plans and recommendations for:

- → Collection and Recycling of UCSL Materials A plan for the collection, transport, and recycling of all covered materials on the RMA's Uniform Statewide Collection List (USCL) and a framework for deploying funding to support these activities. Highlights include:
 - The Oregon Recycling System Optimization Project (ORSOP), a critical project that will offer a more complete
 picture of system gaps, opportunities for efficiency, and more. This initiative will provide additional data and
 details required to more precisely estimate and schedule the distribution of funding for system
 improvements;
 - Key tasks to support the distribution of funding and reimbursements to eligible parties that must be completed in advance of the July 1, 2025 (the RMA implementation date), in addition to the ORSOP:
 - Negotiating with and then providing associated compensation (with a single accounting point-ofcontact system) to local governments for service expansion;
 - Setting up a single accounting point-of-contact system for compensation of local governments for expenses besides service expansion;
 - Setting up a single accounting point-of-contact system for payment of contamination management fees and processor commodity risk fees to commingled recycling processing facilities.
- → The PRO Recycling Acceptance List This section outlines activities, timelines, and recommendations for increasing diversion of materials named on the PRO Recycling Acceptance List, including proposed approaches to meeting service convenience and performance standards and proposed collection targets for each material category. Highlights include:
 - Identification of 173 existing permitted depot sites that meet the state convenience standard, and another
 285 to serve as substitutes if any existing facilities choose to not participate as a PRO collection point;
 - Key activities to ensure timely provision of depot services that must be completed in advance of the July 1,
 2025, RMA implementation date:
 - Perform additional analysis of needs and further design of PRO depot system in consultation with DEQ, potential partner depots, local governments, and service providers;
 - Finalize contracts with local governments, service providers, and end markets and launch reporting and accounting systems while onboarding key stakeholders;
 - Open the first phase of PRO acceptance list collection points.
- → Materials Management Key materials management considerations including strategies for Specifically Identified Materials (SIMs) and engagement with and verification of responsible end markets (REMs). Highlights include:
 - Proposals to expand the USCL to include PET thermoforms, transparent blue and green PET bottles, and spiral wound containers;



- A proposal to explore commingled, trial collection of polycoated paper packaging and single-use cups with the intent to better understand generator behaviors and other system barriers to the inclusion of these materials on the USCL;
- Insight into the program plan's anticipated impact on plastic recycling and an estimate of Oregon's current plastic recycling rate;
- A strategy to create a materials tracking system that supports REM verification for all system participants and proposed approach to supporting REM development.
- Key activities to support effective materials management and REMs that must be completed in advance of the July 1, 2025, RMA implementation date.
- → Education and Outreach A vision for delivering effective and harmonized education in a manner that incorporates feedback from, and supports, local government outreach and is responsive to diverse audiences across this state. Highlights include:
 - Goals to ensure widespread recycling awareness through culturally responsive support and messaging that
 has been proven to effectively drive increased participation and capture of recyclables, deployed in a manner
 complementary to programmatic efforts to reduce contamination;
 - Key activities to support the education and outreach plan that must be completed in advance of the July 1,
 2025, RMA implementation date.

Financing Strategy

An essential role of the PRO is developing a comprehensive methodology for determining how much funding obligated producers of covered materials are required to contribute to the statewide system. Factors such as material type, volume of product sold into state, environmental impact of materials and commodity revenues must be properly accounted for when designing and implementing a fair & effective program fee.

The financing section of the program plan lays out the guiding principles CAA has developed and used as the basis of an interim base fee methodology to set preliminary base fees. This section also describes how the fee outcomes from using this fee algorithm satisfy the RMA statutory requirements and fulfill the adequacy of financing requirement.

CAA will introduce a graduated fee algorithm to provide producers with practical and measurable criteria upon which to qualify for fee incentives and disincentives in future program plan amendments.

In advance of the Oregon System Optimization Project being completed, a preliminary estimate of the Year 1 program budget range is provided in Appendix E. This sum, to be covered by producer fees, accounts for management costs of materials, service expansion costs, PRO depot system development, as well as costs to develop and sustain viable responsible end markets and other contributions to advance program improvement initiatives.

CAA expects the program costs to be refined for future Program Plan amendments.



Equity

There is no one-size-fits-all solution to recycling because motivators and barriers vary across age, region, race, ethnicity, and other factors. For this reason, CAA has embedded principles of equity into the program plan in a manner that upholds and reinforces the goals set out in the RMA. These principles are integrated into each key component of PRO administration and program implementation.

This proposal describes how CAA has built equity into the proposed approaches for key activities, including:

- → The establishment of a PRO depot network
- → The development of responsible end markets
- → Development and deployment of recycling education and outreach efforts
- → PRO administration

CAA consulted with Oregon community-based organizations (CBOs) to develop the equity components of this plan. It recognizes the importance of fostering relationships with Oregon CBOs to effectively address program equity issues.

In short, the program plan outlines strategies to use this transformational moment in Oregon's materials management as a springboard to greater equity in various areas.

Management and Compliance

As an organization helping to introduce a new approach to recycling funding and management in the U.S., CAA recognizes the critical importance of stakeholder communication as the RMA moves toward implementation.

As such, this program plan offers a detailed explanation on CAA's structure of day-to-day management, as well as a communications strategy for maintaining strong connections with government entities and other stakeholders.

Furthermore, CAA has outlined data collection steps and metrics considerations to effectively track program successes and areas in need of improvement. The elements of an optimized annual report are also explained.

Finally, this section of the plan lays out an in-depth process for tracking and maintaining producer compliance, setting clear standards and expectations on rules, audits, and action to take place when companies are found to be in noncompliance. This information is supplemented by important details on contract management, recordkeeping and other best practices around organizational and program governance.

It is through these clear processes that CAA has confidence in its ability to meet the expectations of regulators, drive overall program efficiency, and maintain strong coordination both internally as an organization and externally with partners across the public and private sectors.

At the Center of the Transformation

The ultimate goal of RMA implementation is a transformed system of materials usage and recovery that will be responsive to the needs of all stakeholders and that will lead to significant environmental and social benefits for Oregonians.



CAA has invested significant resources in developing this program plan and is committed to working with recycling stakeholders to deliver on the RMA objectives. There is no doubt that effectively and efficiently transitioning to a shared responsibility model of materials management and delivering on other RMA priorities will be a complicated and challenging effort and one in which producers and other stakeholders will learn much along the way.

But CAA is confident the transition can and will happen successfully.

Data-driven decision-making, combined with a spirit of collaboration and communication, will be critical in the quest to see the RMA realize its full potential. CAA has embedded those core principles in all segments of this plan. The group is excited at the prospect of helping Oregon usher in system shifts that help reduce costs, drive more material into an expanded recycling marketplace, and open the door to a better materials management future.



Goals of the Program

The overarching goal of Circular Action Alliance (CAA) for this initial program plan period is to support the successful implementation of the Recycling Modernization Act (RMA) in collaboration with the Oregon Department of Environmental Quality (DEQ) and all key stakeholders, including local governments, commingled recycling processing facilities (CRPFs), haulers, and Oregon waste generators. Success will center on four critical high-level objectives:

Objective 1: Reduce the negative environmental, social, and health impacts from the end-of-life management of products and packaging.

Program Goal	Outcomes/Indications of Success	Key Metrics
Ensure that materials collected and processed for recycling in Oregon are consistently delivered to responsible end markets.	 System of identifying responsible end markets (REMs) and tracking material flows established with full cooperation from comingled recycling processing facility (CRPFs) and other key stakeholders. CRPF and depot material streams directed to REMs. System established to address and correct issues that arise regarding REMs. Specifically identified materials (SIMs) directed to REMs, where practicable. 	 Percentage of recycled material going to REMs, including SIMs. Number, kind, and specific REMs used by CRPFs and CAA for depot material. Number of instances in which REM material routing has needed correction and the results of correction. Summary of REM verification undertaken Percentage of chain of custody anomalies detected during quarterly reporting review process.
Design and implement producer fee structures that provide adequate financing for RMA obligations and incentivize producers to improve environmental outcomes associated with the production and recycling of printed paper and packaging supplied to the Oregon market.	 Initial base fee schedule adequately supports RMA verification of REM requirements and other system improvements. Eco-modulation factors integrated into producer fee following development of datasets and feedback mechanisms required to adjust fees for greater impact reduction. 	 Comparative base fees for covered products reflecting their individual features as directed by the RMA. Data on producer changes to packaging materials and formats that reflect effects of base fees (and at a later date, as applicable, graduated fees).



Objective 2: Increase the diversion of recyclable materials from disposal.

Program Goal	Outcomes/Indications of Success	Key Metrics
Create new and expanded opportunities for more Oregon residents (waste generators) to recycle a wider array of generated materials, including supporting enhancement of local collection services and establishing convenient depots for additional material collection.	 PRO-assigned depot system established, meeting convenience standards and providing recycling opportunities for materials assigned for depot collection and impact on material recycling rates. Local government service expansion requests evaluated and funded according to prioritization guidelines resulting in new collection opportunities created for waste generators. Uniform Statewide Collection List (USCL) applied across the state to expand what is collected in commingled recycling, and steps taken by CAA to successfully add materials to the USCL. SIMs collection issues successfully addressed. Progress toward 2028 plastic recycling goals at the end of each program year. 	 PRO material collection and recycling rates in relation to plan targets. Consumer awareness and use of PRO material depots. Diversion rates associated with USCL materials. Extent of new SIMs collection efforts established. Tons of plastic materials sent to responsible end markets divided into tons of covered plastic products generated.
Facilitate the modernization of Oregon's commingled material processing infrastructure, driving more efficient capture and delivery of high-quality materials to end markets while reducing loss of materials to residue.	 Processor commodity risk fee (PCRF) and contamination management fee (CMF) payment system established to provide necessary funding to CRPFs. CRPFs meeting DEQ's performance standards regarding capture rates and bale quality. Investments made in new equipment and sorting processes to accommodate the USCL and additions to the USCL. 	 Funding provided to CRPFs through the PCRF and CMF, with associated tonnage and funding amounts. Capture rate and bale quality data from DEQ and from CAA. Individual CRPF capacity to accept and effectively sort USCL materials.



Objective 3: Improve public participation, understanding and equity in the state's recycling system.

Program Goal	Outcomes/Indications of Success	Key Metrics
Ensure Oregon residents (waste generators), reflecting the states' many diverse communities, are fully informed about their recycling opportunities and how to use those opportunities optimally, confidently, and correctly.	 Increase amount of USCL and depot materials collected, indexed against population and generation. Reduction in the amount of contaminant materials entering the recycling collection stream in commingled recycling and at depots. Increase in waste generator understanding and confidence in the recycling system across all populations. 	 Tons of material collected through commingled, depot, and other applicable programs, indexed against population and generation metrics. Amount and percentage of contaminants in collected streams and in streams entering CRPFs. Measures of waste generator awareness, knowledge, and confidence in recycling (for example, participation rates) through surveys or other data collection.
Incorporate principles of equity into the deployment of recycling opportunities, education, and other elements of the recycling system.	 Provision of equitable recycling opportunities for populations that may find it difficult to access service at collection points. Work with local governments and community groups to ensure any proposals for the alternate delivery of recycling convenience standards address equitable access for communities and diverse populations. Educational materials that are clear and demonstrably understandable are universally distributed or made available. Explore and pursue opportunities with Certification Office for Business Inclusion and Diversity (COBID) businesses and depot collection partners representing diverse communities. 	 Roll out of recycling services for populations with access or mobility issues. Additional recycling opportunities addressing gaps identified by local governments and community groups. Numbers and kinds of new educational materials created and distributed, and audiences reached. Amount of new and effective system engagement by groups previously underserved or unaddressed.



Objective 4: Create a system that fulfills the needs and regulatory requirements of the PRO, its members, and all other relevant stakeholders.

Program Goal	Outcomes/Indications of Success	Key Metrics
Manage organizational operations to ensure compliance with all statutory requirements.	 Systems and mechanisms in place to fulfill CAA PRO obligations under the RMA regarding day-to-day management, policies and procedures, communication, membership, timelines, and budgets. Mechanisms in place to address gaps, shortfalls, or other issues regarding CAA's PRO obligations. 	 Number, kind, and operational status of systems and mechanisms for CAA management obligations. Number and nature of gaps or issues that needed to be addressed and resolution status of those gaps/issues. Producer compliance activity reports.
Provide an effective platform of support and interaction with local governments, commingled recycling processing facilities, and haulers that allow them to steadily improve their programs and facilities to meet regulatory targets and the goals of the RMA.	 Application, reporting, invoicing, and informational platforms established that are clear, effective, and efficient for stakeholders to use. Mechanisms in place to use stakeholder feedback for improving platforms. 	 Number and kind of platforms in place for stakeholder interaction. Extent of platform use (number of users, etc.). Number and kind of issues with platforms expressed through stakeholder feedback and any related adjustments made to platforms.

The following program plan details the integrated steps CAA will take to produce results that meet the objectives outlined above. In putting this plan into action, CAA will prioritize clear and consistent engagement with all stakeholders and will adopt an approach of continual improvement, recognizing the dynamic and complex nature of the Oregon materials management system.



About Circular Action Alliance

This section of the plan provides summary information about Circular Action Alliance, including details of its structure, governance and members, as well as its qualifications to serve as a PRO in Oregon.

Description of the Organization

Circular Action Alliance (CAA) is a U.S., nonprofit producer responsibility organization (PRO) established to support the implementation of extended producer responsibility (EPR) laws for paper, packaging, and food service ware. The organization was founded by leading U.S. producers representing retail, food, beverage, and consumer packaged goods manufacturing.

CAA's 20 Founding Members are Amazon; The Clorox Company; The Coca-Cola Company; Colgate-Palmolive; Danone North America; Ferrero US; General Mills; Keurig Dr Pepper; Kraft Heinz; L'Oréal USA; Mars Incorporated; Mondelez International; Nestlé USA; Niagara Bottling, LLC; PepsiCo, Inc.; Procter & Gamble; SC Johnson; Target; Unilever United States; and Walmart.

Together, CAA's membership represents more than 900 brands sold in the U.S., representing a wide variety of covered product material types.

CAA was incorporated as a nonprofit corporation on December 21, 2022, and is recognized by the Internal Revenue Service as exempt from taxation under Section 501(c)(3) of the Internal Revenue Code.

The organization's mission is to provide producers with consistent EPR services across multiple states while developing and implementing EPR programs that:

- → Meet state-specific regulatory requirements
- → Leverage existing recycling systems and infrastructure
- → Advance the circularity of covered materials on a national scale through collaboration with local governments, service providers, and recycling system stakeholders

CAA's National Board of Directors is made up of 20 voting representatives of Founding Member companies, which represent a diversity of covered material supplied to the Oregon market. Each Founding Member has the right to appoint one representative to serve as a Director on CAA's National Board of Directors.

The CAA National Board of Directors has established the following committees and has the ability to create additional committees or dissolve committees in the future:

- → **Governance Committee** consisting of at least three members appointed by the Board of Directors who have relevant experience and expertise in governance, membership development, and compliance.
- → Finance, Audit and Investment Committee consisting of at least three members appointed by the Board of Directors who have relevant experience, expertise, and knowledge in accounting, auditing, investments, budgeting, cash flow management, reserve management, and financial risk management.



→ Human Resources Committee – consisting of at least three members, appointed by the Board of Directors, who have relevant experience, expertise, and knowledge in human resources, employment law, organizational development, and/or diversity, equity, and inclusion.

The CAA National Board of Directors intends to establish a designated governing body known as the Oregon Board, which will have the delegated authority to act on behalf of the National Board of Directors to approve the producer responsibility plan and the budget for implementation of the plan, as well as oversee the implementation of the approved producer responsibility plan under the RMA. The Oregon Board will include Founding Member representatives, other producer representatives, and non-voting members.

Additionally, CAA has engaged a third-party organization to provide support in the development of the Oregon governance model. This organization is conducting a comprehensive review of CAA's governance.

CAA's Qualifications to Serve as a PRO in Oregon

CAA was established to support the implementation of EPR laws for paper, packaging, and food service ware and is fully capable of meeting the PRO statutory requirements under the RMA. The organization has the expertise and vision to collaboratively build a producer responsibility plan that will achieve the objectives of the RMA.

CAA's progress to date includes the following:

- → On May 1, 2023, CAA became the first PRO approved to administer an EPR program for paper, packaging and food service ware in the U.S., being appointed by the Colorado Department of Public Health and Environment (CDPHE) as the single PRO responsible for implementing Colorado's Producer Responsibility Program for Statewide Recycling Act.
- → On October 18, 2023, CAA was approved as the single PRO to represent the interests of producers in Maryland. As the Maryland PRO, CAA will have a seat on the Producer Responsibility Advisory Council, which will make recommendations to the Maryland governor on how to effectively establish and implement a producer responsibility program for packaging materials.
- → On January 5, 2024, CAA was approved as the single PRO to deliver the objectives of the California Plastic Pollution Prevention and Packaging Producer Responsibility Act (California Public Resources Code Sections 42040 to 42084).

As they have in these other EPR states, CAA members have invested time and resources to ensure the organization can fulfill the specific PRO obligations in relation to the RMA in Oregon.

Understanding of Oregon's Recycling Modernization Act

CAA has a strong and detailed understanding of the RMA. Following its incorporation, CAA was engaged in the Phase I rulemaking process (and subsequently the Rulemaking Advisory Committee), which included the submission of comments in July 2023.

CAA has also participated in DEQ Technical Working Groups and has pursued independent and extensive engagement with Oregon DEQ and other Oregon stakeholders and groups, including: Oregon Refuse & Recycling Association (ORRA), local governments and service providers, and the Association of Oregon Recyclers (AOR). Full details on CAA's stakeholder engagement during the development of this program plan can be found in Appendix D.



As a result of this engagement, CAA understands not only the requirements of the statute and rules, but also the priorities of key stakeholder groups that are essential to the success of the RMA.

Team Expertise and Capabilities

CAA Founding Members are united in their vision to create a circular economy for paper, packaging, and food service ware in the United States. CAA's Founding Members have experience with the implementation of various EPR programs, and they have assembled a team of independent service providers drawn from across North America with expertise in developing and operating EPR programs to respond to state-specific regulatory requirements and recycling system needs.

CAA team members have participated in EPR implementation and program operation for many years, playing integral roles in the creation, operation, and improvement of PROs. The team has expertise in regulatory compliance, project management, governance, recycling systems and materials management, system improvement, end markets, finance, fee setting, eco-modulation, packaging design, not-for-profit operation, information technology, reporting, consumer education, producer and stakeholder relations, and public affairs.

The CAA team also includes Oregon-specific expertise and has plans in place to hire Oregon staff, capable of supporting implementation. This local team will supplement the organization's central expertise to enable seamless knowledge transfer across jurisdictions and consistent producer services. CAA's organization charts are included in Appendix C.

Qualifications to Deliver Interim Coordination Tasks

CAA is well-qualified to deliver the start-up tasks (previously referred to as interim coordination tasks) required to launch the program successfully on July 1, 2025, as required by state statute. In particular, the CAA team is preparing to launch the following workstreams:

Local Government and Service Provider Engagement (Oregon Recycling System Optimization Project)

This workstream is planned for April 2024 onward. The goal is to liaise further with local governments and their service providers on expansion needs, to finalize plans for expansions to be funded in the first program plan, and to conduct consultations on other relevant aspects of the plan. CAA has assembled a team of experts to undertake this work, building from the initial discussions with a selection of local governments outlined in Appendix D that have taken place since September 2023. The team has experience relevant to Oregon's regulatory requirements, recycling system design, and Oregon's local government ecosystem. More information on plans for this workstream can be found in the Operations Plan section of this plan, under "Collection and Recycling of USCL Materials."

PRO Depot Development (Oregon Recycling System Optimization Project)

This workstream is planned for April 2024 onward. The goal is to liaise further with existing drop-off facilities and depot locations, as well as new potential partners to finalize a network of PRO depot locations (supplemented by events and other collection services) to meet the necessary collection targets, convenience and performance standards, and Responsible End Market (REM) requirements under the RMA. CAA has assembled a team of experts to undertake this work, building from



the initial discussions with depot organizations outlined in Appendix D. More information on plans for this workstream can be found in the Operations Plan section of this plan, under "The PRO Recycling Acceptance List."

Education and Outreach

This workstream is planned for April 2024 and onward. The goal is to develop education and outreach collateral and a statewide promotional campaign to communicate the USCL and PRO Recycling Acceptance List to residents and commercial entities in Oregon. The workstream includes consultations with local stakeholders, including but not limited to DEQ, the Oregon Recycling System Advisory Council (ORSAC), Oregon residents (in a range of geographies and housing situations), Oregon businesses, local governments, service providers, and community-based organizations (CBOs). CAA has assembled a team of experts to undertake this work. The team has experience in the Oregon regulatory requirements, waste generator behavior trends, education materials development and delivery, Oregon-focused media executions, and Oregon local government engagement. More information on plans for this workstream can be found in the Operations Plan section of this plan, under "Education and Outreach."

CAA's Producer Membership

CAA membership exceeds the 10% market share threshold for covered products in Oregon required for approved PROs. Based on available data, CAA estimates that current membership accounts for a minimum of 12% to 15% of the state's market share of covered products. (Details of how the market share estimate was calculated can be found in Appendix B.)

CAA is also conducting information sessions with hundreds of non-member producers regarding EPR obligations in Oregon and other states and will expand membership further through 2024 and into 2025, in advance of the program start date.

CAA is resourced to complete all the tasks necessary to start the program, including all of the interim coordination (start-up) tasks referenced in the RMA rules. CAA Oregon will be a subsidiary of the national organization that is supported by its founding members. These members have made significant funding commitments to support the CAA program plan development in Oregon and other EPR states.



Operations Plan

The operations plan section of this program plan describes activities and recommendations for increasing the diversion of recyclable materials from disposal to support progress toward targets outlined in the Recycling Modernization Act (RMA).

Important areas of Producer Responsibility Organization (PRO) involvement around operations include meeting local government needs assessment requests, establishing collection depots, improving materials processing, and conducting robust and consistent education.

a. Collection and Recycling of USCL Materials

In this subsection, CAA details how it plans to support the collection and recycling of covered products that are included on the Uniform Statewide Collection List (USCL).

Under ORS 459A.890, local governments and their service providers are entitled to be reimbursed or be provided advance funding for, as appropriate, eligible expenses in several RMA program areas, including but not limited to: system expansions and improvements (costs associated with the expansion and provision of recycling collection services); the transportation of covered products over 50 miles; contamination reduction programming and periodic contamination evaluations outside of comingled recycling processing facilities (CRPFs); and ensuring 10% post-consumer content in roll carts.

The collection and recycling section of the program plan addresses each of these areas in turn, and it also discusses CAA's start-up approach to address specific time sensitive tasks (previously interim coordination tasks).

Following the submission of this initial draft of the program plan, CAA will conduct further outreach and consultation with local governments and service providers to:

- → Undertake the Oregon Recycling System Optimization Project (more details are provided below)
- → Enable the development of more accurate local government funding estimates and prioritization of disbursements which cannot currently be done due to limited available information.
- → Develop a schedule for the disbursement of funding for local government service expansion requests as per RMA requirements
- → Finalize the details of how various funding programs related to USCL materials will be administered

Administrative design principles have been developed to inform further consultation as detailed below.

Administrative Design Principles

- → Streamlined and expeditious processes for the disbursement of eligible expenses
- → Clear and accessible claims submission instructions and mechanisms (reliance on online submissions where possible)
- → **Transparent information requirements** all parties should utilize understandable similar source data in support of funding requests



- → **Standardized review criteria** in support of prioritization and assessment of eligibility of claims (see proposed review criteria below)
- → Coordination of funding program processes with local government budget cycles wherever possible
- → Streamlined dispute resolution processes
- → Appropriate accountability mechanisms to track reimbursements and any advance funding provided

For each compensation program, CAA proposes to post related policy documents, standardized registration forms, claims submissions and other program documents on its stakeholder portal, for ease of access. These programs would also be supported by CAA program staff dedicated to answering questions and guiding stakeholders through program administrative processes.

i. System Expansions and Improvements

Providing financial and other assistance to local governments that need to expand recycling collection services is a critical step in the implementation of this program plan and the execution of the RMA. The activities outlined below will help meet a range of objectives and goals, including expanding overall opportunities to recycle, and help meet the plastics recycling goal set out in the RMA.

Proposal for an Oregon Recycling System Optimization Project

2023 Department of Environmental Quality (DEQ) Needs Assessment Findings

Oregon DEQ released its initial RMA Local Government Needs Assessment in May 2023. While completing the needs assessment survey was voluntary for local governments, eligibility for expansion funding from the PRO(s) in the first program plan is contingent on completion of the needs assessment.

Two hundred forty-five local governments responded to the needs assessment survey (200 cities, 36 counties, and nine additional county responses) with 92.2% of respondents indicating an interest in expanding recycling services.

To support program plan development, CAA consulted with a select number of local government representatives (see Appendix D for more details) to gather more information about initial needs assessment requests and develop a better understanding of existing recycling infrastructure in those jurisdictions.

This consultation process highlighted the different wasteshed infrastructure across the state, including a wide range of different local government and service provider roles and responsibilities and variations in such recycling activities such as contamination reduction activities, material flows, and current education and outreach efforts. This process underscored the need for a second more detailed needs assessment process and continued outreach to local governments to further develop the necessary components for RMA implementation.

The first needs assessment simply identified areas of potential interest in terms of service expansion. Local governments checked general areas of interest to maintain eligibility for funding under the process, which may in some cases have resulted in an inaccurate picture of needs in relation to existing recycling services. Information provided by local



governments was insufficient to prioritize funding requests in relation to RMA rule criteria (which had not been finalized at the time of the needs assessment survey).

As anticipated in DEQ's Internal Management Directive (IMD) related to the program plan submission, CAA is proposing to conduct a follow up on DEQ's 2023 Needs Assessment by conducting an Oregon Recycling System Optimization Project (ORSOP) between April and August 2024 to gather information necessary to further develop its estimates of required local government funding for recycling system expansions and improvements and refine the schedule for processing funding requests in accordance with RMA rule prioritization criteria.

Proposed Approach

Given the interrelationship between local government needs assessment requests and other areas of the program plan pursuant to the RMA, CAA is proposing an integrated approach to the ORSOP. CAA will coordinate the outreach activities required to develop more accurate estimates of service program expansion requests (ORSOP) with continued program development of other local government compensation funding programs.

CAA proposes the following approach for engaging local governments and their service providers in the ORSOP:

- 1. Follow up outreach to all 2023 Needs Assessment respondents (details pending)
- 2. Engagement between CAA and local governments and service providers based on wastesheds (with additional engagement as required for specific geographic areas). Consultation focuses on:
 - a. Understanding the unique conditions that may exist in each jurisdiction (i.e. local government service provider franchise arrangements, nature of existing recycling services provided, etc.)
 - b. Consulting with local governments and service providers on the reimbursement process, review criteria and administrative process that will be established to finalize and rollout service expansion system funding
 - c. Confirm which permitted facilities and existing local government facilities would like to participate in the PRO depot network
 - d. Coordinate needs assessment requests in the context of other local government compensation programs such as transportation reimbursement (see relevant section below).
 - e. Identify primary contacts for each local government and service provider
 - f. Review anticipated processes for disbursement of education and outreach materials and the provision of funding for contamination reduction activities

The ORSOP will enable the development of a schedule, prioritization, and cost estimates of local government service expansion requests, as well as refined estimates of costs associated with reimbursements in other program areas.



General Process and Timelines for Prioritizing and Processing Service Expansion Requests

Proposed Timeline

Under the RMA, producers are not obligated to become members of a PRO until the program starts on July 1, 2025. Given the anticipated cost of local government infrastructure service expansions, CAA will not be in a position to fund service expansion requests until it is generating revenue from obligated producers.

Actual local government service expansion disbursements, therefore, are anticipated to begin after the July 1, 2025, program start date, with CAA prioritizing funding requests in accordance with RMA rule priorities. The general steps and timeframe associated with implementation of this service expansion funding program is below. (This timeline can also be reviewed in Appendix M, Preliminary Program Implementation Timeline.)

- → CAA Conducts ORSOP (April August 2024)
- → CAA Program Plan is updated based on the ORSOP (September 2024). Updates will include:
 - o A more detailed schedule for implementing collection program expansion disbursements
 - Revised estimates of local government expansion disbursements
 - A formalized Administrative Process for Review and Approval of Expansion Disbursements.
 - o Prioritization of expansion disbursement requests
 - o Development of a 2025-2027 Schedule for Processing Expansion Disbursement Requests
- → CAA Program Plan Approved (November/December 2024)
- → CAA-Local government processing of 2025 Expansion Funding Requests (begins Spring 2025)
 - o Detailed CAA local government negotiations
 - Identification of individual local government/service provider funding amounts
- → Disbursement of 2025 Expansion Funding Requests (July December 2025)
- → CAA-Local government processing of 2026 Expansion Funding Requests (begins Fall 2025)
 - Detailed CAA local government negotiations
 - Identification of individual local government/service provider funding amounts
- → Disbursement of 2026 Expansion Funding Requests (January December 2026)
- → CAA-Local government processing of 2027 Expansion Funding Requests (begins Fall 2026)
- → Detailed CAA local government negotiations
 - Identification of individual local government/service provider funding amounts
- → Disbursement of 2027 Expansion Funding Requests (January December 2027)



Initial Outline for Disbursement of Local Government System Expansions

Preliminary Estimated Funding for Local Government System Expansion			
\$54 Million to \$70 Million			
2026 \$143 Million to \$186 Million			
2027 \$159 Million to \$207 Million			
Total Program Plan Funding \$356 Million to \$463 Million			

Table 1

Actual funding amounts for local government service expansion initiatives will be determined on a case-by-case basis subject to RMA eligibility requirements as per a schedule for disbursements included in future program plan amendments. For more information related to how CAA developed initial estimates see Appendix E.

Revised Local Government Funding Schedule

Following the ORSOP, CAA's revised program plan will include a more detailed schedule for processing the disbursement of system expansion funding requests. Where appropriate, CAA will schedule the funding of local government system expansion on a geographic basis so that infrastructure improvements can be coordinated and support broader system efficiencies.

The proposed draft disbursement schedule to be included in the revised program plan could follow a format like the following:

Local Government	Type of Funding Request	Reason for Prioritization	Target Date for Processing System Funding Request	Target Date for Funding Disbursement
LG X	On-route Expansion	Required by OTR	September 2025	December 2025
LG Y	Depot	Population under 4,000	Oct 2025	Jan 2026

Table 2

CAA will consult with local governments to review optimal timing of funding disbursals to align with local government budget policies.

Where prioritized local governments are not ready to process their funding requests in accordance with the proposed Revised Program Plan funding schedule, CAA will work with those local governments to process service expansion requests as soon as that local government is ready to engage in the processing exercise necessary to determine final disbursement amounts.



Assessing Priority of Funding Requests

All PRO funding for expansions and provision of recycling services from July 2025 through to December 2027 will be prioritized following RMA rule guidelines:

- 1. Local governments that are not, or will not be, able to provide the opportunity to recycle
- 2. Existing recycling depots to provide for the collection of any materials that were formerly collected on-route by the local government or a local government's service provider, as needed to ensure continuation of recycling opportunities
- 3. Existing recycling depots to provide for the collection of any materials that are not currently or were not formerly collected on-route by the local government or local government's service provider
- 4. Local governments with populations less than 4,000, according to the Portland State University Population Research Center's most recent Population Estimate Report, or such other estimate approved by the Department
- 5. Local governments of any size that are looking to add new on-route or recycling depot service
- 6. All other local governments that are looking to expand existing on-route collection, recycling depots or both, in order of ascending population

Where local government requests fall into multiple RMA rule prioritization categories, CAA will attempt to identify and sequence in accordance with the most applicable rule criteria. As noted earlier, CAA will also attempt to assess local government requests on a geographic or wasteshed basis to improve system efficiencies. Additional criteria that CAA proposes to employ for evaluation are described below.

Evaluation of Funding Requests

CAA will use a standardized information-gathering mechanism to gather needed specifics for assessing and meeting funding requests and to be able to gauge the requests against these evaluation criteria. This information may include:

- 1. Name of the project
- 2. Detailed description of the project
- 3. Financial request with detailed list of items to be acquired
- 4. Timeline for the project and funds to be disbursed
- 5. Who will be overseeing and undertaking the project
- 6. What is the projected impact on the intent of the RMA
- 7. Is the project consistent with industry best practices/guidelines
- 8. Will the project meet the performance standards outlined in RMA rules

Proposed Review Criteria

While RMA rules provide guidance on how to prioritize local government eligible funding requests, there are several references in the RMA related to potential service expansion requests where further clarifications will be required to determine whether a particular local government service expansion request is eligible for funding under the statute.



For example, service expansion requests related to expanded on-route collection services and the addition of recycling reload facilities indicate that the recycling reload facility is an eligible expense if necessary. RMA rule requirements also indicate that PRO funding for additional recycling depots is in relation to "as needed to provide convenient recycling opportunities." See OAR 340-090-0800(1)(A)(C). In the absence of additional review criteria, to address how RMA terms such as "if necessary" or "as needed" should be interpreted, CAA is proposing program review criteria to clarify how needs assessment funding requests will be assessed. Such criteria will also support other RMA requirements related to the verification of funding amounts anticipated under the statute.

As part of the ORSOP, CAA will consult with local governments regarding funding eligibility protocols and the proposed needs assessment review criteria outlined below:

1. Support for Existing Services and Infrastructure

Local governments and service providers have invested heavily in recycling infrastructure over decades to deliver recycling services in conjunction with the delivery of other solid waste services that form the greater solid waste management system. Where needed, improvements and additions will be considered, but existing infrastructure should remain the foundation for services. Where consistent with other rule and funding assessment criteria, funding requests should support and utilize existing recycling infrastructure.

2. Consistent with RMA Objectives

Funding requests must be qualified expenses under the statute, that are consistent with RMA objectives to minimize the environmental impacts of producer packaging. Regarding local government infrastructure, requests should efficiently support improved environmental outcomes related to both local government recycling and statewide packaging objectives.

3. Driving Efficiency and Effectiveness

Funding requests should improve current system efficiency and support cost-effective diversion. The funding should be used both to improve the performance of existing recycling programs (e.g., increasing the recovery of materials that are currently recycled) and add new materials in a cost-effective manner. Investments should create new capacity that meets the newly anticipated volumes of recyclables under the RMA. Efficiency measurements (e.g., a "net cost per ton" diverted) may be developed for considering applications for funding. It is recognized that any new tons added into the recycling system will likely increase the total and net system costs.

4. Balancing Local Government and Statewide Needs

Local government funding requests should integrate well with statewide infrastructure. A balance is required between funding to support State-wide system benefits and funding for local/regional funding needs and opportunities.

5. No Cross Subsidization or Duplication of Funding

There should be no cross subsidization between local government needs assessment funding and non-RMA solid waste program funding. Funding provided by CAA for recycling programs will be dedicated to eligible recycling programs only. Funding requests should also not duplicate funding provided through other RMA programs.



6. Accuracy and Transparency

Funding requests must be based on accurate and transparent information. CAA will work in good faith with local governments and their services providers to document required information associated with various types of system expansion service requests. (i.e., required information in relation to a request for expanded on-route collection).

Dispute Settlement Process relating to Service Expansion Funding Requests

Given the language of the RMA, there may be disagreements between CAA and local governments and their service providers about the eligibility for certain types of funding requests. These disagreements may be more complex than typical contractual disputes (which often involve disputes over the interpretation of contractual clauses) as they will likely involve different legal interpretations of what reimbursement the statute requires and what qualifies as an eligible cost.

CAA proposes to utilize the ORSOP to identify and catalog the types of costs associated with the expansion and provision of recycling collection service for covered products. CAA would propose to convene a working group comprised of representatives from CAA, local government, and DEQ to attempt to mediate disagreements over service funding requests between the approval of the second program plan and the start of the program plan on July 1, 2025. This process will hopefully minimize potential disagreements between CAA and local governments prior to the processing of individual local government service expansion requests once the program begins on July 1, 2025. In addition to resolving or narrowing potential dispute issues, the working group could also align on the details of the dispute settlement process to be utilized once more detailed CAA local governments negotiations related to service expansion requests are undertaken.

Accountability Mechanisms

Funding provided to local governments will need to be accompanied by accountability mechanisms to ensure that PRO funding provided to local governments is allocated to its intended RMA purpose. In many cases, this may include advance funding for capital items such as trucks or other capital items. As part of the ORSOP, CAA will consult with local governments regarding the accountability reporting and conditions associated with the provision of funding in relation to service expansion requests and different types of eligible funding categories. The details of proposed accountability processes will be provided in the revised second draft of the program plan, anticipated in September 2024.

ii. Transportation Reimbursements

Under the RMA, the PRO is required to fund local government or their service provider costs of transporting covered products from a recycling depot or recycling reload facility to a CRPF, processor, or responsible end market (REM).

DEQ rules establish methods for determining funding and reimbursement amounts which may include payments based on zones. The rules require that:

- → Costs must be based on the actual costs of managing and transporting covered products that must be shipped more than 50 miles
- → 50-mile distance is the shortest driving distance to:
 - o the nearest CRPF with capacity to process the material, if the material is commingled



- the nearest processing or sorting facility that will prepare it for market or REM, if the material is collected separately (e.g., glass) or is not fully commingled
- o the nearest REM if the material is collected separately and in condition to be sent to an REM
- → Costs to receive, consolidate, load and transport covered products include but are not limited to purchasing and maintaining equipment, signage (not already covered under RMA provisions), administrative costs including related staffing costs
- → Transportation costs of covered products directly from a generator to a CRPF or REM are not eligible
- → In 2027, the PRO must also conduct a transportation study
- → The PRO program plan must include methods for calculating transportation costs
- → Payment methods may include rate schedules or zonal maps with periodic adjustments for fuel prices or other variable factors
 - o Consultation with local governments and service providers required on payment methods
 - Methods must include a voluntary option where PRO and local government/service provider may agree to transfer some or all transportation responsibilities to PRO

Consultation Process

During the program plan development process, CAA consulted with a select number of local government service providers on the design of the program for administering transportation disbursements under the RMA. These service providers are all likely claimants for transportation reimbursement under the RMA and were selected in consultation with ORRA, which represents haulers and other recycling businesses throughout the state.

The purpose of this pre-program plan consultation was to identify elements that need to be included in this funding program and outline a general approach to administration. As with other RMA funding programs, CAA's intention is to seek feedback from affected parties throughout the state to support development of this RMA compensation program. Given this requires outreach to the same parties involved in the ORSOP, CAA will coordinate consultation related to the development of this funding program in tandem.

The proposed transportation reimbursement model, which CAA will seek feedback on in conjunction with the Oregon Recycling System Optimization Project, is described below. Following further consultation and outreach CAA would finalize transportation reimbursement policies and required forms and documents. These policy documents would be available online, and CAA would propose to conduct webinars and stakeholder outreach prior to program plan implementation to explain the claims submission process before the program start date.

CAA would begin processing claims from eligible funding recipients for any qualifying shipments made after the start of the program on July 1, 2025.



Proposed Methods for Calculating Transportation Costs

General Model

CAA will calculate disbursements based on standardized rates per mile from eligible outbound facilities to the nearest CRPF with capacity or end market, with some adjustment for loading and preparation of outbound loads:

- → A standardized rate per ton per mile, with different rates for different types of loads, would be utilized to calculate the transportation reimbursement compensation for different facilities
- → The standard per mile rate would be used to calculate set transportation reimbursements for each eligible outbound facility based on the application of the standard rate to the distance between eligible facilities and the nearest processing facility or end market
- → Reimbursement rates would include a process to address fluctuations in fuel prices

Local governments can assign transportation eligibility funding rights to service providers, and eligible transporters would register with CAA and enter into a transportation claims agreement. Functioning through an online portal, eligible applicants would confirm eligibility for reimbursement for individual shipments with CAA prior to the shipment taking place. CAA would confirm their shipment request and notify the receiving CRPF of the delivery. Once received the CRPF will confirm the load was accepted and input final weights. Once that is complete, reimbursement would be disbursed to the party initiating the shipment request. The program would include a dispute settlement process with specified timelines for contested claims.

Although funding requests from service providers for facility upgrades and capital costs associated with preparation of materials (excluding costs covered under expansion of services funding to local governments) may coincide with requests for transportation cost reimbursement, CAA recommends managing funding requests for capital items (e.g. depot signage, compaction equipment, etc.) separately from transportation claims.

Registration of Claimants

A process must be established for local governments to identify the recycling depots, recycling facilities and haulers eligible for transportation reimbursements in their jurisdictions. At the time of this submission, DEQ informed CAA that it was consulting with local governments on an authorization or designation process for local governments to utilize with respect to all RMA local government compensation programs.

Eligible recipients of transportation funding, which could include both local governments and service providers, would enter into a transportation claims agreement with CAA prior to receiving transportation reimbursements:

- → This agreement would include terms of payments including indemnification clauses that clarify each party's liabilities and obligations with respect to transportation of RMA materials including situations where a funding recipient was utilizing a third party to transport covered products
- → CAA intends to consult with service providers and local governments on the content of a draft transportation claims agreement template

CAA will facilitate the registration process and completion of transportation reimbursement claims agreements in time to enable implementation by July 1, 2025.



Establishing Standard Rates

- → CAA will develop a draft recycling depot and recycling reload facility list for review by local governments and service providers
- → A facility receiving rate of inbound shipments that need to be scaled, received, consolidated, stored, and reloaded and all the associated administration and reporting would be paid a standard fee per ton managed
- → A transportation reimbursement rate for outbound shipments from each facility would be calculated based on a standard per mile rate applied to the eligible distance and recorded weight received at the CRPF
- → Process for calculation of transportation rates for each facility would be reviewed including:
 - The categories of shipments that would be subject to different standard transportation rates (i.e. material type, destination)
- → Calculation of facility rates reflecting the shipping distance from each eligible facility to the nearest processing facility with capacity or nearest end market based on the standard rate per mile
- → Proposed rates will be set on a per ton of eligible covered product basis
- → Payment process would include determining rates for mixed loads

Timing of Submissions and Reimbursements

CAA will develop an online portal to process submissions of claims. Claims processing will reflect the steps outlined below:

- 1. Eligible recipients would provide CAA notice of shipment through standard form via an online process
- 2. CAA would pre-approve eligible shipments (within specified time frames)
- 3. A Bill of Lading (BOL) would be released to relevant parties
- 4. Final weights of transported materials would be reconciled by CRPFs and other receiving facilities
- 5. Payment is released

As per RMA rule requirements, CAA would notify local governments of all payments made to authorized service providers under this program.

Claims Submission Content

During the next phase of consultation, CAA proposes to review a draft claims submission template in consultation with local governments and service providers. Operational information collected via claims submissions could include:

- → Confirmation of shipment eligibility (i.e. local government expense for transportation of covered products)
- → Location of recycling depot or recycling reload facility (origin)
- → Date of load pick up at recycling depot or recycling reload facility
- → Location of delivery location: CRPF, processor, or REM (destination)
- → Date of delivery to CRPF, processor, or REM
- → Confirmation of delivery by authorized CRPF, processor, or REM representative
- → Identification of covered product load type:



- o Comingled material, specific material, if appropriate
- o Baled material vs. compaction vs. uncompacted material
- o If applicable, percentage of load associated with eligible covered product
- → Outbound, inbound weights confirmation of outbound and inbound weights from outbound and inbound facilities

Timing of Payments

CAA proposes that service providers confirm eligibility of shipments and submit claims on a delivery-by-delivery basis. CAA would consult on proposed timelines for payment of claims and the processes for verifying, approving and adjusting claims. CAA would also consult on proposed deadlines for the submission of transportation claims and adjustments to transportation claims.

Dispute Settlement Process

As noted above, CAA is proposing a pre-submission claims review process to minimize disputes about whether a particular claim for funding is eligible. In cases where a submitted transportation claim is not considered eligible by CAA, that transportation request will not be approved, and the BOL generation process will not be initiated. If a load is approved for transportation and is rejected upon receipt at the CRPF due to contamination, the transporter shall incur the cost of the transport, removal, and disposal of the material and that load will not be eligible for transportation reimbursement.

CAA will develop a dispute settlement process for claims where a service provider and CAA disagree on eligibility for a claimed cost or the amount of the transportation cost reimbursement. Details would be included in a Service Provider/CAA transportation agreement, with the potential for arbitration by a third party agreed to by both parties. Affected local governments will be notified when a dispute settlement process has been initiated.

Percentage of covered product in commingled loads

- → Under RMA rules initially PROs will use data from the 2023 Oregon Solid Waste Characterization and Composition Study to determine the portion of recyclable material that is not covered product in commingled loads
- → CAA will propose a standard percentage for use in all rate sheet calculations
- → If a local government, service provider, or PRO in a particular county believes that the local commingled stream has a significantly different proportion of covered product (in comparison to the statewide average), it can conduct a study in consultation with the affected parties to determine the proportion of covered product in the local commingled stream
- → In 2027 the PRO is obligated to conduct a study to determine the proportion of covered material in commingled loads:
 - o CAA will consult with stakeholders on the appropriate methodology associated to be used in this study and the revised program plan will include an outline of the proposed approach and timing of initiative

Voluntary Transportation Option

As per RMA rules, CAA would develop an option where CAA would assume responsibility for transporting covered product materials from a local government's recycling depot or recycling reload facilities to the nearest facility if the local



government and CAA agree to such an approach. This would be implemented through a CAA/local government agreement which would describe service details. CAA will consult with service providers on the details of the transportation funding program to determine their level of interest in the voluntary interest option.

Opportunities for Efficiency and Effectiveness

Wasteshed-Level Management

The management of materials at the wasteshed level offers a number of advantages from an administrative, planning, operational, and financial perspective. It is important to manage all the materials at the wasteshed level. The materials can be planned, administered, received, consolidated, prepared for shipment, and loaded in each wasteshed. In some cases, neighboring wastesheds may find it beneficial to work together to benefit from economies of scale and avoid unnecessary duplication of services. CAA will explore options to coordinate transportation of materials on a wasteshed basis during consultation on the details of the transportation funding program.

Material Compaction

The movement of materials must be minimized where possible. One of the most effective ways to minimize the movement of materials is by maximizing load capacities thus reducing the overall number of loads needed, however, this must not be done at the risk of compromising the recyclability and recovery of the materials by CRPFs.

While baling is an effective way to maximize capacity, it has negative impacts on the recovery yield of the materials. Shipping loose materials is the least effective way of shipping materials resulting in the most loads to be managed. The most effective way is to compact the material into closed top walking floor trailers, maximizing the volume capacity without affecting the integrity of the material to be sorted. This will lower freight costs and increase recovery at the CRPF while reducing residue rates.

CAA will consult with local governments and their service providers regarding efficient transportation options. The rate sheet will likely, pending the results of consultation, distinguish between different types of loads to encourage transportation efficiencies.

iii. Additional Reimbursement and Funding for Local Governments

Contamination Reduction Programming

The RMA requires DEQ to establish and maintain list of approved contamination reduction program elements, including:

- → Customer-facing materials, methods responsive to diverse populations
- → Standards for providing feedback to generators that contribute to contamination
- → Standards for service or financial consequences to generators that are repeated sources of contamination



Local governments must implement programs to reduce contamination that include program elements identified by DEQ, or materials or methods that are as effective, and must include a process to review and revise as local elements once every five years. Local governments are only obligated to participate to the extent program funding is provided by a PRO. PRO contamination reduction funding is capped at \$3 per capita per year.

RMA rules related to contamination reduction funding will be finalized as part of the RMA's Phase II rulemaking process with a review and approval by the Environmental Quality Commission anticipated in November 2024.

CAA has conducted some preliminary outreach with local governments related to this program, but as in other program areas, further consultation is required to develop the details of how this program will be administered.

As with other reimbursement programs, local governments may designate service providers as eligible recipients for program funding. Local governments may also assign other local governments as funding recipients (i.e. a city may choose to designate a county as the funding recipient).

Given that PRO program funding is capped at \$3 per capita, the assignment or designation process related to this program requires local governments to assign or designate portions of funding in situations where it may be assigning funding to multiple service providers. The per capita cap also requires the determination of funding years for which to calculate the cap, and the population period on which the per capita cap was calculated so that in any given funding year, local governments are working from the same population estimates.

CAA proposes the following general approach to disbursing funding for contamination reduction programming:

- → The funding year for disbursements would be based on the municipal calendar year (e.g. July 1, 2025 to June 30, 2026)
- → Prior to the start of each funding year CAA would calculate the eligible cap for Oregon local governments for the upcoming year based on the most recent estimate of Oregon population available from the Portland State University Population Research Center as per RMA rules 340-090-0810 (2) (timing to be determined) and provide to local governments and DEQ (potentially post on its website)
- → Prior to the start of each funding year, local governments would through the Opportunity to Recycle (OTR) process assign funding eligibility identifying the portion of funding available to recipients in cases where the local government was assigning eligibility to multiple recipients
- → CAA would encourage local governments and eligible service providers to submit contamination reduction funding budgets, identifying what the CRF will be utilized for, to CAA for pre-approval prior to the start of each program year this process would expedite the processing of payments later in the year
- → Where recipients want advance funding for contamination reduction programs, they would submit a budget for eligible items to CAA prior to the start of the program year (timing to be determined)
- → Recipients that are provided advanced funding in relation to the contamination program would need to monitor spending and provide CAA with updates confirming advance funds were utilized for eligible contamination reduction program elements (timing to be determined)
- → In the event that recipients of advance funding related to the contamination reduction program had not spent the advance funding by the end of the funding year, they would be required to return unspent advance funding amounts to CAA (timing to be determined)



Ensuring 10% Post-Consumer Content in Roll Carts

Many manufacturers of roll carts currently offer 10% or more post-consumer content in new containers. To get the post-consumer material needed, manufacturers need access to residentially sourced resin and there has been concern in the past about an adequate supply of this material. Some manufacturers may indicate that, depending on the size of the container and the weight of the resin used the purchaser, there may be the need for a small premium for a 10% cart during procurement. However, some cart manufacturers are already able to provide 10% post-consumer content at the same price and same warranty terms as 100 percent virgin resin carts.

CAA proposes to work closely with local governments and haulers to facilitate procurement that ensures the 10% standard is met and that the content is derived from residential post-consumer sources.

Measures to Protect Ratepayers from Increased Costs

Under the RMA, producers will provide funding for several activities that are currently financed indirectly through ratepayer recycling fees. In addition, producers will fund activities designed to implement recycling system improvements. While the level of many of these investments have yet to be finalized, the investments are anticipated to be significant and will indirectly protect existing ratepayers from fee increases as local governments and system participants will no longer be required to recover such costs exclusively through rate payers.

Producer funding directed toward existing activities that should provide ratepayer protection include:

- → Annual compensation to CRPFs to cover current operating and contaminant disposal costs as well as future system improvement costs
- → Annual local government contamination reduction program funding
- → Funding for local government transportation of covered products for more than 50 miles

New sources of producer funding directed toward recycling system improvements that should provide rate payer protection include:

- → Producer funding for expansion of local government collection services
- → Close to 50% of CRPF compensation relates to recycling system improvements associated with RMA obligations
- → Producer funding for the collection of PRO acceptance list materials including potential funding in support of continued curbside collection of select materials
- → Producer funding for the provision of local government education and outreach materials
- → Producer funding to ensure collected materials are recycled at responsible end markets
- → Producer funding for waste prevention and reuse projects designed to lower the environmental impact of covered products

With respect to the processing costs of collected materials and the requirement under 459A.923 (2) which requires PROs to share in processing costs to allow local governments to reduce the financial impact on ratepayers, CAA supports data reporting processes that would allow it to provide local governments with an annual estimate of PRO funding provided to processing facilities in relation to the volume of commingled materials collected in their jurisdiction. This would allow individual local governments to take PRO funding into account when setting ratepayer fees and processes for their local service providers. CAA can track certain commingled volumes through the provision of transportation subsidies, but will likely require additional reporting by CRPFs to ensure that this information is accurate on a local government basis. CAA will



work with DEQ to review various data reporting requirements under the RMA with the goal of providing this type of information to local governments.

CAA also supports the monitoring of developments at CRPFs over the course of the program plan in relation to the anticipated investments and costs identified through the study by Crowe on the Oregon Processor Commodity Risk Fee and Contamination Management Fee. This is necessary to review whether anticipated investments were made and to review whether processing facility anticipated cost estimates were accurate. Such information will help refine forecasting estimates associated with anticipated future studies related to the calculation of CRPF processing fees. CAA believes that DEQ is best positioned to gather this information as a requirement of CRPF permitting reporting.

Finally, CAA has an obligation under 469A.875 to describe how it will provide funding to allow local governments to protect ratepayers from the increased costs associated with processing and marketing recyclable materials. As noted above, CAA will be making significant investments to support recycling throughout the state and indirectly protect ratepayers. CAA will provide local governments with an annual summary of RMA funding in relation to materials collected in their jurisdiction so that these amounts can be reviewed by local governments when conducting ratepayer reviews in relation to recycling services.

iv. Start-Up Approach for Time-Sensitive Tasks

Given the program start date of July 1, 2025, there are time-sensitive tasks that need to be completed during 2024 and early 2025.

The expected start-up tasks include:

- 1. Negotiating with and then providing associated compensation (with a single accounting point-of-contact system) to local governments for service expansion
- 2. Setting up a single accounting point-of-contact system for compensation of local governments for expenses not related to service expansion (i.e. transportation funding, contamination funding, roll cart funding, etc.)
- 3. Setting up a single accounting point-of-contact system for payment of contamination management fees and processor commodity risk fees to CRPFs.

In relation to the stated start-up tasks, CAA will begin outreach to and preliminary negotiations with all respondents to the initial needs assessment to further develop understanding of service expansion funding needs. Details of this proposed outreach, including ways to gather information that uses stakeholder time efficiently (by addressing multiple related topic areas for example), are included under the "Proposal for an Oregon Recycling System Optimization Project" section above.

By June 30, 2025, the development, buildout, and implementation of a local government-facing portal will be completed. The portal solution will provide an easy to use yet secure platform for producers, service providers, and state/local stakeholders to interact with CAA. All data within the portal will be encrypted to safeguard against external threats and ensure the confidentiality of data.

¹ Crowe. Study Results: Processor Commodity Risk Fee / Contamination Management Fee. Retrieved March 8, 2024 from https://www.oregon.gov/deg/recycling/Documents/TWGTask4-5Report.pdf.



For local governments and service providers, the portal will allow access through a secure user ID and password. Once in the portal, service providers will be able to view their claims, account history and balance due, and reports and notices. Additionally, the portal will provide multiple means for service providers to send their claims data to CAA through data exchange, structured file upload, or direct entry. As described above, details for administering each of the individual reimbursement programs will be discussed with local governments during the next phase of outreach. This process will inform further specific portal requirements.

In parallel to local government and service provider outreach, CAA will continue its discussions and engagement with Oregon's eligible CRPFs to better understand their needs and align on administrative processes for the payment of contamination management fees (CMF) and processor commodity risk fees (PCRF). Payment of these fees will also be facilitated through CAA's secure portal system.

Leveraging functionality that will support the overall achievement of Objective 1, including ensuring that materials are collected and processed for recycling in Oregon are consistently delivered to responsible end markets, CAA will provide full material flow traceability through a system that manages and reconciles inventory flow from initial possession, through validation of receipt by responsible end markets. This same functionality will support the track and trace needs under the transportation reimbursement process.



b. The PRO Recycling Acceptance List

This section outlines activities, timelines, and recommendations for increasing diversion of materials named on the PRO Acceptance List from disposal, including proposed approaches to meeting convenience and performance standards and setting collection targets.

As noted below, CAA has completed a GIS mapping exercise to assess existing depots and alternate collection sites in relation to the RMA rule requirements. In general, where there are service gaps in relation to RMA convenience standards, local governments are currently collecting some PRO materials through curbside collection. These local governments have indicated to CAA that they would like curbside collection of certain PRO materials to continue under the RMA and CAA has indicated its interest in working with local governments to support this added level of convenience.

As the exact number of physical collection points that CAA will propose is dependent on the outcome of local government discussions in relation alternate collection activities in key local government jurisdictions, CAA has not aligned on a proposed number of physical collection sites for PRO acceptance list materials at the start of the Program. The numbers provided below are initial estimates, which combine physical locations with alternate activities.

As CAA conducts further outreach in relation to assessing local government service expansion requests, it will also work with local governments to confirm potential participation in the collection system for PRO acceptance list materials. These discussions will enable the development of a more detailed plan for the collection system which in turn will layout a detailed proposal for CAA's compliance with convenience standards as part of the anticipated second program plan required in September.



i. Proposed Approach to Achieving Convenience Standards

Requirements

Through the rulemaking process, DEQ has defined the convenience standards for depots to ensure Oregonians have reasonable and equal access to recycle materials that the PRO is responsible for collecting and managing. ORS 340-090-0640 outlines minimum sites for counties, cities and the Metro region.



Figure 1. An infographic summarizing the requirements of recycling access laid out in the RMA

The PRO will be required to have a minimum of:

- → One depot in every county
- → One additional collection point in counties with over 40,000 residents
- → Additional depot locations for counties in the Metro region (Clackamas, Multnomah, and Washington Counties)
- → A depot in cities of 7,000 or more for cities outside the metro region
- → A depot for every city of 14,000 within the Metro region
- → Additional collection points based on population and location of the city

The achievement of this distribution is demonstrated in Appendix F.



In addition to minimum regional requirements for depots, there are additional considerations that CAA is factoring in when considering optimal locations for siting depots, including:

- → Incorporated versus unincorporated parts of counties
- → Proximity to public transit in the multi-depot cities
- → A goal that 95% of Oregonians live within 15 miles of a depot

Further, enhanced convenience standards exist for PE film, plastic buckets and pails, glass bottles and jars, PE and PP lids and caps, and HDPE package handles.

Block EPS, pressurized cylinders, aerosol packaging, aluminum foil and shredded paper are not included in the materials that must be collected at locations that meet the enhanced convenience standards. However, CAA, when possible, proposes to attempt to have most existing permitted sites, collection events and on-route (in specific urban areas) collect most, if not all PRO materials (collected separately from Universal Statewide Collection List materials), meeting the enhanced convenience standards for all materials while minimizing costs to the system and increasing convenience for the user. All depot locations shown in this section on the maps (Figures 2 and 3) and in Appendix F are being considered as enhanced locations accepting all PRO materials.

CAA will also consider alternative depot locations, where necessary for certain product categories, such as PE films, aerosols and pressurized cylinders. The use of on-route collection in certain metropolitan areas, at no additional cost to residents, is also being explored as a means to help meet convenience standards.

Further discussion of suggestions around the proper management of pressurized cylinders and block EPS can be found in the relevant sections below.

Network Analysis and Mapping

Given all the requirements to meet convenience standards, CAA estimates it will need to establish between 138 and 189 points of collection for materials on the PRO acceptance list. Points of collection refer to physical depots and events. The number also includes 38 identified areas where on-route collection may, in part, replace the need for a physical depot.

CAA contracted with IncaTech, a consultant group specializing in geospatial analysis, to utilize a GIS mapping tool to predict where coverage might be possible through existing depots and permitted facilities. Lists of prospective depots sites were prioritized and input separately as layers of information to produce different network coverage scenarios.

The RMA requires the PRO to prioritize outreach to permitted DEQ facilities and existing depots. CAA will issue letters to all permitted and existing sites inviting them to participate in the PRO depot network. This will occur in the first stages of the ORSOP and be followed by a series of outreach activities to prepare local governments and service providers for the ORSOP. Through this outreach, permitted DEQ facilities and existing local government depots will receive no less than two specific and direct requests to consider joining the PRO depot network. Access to webinars, information offered on the CAA website, and other anticipated electronic communications will further increase awareness opportunities for these sites as required in ORS 459A.896(1)(a).

A map of existing depots and permitted facilities was layered over the county and city convenience standard requirements to determine where gaps in convenience standards would exist if all existing locations joined the network as 'enhanced'



locations. Given the location requirements, many gaps were discovered in the state where alternative locations or methods of collection are needed.

To fill some of the gaps, CAA researched likely participating partner locations of existing refuse-related industry locations and community-based organization (CBO)/current Ecycles locations. CAA also noted and layered many of the existing permitted locations, as well as potential future partner locations that could serve as backup in cities where convenience standards would not be met if some of the central existing permitted locations chose not to participate.

173 existing permitted depot sites were identified with additional plausible existing locations (hauler yards, CBOs, etc.). These 173 locations cover much of the state, meeting the state convenience standards of reaching more than 95% of residents within a 15-mile range and having at least one site per county. However, CAA may not be able to initially meet the city convenience standards, leaving gaps in some of the cities. Strategies to close gaps in convenience standards are explained below.

Closing Gaps to Meet Convenience Standards

The initial phase of depot implementation is estimated to begin in 2025 by expanding collection of PRO material to the participating existing depot and permitted site locations.

Many existing hauler sites and permitted locations have expressed interest in participating as a PRO material collection point, however confirmation of participation is not yet confirmed. CAA has also identified over 285 backup sites that could be substituted if any existing facilities ultimately chose to not participate as a PRO collection point.

CAA also proposes to conduct outreach to retailers to explore existing or expanded collection opportunities for certain product categories, such as PE films, block white EPS, and pressurized single-use containers.

In metropolitan areas where on-route glass collection services currently exist, CAA will explore the potential of adding certain PRO materials to on-route collection services. CAA has sent out a questionnaire to Metro Regional governments to explore the economic feasibility and practicality of curbside collection. In the event that CAA and the local governments agree this is the best way to meet convenience standards for PRO materials, CAA proposes the number of depots required be adjusted in those enhanced service areas. CAA recommends offering direct service for the collection of PRO materials as it would help increase participation for all residents, increasing recovery rates and broadening access for residents.

CAA will explore the potential of enhanced curbside collection of PRO materials for both single-family and multifamily residents. To further address underserved communities and neighborhoods, CAA will consider hosting collection events in those identified areas.

As the depot network is built, there may be instances where barriers exist in establishing depots, such as a lack of available commercially zoned properties, or locations that do not immediately meet performance or geographic convenience standards. Where there are gaps and barriers that prevent ready identification of a suitable depot location, the CAA team will consider all practicable measures to work with prospective partners to develop a suitable site. Until a site can be developed, collection events may be necessary to meet convenience standards (more details on events below).

In these locations, CAA will explore one of three main options to fill the gap:



- 1. Adding PRO materials to a curbside container service, separate from USCL collections, and available at no cost to single family and multifamily properties to meet and exceed the convenience standards. Property density, service provider availability, and economic viability will guide this option
- 2. Partner with a CBO or independently host collection events regularly in areas lacking a permanent depot location
 - a. An emphasis on events in underserved areas of the cities will be prioritized. This option will be better suited where sites and infrastructure are limited and/or there is a lack of economies of scale for the alternative options
 - Option 2 and 3 will be combined in areas where single family convenience standards are met by onroute collection by adding targeted events to multifamily apartment complexes multiple times a vear
- 3. Constructing a new facility to act as a depot location for PRO items in the community. Site availability and economic viability will likely be the main drivers of this option

Running Collection Events

For events, CAA proposes to work with the municipality to prepare events that will best serve the population. CAA will work with cities and counties to find the most suitable sites for collection events and determine the best time and frequency of hosting events. CAA will work with jurisdictions to promote the collection events and collect data on utilization. The events will either be staffed by the local municipality and reimbursed by CAA, or by a partner CBO or local COBID certified contractor with experience in waste management. Design for these events will be based on the models of existing Metro area collection events such as Metro Hazardous Waste Rounds Ups, City of Gresham Earth Day Events, Lane County's Plastics Round Ups or James Recycling's recycling collection events and they may be combined to increase participation.

CAA team members and partners have experience conducting similar events in other parts of the U.S. and Canada. The type of event will depend on the community's needs and what other disposal options currently exist. Events will be conducted in accordance with the same performance standards as depot locations (outlined in the Performance Standards section), offering free collection services and collecting covered materials in a way that preserves the quality of the material and prevents risk of litter or loss of materials.

Requesting Variances

Onboarding the backup locations, siting and construction of new locations and event implementation for filling convenience standard gaps will begin in 2025 and CAA expects its proposed collection system to be completed by the end of the program plan. CAA intends to meet convenience standards in all service locations via one of the three options identified above for targeted communities.

In the event a suitable location cannot be identified for a permanent collection location or collection event, but a suitable location is established within a reasonable distance, CAA will request a proximity exemption variance. CAA proposes a reasonable distance would be 15 miles from the established depot serving as the basis of the proximity exemption to the jurisdiction where the PRO depot location/collection service is lacking.



If there are extenuating circumstances beyond the PRO's control, including natural disasters such a wildfires and floods, or other situations that could affect service to a community for a prolonged period, CAA will seek a temporary variance on operations of that depot.

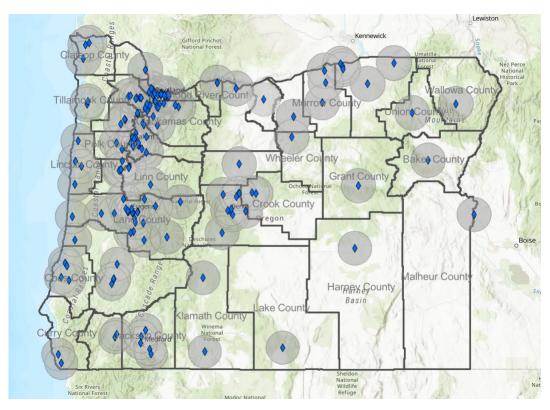


Figure 2. Proposed sites to meet performance standards and most convenience standards.

Using the existing collection sites of permitted facilities and local government depots, CAA has identified 142 suitable existing sites that, combined with special events and/or enhanced curbside service, will serve 96.9% of the population within a 15-mile buffer, based on 2020 census data.

	Number of Existing Collection Points	Total Population	Population within 15 Miles	% Beyond 15 Miles	% of Population within 15 Miles
State of Oregon	173	4,237,256	4,105,681	131,575	96.9%

Table 3



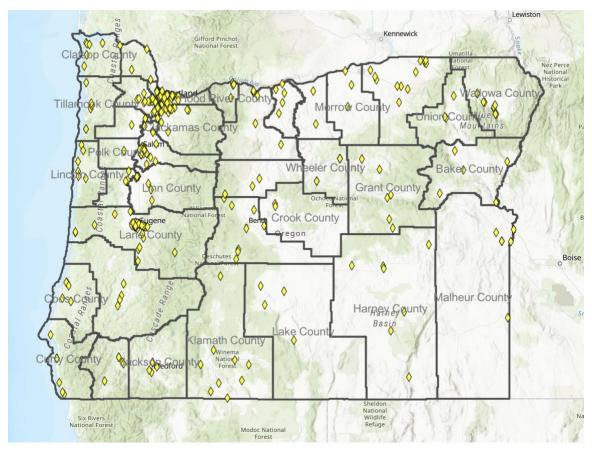


Figure 3. Identified backup sites where proposed sites do not wish to participate.

Due to the magnitude of the task and the need for the ORSOP, outreach to all sites has not yet been completed. CAA will prioritize detailed outreach to inform the planning processes. However, based on preliminary discussions with local governments and their service providers, CAA believes many of these sites will host depot collections for at least some PRO materials.

As mentioned above, CAA recognizes not all permitted sites and local government depots will elect to accept PRO depot materials. The requirement for a higher concentration of depots in metropolitan areas will also require additional locations beyond the existing sites. Anticipating this need, CAA has consulted with several organizations to explore the feasibility of utilizing their services to fulfill the remainder of the convenience standards requirements. Those organizations include:

- → St. Vincent de Paul
- → Bring Recycling
- → Oregon Beverage Recycling Cooperative
- → Habitat ReStores in the Portland Area

- → James Recycling in the Metro Area
- → City of Roses Disposal and Recycling
- → Trash for Peace
- → The Arc of Portland

All of these organizations, which are either non-profit or minority owned/operated, have expressed interest in continuing to explore the opportunity to be part of the PRO depot network.



Once the program is underway, to ensure compliance with convenience standards for transit access, CAA proposes to use the GIS mapping tool to overlay public transit routes to ensure the additional depot locations meet the proximity requirements for access to public transit.

Underserved Populations

The CAA team has also considered mechanisms for collecting PRO materials from residents that might not be able to access depot points. CAA will explore the possibility of providing valet services through haulers currently servicing the area, many of which offer a form of subscription collection service, such as Recycle+, in metropolitan areas. The contracted hauler's ability to offer valet services across the state will be explored as part of the proposed ORSOP.

CAA proposes to develop eligibility criteria for these valet services. Some of those criteria could include that a resident is a recipient of Meals on Wheels, receiving home care services, and/or set-out/set-back assistance. CAA proposes to consult with organizations representing aging and disabled populations to develop the appropriate criteria for eligibility and means to educate these populations about collection services available to them.

Just as CAA has been exploring working with a on route collection model for areas lacking sufficient depots, these collection methods are also being explored for collecting PRO and USCL materials for handicapped individuals via the same method. In the Portland area for example, CAA is exploring contracting with Trash for Peace to use electric vehicles (cars/vans/bikes) to serve mobility-limited populations within the city in addition to exploring similar services that may be offered by haulers.

ii. Proposed Approach to Addressing Performance Standards

Once the depot network is developed, it will be CAA's responsibility to ensure that each site is operating in conformance with the performance standards defined in the rules. Oversight includes ensuring:

- → Sites and services consistently conform to operating standards
- → Depots are free to the public
- → Sites are well promoted to maximize awareness and participation
- → Infrastructure around the site promotes ease of accessibility
- → Quality of recyclable materials is maintained
- → Depot sites have a positive impact on the communities and environment within which they operate

CAA proposes to build multiple check points into the process of establishing and maintaining the network in a way that meets all these performance standards.

Criteria for Site Selection

CAA is responsible for reaching out to permitted facilities and existing locations to assess their interest in participating as a PRO depot and their suitability as a site. If a permitted facility or existing depot location is found not to conform to the



performance standards, CAA will reconsider the eligibility of that depot to serve as a drop off facility within 12 months of that depot correcting any non-conformance to the performance standards.

CAA will also ensure hours of operation conform to the rules. If a depot is located at a "parent facility", such as a permitted facility, access to the PRO recycling area will be open those same hours. For all other collection points, or "stand alone" sites, CAA will ensure they are open for at least 4 days a week, 8 hours a day and that one of those operating hours falls on a Saturday or Sunday.

All sites must meet accessibility standards, having ADA compliant recycling areas in prominent places or marked so residents can easily access recycling opportunities. The sites need to also be accessible from a transportation perspective, ensuring roads and public spaces are suitable for residents to reach sites safely and for logistics partners to service. For collection opportunities that may be co-located with retail or other commercial activities, clear signage on how to access the recycling system will be made available at entrance points.

Sites will be fenced or have some other enclosure that acts as a litter mitigation measure. All collection areas shall be covered by a roof or have lidded bins that protect the material's quality and prevent water from collecting in covered product collection areas.

Establishment of Depot Sites and Contracts

As depot locations are brought on board, CAA will assess sites for additional equipment and infrastructure needed to meet the performance standards. Additional staff time necessary to fulfill the operational obligations of the PRO depot network will also be assessed and worked into the payment schedule. Each site will enter into a services contract with CAA, which will outline performance expectations as terms of the contract.

CAA will also document that all operational expectations are in place before a depot location is added to the network. CAA will create a site audit record for each site, demonstrating that each depot location can meet the performance standards at the outset of operating in the program.

Depot staff will undergo initial onboarding training with their CAA point of contact. Staff will receive training in all operational procedures, become familiarized with the system for pick-up requests, and learn where to find resources to promote their services. CAA will provide a depot management handbook outlining the above information to all depot sites.

CAA will work with collection sites to determine the best compensation method. Collection volumes may be low for some sites, in which case factoring a per pound reimbursement might not be practical. To adequately accommodate for the fixed space and labor costs, CAA may need to compensate collection sites based on a flat, per month service fee. Terms of compensation will be part of the depot negotiation process.

A provision of the contract will state that any incidents that could substantially impact services offered or require emergency response be reported to the PRO within 24 hours. That will allow the PRO 24 hours from the time of notification by the collection depot to convey incidents to DEQ within the two business days defined by rule.

Operational Support

Once a depot is operating in the program, CAA will provide resources to support their operations. CAA anticipates offering the following resources:



- → newsletter for depots to keep them informed of the progress of the program, feature information on best practices, and remind them how to contact the team for assistance
- → Offer webinars to ensure operators are familiar with operational procedures
- → Develop a media kit that will help depot sites promote the PRO collection opportunities alongside their other services
- → Have access to digital resources like the PRO depot management handbook and digital files for signage

To ensure residents across Oregon have an equal opportunity to recycle, CAA will make education and promotional materials available in multiple languages. Different language options offered for depot education will mirror the language options used in each jurisdiction for broader program education elements.

Annual Audits

CAA will develop an audit cycle that will include a mix of on-site and desktop audits performed each year for every site. On-site audit inspection will be conducted to ensure operations are running smoothly and in accordance with the terms of the contract. Desktop audits and on-site audits will assess the same criteria. When a desk audit is performed rather than an on-site audit, documentation via photos, promotional efforts and compliance documentation will be requested. All the same documentation will be gathered by CAA staff when conducting an on-site audit.

Audit Criteria

The audit criteria will include, but not necessarily be limited to:

- → Adequate signage advertising the program, program hours, who residents can contact if there is a complaint about the site and noting that the program is free
- → Record of program promotion throughout the year
- → Certificates of insurance
- → Demonstration that staff are knowledgeable about the PRO program, PRO depot training is provided to all new employees, and employees have access to the PRO depot management handbook
- → A mechanism for logging site complaints directly and documentation that complaints were forwarded to CAA

Contamination Management

CAA will require, when feasible, an on-site staff member to be present to assist the public with drop-offs of PRO materials. This staff member will ensure cleaner material streams and will be an educator to the public about the PRO depot system and what it can collect. Where repeated contamination or illegal dumping issues arise at a site, CAA may use monitoring technology to address issues. Signage will be prominently placed to offer instructions on management of materials that are not accepted in the collection system and would therefore contribute to contamination.

If a load of material is determined to be too contaminated for an end market, the PRO will explore options to remedy the contamination situation through initial sorting. If that is not possible, the PRO will choose to landfill the material and notify DEQ within three business days of disposal. The notification will include a description of:



- → The nature of contamination
- → The cause of contamination
- → The remedy explored to improve the quality of the contaminated load
- → The remedy that will be put in place to prevent future contamination

Specific Material Handling Requirements

Block White EPS Foam Management

There are three regions in the state that have established foam densifying operations or are themselves a recycling market for block white EPS foam. Outside of these areas, CAA will work with specific PRO depot locations or partners to house non-thermal foam densifiers for consolidating the foam in the surrounding communities. CAA is exploring placing densifiers and exploring mobile densification near Grants Pass, Klamath Falls, Burns, Redmond, Ontario, The Dalles and Pendelton. These sites will prevent the movement of loose polystyrene for more than 75 miles. Where these sites do not meet the requirements, third-party sites will be contracted and/or mobile units will be dispatched. Additional contracting with these locations for staff and proper compensation will be negotiated with those sites.

Pressurized Containers and Aerosols

CAA recognizes that all aerosols and single-use pressurized cylinders will be managed through a household hazardous waste (HHW) system according to OAR 340-090-0650(2)(b). The DEQ permitted facilities that CAA will be reaching out to as priority PRO depot locations meet the criteria of being staffed, and some have permanent HHW collection sites.

In addition to working with the permitted DEQ facilities that offer HHW collections, CAA is reaching out to contractors that host events for many of the counties across Oregon to explore how CAA can support the collection of aerosol containers and pressurized cylinders through those programs.

CAA has been in contact with PaintCare to explore the potential of partnering on promotion and coordination of HHW collection points and events where both programs are supporting the cost of managing covered products. Where there is an opportunity to partner on specific PaintCare collection events, CAA will consider co-sponsorship of those events. Once collected, both aerosol and pressurized cylinders would be managed by licensed HHW material handlers. CAA proposes reporting recovery of those products in empty containers weight, if it is possible for third party vendors managing the evacuation of the packaging to provide that data. If that is not possible, CAA will need to develop a calculation for a proxy weight that would be used for reporting.

CAA will not accept aerosol cans or pressurized cylinders from any non-residential generator unless that non-residential generator affirms in writing its status as a very small quantity generator pursuant to 40 CFR 260.10 and 40 CFR part 262.

The table below shows the counties currently supported with either a permanent HHW collection point, collection events or a combination of both. Aerosol containers and pressurized cylinders are items commonly managed through these existing programs, and CAA will seek to finance the collection and management of those products in partnership with those jurisdictions. CAA estimates that 94.6% of the Oregon population currently has access to some form of HHW collection through their county.



The table below also identifies the counties that are lacking any HHW access for residents. CAA will prioritize hosting additional collection events for aerosols and pressurized cylinders in those jurisdictions.

ID	County	2022 Population	Wasteshed	HHW Sites	HHW Events	HHW Sites	HHW Events	No Coverage
801	Baker	16,860	Baker	Yes	-	16,860	0	0
802	Benton	93,976	Benton	-	Yes	0	93,976	0
803	Clackamas	425,316	Part of Metro	Yes	Yes	425,316	425,316	0
804	Clatsop	41,428	Clatsop	-	Yes	0	41,428	0
805	Columbia	53,014	Columbia	-	Yes	0	53,014	0
806	Coos	65,154	Coos	-	Yes	0	65,154	0
807	Crook	25,482	Crook	-	Yes	0	25,482	0
808	Curry	23,662	Curry	-	Yes	0	23,662	0
809	Deschutes	203,390	Deschutes	Yes	-	203,390	0	0
810	Douglas	111,694	Douglas	Yes	-	111,694	0	0
811	Gilliam	2,039	Gilliam	-	Yes	0	2,039	0
812	Grant	7,226	Grant	Nothing	Nothing	0	0	7,226
813	Harney	7,537	Harney	Nothing	Nothing	0	0	7,537
814	Hood River	23,888	Hood River	-	Yes	0	23,888	0
815	Jackson	223,827	Jackson	-	Yes	0	223,827	0
816	Jefferson	24,889	Jefferson	Nothing	Nothing	0	0	24,889
817	Josephine	88,728	Josephine	-	Yes	0	88,728	0
818	Klamath	69,822	Klamath	Nothing	Nothing	0	0	69,822
819	Lake	8,177	Lake	Nothing	Nothing	0	0	8,177
820	Lane	382,647	Lane	Yes	-	382,647	0	0
821	Lincoln	50,903	Lincoln	-	Yes	0	50,903	0
822	Linn	130,440	Linn	-	Yes	0	130,440	0
823	Malheur	31,995	Malheur	Nothing	Nothing	0	0	31,995
824	Marion	347,182	Marion	Yes	-	347,182	0	0
825	Morrow	12,635	Morrow	Yes	-	12,635	0	0
826	Multnomah	820,672	Metro	Yes	Yes	820,672	820,672	0
827	Polk	88,916	Polk	Yes	-	88,916	0	0
828	Sherman	1,908	Sherman	-	Yes	0	1,908	0
829	Tillamook	27,628	Tillamook	Yes	-	27,628	0	0
830	Umatilla	80,523	Umatilla	Nothing	Nothing	0	0	80,523
831	Union	26,295	Union	-	Yes	0	26,295	0
832	Wallowa	7,433	Wallowa	Yes	-	7,433	0	0
833	Wasco	26,581	Wasco	-	Yes	0	26,581	0
834	Washington	605,036	Part of Metro	Yes	Yes	605,036	605,036	0
835	Wheeler	1,456	Wheeler	Nothing	Nothing	0	0	1,456
836	Yamhill	108,261	Yamhill	-	Yes	0	108,261	0
	Total	4,266,620				3,049,409	2,836,610	231,625
						71.5%	66.5%	5.4%



Compensation

CAA proposes to contract with each location for wages and salaries for additional depot employees needed to monitor and maintain PRO materials.

Reuse

CAA will explore opportunities for supporting reusable packaging at depot locations and events. As depot locations and events will be staffed there may be opportunities for collection of reusable packaging.

If member producers express interest in introducing reusable packaging formats, CAA will work those producers and other stakeholders to assess the logistics and operational requirements required to facilitate collection through the PRO depot system. This will likely require additional reverse logistics arrangements specific to refillable packaging. Depending on the status of the material in question, incorporation of reusable packaging into the PRO acceptance collection system may also require material reporting category changes and program plan amendments. CAA will work with producers to assess the full financial and operational implications of managing reusable packaging. Where appropriate trials may be implemented to assess feasibility.

Advanced Notification

Before considering adding any materials for collection at the depot, including a reusable packaging format as described above, CAA would engage with DEQ in a process of notification six months before implementation. At that time of notification, CAA will produce data relevant to the proper screening assessment, which relates to sufficient availability of responsible end markets.

Promotion of the PRO Depot Network

The statewide promotional campaign, as part of the broader education and outreach component of this Plan, will focus on three main areas: the USCL, the PRO recycling acceptance list collection materials (including how to take advantage of PRO Recycling material collection opportunities) and reducing contamination (both in terms of proper preparation of materials and avoiding non-accepted materials).

Collection opportunities will be promoted via a CAA-developed website that lists the available depots throughout the state. This will include hours of operation and site accessibility information. Customizable collateral that will be made available to local governments via an online portal and then distributed through their existing channels will also reinforce relevant messaging about depot recycling opportunities.

Educational collateral and campaign material will also highlight the importance of proper preparation of materials for recycling. CAA proposes to use proven motivational messaging to address key issues and inform residents about the new opportunities to recycle materials in their area.

To ensure that materials are accessible and culturally relevant, CAA has built in audience research and consultation processes with local governments, community-based organizations, targeted community focus groups, DEQ and the Oregon Recycling System Advisory Council (ORSAC). This is to ensure that all educational collateral is informative, well-designed,



culturally relevant and actionable. Local governments will also be able to tailor materials to their area via CAA's online portal.

More information about CAA's proposed approach to education and outreach, including education and outreach specific to the PRO depot network, can be found in the "Education and Outreach" section of the Operations plan.

Equity in Performance Standards and Collaboration with the Community

As mentioned in the Convenience Standards section above, CAA has been in talks with several CBOs around the state that have expressed interest in staffing and maintaining depots. Several of the CBOs function as workforce development programs, such as Trash for Peace's Environmental Promotor program or The Arc's Job Training programs for individuals with Intellectual and Developmental Disabilities (IDDs). Working with these CBOs to utilize the management of the depots as a training ground for workforce development aligns with the current goals of many of these programs. Saint Vincent de Paul and James Recycling also have similar workforce development programs tailored to individuals with differing physical and mental abilities. CAA aims to make some of the depot contamination management and other processes obtainable for individuals with differing physical and mental abilities.

iii. Start-Up Approach for Establishing the Depot Collection System

In the sections above relating to meeting convenience and performance standards, there are several references to CAA's plans to contact existing depot locations as well as pursue opportunities to partner with new locations or offer alternative solutions. As previously noted, CAA plans to undertake this start-up activity (previously an interim coordination task) as part of its proposed ORSOP. However, given there are several considerations that are PRO depot specific, the outline below explains in more detail the tasks and timings specific to this aspect of the needs assessment work.

Phase 1: Preparation (April 2024)

CAA's first phase of work to establish a depot collection system will focus on preparing for outreach and engagement. Likely activities during this phase include, but may not be exclusive to:

- → Working with Oregon DEQ and other stakeholders to identify key information gaps to inform outreach and analysis process, for example, the potential role of transfer stations in the depot network
- → Refining the target list of existing and potential depot partners, including identifying overlaps with outreach to local governments and service providers
- → Drafting consultation materials e.g., background and planning documents that will include (at a minimum) explorations of the following for existing depot/drop-off sites including those run by Local Governments/service providers, and new sites:
 - Existing collection provision and capacity (if applicable)
 - Appetite and capacity for expansion (existing and new sites)
 - Estimated cost of expansion



- Specific material questions relating to current and potential handling e.g. proposed status of glass, handling needs for materials like EPS, aerosols etc.
- o Understanding Education and Outreach provision and needs

Phase 2: Consultation, Enhanced Analysis and System Design (May-August 2024)

CAA's second phase of work will focus on conducting outreach, leveraging efficiencies where this may overlap with other outreach to local governments and service providers in relation to curbside service. Activities may include, but will not be limited to:

- → Undertaking outreach to local government and potential partner depot operators, using the following potential methods:
 - o Direct outreach, potentially via a survey mechanism (efficiencies with ORSOP to be explored)
 - o Follow-up calls and meetings to pursue negotiations with potential depot partners
 - o Group meetings to facilitate coordination at the wasteshed level
- → In parallel to, and informed by, the outreach and consultation process:
 - Exploring and modeling options for materials management including aggregation, transportation and
 Responsible End Market management, informed by learnings from survey and other outreach
 - Refining the GIS mapping work CAA has commissioned to date with IncaTech to revise estimates of schedule for meeting convenience standards
 - Developing detailed approach to meeting performance standards, further developing and refining the initial proposals outlined in this submission
 - o Refining the plan for achieving collection targets and adjusting corresponding aspects of the Program Plan
 - o Liaising cross-functionally or across PRO(s) on Education and Outreach needs

Phase 3: Revised Draft Development and Iterations (September 2024)

Informed by additional 2024 outreach, CAA will update plans for the PRO acceptance list collection system.

Phase 4: Operationalization and Onboarding (January-June 2025)

Subject to DEQ approval of the CAA program plan, CAA will focus on the operationalization of the Oregon PRO depot network. Activities may include, but will not be limited to:

- → Finalization of contracts with local governments, service providers and end markets
- → Finalizing the launch of reporting and accounting systems while onboarding key stakeholders



Phase 5: Launch

By June 30, 2025, the first phase of PRO acceptance list collection points will be open. This will provide continued opportunity to recycle in Metro areas where items formerly on local government recycling acceptance lists have moved to the PRO recycling acceptance list. Over the course of the program plan CAA will on board additional collection sites to fully achieve convenience standards. Continued education and outreach efforts will ensure accurate information for residents regarding depot location, depot accepted materials, proper preparation of materials for recycling and top-level contaminants to avoid.

iv. Proposed Depot Collection Targets

CAA has developed initial proposed collection targets for the PRO depot network. Where possible and where data were available, information from Cascadia's <u>Overview of Scenario Modeling: Oregon Plastic Pollution and Recycling Modernization Act</u> (referred to from here on as the "Cascadia report") was used to generate the values in the following section. Where data were not available, supplemental sources from depot programs in Ontario (the Resource Productivity and Recovery Authority for general blue box materials and the Orange Drop program for hazardous materials) were referenced.²

For the purposes of simplifying equations to demonstrate estimated collection rates per location, the following section will reference a number of depot locations. In this section, the term "depot" is used to represent physical locations, events and curbside services for PRO materials as explained in the "Proposed approach to meeting convenience standards" section of the Program Plan. Strictly for purposes of calculations here, but pending a number of considerations going forward, the table and text below use 173 sites against projected collected tons.³ The numbers are presented as an average per site per year, recognizing that, in reality, some sites will collect more material than others.

For purposes of projecting collection targets in this section and subject to additional analysis in future versions of this Plan, CAA also assumes that 15% of the Oregon population will participate in depot and related services.

² https://stewardshipontario.ca/wp-content/uploads/2022/06/SO-2020AR-FINAL-002-3.pdf

³ Variables that will affect or determine the final number of collection sites include but are not limited to 1) the percentage of local governments agreeing to host sites, 2) DEQ's flexibility in meeting convenience standards by city, 3) value of curbside collection to displace number of depots, 4) number of sites that can accept all materials vs a more limited range, 5) materials management standards for aerosols and pressurized containers as HHW, 6) the ability to use existing film drop-off points at retailers, and 7) the ability to substitute events for sites



Proposed Collection Targets and Rates

Material	Proposed Collection Targets and Rates	Average Tons/Year Per Collection Point	Average Pounds Per Participant Per Year
Steel and Aluminum Aerosol Packaging	325 tons (11.6% collection rate)	1.03	1.88
Single-Use Pressurized Cylinders	120 tons (15% collection rate)	0.38	0.69
Polyethylene Film Packaging	1,950 tons (5.9% collection rate)	6.16	11.27
Aluminum Foil and Pressed Foil Products	390 tons (6.2% collection rate)	1.23	2.25
Block White Expanded Polystyrene	490 tons (9.2% collection rate)	1.55	2.83
Polyethylene (PE) and Polypropylene (PP) Lids and High-Density Polyethylene (HDPE) Package Handles	290 tons (10% collection rate)	0.92	1.68
Plastics Buckets, Pails, and Storage Containers	975 tons (15% collection rate)	3.08	5.64

Table 5

Material-Specific Discussion

Steel and Aluminum Aerosols

Data on available steel and aluminum aerosols is very limited. Data that was available from the Cascadia report did not provide any generation estimates specific to aerosol cans. Data from other jurisdictions and sources⁴ suggest approximately

⁴ These include capture rate data from The Recycling Partnership and proprietary data from other programs



2,800 tons of empty containers were generated in Oregon in 2023. The Cascadia report suggests 166 tons of aerosols would be collected at depots. However, data from other Oregon sources, such as facilities that are currently handling this material, suggests the number could be significantly higher. It is estimated that approximately 325 tons of empty aerosol containers will be collected. Thorough education and outreach will help increase diversion.

Overall, the collection rate is estimated to be approximately 11.6%. An average of 1.03 tons (empty package weight) are expected to be collected per each through the collection point network, at an estimated average of 1.88 pounds collected per participant per year.

CAA recognizes that aerosol containers will need to be managed as HHW items. CAA is currently working with both permanent and event collection HHW providers to understand the volumes that will be collected through those channels and recovered by the PRO. As CAA learns more about the volumes currently collected through HHW programs, this collection calculation may be revised.

Single-use Pressurized Cylinders

The Cascadia report did not have any specific generation data on single-use pressurized cylinders. The only source identified was from the Orange Drop program in Ontario, Canada. Extrapolating from data available from the annual reports it is estimated that approximately 800 tons of pressurized containers were generated in Oregon in 2023. Through an aggressive depot collection education program, it is anticipated that up to 120 tons may be collected.

The projected collection rate would be approximately 15%, averaging 0.694 tons per each collection point or approximately 0.38 per participant per year.

Polyethylene Film Packaging

Data from the Cascadia report suggests approximately 66,000 tons of polyethylene (PE) film were generated in 2023. Assuming 50% falls within the RMA scope⁵, approximately 33,000 tons are generated and available for collection. An estimated 1,950 tons will be collected per year, which is a number consistent with data from available Canadian depot programs. Consumer confusion over flexible films may result in a mix of film resins being captured at the collection points.

Overall, the collection rate is estimated to be approximately 5.9%. An average of 11.272 tons are expected to be collected per each of the collection points in the network, at an estimated average of 6.16 pounds collected per participant per year. As part of the depot network for film collection, CAA will reach out to the retailers currently collecting film in the state to see which locations may be voluntarily added to the PRO collection network for film.

DEQ designated PE film as a PRO depot material due to concerns surrounding the material's compatibility with the existing recycling system. While not challenging this decision, CAA believes that this material could eventually be introduced into the USCL list and that improving long-term collection rates will likely be necessary to meet statewide plastic recycling goals.

⁵ This assumes that 50% of PE film is out of scope because it is generated as wrap by non-RMA retail, distribution center and industry sources. This estimate aligns with other industry sources, for example The Recycling Partnership capture data, accounting for some increases due to commercial volumes but also some decreases due to plastic bag bans in Oregon. Note that this same generation figure is used in the denominator of the plastics recycling rate calculations below.



As such, CAA will work with Oregon processing facilities to review strategies for management of PE film as well as adding non-PE films over time. Assessment may include the implementation of research opportunities once the Program Plan period commences to better understand opportunities. Meanwhile, CAA also plans to further investigate the volume of PE film material flowing through depots, the commingled stream (as contamination) and specialized collection services to inform potential research and trials while meeting its obligation to ensure the disposition of this material to REMs.

Aluminum Foil and Pressed Foil Products

The Cascadia report provided no specific generation estimates for aluminum foil and pressed foil products. Estimates from other sources, including The Recycling Partnership (The Partnership), suggest 6,300 tons of residential material were generated in 2023. Based on The Partnership's estimates for collection, corroborated by available information from Canadian depot programs, CAA estimates that approximately 390 tons of aluminum foil and pressed foil products will be collected through PRO depots (Cascadia's report suggested only 50 tons may be collected as it is common for residents to place their aluminum foil products in their curbside container, but this figure seems too low).

A general trend towards grocery products moving away from aluminum foil trays into polycoated boxboard formats may impact the volume of foil products generated over time. Less expensive, freezer-safe and microwave-safe, boxboard trays are increasingly replacing aluminum foil products. Provided that assumed participation rates remain the same, the estimate of collected tonnage may become aggressively high over time.

Overall, the collection rate is estimated to be approximately 6.2%. An average of 2.254 tons are expected to be collected per each of the collection points in the network, at an estimated average of 1.23 pounds collected per participant per year.

Block White Expanded Polystyrene (EPS)

The Cascadia report suggests approximately 5,300 tons of foam polystyrene were generated in 2023. However, the report noted there was some downward pressure on EPS for generation. Using available data, adjusted for recent reductions in EPS usage suggests approximately 490 tons will be collected.

This estimate is consistent with data available from depot programs in Canada. It should be noted that producers utilizing EPS packaging are under pressure to replace it because of the perception of its impact on ocean beaches and marine litter. EPS is being replaced by molded pulp forms, corrugated cardboard forms and expanded PE and PP foams. Therefore, the collection estimate may be on the high side if these other cushion packaging forms continue to make inroads.

Overall, the collection rate is estimated to be approximately 9.2%. An average of 2.83 tons is expected to be collected per each of the collection points in the network, at an average estimated 1.55 pounds collected per participant per year. CAA will also be approaching enhanced recycling service programs, such as Recycle+, to offer management of those collected materials, like EPS, to ensure they are recycled by REMs. These volumes may also be included in the PRO annual recovery calculations.

PE and PP Lids and Caps and HDPE Package Handles

There is little available data on generation of these materials as typically both are part of a larger tubs and lids collection program in many jurisdictions. Based on 7.5% of the weight of HDPE and PP bottles, tubs and lids captured in selected Canadian programs, 290 tons are expected to be collected through the collection point network. Overall, the collection rate



is estimated to be approximately 10%. An average of 1.676 tons are expected to be collected per each of the collection points in the network at an estimated average of .92 pounds collected per participant per year.

DEQ has included PE and PP lids on the PRO depot collection list due in large part to sortation concerns (they are permitted on the USCL when screwed or snapped onto containers). Realistically, caps and lids will likely have low collection rates, given the time cost associated with households having to collect them and drop them off at designated depot drop-off points. However, CAA will ensure extensive education and promotional materials are distributed to direct people to take their caps and lids to local drop-off depots.

CAA believes this material, inclusive of HDPE package handles, should eventually be introduced into the USCL list, as lids and caps that are screwed or snapped onto containers are already an accepted USCL material. CAA is in contact with an Oregon-based manufacturer of HDPE package handles that has completed further CRPF-focused studies since the rulemaking process. CAA proposes to discuss the findings of this new research with DEQ and Oregon CRPFs, as well as exploring other research needs, potential design improvements among producer members and ways of better communicating to residents once the Program commences, with a view to making the case for their inclusion on the USCL.

Plastic Buckets, Pails and Storage Containers

The Cascadia report does not provide categorization or other levels of granularity that produces a generation figure for plastic buckets, pails and storage containers. For purposes of projecting a collection target, it is assumed approximately 6,500 tons of this material are generated per year. Some of this material is likely currently found in curbside recycling loads in Oregon, but CAA will focus education on driving the right materials to depot locations. At depots, it is estimated that approximately 975 tons will be collected, although this estimate is higher than data available from depot programs in Canada.

Overall, the collection rate is estimated to be approximately 15%. CAA expects 5.636 tons to be collected on average per each of the collection points in the network. An estimated 3.08 pounds per participant per year will be captured.

Glass

Glass currently collected in Oregon via separated curbside streams totals upwards of 38,000 tons annually. Additional glass bottles and jars are expected to be collected through new communities getting access to glass recycling. Many residents in more rural areas, or who self-haul in Oregon, already take glass to their local depots for recycling. Through an enhanced public education and promotion campaign, CAA estimates that an additional 3,100 tons of glass, for a total of approximately 41,100 tons will be collected through the network of collection points, and on-route collection where local governments choose to preserve those services (subject to negotiations between CAA and the local governments). This estimate is consistent with the estimates provided by Cascadia. Overall, with an estimate of 77,000 tons of glass available for collection, this translates to an estimated collection rate of 53%; eight percentage points higher than the required rate of 45% under the program.

Challenges associated with glass contaminants in the commingled stream are well understood by CAA and will inform the education and outreach strategy. Given that glass bottles are used in food contact applications, relevant education and outreach will also address appropriate disposal practices in case of high levels of food contamination and will mirror that of delisted materials with similar use cases, such as aluminum foil.



Supporting the Oregon statewide plastics recycling rate (ORS 459A.926)

The state of Oregon has established a statewide recycling goal for plastic packaging and plastic food service ware, with targets of:

- → At least 25% by 2028
- → At least 50% by 2040 and in each subsequent year, and
- → At least 70% by the calendar year 2050 and each subsequent year

The establishment of the statewide PRO depot network along with the USCL will significantly increase access and opportunity uniformly across the state for all Oregonians. The transportation reimbursement to local governments and their service providers will also serve as an economic equalizer across the state, addressing an existing and significant barrier to plastics recycling in more rural parts of Oregon.

CAA expects the increase in access to recycling for a greater range of plastic products, coupled with the continued success of other recycling programs, such as OBRC, to allow the state to reach the first plastics recycling goal of 25% by 2028.



c. Materials Strategy

CAA acknowledges that specific materials need special attention and potential action to help in the achievement of this plan's objectives and goals, as well as the goals of the RMA. These activities connect to the objectives relating to addressing packaging impacts, the expansion of recycling opportunities, the achievement of the plastics recycling goal, and the utilization of responsible end markets.

Many CAA members have made significant investments to support the successful collection and recycling of certain materials nationally and, in many cases, in Oregon specifically. As CAA works to address packaging impacts, the expansion of recycling opportunities, and the achievement of recycling goals and targets, the organization is committed to further leveraging work being done by existing material-focused groups and organizations where applicable. Examples of this type of work include The Recycling Partnership's PET Recycling Coalition and the Poly Coated Paper Alliance. It is a priority of CAA to avoid unnecessary duplication of efforts.

CAA is also committed to exploring opportunities to achieve the broadest possible system benefits from any agreed and funded system interventions. For example, if any investments are made in CRPFs in Oregon, CAA proposes to work with CRPFs to agree when and whether these may stand to benefit more than one material category.

In addition to the specific material actions identified below, CAA will continue to work with stakeholders in reviewing other RMA material issues and options. For example, CAA noted support in its Phase I RMA Rules submission for the inclusion on the USCL of PE and PP lids and caps and HDPE package handles. While CAA does not have a specific action plan in relation to these materials at the time of this submission, the group will continue to assess these materials and potentially other USCL additions with Oregon stakeholders in the context of other materials management discussions. Any recommendations for the addition of other materials to the USCL or recommendations for trial assessments of other materials would be presented as program plan amendments at a later date.

To effectively improve collection and recycling in Oregon in accordance with the RMA, several material-specific issues must be addressed. In this section, CAA reviews:

- 1. Proposed additions to the USCL
- 2. SIMS on the USCL
- 3. SIMS on the PRO Recycling Acceptance List
- 4. Proposals to engage on commingled collection of some materials on a trial basis
- 5. Initial plastic recycling rate projections



i. Proposed Additions to the USCL

In addition to taking steps to establish universal adherence to the currently approved USCL, CAA is proposing pathways for some other materials to be added to the USCL.

PET Thermoforms

Material Status

CAA recognizes that some PET thermoforms have not been included in the USCL list and DEQ has classified them as a SIM. CAA intends to take steps that will justify the addition of those PET thermoforms to the USCL list, which in turn will encompass CAA's obligations to address the concerns raised by Oregon DEQ via the SIMS list. CAA proposes that appropriate actions be taken to include PET thermoforms on the USCL by July 1, 2027.

DEQ's overall material collection determination has kept PET thermoforms off both the USCL and PRO depot lists, meaning these materials will not be collected as a part of curbside commingled streams. However, studies across the country find that even when *not* accepted as a part of curbside commingled collection, thermoforms can make up to 10% of an average PET bale.⁸ To minimize the loss of thermoforms as CRPF residue, CAA proposes to engage with CRPFs as outlined below to create a seamless system for PET thermoforms.

Under CAA's proposal, PET thermoforms would ultimately be collected statewide as part of commingled curbside streams and would be processed and sent to responsible end markets (REMs) by CRPFs. In the interim, CAA will engage with the specialized subscription-based collectors of PET thermoforms and CRPFs to understand the volumes and processing picture for those materials – and to ensure REMs are being utilized.

Performance Against ORS Criteria

CAA acknowledges that Oregon DEQ made its decision to exclude PET thermoforms from the USCL based on a set of key criteria in ORS 459A.914(3). Chief among DEQ's concerns is a lack of consistent, responsible end market demand for the material, which in turn has caused limited CRPF acceptance and inclusion in curbside programs. The table below provides information to address the key challenges for PET thermoforms, referencing the specific determination criteria outlined in ORS 459A.914(3). The information has been gathered through ongoing research and engagement with a wide range of stakeholders involved with PET thermoform recycling issues (more details can be found in Appendix D).

Criteria	Performance
The stability, maturity, accessibility and viability of	Reclaimer investments and interest in PET thermoform recycling are dynamic and growing, with regional end markets available to Oregon CRPFs and new markets actively developing.
responsible end markets	CAA proposes to facilitate PET thermoform markets between Oregon CRPFs and responsible end markets.



	CAA also acknowledges the role it will need to play in directing existing PET thermoform collection (e.g., via specialized collection services) to REMs while PET thermoforms remain non-USCL materials. Further, CAA notes there currently is market demand for thermoform-derived rPET (most prominently by berry company Driscoll's) that considerably outweighs the current supply. CAA expects more producers to join this existing end user in demanding thermoform-derived rPET.
Environmental health and safety considerations	PET thermoforms do not present any immediate or substantial health and safety concerns to the recycling process. Concerns with PET thermoform reclamation include water usage and wastewater management. However, it is noteworthy that there is no indication that thermoform reclamation requires any more water than PET bottle reclamation. CAA proposes to examine water consumption in PET thermoform reclamation as part of its end market engagement and, as needed, develop interventions to reduce water consumption and improve usage of best practices in wastewater treatment.
The anticipated yield loss for the material during the recycling process	Yield loss during reclamation includes both the intended removal of non-PET materials and the unintended loss of PET. The removal of non-PET items during pre-sorting at the reclaimer causes an unavoidable simultaneous loss of erroneously removed PET. Both forms of yield loss at pre-sorting can be minimized by implementing more effective sorting equipment and procedures at CRPFs. Reclaimers also experience loss of PET due to the generation of fines, which tends to be greater in PET thermoform reclamation than PET bottle reclamation. CRPFs can minimize yield loss due to fines generation by implementing best practices and optimizing equipment and processes.
The material's compatibility with existing recycling infrastructure	To date, only two Oregon CRPFs are accepting and marketing PET thermoform material gathered through specialized collection programs separate from curbside commingled collection. The current lack of acceptance in municipally managed collection programs is a result of a historical lack of end market demand, which has only recently improved. CAA proposes to address the nexus of CRPF acceptance/reclaimer demand that then creates the condition for universal collection.
The amount of the material available	Information submitted by various stakeholders in Oregon's rulemaking and material assessment processing solidly documents the established, scaled presence of the PET thermoform material in the packaging stream.
The practicalities of sorting and storing the material	PET thermoform sortation and storage at CRPFs is an established practice, most prominently in California. CAA proposes to explore the need for CRPF investment in this equipment and facilitate this as appropriate.
Contamination	Contamination results from mistaken public recycling of lookalike materials and design issues with PET thermoforms, including the use of recycling-incompatible glues and labels. An additional challenge can arise from residual food waste on PET thermoforms. CAA proposes to develop mechanisms to address and minimize all these challenges.
The ability for waste generators to easily identify and properly prepare the material	CAA proposes to develop mechanisms designed to reduce the presence of lookalikes in the packaging stream (without creating adverse environmental impacts) as well as clear education to help generators correctly identify the materials that should be placed in commingled recycling.
Economic factors	While there are no direct measurements of PET thermoform value marketed by CRPFs, PET thermoform bales marketed by California MRFs have consistent positive value, as demonstrated by RecyclingMarkets.net . Similarly, Plastic Recycling Corporation of California (PRCC)'s website indicates that at the time of submission, thermoform-only bales trading at 8 cents per pound, which is a

 $^{^{\}rm 6}$ Based on conversations with internal PET thermoform experts at The Recycling Partnership.



	fraction higher than commingled bottle and thermoform bales and only two to three cents per pound lower than bottle-only bales. If this value translates to Oregon when PET thermoforms are collected and processed, it could improve the current "blended value" of all processed materials. CAA's plan articulates market-related mechanisms that will help to guarantee the value of PET thermoform material to CRPFs. Once established in collection, CAA's PCRF payments will help support PET thermoform sortation and marketing.
Environmental factors from a life cycle perspective	N/A

Table 6

CAA submits that PET thermoforms have a positive trajectory in relation to the challenges detailed above and that concerted action in the implementation of this Plan will encourage that trend, thus facilitating the addition of PET thermoforms to the USCL.

Proposed Action Steps and Timeline for Inclusion on USCL

As part of its implementation of this plan (once approved), CAA proposes to take the following steps to facilitate inclusion of PET thermoforms on the USCL:

- 1. Explore providing technical and financial assistance to CRPFs to receive and sort PET thermoforms for shipment to responsible end markets
- 2. Facilitate end market demand for PET thermoforms to ensure that all CRPFs gain the continuous ability to send PET thermoforms to REMs
- 3. Address design issues that hinder PET thermoform recyclability

With the implementation of the action steps outlined above during the first Program Plan, CAA proposes that PET thermoforms can be considered for addition into USCL on July 1, 2027. In the interim, CAA will explore ways to direct thermoform collection (e.g., via specialized collection services) to CRPFs with existing sortation capabilities to concentrate the flow of materials and facilitate disposition of these material to REMs.

CAA financing for activities related to the potential inclusion of PET thermoforms (currently not accepted for recycling) will be managed through the collection of fees applied to these materials. This fee setting principle will be applicable to material management development costs associated with other materials. CAA will allocate specific material development costs to those specific materials through the fee setting process.

⁷ Based on values indicated on https://prcc.biz/pricing/ accessed on 5th February 2024.



Transparent Blue and Green PET Bottles

Material Status

DEQ only included clear PET bottles on the USCL. However, CAA understands from stakeholder discussions that transparent blue and green PET bottles are widely recycled and recommends that transparent blue and green PET bottles be added to the USCL by July 1, 2025.

CAA understands that transparent light blue PET bottles are treated separately from transparent dark blue PET bottles, with transparent light blue PET bottles being desired by reclaimers to counteract the gray color of rPET derived from clear bottles. Based on email correspondence with subject matter experts from the National Association for PET Container Resources (NAPCOR), the Association of Plastic Recyclers (APR), and The Recycling Partnership, CAA understands that transparent dark blue PET bottles are often combined with transparent green PET bottles with minimal impact on endmarket suitability.⁸

Given that Oregon is a deposit state, with many transparent blue and green bottles collected for recycling via redemption centers, CAA anticipates that adding transparent blue and green PET bottles to the USCL will add a relatively small volume of material to CRPFs.

Performance Against ORS Criteria

Criteria	Performance
The stability, maturity, accessibility and viability of responsible end markets	Consultations with reclaimers made clear that transparent blue and green PET bottles are routinely and successfully routed to established, stable end markets in the Pacific Northwest Region and other parts of the U.S. Also of note, APR and ISRI bale specifications ⁹ are inclusive of transparent blue and green PET bottles with no limitations on either. CAA will monitor and consistently engage reclaimers to understand and suitably address any issues that arise in processing or marketing this material.
Environmental health and safety considerations	Transparent blue and green PET bottles do not present any immediate or substantial health and safety concerns on the health or safety of CRPF operators.
The anticipated yield loss for the material during the recycling process	Yield loss for transparent blue and green PET bottles is not significantly different than the yield loss during reclamation of clear PET bottles, which can be minimized by optimizing equipment and processes.
The material's compatibility with existing recycling infrastructure	Transparent blue and green PET bottles are already collected and sorted successfully from commingled streams in Oregon.

⁸ Interviews with ORPET and email exchange with NAPCOR, APR, and The Recycling Partnership.

⁹ APR's model bale specifications for PET bottle with PET thermoforms and APR and ISRI's model bale specifications for PET bottle bales without PET thermoforms states that transparent green and transparent light-blue PET are an acceptable part of a model PET bale. See APR's Model Bale Specification: PET Bottles (No PET Thermoforms), APR's Model Bale Specification: PET Bottles with PET Thermoforms, and ISRI's Bale Specification: PET Bottles (No PET Thermoforms). Documents accessed on 02/22/2024.



The amount of the material available Transparent blue and green PET bottles are already collected and sorted successful from commingled streams in Oregon.	
The practicalities of sorting and storing the material	Transparent blue and green PET bottles are already collected and sorted successfully from commingled streams in Oregon.
Contamination	There are likely no contamination issues that are specific to the acceptance of transparent blue and green PET bottles.
The ability for waste generators to easily identify and properly prepare the material	Engagement with stakeholders has led CAA to believe that transparent blue and green PET bottles are easily identifiable by waste generators. Transparent green and blue PET lookalikes made of other resins are also uncommon.
Economic factors	The existing market economics surrounding PET bottle recycling account for the value of transparent blue and green PET bottles and have demonstrated a viable amount of economic productivity.
Environmental factors from a life cycle perspective	N/A

Table 7

Spiral Wound Containers

Material Status

Spiral Wound Containers were included in DEQ's draft USCL rule until they were removed by DEQ just prior to submitting the proposed rule to the Environmental Quality Commission (EQC). This removal occurred because an in-state market, Cascade Steel Rolling Mills Inc. (CSRM), provided a formal written comment that while the company "is adopting a neutral position regarding the addition of spiral wound cans" it had concerns regarding "the potential impact of these materials on emissions of air toxics and other pollutants."

Although Sonoco (the primary manufacturer of spiral wound containers) reported a screening-level life cycle assessment demonstrating that for five of six impact factors evaluated, the added (global) environmental benefits of increased steel recycling outweigh higher (local) emissions associated with combustion of the non-steel fraction of the package, DEQ chose to remove them from the draft rule submitted to EQC to provide "Cascade Steel Rolling Mills and Sonoco additional time to better evaluate outstanding concerns involving local air emissions."

CSRM and Sonoco have subsequently met, and we understand had a positive discussion. As of the time of this program plan submission, however, CSRM had not yet provided a final decision to Sonoco. There are currently 112 steel mills in the United States, of which CSRM is only one, and regardless of the decision by CSRM, CAA proposes to add/restore spiral wound containers to the USCL via this program plan. Other steel mills that Sonoco has approached for their acquiescence to recycling steel can bundles with spiral wound containers in them have not raised air emissions concerns. In fact, Sonoco has submitted letters from the following steel mills that accept spiral wound containers in their incoming stream:

- → United States Steel Corporation (on behalf of their six U.S. steel mills)
- → Nucor Plymouth, Utah location (Nucor has 20 U.S, steel mills, including a mill in Seattle)



- → ArcelorMittal Dofasco 13 U.S. steel mills
- → Algoma Steel Inc., Sault Ste. Marie, Ontario, Canada

Performance Against ORS Criteria

When removing spiral wound containers from its draft rule, DEQ stated in its comments that:

"DEQ understands that paper cans are appropriate for recycling given consideration of all other criteria contained in ORS 459A.914(3) and if this concern regarding potential air emissions can be addressed. A producer responsibility organization may propose adding this material to the Uniform Statewide Collection List using the program plan mechanism described in ORS 459A.914(4)(b)."¹⁰

CAA is not submitting additional information with respect to ORS Criteria at this time.

Proposed Action Steps and Timeline for Inclusion on USCL

CAA proposes to include spiral wound containers on the USCL effective July 1, 2025. Existing equipment in Oregon's CRPFs – specifically magnets and paper screens – sort spiral wound cans into acceptable market grades (primarily steel cans, and, to a far lesser extent, mixed paper) at sufficiently high effective sorting rates. No additional labor or equipment is needed for CRPFs to successfully sort and market spiral wound cans in incoming commingled material.

If the inclusion of spiral wound paperboard cans in steel can bundles is proven to cause CSRM to exceed its DEQ air permit, then CSRM would not be deemed a responsible end market. Under this circumstance CAA proposes to develop a list of alternative steel mills that purchase steel can bundles with spiral wound containers and to distribute such list to CRPFs so that their steel can bundles go to alternative responsible end markets, of which there are many.

ii. Specifically Identified Materials on the USCL

Some materials that are included on the USCL are also considered SIMs by DEQ. As these materials will require particular attention, CAA proposes implementation of the following strategies to address relevant recyclability challenges.

Polycoated Gable-Top Cartons and Aseptic Cartons

CAA acknowledges that polycoated gable-top and aseptic cartons have been identified as a SIM in addition to being included on the USCL. Currently, it is estimated that about half of Oregon households are served by collection programs that include cartons and this will grow to all households by July 2025. It is CAA's understanding that Oregon's CRPFs currently include cartons in mixed paper bales and do not sort cartons into a separate PSI 52 grade bale. To date, CRPFs have not seen the value in marketing cartons separately from mixed paper.

¹⁰ https://ormswd2.synergydcs.com/HPRMWebDrawer/Record/6446398/File/document, top of Page 7 of 105.



Processing and Marketing Challenges

CAA aims to address issues associated with processing and marketing of this material by engaging with key stakeholders, as well as identifying logistical issues that CAA can play an active role in resolving.

CAA proposes to work with CRPFs to explore the barriers they face in sorting and/or storing cartons and work with interested producers and associations, such as the Carton Council of North America, to review funding options for any necessary incremental infrastructure.

CAA also proposes to explore offering a marketing service for cartons, which would be voluntary for CRPFs that elect to take advantage of it. For example, CAA would collect carton bales from individual CRPFs on a pre-agreed cadence, consolidate them into truckload quantities, and market them. CAA would then compensate CRPFs for the tons marketed. This could be based on the Pacific Northwest index price for PS54 Mixed Paper as reported on RecyclingMarkets.net's Secondary Materials Pricing (SMP).

In exploring these options, CAA will ensure materials are routed to responsible end markets and will consider adjustments to its fees to provide any necessary funding. In scenarios in which CAA possibly markets materials on behalf of CRPFs, CAA will work with the facilities to determine the best way for material revenues to be factored into PCRF payments.

Nursery Packaging

CAA acknowledges DEQ's recommendation to place all nursery packaging in the SIM list while designating only HDPE and PP-made nursery packaging as material approved for curbside commingled collection with inclusion on the USCL.

Education and Outreach

CAA recognizes that the USCL status recommended for HDPE and PP-based nursery packaging will require the program plan to account for communities that may not have collected these pots and trays thus far. Education and outreach will aim to minimize contamination, in particular from problematic PS nursery packaging. To accomplish this, CAA proposes to:

- → Explore the need to gather data on which communities in Oregon, prior to July 1, 2025, collect nursery packaging and which ones don't. When done for nursery packaging, data will try to capture the number of communities that collect/do not collect the material, quantities and seasonal trends in the generation of this material as a curbside recyclable, and extent of contamination from PS and LDPE lookalikes. Similar data collection exercises will be explored for all SIM materials
- → Explore opportunities for reuse and recycling of this material at Oregon-based nurseries and explore ways for CAA to leverage this information in its education materials, prioritizing options for reuse wherever possible
- → Identify and segment communities in Oregon based on those that are most acutely affected by nursery packaging's inclusion in the USCL. This segmentation could be based on the determination of which communities have accepted nursery packaging prior to July 2025 and which ones have not
- → Design outreach strategies in a phased manner to account for the segmentation. For example, for communities where curbside collection of nursery packaging is set to start in 2025, the focus will be on informing households of the availability of commingled curbside collection of nursery packaging. For households already participating in curbside collection of nursery packaging, CAA will focus the education and outreach strategy on mitigating contamination



→ Determine a suitable strategy to help residents identify recyclable nursery packaging from contaminants (lookalikes). The strategy will aim to help residents differentiate HDPE and PP-based pots and trays from contaminant materials, examining different approaches, (by use of the resin identification code, for example) As a first step, CAA will investigate the scale of the contamination issue from PS and LDPE lookalikes in the recycling stream through conversations with CRPFs.

Processing Improvements

To minimize contamination and improve processing efficiencies of CRPFs, CAA proposes to better understand how Oregon CRPFs are receiving, sorting and marketing nursery packaging as part of their current operations, for example, if these materials baled as part of mixed plastics bales. CAA also plans to engage with CRPFs and reclaimers including Denton Plastics, Merlin Plastics and EFS to understand the scale of the contamination issue with nursery packaging.

As part of a broader stakeholder engagement strategy, CAA will include additional efforts to ensure successful and responsible recycling of nursery packaging. CAA proposes to identify key manufacturers of nursery packaging and industry associations such as the Oregon Association of Nurseries and engage with them on strategies to minimize contamination.

iii. Specifically Identified Materials on the PRO Recycling Acceptance List

Steel and Aluminum Aerosol Containers

CAA recognizes that steel and aluminum aerosol containers have been designated as a SIM and will be removed from curbside commingled collection, primarily in the Portland Metro area. Aerosol containers have thus far been collected in many Oregon communities, making education and outreach an important component of the program plan for these materials. Residents' education will include awareness about the de-listing of aerosol containers and referring residents to household hazardous waste program as detailed below. To meet this need, CAA proposes to:

- → Segment Oregon communities based on whether they have had curbside commingled collection of aerosol containers or no collection prior to July 2025
- → Create distinct outreach strategies for communities based on segmentation status of curbside commingled collection
- Treate an outreach strategy for periodic reminders and awareness to residents on PRO depot collection centers and HHW collection centers, including a "best practices cheat sheet" for disposal of aerosol containers

Subject to member alignment on relevant fee implications, CAA proposes to consider continuing to engage in systemic changes to minimize hazard potential and perceptions of aerosol containers and to improve the recyclability status of this material. These may include:

→ Build on DEQ's work in examining hazard perceptions related to aerosol containers by investigating the proportion of aerosol containers generated in Oregon that could be hazardous either due to substances contained in them (e.g., pesticides) or from the propellants. To this end, CAA has engaged with key stakeholders to learn that the majority share (~65%) of aerosol containers in the U.S. are used in non-hazardous consumer segments like personal care, household products and food products. CAA proposes to investigate similar trends for Oregon. Further, with respect to propellants, a key design intervention identified by CAA through stakeholder interviews was replacing liquified or



compressed gas propellant with nitrogen or compressed air propellant, which is less hazardous as the can becomes less pressurized with use and is non-flammable, unlike liquified gas

- → Work with the U.S. Aerosol Recycling Initiative, led by the Can Manufacturers Institute and Household and Commercial Products Association, to learn more about aerosol manufacturing, consumer and end markets, and recycling
- → Explore synergies with existing household waste management companies in Oregon to leverage their experience in collecting and emptying potentially hazardous non-empty aerosol containers
- → Explore developing logistical models to link household waste management companies and CRPFs/secondary processors to determine the most cost effective and intuitive approach for aerosol container recycling in Oregon
- → Engage with CAA members to examine appropriate market-based strategies, including ecomodulation, for phasing out hazardous propellants

Aluminum Foil and Pressed Foil Products

CAA acknowledges the addition of aluminum foil and foil products to the list of SIMs. Oregon DEQ cited reasons for this designation that include concerns around food contamination, ability to sort due to the material's flat shape, and realities of smelter yields. CAA's interventions will focus on developing a suitable education and outreach strategy that will help residents recycle these products at appropriate depot drop-off points and not add to the commingled stream as a contaminant.

CAA may continue to explore paths for this material to be included on the USCL in future program plan periods.

A key challenge will be instigating a change to the long-standing practice of collecting this material curbside in parts of the state while simultaneously creating outreach materials that inform residents of appropriate depot locations. CAA's approach to developing this strategy will include the following steps:

- → Segmentation of Oregon communities based on whether they have had curbside commingled collection of aluminum foil and foil products in the past or no collection prior to July 2025. Communities that have historically treated foil as a curbside commingled collection material are likely to be most acutely impacted by this change, and CAA will design the education and outreach strategy to minimize contamination from this group
- → Communities across Oregon will be targeted for outreach on depot collection points for aluminum foil and foil products
- → Given that aluminum foil and foil products are often used in food contact applications, CAA will design education and outreach materials that address appropriate disposal practices for food contamination

Shredded Paper

Shredded paper is on the PRO Recycling Acceptance list and has been designated a SIM. Much like aluminum foil, shredded paper has been collected by communities in Oregon and the de-listing of this material from collection lists will impact the residents of those communities. Education and outreach will be the primary intervention for shredded paper and will mirror that of other de-listed materials such as aluminum foil.



Glass Bottles and Jars

CAA acknowledges DEQ's decision to include glass bottles and jars on the PRO Recycling Acceptance list and classify them as SIMs.

Glass bottles and jars are currently collected in some areas of Oregon as a separated curbside stream, and the communication necessary with respect to glass containers will be tailored to the outcome of discussions with local governments on the development of the collection system for PRO Recycling Acceptance List materials. Where local governments choose to discontinue existing on-route collection systems for glass, CAA will tailor communications to orient residents toward glass drop-off and discourage placing glass in the commingled stream.

As detailed in the PRO Recycling Acceptance list section of this plan, CAA anticipates that a mix of curbside and depot glass collection will support the achievement of the glass collection target.

iv. Proposal to Trial Commingled Collection of Non-USCL Materials

There are two material groupings that DEQ has designated as SIMS that are neither USCL nor PRO Depot materials. These are polycoated paper packaging and single-use cups. While these materials are not currently being recommended for inclusion on the USCL, CAA believes that to adequately address the challenges identified under the SIM designation, it is appropriate to explore commingled collection of these materials on a trial basis after program commencement, with a view to better understanding current generator behavior while at the same time working to understand and address other system barriers to the inclusion of these materials.

Polycoated Paper Packaging

CAA acknowledges that polycoated and similar paperboard packaging have not been included on any collection list due to concerns surrounding their recyclability. DEQ noted challenges in both sortation and yield. On the issue of yield, DEQ has questioned whether these materials are effectively recycled by paper mills, if they are readily recyclable (e.g. polycoated paperboard vs. paperboard with wet strength), and if they showed a high rate of recovery.

CAA also notes that DEQ requests that prospective PROs propose efforts to understand and address the impact of user behavior on CRPFs and end markets if polycoated paperboard packaging is collected as a part of commingled recycling. CAA posits that without collecting this material in a commingled curbside trial environment, once the USCL formally launches on July 1, 2025, it will be challenging to replicate these behaviors and impacts. Therefore, CAA proposes the use of commingled curbside trials after the commencement of the program period to address this material category's SIM designation, while also exploring future paths to the USCL.

In order to meet DEQ's expectations for this material, CAA proposes conducting time-limited, geographically-bound commingled collection of these materials to derive real-world, actionable insights:

→ The trial(s) will primarily aim to understand resident behavior, notably waste generators' ability to differentiate recycling information on polycoated paperboard, polycoated paper cups, and cartons. Education and outreach tactics will be deployed to communicate the appropriate actions



→ The trial(s) will aim to understand the nature and quantities of polycoated paper generated, as well as an initial estimate of the quantities of these materials that end up in mixed paper bales

To scope and plan these trials in the right geography, CAA will research regions where variables and metrics that could affect results are strongly controlled. Ideally, CAA would target trial regions where willing local partners have:

- → Strong, stable control or influence over accepted materials lists
- → Consistent service populations that can be successfully engaged with highly targeted education information
- → Consistent flows of collected materials to specific CRPFs
- → CRPFs that are willing and able to participate in the trial to track materials to bales
- → Responsible end markets willing to participate in the trial to test yield and other factors

CAA proposes to work with relevant stakeholder partners (DEQ, local governments, CRPFs, haulers, and end markets) prior to any trials to develop a detailed project plan for execution factoring in the following considerations:

- → Goals and objectives of trials
- → Timing and duration
- → Stakeholder partners
- → Geography (communities potentially impacted)
- → Logistics of franchised hauling
- → Resident education (what are the related baseline education materials and how will this work within the broader education and outreach plan)
- → Costs associated with the proposed trial

The trials would aim to track materials very specifically from route to bale to market and ensure no other material changes to the stream or service changes are happening at the same time.

In addition, CAA proposes to address concerns surrounding stability, accessibility, and viability of end markets for this material by engaging with CRPFs and end markets to understand an acceptable proportion of this material that will not adversely affect end market applications. Currently, some processors can handle up to 20% of polycoated paperboard (including polycoated cartons and aseptics) in mixed paper bales. ¹¹ CAA proposes to explore options to model the proportion of polycoated paperboard currently in mixed paper bales and study the implications of an increase. An in-depth CRPF study could entail examining CRPFs that sort polycoated cups into mixed paper bales separately from those that sort cups into grade 52 carton bales. Such studies could further entail downstream market research for mixed paper bales with polycoated cups.

Furthermore, CAA recommends assessing the re-pulpability yield of mixed paper trials. This could potentially include assessing specific packaging structure potential re-pulpability yield to inform education and outreach.

¹¹ Based on consultation with a key stakeholder processing mixed paper bales.



Single-Use Cups

DEQ has excluded single-use PP and PET clear cups from recycling collection lists due to contamination concerns. DEQ stated that the inclusion of single-use cups in acceptance lists may introduce contaminants like trays, clamshells, plates, and food waste, as well as contamination from PVC and PS lookalike packaging. CAA further notes DEQ's request to propose efforts to understand and address the challenges this material poses to the recycling system.

CAA proposes no change to the SIM designation for single-use cups and proposes to conduct a trial study to better understand user behavior and to investigate the challenges single-use cups pose to the recycling system. CAA proposes that the limited time, geographically bound trial(s) be conducted after the program period commences in July 2025.

Prior to the trials, CAA will work with relevant stakeholder partners (DEQ, Communities, CRPFs, haulers, end markets) to develop a detailed project plan for execution factoring in the following considerations:

- → Goals and objectives of trials
- → Any material overlaps (for example, polycoated paper cups that may fall into both categories) and how to deal with these
- → Timing and duration
- → Stakeholder partners
- → Geography (communities)
- → Logistics of franchised hauling
- → Resident education
- → Costs associated with trial

The geography of the trials will be determined in a similar manner as for polycoated paperboard packaging as detailed in the above section.

In addition, CAA proposes to address information gaps and concerns surrounding single-use cups. For example, the organization could engage CRPFs and reclaimers receiving single-use cups to understand the extent of yield losses expected with these materials. Additionally, CAA proposes to examine the extent of contamination introduced from lookalikes made of PS and understand challenges this may create during the processing of this material.

v. Initial Plastic Recycling Rate Projections

This section of the plan provides CAA's best estimate of the current plastics generation and recycling rate in Oregon in relation to the 2028 recycling target of 25% that is laid out in the RMA. It also provides information on the elements of this plan that can be expected to contribute to achieving the goal, which form a critical part of Objective 2 of this plan: increase the diversion of recyclable materials from disposal.

Preliminary Plastic Recycling Rate Projections

Oregon currently has limited official data on the generation and recycling of plastic material, especially at levels of detail that would allow a more precise understanding of recycling rates for specific plastic materials, including the generation



source of these materials (e.g., residential vs non-residential). Oregon DEQ has indicated that it will work to release data by August 2024 for the year 2022 to help inform planning toward achieving plastic recycling goals and related calculations.

In the interim and per guidance from DEQ and with no other data source known to CAA to use for this plan, CAA has used data produced by the <u>Overview of Scenario Modeling: Oregon Plastic Pollution and Recycling Modernization Act</u> and the <u>2021 Oregon Material Recovery and Waste Generation Rates Report</u> to make a preliminary estimate of the baseline plastics recycling rate, as shown below. Per guidance from DEQ, CAA has included plastics subject to deposit in the calculations as well as food service ware.

Note that the table below includes an estimate of the *net generated materials* that are presumed to be in scope of the RMA, applying the percentage assumptions displayed in the table. The objective was to try to estimate, account for, and then exclude materials such as film wrap recycled in distribution centers that is baled and sent to markets directly, never entering the residential and commercial recycling streams that are focus of the RMA.

CAA welcomes additional data and guidance from DEQ on this issue to ensure that the assumption percentages are correct (or whether they should be applied at all). The estimates in the table are shown for 2023 as a baseline and for 2028, the year in which the plastic recycling goal must be met. CAA recognizes that DEQ may set the baseline year as 2022 in its August data release.

Materials	2023 Generated (tons)	2028 Generated (tons)	Assumed % in Scope (Residential Sources + Small Commercial)	2023 Adjusted Generated (tons)	2028 Adjusted Generated (tons)
PET Bottles (Deposit)	16,864	17,363	75%	12,648	13,022
HDPE Bottles (Deposit)	171	173	75%	129	130
PP Bottles (Deposit)	171	173	75%	129	130
Other Deposit Plastic Bottles	343	346	75%	257	259
Other Pet Bottles & Jars	14,912	15,649	90%	13,421	14,084
HDPE Bottles & Jars	12,683	13,239	90%	11,415	11,915
PP Bottles & Jars	504	523	90%	453	471
Other Bottles	936	947	90%	843	853
PET Tubs	919	924	90%	827	832
HDPE Tubs	5,476	6,206	90%	4,928	5,585
PP Tubs & Small Rigids	7,406	7,688	90%	6,666	6,919
Other Accepted Tubs & Pails	533	536	90%	480	482
PET Thermoforms	7,879	8,483	90%	7,091	7,635
Other Rigid Plastic Containers	11,103	11,258	90%	9,993	10,132
PP Rigid Products	11,976	12,200	90%	10,778	10,980
Other Bulky Rigids	28,897	29,438	90%	26,007	26,494
PP Rigid Packaging & Products	10,987	12,411	90%	9,888	11,170
Polystyrene Foam	5,283	5,424	90%	4,754	4,882



Solid Polystyrene	2,527	2,594	90%	2,274	2,335
Other Non-Recoverable Plastic	54,682	55,733	90%	49,214	50,160
PE Film	65,989	81,460	50%	32,995	40,730
Other Recoverable Film	1,283	1,273	90%	1,155	1,146
Plastic Pouches	1,937	1,972	90%	1,743	1,775
Other Film	50,904	51,937	90%	45,814	46,744
TOTAL	314,365	337,950		253,900	268,863

Table 8

The denominator estimated above for the adjusted total plastic generation for 2023 is 253,900 tons. This number can be compared to data from DEQ's 2021 Recovery Rate report that includes recycled tonnage information to then estimate the current plastic recycling rate (presuming that 2021 recycling rates have not changed substantially between 2021 and 2023). Table 9 below shows the tonnage recycling data from the Recovery Rate report:

Material	Tons Recycled
Composite Plastic	1,185
Mixed Plastic	N/A
Other Plastic (P7)	N/A
Plastic Bottles	N/A
Plastic Film	10,442
Plastic Other	7,380
Rigid Plastic Containers	31,531
Total	50,538

Table 9

The data in Table 9 does not provide enough detail to map to the specific material generation in Table 8, nor to help decide whether any of the 2021 recycled tonnage should be excluded for being out of scope with the RMA and the plastics recycling goal. However, the overall totals allow for a general estimate of the baseline plastics recycling rate in Table 10.

Recycled Tons	50,538
2023 Generated Tons	253,900
Plastics Recycling Rate	20%

Table 10



Using the 2028 Generation estimate in Table 8, it is also possible to project the necessary tonnage that would need to be recycled to meet the 25% goal and to calculate the net recycled tonnage growth over the baseline that would be needed to meet the goal.

2028 Projected Tons Generated	268,863
Recycled Tons needed to meet 25% target	67,216
Difference between target tonnage and 2023 baseline	16,678

Table 11

Table 11 provides a preliminary estimate that an additional 16,678 tons of plastic would need to be recycled per year over current tonnage to meet a 25% recycling goal in 2028. Again, CAA acknowledges that DEQ's data release in August 2024 may alter this analysis substantially.

The implementation of this plan includes elements that are expected to result in more recycled plastic, thus allowing Oregon to meet its plastics recycling target. At a very general level, with a great deal of uncertainty as to the true potential of each of these elements to contribute additional tons, Table 12 displays the main elements and notation on how they might create new recycled plastic tonnage. Where available data allowed, the notes include a preliminary projection of new tons.

Plan Element	Notes on Potential Impact
Expand curbside, multifamily, and small commercial recycling access through local government needs assessment requests	CAA funding and support of local government requests for new collection infrastructure should result in the collection of additional plastics. Projected tons are difficult to estimate without more data on the number of generators who will receive new service, their generated tonnage, and anticipated participation and participant capture rates.
Enhance collected material mix in local programs to meet USCL requirements	As collection programs add new plastic materials to meet the USCL requirements, it should result in more plastic tons. A rough projection for new polyproplyene collection alone is about 1,400 tons/year.
Implement PRO Depots that collect specific plastics	CAA (and potentially additional PROs) will collect a range of plastic materials at new and existing depots. A preliminary estimate of new plastics collection is 3,840 tons/year.
Add PET thermoforms to the USCL and local collection	CAA is proposing to add PET thermoform packaging to the USCL by 2027, at which point thermoform collection could provide as much as 1,500 new plastics tons per year toward the plastic recycling goal.
Enhance plastics capture at Commingled Recycling Processing Facilities	PCRF and CMF payments, along with regulatory mandates to improve capture rates and bale quality, are expected to reduce plastic material disposed at CRPFs and increase tonnage recycled. It is difficult to project the associated tonnages without more direct engagement with individual CRPFs.
Improve recycling participation and participant capture rates in collection programs	CAA's educational efforts and coordination with local recycling programs and franchised haulers may include specific efforts to raise participation and plastics capture rates (a 2019 Metro capture study showed a 68% capture rate for colored HDPE bottles collected from single-family households and a 35% rate for PP tubs, assumed to be the high end for most Oregon recycling programs and showing room for improvement). It is difficult to project the amount of new tonnage that could be expected from educational efforts without more



	specific data from local programs and haulers on current participation and participant capture rates.	
Expand curbside, multifamily, and small commercial recycling access through local government needs assessment requests	CAA funding and support of local government requests for new collection infrastructure should result in the collection of additional plastics. Projected tons are difficult to estimate without more data on the number of generators who will receive new service, their generated tonnage, and anticipated participation and participant capture rates.	
Enhance collected material mix in local programs to meet USCL requirements	As collection programs add new plastic materials to meet the USCL requirements, it sho result in more plastic tons. A rough projection for new polyproplyene collection alone i about 1,400 tons/year.	
Implement PRO Depots that collect specific plastics	CAA (and potentially additional PROs) will collect a range of plastic materials at new and existing depots. A preliminary estimate of new plastics collection is 3,840 tons/year.	

Table 12

In summary, CAA has provided in this section a preliminary calculation of the baseline generation and recycling tonnage subject to 2028 plastic recycling rate target in Oregon and has identified the plan elements that will help achieve the target. Implementation of the plan will provide new data that will allow CAA to adjust its strategies. CAA will continue to engage DEQ in the search for better data and estimates of plastics generation and recycling as well as continue to seek DEQ guidance on what materials are subject to the recycling goal calculations.

vi. Ensuring Responsible End Markets

CAA will ensure that covered products and contaminants collected with covered products are managed and disposed of in a manner that aligns with Objective 1 of the program plan (Reduce the negative environmental, social, and health impacts from the end-of-life management of products and packaging).

An important component of this management strategy is the transfer of such materials to responsible end markets (REMs).

Example End Markets

Based on discussions with CRPFs, CAA anticipates that most covered products collected for recycling under the RMA program will be processed in North America, with the exception of:

- → Mixed paper
- → Aseptic and gable top cartons (a mix of North American and overseas markets)
- → Expanded polystyrene protective packaging (block white EPS)

Based on industry knowledge, CAA team expertise, and discussions with CRPFs, an initial assessment of the entities that could potentially use materials collected in Oregon range between 130 and 150 entities, excluding plastic converters. Examples include:

- → OCC and Mixed Paper: NORPAC, Pratt Industries
- → HDPE: Denton Plastics



→ Mixed Plastics: Merlin Plastics, EFS-Plastics

→ Cartons: Sustana Fiber, Great Lakes Tissue

→ Glass: Glass to Glass→ Polystyrene: Nepco

For commodities processed overseas (e.g., mixed paper), CAA will work in close collaboration with material brokers to ensure its obligation under ORS 459A.860 to 459A.97. For example, CAA will assist in getting the self-attestation forms from brokers' clients.

Verification of REMs

CAA has developed end market verification processes for jurisdictions where it has been designated as a PRO (Colorado, California). CAA's verification approach was designed based on the principles of the International Organization for Standardization's Guidelines for auditing management systems (ISO 19 011) with input from the expertise of PROs active in other jurisdictions with similar REM verification requirements (including European PROs). CAA's verification approach is a three-step process (see table below):

- 1. Initial screening
- 2. Reporting review
- 3. Entities verification

Verification bodies will be contracted by CAA to undertake the audit step. They will be selected based on several criteria, such as:

- → Capacity to perform overseas audits (e.g., the verification body has local offices or agents in targeted overseas market) as well as North Americans audits
- → Experience in chain of custody verification
- → Experience in waste management
- → Experience in health and safety
- → Existence of policy for prevention of conflict of interests
- → Compliance to ISO 17065 (Conformity Assessment Requirements for Bodies Certifying Products, Processes and Services)
- → Possesses professional liability insurance
- → A proposal of standards to use to measure REM compliance
- → Cost of services

CAA will also rely on DEQ endorsement of verification programs.

CAA will also contract only with certification bodies that fulfill the requirements of ISO 17065 (Conformity Assessment – Requirements for Bodies Certifying Products, Processes and Services).



Verification Action	When	Who	Purpose
Initial screening	Immediately for each unverified end market	CAA and CRPFs (collaboration)	Obtain self-attestation form Pre-approve markets
Reporting review	Quarterly	CAA	Detect any reporting anomalies Calculate yield
Entities verification	Annually	Verification bodies contracted by CAA	Verify compliance with REM standards

Table 13

The verification will also include a material tracking component, ensured by:

- → A Material Flow Management System that will be made available to the different stakeholders of the supply chain for their reporting obligation under the regulation (e.g. CRPFs quarterly disposition reports) and will ensure data confidentiality is preserved
- → A random bale tracking process, connected to the material flow management system
- → An agreement with brokers that will voluntarily collaborate with CAA to ensure they will provide the required information for verification

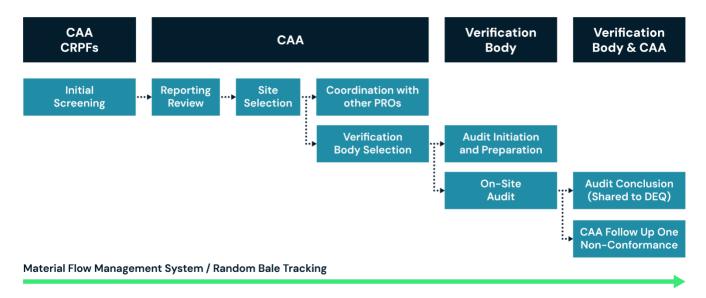


Figure 4. Infographic visual aid depicting the proposed Material Flow Management System.

Verification Sampling Plan

Not all entities will be verified every year. By July 1, 2027, all entities will have been verified at least once. The CAA on-site audit cycle will be performed on a five-year cycle, with every entity verified on-site every five years after the first on-site verification. In the interim, desk audits (review of documentation) will be performed.

CAA will determine the sites to be verified based on the following criteria:



- → Tonnage received: larger tonnage will be prioritized
- → Previous verification: sites that have not been previously audited will be prioritized
- → Risk of non-compliance: overseas end markets and entities for which CAA has received information related to potential non-compliance spotted in the quarterly reporting review will be prioritized
- → Compliance with other verification process: entities already participating in other certification (e.g. recycled content) or verification programs (e.g. food grade quality control) will *not* be prioritized if stakeholders share relevant information and if that information allows CAA to verify compliance against REM standards

Specific Verification Approach by REM Standard

- → Verification of compliance to laws and regulations: For each end market, the verification process will make sure to list any local, state, and national laws and international treaties applicable to the entity. This work will be undertaken by the verification body(ies) retained by CAA. Based on this assessment, the verification body(ies) will inform CAA of its strategy to measure compliance to laws and regulations. At a minimum, CAA can expect the verification body(ies) to review operating permits of the entities.
- → Verification of chain of custody: CAA will use an internal system to enable continuous material tracking throughout the value chain (material flow management system). The detail of how the system will work is presented below. The audit process includes an audit initiation and preparation phase between the verification body and the entity verified, in which the paper trails related to chain of custody (e.g. purchase orders, processing information such as conversion factors, production and stock records, sales orders, inventory balance) will be reviewed. On-site audits will review the chain of custody documents for specific loads. Finally, CAA will use random bale tracking, as described in the section below.
- → Verification of environmental compliance: For each end market, the verification body will list the applicable laws and regulations. It will also request any relevant information during the audit initiation and preparation phase, such as environmental procedures or the existence of an environmental management system (EMS). Based on this assessment, the verification body(ies) will inform CAA of its strategy to measure environmental compliance. At a minimum, CAA can expect the verification body(ies) to review operating permits of the entities and to document plastic leakage during onsite visits.
- → **Verification of recycling yield**: CAA will provide access to the material flow management system to the verification body(ies) in order to measure and verify yield compliance.

Investigating Non-Compliance

For each entity audited, the verification bodies contracted by CAA will provide an audit report that will clearly state:

- → If the end market entity passes or fails each of the REM standards, and the rationale for each potential fail
- → If the end market entity can be deemed responsible or not (if it is not deemed responsible, the report will list steps that would be required to bring it into compliance)

The report will not contain detailed information about the entity for confidentiality purposes.



Instances of non-compliance are most likely to be reported to CAA during the verification process, by the chosen verification body. Once CAA is informed, representatives will review the non-compliance finding with the verification body and the entity in question at the earliest reasonable date following the initial finding. The investigation will help to determine if the entity is confirmed to be non-compliant, the level of severity of the infraction, and the appropriate course of action as described in the section below.

DEQ will receive the verification report and will be informed of any entity that is not compliant after CAA's review process.

Actions to Address Non-Compliance

The verification report will clearly state if the end market entity can be deemed responsible or not and, if not, steps that would be required to bring it into compliance. CAA will provide non-compliant entities with this information along with guidance to support corrective action. The verification body will classify potential non-compliance according to the severity of the infraction: Based on ISO 19 011, CAA will classify non-compliance into three categories of severity:

- → Minor non-compliance
- → Major non-compliance
- → Disqualification non-compliance

In collaboration with the Verification Body, CAA will define the rules and criteria to classify non-compliances in the appropriate category. Entities with minor and major non-compliances will have the opportunity to take corrective action of the situation in a defined period of time. Entities with disqualification non-compliance will not have that opportunity. Entities with minor compliance could be considered a REM during the time they are taking corrective action.

Requests for Temporary Variance in Verification

CAA requests temporary variance from the required components of a verification under the following conditions:

- 1. When another PRO has already approved the end market and deemed it responsible
 - a. Other PROs periodically verify the end market on its performance (e.g. recycling yield) and compliance to their jurisdiction's requirements or the PRO's policy. For example:
 - i. LDPE recyclers in North America that process materials from the agricultural sector may be audited by Clean Farms, a Canadian PRO for agricultural products
 - ii. Paper mills in Asia may be audited by Valipac, a Belgian PRO for packaging material, in compliance with the Waste Shipment Directive Regulation
 - b. CAA requests variance instances for when an entity can prove, with evidence, it has been audited by a recognized PRO within the last three years and can provide a self-attestation of its compliance to REM standards under the RMA
 - c. If an entity can only prove compliance against certain but not all REM standards (e.g. environmental compliance), CAA will undertake the verification against the missing REM standards
- 2. When an end market entity already has certification requiring verification (e.g. recycled content, food grade)



- a. Several entities are already engaged in different certification schemes, such as recycler certifications (e.g. EuCertPlast, FDA LNO) or recycled content certifications (e.g. SCS, ISCC+)
- b. The rationale is similar to what is detailed above for cases when there is verification from another PRO program.
- c. CAA requests variance when an entity can prove, with evidence, it has been audited by a recognized certification scheme within the last three years and can provide a self-attestation of its compliance to REM standards under the RMA
 - If an entity can only prove compliance against certain but not all REM standards (e.g. environmental compliance), CAA will undertake the verification against the missing REM standards
- 3. Domestic landfills will be deemed responsible, unless CAA receives information on potential noncompliance
 - a. Landfills and disposal sites in U.S. and Canada are already verified and controlled periodically by local environmental agencies
 - b. CAA requests variance for landfill or disposal sites in the U.S. and in Canada, as soon as they provide an operating permit delivered by the local authority. Verification might be performed if information regarding potential noncompliance is provided to CAA

Tracking Material Flows

CAA is developing an internal material flow management system to enable continuous material tracking throughout the value chain. The material flow management system is a cloud-based platform that provides the following services, among other capabilities to be determined:

- → Collect and store integral data from external service provider partners, from haulers to end markets, including loads and weights of materials received, processed and shipped out, inbound and outbound data, and information on stakeholder process and environmental compliance. The system will provide "track and trace" functionality with the ability to securely receive transaction data through system-to-system data exchange, file upload, or secure web-based data entry
- → **Protect confidential data**. The platform will implement data security measures that meet the highest security standards, including native encryption of all data, real-time event monitoring, field-level monitoring and audit trails, and field-level data sensitivity
- → **Ensure independent verification**. Data and disposition reporting will be tracked and maintained in a manner that can easily be made available for auditing by authorized external parties
- → Report information to stakeholders for accountability through the secure-access stakeholder portal



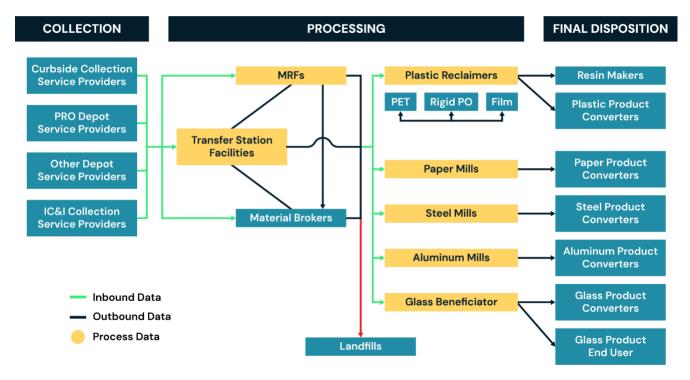


Figure 5. Infographic depicting the fate and transport of different materials from collection through to disposition.

Accounting For Disposition and Yield

CAA will implement measures to account for end market variance in disposition and yield when obligated materials from Oregon mix with non-obligated materials from elsewhere.

CAA will use one of the following chain of custody model defined by ISO 22095:2020

- → Controlled blending model
- → Mass balance model with rolling average percentage method

The controlled blending model will be used when an entity is using materials from Oregon mixed with other sources in a batch production. ISO 22095 requires that the ratio between Oregon and non-Oregon materials is known for all outputs, at all times, for a contained volume (see figure below). This model will be limited in its application as most of the recycling industry does not utilize batch production.



Control Blending Model Processor Mass Balance Rolling Average

Figure 6. Controlled blending model example from ISO 22095.

Material from Other States

Processor

The mass balance model with rolling average percentage method will be used for continuous processes. This is the method most commonly used in the recycling industry, including for mechanical recycling of plastic. The model as defined by ISO 22095 requires calculating an average percentage of Oregon and non-Oregon materials for each output. It also requires claim period. CAA defines those boundaries as follows:

- → Single site only (no multiple sites possible)
- → Average to be calculated at most quarterly and annually
- → Characteristic to be used: Oregon source vs non-Oregon source

Auditing the Verification Program

CAA plans to take a number of steps to ensure a reliable and high-performing REM system.

Material from Oregon

CAA will select verification bodies that are compliant with ISO 17065 (Conformity Assessment – Requirements for Bodies Certifying Products, Processes and Services). This will give CAA the confidence that the REM verification process will be undertaken with professionalism, ethics and neutrality.

CAA's verification program is based on ISO 19011 standards. For the verification to be performed efficiently, the verification body usually guarantees the confidentiality of the information shared, providing a report that only states if the entity



passes or fails compliance against the requirements. Nevertheless, whenever possible, CAA reserves the right to carry out spot checks of the verification work. For instance, CAA representatives may accompany the verification body randomly onsite visits or take other steps to audit the verification process. It may also spot check certain documents that can be made available to CAA.

CAA's verification approach includes a reporting review step, to be performed quarterly, to verify different data sources. An example would be spot bale audits or comparing a CRPF's outbound weight with the inbound information from a corresponding end market. Verification will be performed on 100% of outbound tonnage from CRPFs and PRO depots, with the exclusion of the de minimis level from DEQ.

Random Bale Auditing

To complete the robust chain of custody control through the material flow management system, CAA will randomly audit the journey of materials through the recycling system. Two types of random tracking will be performed:

- → Tracking from the curbside, to determine if household packaging ultimately ends up in a commodity bale or in landfill. As part of this effort, CAA will work with CRPFs to coordinate with their measurement of material capture rates to meet standards set in rule
- → Tracking from the CRPF, to determine the fate of loads of specific material managed by brokers

The approach to tracking from CRPFs will be informed by a risk analysis that will be evaluated according to several criteria, including but not limited to:

- → Shipment destination: Bales more likely to be sent to overseas markets will be prioritized
- → Number of entities handling material: Bales handled by the highest number of entities (i.e. different brokers) will be prioritized
- → Past audit results: Bales most likely to be sent to recyclers whose audit results have demonstrated minor or major non-conformance compliance on chain of custody documentation will be prioritized
- → Number of end markets: Bales that do not have a high number of responsible end markets will be prioritized

Based on initial assessments of the criteria the above, CAA will likely prioritize the random tracking of the following commodities:

- → Mixed paper (grade 54)
- → Cartons (grade 52)

CAA envisions using up to 33 trackers per year:

- → Eight for material collected at the curb (one for each of the eight CRPFs expected to be part of the program)
- → Up to 20 for mixed paper bales (one for each potential broker)
- → Up to five for cartons bales (one for each potential broker)



CAA will undertake the work to affix the tracker devices at the curb or in the bales according to a schedule to be defined. CAA will then verify:

- → If products end up in landfill before or after the CRPF process
- → If loads and bales are compliant with the shipment documents, informing DEQ of any form of non-compliance

CAA is currently working with different tracking device providers to select the best device, both for overall tracking integrity and to help prevent any potential risks around recycling safety.

Supporting Responsible End Markets

CAA's proposed budget includes a dedicated fund for end market development initiatives. The fund will be financed through producer fees and be approximately 3-5% of expected commodity values.

Following internal pre-assessment of existing markets, CAA has identified several commodities expected to require market improvement to satisfy RMA requirements for REMs. CAA does not currently anticipate a need for market improvement for commodities that are not specifically listed below:

- → Mixed paper (grade 54)
- → Cartons (grade 52)
- → Glass
- → Mixed plastics
- → Flexible PE plastics
- → Polystyrene
- → PET thermoforms

CAA will maintain active market development programs for commodities and materials listed above and will take reasonable and practicable steps to facilitate the sale of collected materials to responsible end markets. CAA's ability to facilitate the flow of materials to responsible end markets is predicated by the voluntary agreement of those entities that control the flow of those materials. Actions to support REM development may include:

- → Providing technical assistance, brokerage services, and/or information on responsible end markets to materials marketers
- → Purchasing and reselling materials that otherwise are not being sold to responsible end markets (under certain conditions)
- → Providing wherever possible a supply guarantee to reclaimers so they can secure investments. CAA will focus on taking ownership of commodities lacking end markets
- → Working in close collaboration with existing investors and market development program managers, such as The Recycling Partnership and Closed Loop Partners
- → Working in close collaboration with public sector market development programs, such as those in California and Washington
- → Assessing leverage to promote recycled content in products to pull market demand



Specific actions/strategy will be developed for each commodity/material during the program plan review period and will be included in the revised program plan submission.

Producer Exemptions Under 459A.869 (13)

Under the RMA, producers can demonstrate that certain products are exempt from covered product requirements when those materials are not collected under an Opportunity to Recycle program, are not separated from other materials at a commingled recycling processing facility, and are recycled at a responsible end market.

Although demonstrating conformity with 459A.869 (13) is not a formal PRO obligation, CAA will work with producers and recyclers where applicable to ensure that materials collected in relation to this potential covered product exemption are being recycled at REMs. This may include additional tracking and reporting requirements administered by CAA.

Responsible End Market Development Guiding Principles

The planned responsible end market development program will be guided by four key principles:

- 1. **Partnership.** CAA will undertake investments in market development activities in partnership, where possible, with other parties (e.g. the private sector, local governments, and state and federal interests)
- 2. **Link to targets.** CAA's market development investments will be linked to material specific targets. The emphasis will be on market development opportunities that support end markets for targeted materials at the lowest overall cost
- 3. **No cross-subsidization.** CAA, wherever possible, will avoid cross-subsidization of material specific market development. For example, glass producers will be responsible for funding glass market development activities that are approved by the CAA Board. Where investments benefit a range of materials, costs will be allocated across all benefiting materials
- 4. **Competitive proposals.** Where feasible, CAA will implement a request for proposal/competitive bid process for allocating market development funds. CAA will identify its market development priority areas and will invite interested parties to submit proposals to meet CAA's requirements at the lowest cost. The final decisions regarding market development investments will rest with the CAA Board

Furthermore, CAA has defined a series of principles under which it will take practicable actions to ensure the integrity of REMs:

- → CAA will take actions according to type of non-conformance (e.g. CAA will not take action for disqualification non-conformance)
- → CAA will take practicable actions in priority at North American entities and will limit its actions overseas
- → CAA may consider financial levers under specific considerations, in the form of financial de-risking measures
- → CAA will not take actions if:
 - Other REMs already exist for the relevant material
 - o The entity processes a low volume from Oregon
 - o The entity is not financially stable



vii. Upholding Oregon's Materials Management Hierarchy

CAA will uphold Oregon's materials management hierarchy, specifically with regard to the third principle: recycle material that cannot be reused, with preference given to recycling pathways, methods and responsible end markets that result in the greatest reduction of net negative impacts on human well-being and environmental health.

CAA has identified the previously named end markets as representing the highest and best use of their respective materials because they represent the lowest environmental impacts of all end markets analyzed by DEQ LCAs.

Material-Specific Strategies

Based on existing information and on DEQ analysis for specific end markets, glass, cartons and polystyrene require unique materials management strategies. CAA will work on selecting specific end markets for each of those materials, and the organization may compare the solutions through an LCA that follows ISO 14040 Standard (LCA principles and framework) to identify those with the better environmental outcomes.

Strategy for Glass

Glass will have to be processed by a glass beneficiation plant before it is sent to the final user. However, the capacities of the accessible beneficiation plants in Oregon or nearby states are limited. Therefore, CAA will support the development of production capacity to diversify potential markets for recovered glass, through supply agreements.

For instance, CAA could offer long-term glass volume assurance to help de-risk the investment in a glass processing facility designed to process depot glass. This facility could supply the traditional glass container and fiberglass manufacturing markets, as well as other markets, such as abrasives, water filtration media, and pozzolan. An LCA may be performed according to the targeted end markets.

In the short term, considering the current lack of processing capacities, CAA will continue to explore end markets that can use glass in aggregate form, such as road bedding or ornamental mulch, comparing them with other options while taking into consideration the materials management hierarchy).

Strategy for Cartons

CAA will work in close collaboration with the Carton Council to partner with specific end market entities that are involved in pulping activities, such as tissue production, notably in North America (e.g. Kimberly-Clark de México, S.A.B. de C.V., Sustana Fibers, and Tissue Depot formerly known as Great Lakes Tissue).

Strategy for Polystyrene

In accordance with DEQ's LCA on polystyrene, CAA will prioritize end markets that utilize mechanical recycling over non-mechanical recycling.



d. Education and Outreach

In this subsection of the plan, CAA details how it plans to conduct education and outreach activities in support of USCL and PRO Recycling Acceptance list materials, as well as the statewide promotional campaign.

Due to the nature and timing of start-up activities required for education and outreach (previously an interim coordination task), CAA has integrated the requirements for that activity within this section. CAA and its partners plan to consult with local governments and their service providers, ORSAC, DEQ, and community-based organizations to garner feedback throughout the development of educational materials and plan formulation process.

i. Goals for Education and Outreach

- 1. Effectively build widespread recycling awareness among all Oregon waste generators in the scope of the RMA, including residents living in single-family homes and multifamily communities, as well as commercial businesses, institutions, and non-governmental organizations. Awareness efforts will leave these waste generators with:
 - a. An understanding of the Uniform Statewide Collection List, highlighting recent revisions to the list and an understanding of the PRO-Depot collection list, with an emphasis on newly added or removed items
 - b. An awareness of SIMs and how residents, municipalities, and counties will interact with these materials
 - c. Knowledge of which materials will be collected at curbside versus which materials will be handled at depot drop-off points
 - d. Access to information about the location of depots and instructions for how to properly prepare materials for drop-off at those locations
- 2. Develop educational materials that are culturally responsive to diverse audiences across this state, including people who speak languages other than English and people with disabilities
- 3. Deliver support and messaging proven to effectively increase participation and capture of recyclables. The education and outreach will contribute substantially to the established goal for increasing the plastics recycling rate (25% by 2028, 50% by 2040, and 70% by 2050), thereby contributing to the RMA's goal of maximizing the use of existing infrastructure
- 4. Include a systematic focus on and complement programmatic efforts to reduce contamination of recyclable material streams

Accomplishment of these education and outreach goals ladder up to the overall program plan goals, in particular Objective 3 (improve public participation, understanding, and equity in the recycling system) and Objective 2 (increase the diversion of recyclable materials from disposal).

CAA proposes to conduct annual assessments to measure effectiveness of the campaigns and progress toward the goals outlined above.



ii. CAA's Education and Outreach Plan

CAA and partners, in consultation with ORSAC, will develop educational resources and promotional campaigns to promote the USCL, as well as depot recycling programs. CAA will coordinate and fund the distribution of education and outreach materials through statewide promotional campaigns following the first establishment of the USCL and after each revision of the USCL, but not more frequently than once per calendar year.

Supporting Widespread Awareness and Understanding

This section outlines CAA's proposed approach to building widespread consumer awareness and understanding of the USCL, the depot recycling network and other recycling services available to them.

Audience Research

The target audiences for education and outreach efforts under the RMA are described broadly below. Residential audiences can be further segmented by demographic characteristics. A keystone workstream will be to complete in-depth audience research to effectively develop and deploy messaging that resonates with each group.

- → Single-family household residents
- → Multifamily households residents
 - o Multifamily property management
- → Residents that will utilize drop-off/depots
- → Commercial businesses, institutions, and non-governmental organizations

Audience research will consist of the following activities:

- → Statewide Quantitative Survey: Gather attitudes, perceptions and opinions on current recycling practices, and the current system including understanding and satisfaction
- → Qualitative Interviews:
 - Explore knowledge and attitudes surrounding the recycling of certain materials
 - o Identify gaps in recycling knowledge and points of confusion
 - o Gather feedback on concepts/messaging in terms of relevance and motivation
 - Research to be conducted in English, Spanish, Chinese, Korean, Arabic, Russian, Vietnamese, and Ukrainian

Anticipated audience considerations include:

- → 4.2 million residents, living across 1,642,451 households
- → 120,704 employer establishments (single physical locations at which business is conducted or where services or industrial operations are performed; companies or enterprises may consist of more than one establishment)
- → Translations and transcreations to the following language groups: Simplified Chinese, Traditional Chinese, Korean, Arabic, Russian, Vietnamese and Ukrainian



- → Responsive communications strategies to serve an increasingly diverse population
- → Accounting for gaps in rural vs. urban use of internet to access government services
- → An estimated 35% of Oregon's recycling is generated by the commercial sector, thus substantial investment is needed to effectively capture recyclables from this sector

Developing Messaging

Leveraging key insights from behavioral science research and best practices in motivational messaging for effective outreach, CAA and its partners propose to develop key messages tailored to different audiences in Oregon, which will likely include Portland Metro Region, communities outside of the Metro region with more than 4,000 residents, and rural communities

Messaging Best Practices

CAA proposes to leverage proven best practices in motivational messaging to build participant confidence, improve recycling behaviors among residents, and increase capture of recyclable materials. Motivational messages will be paired with instructional messaging, tailored to target audiences. Key messages that will be communicated to the public include but are not limited to:

- → An explanation of the USCL
- → An explanation of recycling services, including depots and how to sign up for/access services
- → Accepted materials vs. not accepted materials
- → Instructions for preparing materials for recycling
- → Information on the importance of not placing contaminants in curbside recycling bins and carts
- → Key messages will be clear and free of jargon

Consultation and Testing

Campaign messaging may incorporate the best practices described above but should be tested and refined to ensure local relevance and cultural sensitivity. CAA proposes to evaluate and adjust its messaging based on a statewide quantitative survey, focus groups, and consultation with Oregon recycling program staff local CBOs.

Change Management

As the RMA is implemented, there will be differing changes to accepted materials lists across the state, and education and outreach will play a critical role in alleviating the burden and confusion of these changes on key audiences. For instance, as infrastructure and responsible end market development goals are met, the USCL and depot recycling lists may evolve. Additionally, some communities may be exempt from implementing the USCL on the effective date and will come into compliance over time.

Importantly, the effects of these changes may be experienced unevenly across the state. For some communities, updates to the USCL could create feelings that materials are being taken away, and for others, it will be clear that materials are being added. The overall communications strategy must account for the implications of these perceptions.



Material-Specific Considerations

Message development will account for the considerations identified in the Materials Strategy section above with regard to SIMs to the fullest extent possible.

For plastics in particular, the expectation is that the majority of resin types, with perhaps the exception of plastic films and expanded polystyrene (not collected curbside), may end up in curbside containers. All efforts will be made through education and outreach to limit contaminants and contamination, and advance collection of all plastics through the depot network where appropriate.

Delivering Messaging

CAA and partners propose adopting the following best management practices, where appropriate, for delivering communications and messaging to effectively capture attention and motivate appropriate recycling behaviors. Effective strategies will vary depending on the target audience, and are grouped as such:

General Best Practices:

- → Behavioral research has not found general "awareness" campaigns to be effective in driving behavior change to increase recycling. Beyond ensuring that residents are aware of recycling in their community, efforts should focus on why and how to recycle
- → To capture resident attention and motivate appropriate recycling behaviors, information should be provided to the resident close to where the behavior will occur most likely, at home. This is what makes direct mailing effective as well as equitable in reaching communities with lower internet accessibility rates
- → Recent research suggests that information should only include up to five categories of accepted and unaccepted materials with images and clear language any more is overwhelming to the resident. CAA will develop a strategy for clearly and succinctly communicating the USCL to customers, while ensuring that they also have access to detail guidance where needed
- → Residents need to make the choice to recycle each day, which requires sustained effort. At least one annual mailer is a best practice as a minimum level of recycling education
- → A dedicated recycling landing page on local government websites with relevant recycling information for all user groups is a strong step to help funnel searches from residents looking for information online
- → All information should be presented using clear language.
- → Direct mailings with a top issue (one item that is a top contaminant) are helpful in reducing contamination, especially when paired with cart tags
- → Recycling messaging delivered by multiple mailers has been observed to significantly increase recycling participation in one pilot study
- → Ongoing research findings imply that multiple interventions (e.g. mailers AND cart tags AND in-person outreach) may be required to meaningfully increase recycling
- → Delivering messaging by cart tag is memorable and has proven effective at increasing recycling tons in several pilot studies



Multifamily Recommendations:

- → When working with multifamily properties, education and support needs to be provided to residents and property managers. Materials should be written with both audiences in mind, with separate pieces for managers and residents
- → Property managers need to be provided with information on regulations, best practices for recycling, how to set up recycling at the property, and resources to educate residents about how to recycle properly
- → In-unit recycling bins or totes are a promising strategy for increasing multifamily resident participation, but further research is needed to understand the impact of this tool
- → Signs posted near or on recycling containers can help to increase the clarity of what is accepted in the recycling stream. Portland's free signs are a great example of a helpful tool
- → Behavioral scientists recommend introducing new concepts at points of change in people's lives such as a move. A move-in packet that includes recycling information is a helpful tool for new residents

PRO Depot/Drop-Off Recommendations:

CAA and its partners will ensure that in conjunction with messaging aimed at building awareness of the USCL, educational collateral and the statewide campaign will promote the depot network, including site locations and instructions for preparing materials. In addition, once customers arrive at the depot, it is important that they are provided with clear guidance and instructions.

- → Clear signage at the drop-off location (both on containers and at the facility entrance) can help drive correct behavior
- → Specific messaging provided around confusing and hard-to-recycle materials, such as film, will help residents correctly sort their recyclables
- → A single-issue postcard can be used to highlight materials that are common contaminants
- → "Oops" tag handouts can be given to all patrons on-site, not just those bringing contamination
- → Person to person engagement on-site will help residents understand what to recycle and that recycling exists at the site

Recommendations for Commercial Businesses, Institutions, and Non-Governmental Organizations:

- → Create technical assistance resources to help businesses throughout the state, especially outside of the Portland Metro area to:
 - Recycle covered materials
 - Ensure internal collection bins
 - Establish guidelines and a minimum recycling service standard for recycling service by business type
- → Make recycling signs and instructions available to businesses
 - Create recycling sign portal with downloadable signs, or available for order and mailed to the business
 - All signs should clearly identify recyclable materials in no more than five categories and include the top five common contaminates in a "no" category



- → Ensure Recycling is convenient for employees to access. Co-location of recycling and garbage containers is the most convenient setup within a business, both inside the businesses and for external containers
- → Tailor messaging and support provided to businesses depending on size and generator type. Each of these generator types face different barriers to recycling, have different recycling systems in place and generate different types of recyclable materials:
 - Institutions: healthcare, university, schools
 - Franchise and chain businesses
 - Independent small businesses
 - Restaurants, retail and manufacturing

Developing Educational Materials

CAA will fund and coordinate the development of the following educational resources, which will communicate:

- → Materials identified for recycling as described in the USCL.
- → Requirements to properly prepare materials for recycling
- → The importance of not placing contaminants in commingled recycling collection
- → Information about depot recycling, including locations and instructions for preparing materials for drop-off

Educational Materials for Local Governments and Service Providers

Educational materials will be made available in digital and print formats for local governments. Materials will be translated and transcreated into Spanish, Simplified Chinese, Traditional Chinese, Korean, Arabic, Russian, Vietnamese and Ukrainian.

Materials will be developed and made available in an electronic format via an online portal to local governments and their authorized service providers for customization to local conditions. Customization options will allow local governments to easily adapt the materials below to communicate their individualized phase-in timeline to their local public. Customization is also necessary in allowing for adaptation as accepted materials lists change over time due to end market dynamics and other factors.

Specific collateral will include:

- → Photos/illustrations of accepted items and photos/icons of key contaminants
- → Sample text for informative, motivational, and instructional messaging
- → Handouts and/or mailers, including postcards, brochures, full-page flyers, door hangers, and magnets
- → Social media toolkits and digital media materials
- → Signage for depots, commercial and multifamily recycling enclosures
- → Decals for roll carts



Plans for an Online Portal

CAA proposes to provide an online portal for local governments and their designated service providers (and any other entities such as commercial businesses, if planned) to easily access, customize, print and mail educational collateral at no cost.

Users of the portal would be able to:

- → Access templates for the various educational materials listed above that has been strategically designed based on best practices to effectively deliver recycling messaging
- → Accommodate educational materials for relevance to different types of recycling programs, especially curbside pickup and drop-off programs
- → Produce coordinated educational materials that is thematically aligned for cohesive recycling education and outreach across the state
- → Customize materials in seven additional non-English languages spoken in Oregon
- → Easily customize materials to reflect their local contact information
- → Customize materials to accommodate the different bin colors across programs

CAA has built support for local governments and designated service providers in the utilization of the portal into its staffing plans.

Communicating Directly with the General Public

CAA will maintain a website for Oregon residents to learn about recycling by accessing information on the RMA, the USCL, collection points and depots, and in-home recycling best practices. CAA will also explore opportunities to implement responsive customer service tools via its website.

CAA will include messaging on its public-facing website that is aimed at building public confidence in the recycling system and the RMA. Messaging will include information about the PRO's requirement to ensure materials are transferred to responsible end markets and its methodology for doing so. Additionally, CAA will make life cycle assessments conducted by producers to meet obligations of the RMA accessible on this website and will accompany these postings with clear and jargon-free explanatory language to ensure this information is accessible to all members of the public.

Additionally, CAA will provide material for local governments to include on their websites, allowing local governments to include more detailed information about accepted and not accepted material. In this way, local governments will continue to serve as a resource for residents that want to learn more about recycling in their locality.

iii. A Description of the Statewide Promotional Campaign

CAA and partners propose to employ a phased approach to the statewide campaign that will focus on (1) communicating statewide changes to the recycling system in 2025 and introducing new resources, and (2) maintaining awareness throughout 2026 and 2027, while driving increased participation and capture to meet goals set by the RMA.

Throughout both phases of the education and outreach plan, CAA and partners will be focused on delivering messaging and collateral that builds awareness among Oregon residents and organizations and effectively introduces the USCL list. The organization will leverage proven motivational, empathetic messaging in bold, bright colors that will appeal to recyclers



who need more encouragement (based on our audience segmentation), pairing that outreach with detailed instructions for customers to participate successfully in the new system.

Phase One/Year 1: Program Launch

Dates: Begins July 1, 2025, extending as recommended throughout the calendar year.

Phase Description: "Change is here!" Introduction of the USCL and depot recycling program. Getting the right information to the right audiences to educate and encourage them to recycle and increase awareness.

Anticipated Channels: Meta, YouTube, display ads, streaming audio, radio, digital out of home, printed mailers/handouts tailored to key audiences.

→ Key Insight: Based on 2023 pilots, display ads were a top source of impressions and clicks, driving website traffic at a higher rate than the rest of the tactics and showed the highest click-through rate (CTR) of the channels. Display average CTR is 800% higher than the average industry benchmarks, making this a great potential channel for Phase 1

Special Audience Considerations:

CAA proposes to explore the option of creating (not simply translating) an original Spanish language campaign that would parallel the English statewide campaign

CAA recommends specific materials for multifamily/apartment complex management companies that will need to prepare for and communicate changes to their residents.

→ Similarly, commercial businesses that offer office or public space recycling, should receive "change is coming" messaging/packets and support for setting up new systems

Desired Outcomes:

- → Drive audiences to key PRO resources (i.e., the PRO's website)
- → Increase awareness of new recycling guidelines, including both the USCL and depot network
- → Increase public confidence in Oregon's recycling program
- → Begin to drive increased participation

Phase Two/Years 2 and 3: Continued Engagement Phase / Material-Specific Supports

Dates: January 2026 through December 2027

Phase Description: Deliver support to effectively engage frequent, infrequent, and non-participating audiences and achieve increased capture of target materials. It is also possible that during these subsequent years, additional changes will be made to the USCL and depot accepted material lists, and therefore elements of this phase will need to be focused on communicating those changes and managing customer expectations.

Anticipated priority channels:

→ Leverage moments of change (e.g. recycling welcome kits for residents who fill out change of address forms)



- → CBO partnerships, especially for equitable outreach
- → Ads: Google search, Meta, native, phone texts, YouTube, CTV/OTT (streaming TV)

Desired Outcomes:

- → Continue to drive audiences to key PRO resources (e.g., the PRO's website)
- → Continue to build confidence in Oregon's recycling program
- → Achieve increased participation in local recycling programs and PRO depots
- → Increase the capture of recyclable materials, with a focus on underperforming target materials

Campaign Applications and Channels

CAA proposes the following campaign, intended to be deployed in the phased approach described above:

- o Advertising assets: Video, radio, banner, social, outdoor, print, search and community media ads.
- o Recycling signage/decals for depots, enclosures and carts
- o Print materials: Up to three brochures or full-page flyers as well as a mailer, cart tag and a door hanger

iv. A Culturally Responsive Approach

CAA will ensure that educational materials and campaigns are culturally responsive to diverse audiences across this state, pursuant to ORS 459A.893(3). This includes, at a minimum:

- → Including people who speak languages other than English and people with disabilities
- → Ensuring materials are printed or produced in languages other than English and are accessed easily and at no cost to local governments and users of the recycling system

Translation and Transcreation

CAA and its partners propose to translate and transcreate all education and outreach materials into those languages spoken in Oregon by at least 1,000 people over the age of five who spoke English less than very well according to the most recent American Community Survey.

In-language content will be transcreated, not simply translated. CAA and partners will engage linguists and multicultural experts to ensure materials resonate with intended audiences by taking into account language, but also cultural relevancy. For example, materials for different multicultural communities would be designed with images of recyclable items that are most commonly found in the households of the community that is being targeted. CAA understands that under ORS 251.167, information on the most-commonly spoken languages in the state of Oregon and its counties is updated periodically for the purpose of disseminating accessible information on voting to the public. CAA will use this information in formulating and updating its plan to fulfill these accessibility requirements.



Translations and transcreations include up to ten digital ads, recycling enclosure signs, three brochures or full-page flyers, and up to three print designs (either for a postcard, mailer, door hanger or similar sized piece).

Co-Creation

Co-creation will be employed for development of campaign materials and multifamily outreach. Co-creation gives community members a chance to participate in campaign design through community-level listening sessions to deepen mutually beneficial relationships. Other connective strategies could be use of an advisory board, active liaisons, or trusted advisors.

Accounting for Future Diversity

The U.S. Census Bureau considers Oregon among the states rapidly becoming more diverse with time. Any outreach plans developed to educate and inform the public about recycling should strive to be responsive to future changes to Oregon resident demographics.

Partnerships with Community-Based Organizations

To achieve an inclusive and equitable education and outreach program, CAA plans to engage community-based organizations (CBOs) as advisors to its education and outreach efforts, as well as implementation partners.

Designed for Accessibility

Educational materials created for the campaigns will follow ADA compliance and best practices as well as the principles of universal design, where products, services or environments are designed so that anyone – no matter their age or ability – can use that design with minimal or no accommodations. Examples include:

- → Considering color blindness and legibility when selecting color palettes, fonts, text size and imagery. This could include avoiding small print and reverse type and leveraging color blindness testing tools for designers
- → Ensuring all elements meet or exceed the Web Content Accessibility Guidelines 2.1 AA (WCAG) requirements
- → Building accessible features into electronic versions of collateral that are intended for the general public so they include "alt text" for images and all copy and visuals are "screen reader ready"
- → Using plain language and using simple sentences with relevant examples
- → Making use of imagery, icons and other visuals rather than large blocks of text to more quickly and easily communicate information and demonstrate processes
- → Providing materials in a range of formats to reach across digital access and literacy gaps (e.g. digital ads as well as television, radio, print, and outdoor ads and offering detailed information via websites as well as printed mailers and brochures)



v. Schedule Including Proposed Timing of Start-up Approach

CAA and its partners propose to develop educational collateral and the subsequent implementation strategy of the statewide promotional campaign in a deliberate and phased approach. In parallel, CAA anticipates working on a second draft program plan submission for September 2024.

The visual timeline for this proposed implementation plan can be found in the preliminary program implementation timeline featured in Appendix M.

April - June 2024:

- → Quantitative survey of Oregon residents, analysis, and reporting of results and key findings
- → Develop campaign strategy based on survey results and existing best practices
- → Preliminary concepting for the campaign
- → Kick off engagement with CBOs and local governments to consult on strategy
- → Work with ORSAC to set a presentation schedule through July 1, 2025
- → Confirm the material approval schedule with OR DEQ through July 1, 2025.

Late-June 2024:

→ Proposed Activity: Consult with ORSAC Education and Outreach Committee to review and provide feedback on the draft campaign concept prior to testing.

July-September 2024:

- → Conduct qualitative audience research to test the campaign concepts
- → Develop USCL instructions/communications strategy, including key terms
- → Local government review of USCL instructions/communications strategy, including key terms

Early- or mid-October 2024:

→ Proposed Activity: Detailed report on audience research and campaign concept recommendation presented to ORSAC, with materials to be provided at least 2 weeks prior

October 2024 - January 2025

- → Conduct qualitative audience testing to inform transcreation of outreach materials
- → Produce batch 1 materials (those required for Feb 1 distribution): USCL guide, cart label, style guide, messaging timeline, newsletter article, web domain/QR code
- → Local governments to review batch 1 materials over two 2-week periods
- → Initial drafting of batch 2 materials (those required for April 1 distribution): Social toolkit, press release, newsletter article, website with 'change is coming' messaging, print materials USCL mailer/poster, postcard, bill insert, depot/enclosure signage, available in agreed-upon languages



- → Local governments to review batch 2 materials over two 2-week periods
- → Develop media planning strategy and establish hotsheet of advertising specifications

January 2025:

- → Proposed Activity: Present batch 1 materials to ORSAC
- → Submit batch 1 materials to DEQ for approval

Key Deliverables by February 1, 2025

The following **guidance documents and editable design files** will be available to local governments and service providers for download:

- 1. Photos of all materials on the USCL, materials being removed from lists around the state, and contaminants of concern, in both low and high resolution
- 2. An in-mold label graphic for roll carts
- 3. A style guide to help ensure residents experience a unified aesthetic and feel whenever and wherever they receive recycling information in the state (see attached example of Metro Multifamily Decals and Signage Playbook) that includes fonts, colors, as well as a vetted list of terms (e.g., when to use "bins" versus "carts," "recycling" vs "recyclable materials," etc.) in agreed-upon languages
- 4. A recommended phased messaging timeline for local governments and service providers to adhere to
- 5. A Customizable newsletter-style article with "change-is-coming" messaging (i.e., change is coming July 1 and why, look for more information in June)
- 6. A QR code to public-facing website with an identifiable and memorable domain name that local governments and service providers can use to direct their residents/customers to more information

February – April 2025

- → Complete production of batch 2 materials for April 1 distribution.
- → Initial drafting of batch 3 materials (those required by June 1) Website strategy, design, development and QC to have live, updated with downloadable materials.
- → Initial production of batch 4 materials (those required by July 1) in English Ad materials video, radio, banner, social, native, OOH, print, search.
- → Local governments to review batch 4 English materials over two 2-week periods
- → Upon approval of English materials, transcreated materials will be developed
- → PR planning, messaging and materials development (early milestone is 'change is coming' release)
- → Initiate business association outreach
- → Initiate mail house coordination
- → Design, build and test education and outreach electronic portal



Key Deliverables by April 1, 2025

Electronic Portal launches by 4/1/25 to support outreach efforts conducted by local government and service providers. The following materials will be available for download via electronic portal:

- 1. Social media toolkit with change-is-coming messaging in agreed-upon languages
- 2. Example and customizable brochure in agreed-upon languages that is simple, clear, and free of jargon that also serves as mailer/poster and includes:
 - a. Basic preparation information ("empty and dry")
 - b. Top 3-5 contaminants to keep out
 - c. Limited Yes/No poster that can be posted near receptacles and includes a QR code to the public-facing website with comprehensive list of accepted items and contaminants
- 3. Additional example and customizable resources, including social media toolkit, newsletter, postcard, billing insert, press release, available in agreed-upon languages, that deliver the following messages:
 - a. The system is changing July 1 and why
 - b. Benefits of the new system
 - c. How to participate—action steps
- 4. Example and customizable container stickers and depot/enclosure posters and signage in agreed-upon languages, available in different sizes developed through consultation with local government

April – June:

- → Complete production of batch 3 materials for June 1 release.
- → Ongoing business association outreach
- → Ongoing mail house coordination
- → PR planning, messaging and materials development (early milestone is 'change is coming' release)
- → PR materials development (early milestone is 'change is coming' release).
- → Initiate media negotiation and coordination

Key Deliverables by June 1, 2025

The following **print materials** will be available for local governments and service providers to order for delivery by June 1, available in different sizes developed through consultation with local governments in agreed-upon languages, made of waterproof materials that are appropriate for indoor and outdoor use:

- 1. Signage for depots and commercial and multifamily recycling enclosures
- 2. Stickers for roll carts/containers

A live **public-facing website** with memorable domain name, populated with change-is-coming messaging will also be available by June 1. Information posted to the site will explain/include the items below. Information will be available/accessible in all agreed-upon languages:



- 1. The Oregon recycling system is changing July 1, and why
- 2. The benefits of the new system
- 3. How to participate—action steps
- 4. A downloadable poster to hang near receptacles that includes:
 - a. Basic preparation information ("empty and dry")
 - b. Limited Yes/No list
 - c. QR code to the website itself with comprehensive list of accepted items and contaminants
- A complete Yes/No list for materials, closer to <u>https://www.oregon.gov/deq/recycling/Documents/rmaMatAccept.pdf,</u> but using customer-friendly terminology
- 6. Detailed preparation information and list of common contaminants

Key Deliverables by July 1, 2025

- → Formal campaign launch
- → All other USCL educational resources made available

2026-2027

→ Campaign continues as described in the campaign section of the education and outreach plan

vi. Relevant experience

Given its widespread reputation as a leader in recycling education, The Recycling Partnership has been a partner to CAA in developing plans for the education and outreach aspects of the program plan. CAA will also consult with The Recycling Partnership as a potential partner to execute the education and outreach plan. CAA believes the team tasked with delivering this work needs to have:

- → Industry Knowledge A deep understanding of the recycling and waste management sector, including knowledge of current trends, challenges, and opportunities. The qualified firm will have considerable experience with deploying recycling education and outreach campaigns that measurably improve the performance of recycling programs
- → Communication Expertise Proven experience in developing comprehensive communication strategies that resonate with diverse audiences. The firm will show demonstrated proficiency in utilizing various communication channels, including traditional media, social media, and digital platforms
- → **Stakeholder Engagement** Experience identifying and engaging with key stakeholders, including local governments and recycling service providers. This experience should extend to building partnerships and collaborations to enhance the reach and impact of campaigns
- → Campaign Development Previous success in developing and implementing large-scale, statewide campaigns. The goal is outreach that leverages creativity and innovation to craft compelling messages and materials that effectively convey the campaign's goals



- → A Data-driven Approach Utilization of data and analytics to inform the development of materials and to measure the success of outreach interventions
- → **Cultural Sensitivity** Understanding of the cultural diversity within the state, ensuring that the campaign is inclusive and resonates with various demographic groups
- → Adaptability Flexibility to adapt strategies based on feedback, changing circumstances, and emerging trends



Financing

a. Membership Fee Structure and Base Fee Rates

i. Product Speciation for the Fee Structure

CAA proposes a product speciation list of 62 materials, grouped by eight material categories as described below. This list was developed based on our understanding of the RMA requirements, our experience with EPR programs in other jurisdictions, and the USCL and PRO accepted material lists developed by DEQ as a part of rulemaking. We also considered its potential for "nestability" with other EPR programs, such as California, to enable producer reporting synergies between Oregon and other state programs.

Printing and Writing Paper

Newspapers

Newsprint (inserts and circulars)

Magazines, Catalogs and Directories

Paper for General Use

Other Printed Materials

Plastic - Rigid

PET (#1) - Bottles, Jugs and Jars (Clear/Natural)

PET (#1) - Bottles, Jugs and Jars (Pigmented/Color)

PET (#1) - Thermoformed Tubs

PET (#1) - Thermoformed Containers, Cups, Lids, Plates, Trays

PET (#1) - Tubs

PET (#1) - Other Rigid Items (including containers)

HDPE (#2) - Bottles, Jugs and Jars (Clear/Natural)

HDPE (#2) - Bottles, Jugs and Jars (Pigmented/Color)

HDPE (#2) - Pails and Buckets

HDPE (#2) - Tubs, Nursery (plant) pots and trays

HDPE (#2) - Package Handles, Lids

HDPE (#2) - Other Rigid Items (including containers)

PVC (#3) - Rigid Items

LDPE (#4) - Bottles, Jugs and Jars

LDPE (#4) - Lids

LDPE (#4) - Other Rigid Items

PP (#5) - Bottles, Jugs and Jars

PP (#5) - Thermoformed Containers, Cups, Plates, Trays (non-nursery (plant))

PP (#5) - Thermoformed Lids

PP (#5) - Thermoformed Tubs, Nursery (plant) Pots and Trays

PP (#5) - Lids

PP (#5) - Tubs, Pails and Buckets, Nursery (plant) Pots and Trays

PP (#5) - Other Rigid Items

PS (#6) Expanded/Foamed Hinged Containers, Plates, Cups, Tubs, Trays, and

Other Foamed Containers

PS (#6) White Expanded/Foamed Cushioning and Void Fill

PS (#6) Colored Expanded/Foamed Cushioning and Void Fill

PS (#6) Rigid Non-Expanded

PLA, PHA, PHB - Rigid Items

Other/Mixed Rigid Plastic



Glass and Ceramics Glass Bottles and Jars and Other Containers Ceramic - All Forms	
Metal Aluminum Containers Aluminum Foil and Molded Containers Aluminum Aerosol Containers Aluminum Other Forms Steel Containers Steel Aerosol Containers Steel - Other Forms Metal - Small Format Pressurized Cylinders	
Paper/Fiber Aseptic and Gable-top Cartons Kraft Paper Corrugated Cardboard Corrugated Cardboard (Tertiary/transport) Non- consumer Paperboard Polycoated Paperboard Other Paper Laminates Other Paper Packaging Paper - Small Format	
	Plastic – Flexible HDPE (#2)/LDPE (#4) Flexible and Film Items HDPE (#2)/LDPE (#4) (Pallet Wrap) non-consumer PP (#5) Flexible and Film Items PLA, PHA, PHB - Flexible and Film Items Plastic Laminates and Other Flexible Plastic Packaging
Plastic – Other Plastic - Small Format Plastic containers for motor oil, antifreeze, or other automotive fluids, pesticides or herbicides, or other hazardous materials (flammable, corrosive, reactive, toxic)	Wood and Other Organic Materials Wood and Other Organic Materials

ii. Development of the Base Fee Algorithm

In the fall of 2023, CAA began consultations with its Founding Members to develop a national fee-setting methodology to be deployed to all EPR enacted states. While the methodology development will continue in 2024, the Founding Members developed a set of guiding principles to guide the development of the fees. The guiding principles underpinning the feesetting methodology are:



CAA Fee-Setting Guiding Principles

- 1. **Harmonization:** Fee rates should be developed using a national fee-setting methodology that is consistent across states unless state-specific laws or conditions require adjustments. Fee structures will vary in each state due to state-specific inputs and statutory requirements.
- 2. **Fairness:** Producers supplying covered materials to end users must contribute to the costs of the recycling system, including those who use materials not collected for recycling or are not recycled.
- 3. **Material-Specific Costs:** Fee rates will reflect material-specific management costs in each state using the best available data.
- 4. **Commodity Revenue:** Fee rates will reflect state-specific commodity revenues, and these revenues will be attributed to the corresponding material categories that earned them.
- 5. **Ecomodulation:** Fee-setting will account for measurable environmental objectives and state-mandated ecomodulation policies using CAA's ecomodulation principles (which are under development).
- 6. **Responsible End Markets:** Fee-setting will factor in the development and maintenance of viable responsible markets with any associated costs borne by the material category and as required by state EPR laws.
- 7. **Clarity:** Fee-setting materials and consultations will be prepared and conducted in a manner that clearly communicates to producers the principles, methodologies and approach that Circular Action Alliance is using to determine fee rates.

These principles provide guidance for the development of a fair, transparent and effective fee allocation method for producers. For covered materials that are neither collected nor recycled, producers will still incur fees to cover the cost of the recycling system in accordance with the Fairness principle.

Interim Fee-Setting Methodology

As part of the fee-setting development process, CAA evaluated past and present frameworks used in other jurisdictions that have implemented EPR for packaging and paper products. CAA arrived at an interim method to set the preliminary base fees for the Oregon program plan submission. This methodology is considered interim because further fee-setting considerations, such as the development of the graduated fee algorithm, will be advanced in subsequent program plan amendments. Given the complexity of preparing producers for implementation of ecomodulation, CAA believes further consultation will be required with stakeholders in light of DEQ's proposed LCA impact rule concepts.

The interim fee method allocates the estimated material management costs to covered materials based on their share of supply tons. This upholds the generally accepted "polluter pays principle" in EPR literature whereby materials with large supply quantities pay for a large share of system costs. Material cost variation exists by incorporating material-specific indices generated by an Oregon-based Activity-Based Costing model into the fee allocations. The indices represent the varying costs that each material drives in the recycling system as it is being managed throughout the reverse supply chain from collection to transfer and consolidation, and then transportation to processing facilities. These are used to approximate the relative cost proportionality of covered materials managed in the program to avoid arbitrary cross-subsidization outcomes and to ensure that the statute requirement under ORS 459A.884(3)(b) is satisfied.



Program generated revenues are attributed to the materials that earned those revenues to reduce their share of material management costs.

The base fee schedule will be updated annually at a minimum, to reflect changes to producer supply tons, system operations and costs. The base fee schedule meets the state-mandated requirement under ORS 459A.884(3)(a), where the average base fee rate for covered materials that are not accepted for recycling must pay higher average fees than those materials that are accepted for recycling in Oregon.

Summary

- → The interim fee methodology ensures fairness for producers by differentiating material fees based on a material's supply, cost and revenue profiles
- → Materials with the highest supply quantities and management costs pay the highest share of costs
- → Materials generating the most commodity revenues benefit from the largest reduction to costs
- → Materials that are recycled at high rates do not pay a higher share of costs relative to lower performing materials. This ensures that the core fee principles of Fairness, Material-Specific Costs and Commodity Revenues are upheld

Separate Allocations for USCL and PRO Recycling Acceptance List Materials

In the Oregon program, there are three separate groups of covered materials: USCL, PRO recycling acceptance list, and materials not accepted for recycling. The first two groups have distinct management systems and funding obligations, e.g. the PRO is obligated to fund the expansion of on-route collection of USCL materials but not the actual collection services of USCL materials, whereas for materials on the PRO recycling acceptance list, the PRO must develop a depot network to receive these materials and then transfer them to a sorting facility or end market. To avoid cross-subsidization of the fees between these groups, the allocation of materials management costs is done within cost boundaries between these material groups.

While materials not accepted for recycling do not incur actual material management costs, they contribute their portion of fees based on their share of supply tons multiplied by cost indices of similar materials. Specifically Identified Materials (SIMs) and other strategic materials targeted for investments are assigned investment costs directly based on their needs.

Metrics and Other Data Inputs Used to Set Fees

In developing the preliminary fees, CAA relied on estimates and data modeling of critical data inputs provided by CAA project team members with expertise in this field. Once the Oregon program launches, CAA will use actual supply and recycling data to inform fee-setting.

Allocation of Non-Material Management (Indirect) Costs

Non-material management costs include program operations and administration, program development and regulatory costs. These costs have different cost drivers than material management costs and are often borne by all covered materials.



As a result, these costs are allocated to materials using a consistent but different approach than material management costs.

Flat Fees

In accordance with ORS 459A.884(6), CAA proposes tiered uniform fees for low volume producers with gross revenues of less than \$10m or covered materials sold for use in Oregon of less than 5 metric tons as follows:

Tiered Flat Fee Structure (for producers with gross revenues of at least \$5m and up to \$9.99999m)

Tier Based on Annual Supply Tons	Flat Fee (Base Case)	Flat Fee (High Case)
1 to 2.5 tons	\$600	\$800
Over 2.5 tons up to 4.99999 tons	\$1,300	\$1,700

Table 15

Publisher In-Kind in Lieu of Paying Fees (Print and Online Advertising)

In accordance with ORS 459A.884(7), CAA shall accept the value of print and online advertising services in lieu of all or a portion of fees payable by newspaper or magazine publishers. Once the fees are determined, CAA will work with the publishers to arrange for advertising products and services of similar value to offset CAA's education and outreach expenditures. The portion of fees payable in cash by publishers will be negotiated.

Confidentiality

As per OAR 340-090-0710(2) and with support from DEQ, CAA's fee-setting methodology is considered proprietary and confidential information. The detailed methodology will be included as part of a confidential addendum to the Program Plan submission.

iii. Preliminary Base Fee Schedule Ranges

In advance of conducting the Oregon Recycling System Optimization Project, CAA developed a range of preliminary program cost estimates to inform preliminary base fees for publication in the Program Plan. Presenting a range of anticipated program costs is reasonable given the absence of program data and uncertainty with estimates at this early stage.

The fee range was developed using a base case and high case scenario with the base case being conservative and the high case reflecting potentially higher costs due to high variability and uncertainty of cost estimates. Once the Oregon program launches, CAA will use actual program data to inform the program budget and resulting fees.



Preliminary Base Fees (Material Category Level)

Program Year 2025	Base Case	High Case
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Covered Material Category	Fee Rate	Revenue Budget \$	Fee Rate	Revenue Budget \$
Printing and Writing Paper	2.0 ¢/lb	\$6,800,000	3.0 ¢/lb	\$7,100,000
Paper/Fiber	6.0 ¢/lb	\$35,100,000	11.0 ¢/lb	\$45,000,000
Plastic - Rigid	24.0 ¢/lb	\$48,900,000	43.0 ¢/lb	\$61,300,000
Plastic - Flexible	37.0 ¢/lb	\$118,300,000	71.0 ¢/lb	\$158,900,000
Plastic - Other	27.0 ¢/lb	\$2,600,000	49.0 ¢/lb	\$3,300,000
Glass and Ceramics	14.0 ¢/lb	\$9,200,000	24.0 ¢/lb	\$11,000,000
Metal	8.0 ¢/lb	\$2,900,000	13.0 ¢/lb	\$3,300,000
Wood and Other Organic Materials	4.0 ¢/lb	\$1,700,000	6.0 ¢/lb	\$1,700,000
Total	15.0 ¢/lb	\$226,000,000	26.0 ¢/lb	\$292,000,000

Table 16

Given the preliminary nature of these fee estimates, CAA strongly advises against relying on these estimated fees to budget producers' compliance costs in Oregon. With the completion of the Oregon Recycling System Optimization Project, CAA will be in an improved position to refine the fee range and likely expand the base fee schedule to reflect the proposed 62 fee reporting categories in the second Program Plan submission.

A final fee schedule will be released once the Program Plan is approved and more accurate cost and supply data are captured to replace estimates.

iv. Producer Fee Incentives, Other Than Graduated Fee Adjustments

Oregon's Recycling Modernization Act mandates that the average fee rate for covered materials that are not accepted for recycling be higher than the average fee rate for covered materials that are accepted for recycling, as outlined in ORS 459A.884(3)(a). This statutory requirement is arguably a fee incentive that is implemented within the base fee structure, outside of Graduated Fees.

v. Meeting the Statutory Requirement

In accordance with ORS 459A.884(3)(a), the preliminary base fees for both base and high scenarios satisfy the requirement for the average base fees for covered material not accepted for recycling to be higher than the average base fees for covered materials that are accepted for recycling in Oregon. These are shown in the table on the next page.



Avg. Fee	Base Case	High Case
USCL	6 ¢/lb	10 ¢/lb
PRO	27 ¢/lb	50 ¢/lb
N/ A	31 ¢/lb	57 ¢/lb
	15 ¢/lb	26 ¢/lb

Table 17

As the materials not accepted for recycling tend to be costlier to manage than USCL and PRO recycling acceptance list materials, their resulting average fee rate is higher than that of materials that are accepted for recycling.

In addition, the fee methodology incorporates a discretionary state-adjustment factor to ensure that this condition is met. It is activated only when the average fee of not accepted materials is lower than the average fees of accepted materials. To satisfy the state-mandated condition, this factor shifts material management costs from the group of accepted materials to non-accepted materials using the "goal seek" function in Microsoft Excel, to generate a positive delta between the average base fees of not accepted materials and accepted materials. Once transferred, the costs are allocated amongst the non-accepted materials based on their material management cost proportions. Below are the calculation steps for the state-adjustment factor:

- 1. One hundred percent of the material management costs are allocated by material specific supply tons using the material cost indices generated from activity-based costing. The non-material management costs are allocated by the material management cost allocation ratio.
- 2. The average fees of accepted and not accepted material is calculated, as shown in the below table. If the accepted material fee is lower than the not accepted material fee, then the requirement is met and no further action is required.
- 3. However, if the accepted material fee is higher than the not accepted material fee, as in the below example where the fee per ton for not accepted materials is at \$88.98 and accepted material is at \$103.24 (which is lower by \$14.26), then the requirement is not met.
- 4. In the next step an optimized percent (8%) of material management cost is assigned to not accepted materials to make their fees higher than accepted materials. Excel goal seek function (Newton-Raphson method) is used to calculate the optimized percent to create a positive difference between accepted and not accepted materials. The remaining 92% of material management cost is allocated using the supply tons and material cost index.
- 5. The non-material management costs are allocated by the new material management cost allocation ratio after the state-adjustment factor calculation.
- 6. The new fee per ton will meet the requirement as demonstrated in the tale below:

¹² Technically known as the Newton-Raphson method.



The numbers mentioned in the example are for illustrative purposes only.

Material Type	Average Fee per Ton	Average Fee per Ton with State-Adjustment Factor
Accepted	\$103.24	\$95.10
Not Accepted	\$88.98	\$96.10
Difference	-\$14.26	\$1.00

Table 18

This factor and its application are designed so that:

- → Only the minimum required costs are redistributed from accepted materials to non-accepted materials to ensure minimal cost impact on producers in the non-accepted group because they exert no control over whether their materials are accepted or not, and
- → There is no need to determine arbitrary costs to assign onto non-accepted materials because the model algorithm will calculate the minimum costs required to be transferred



b. Graduated Fee Algorithm and Methods

i. The Algorithm and Accompanying Descriptive Text for the Proposed Graduated Fee Structure

As per ORS 459A.875(2)(a)(F), the Oregon program shall encourage producers to make continual reductions in the environmental and human health impacts of covered materials. This is to be administered through a graduated fee structure as described in ORS 459A.884, that can be used to adjust fees for producers who make or have made impactful changes to the ways in which they produce, use and market covered materials in Oregon. According to DEQ's latest "Guidance on Ecomodulated Fees," while the law requires PRO(s) to consider at a minimum the five factors ¹³ listed in the statute, it does not require any of those factors to be included in the fee schedule. ¹⁴

CAA fully supports the notion of developing a graduated fee structure to incentivize producers to continually reduce environmental and human health impacts and commits to implementing a fee methodology that meets these regulatory requirements.

As of the submission of this program plan, CAA does not have a specific eco-modulation proposal developed for review. Given the challenges associated with implementing eco-modulation concepts (see below), CAA believes that eco-modulation proposals should be sequenced in the following manner:

- 1. Interim voluntary eco-modulation options should be developed for producers for implementation as soon as possible after the start of the program on July 1, 2025;
 - CAA would propose developing the details of these interim or voluntary eco-modulation fee adjustments in consultation with producers and other stakeholders to inform subsequent program plan amendments with the goal of alignment on these fee adjustments prior to the start of the program.
- 2. Parallel to the development of interim voluntary eco-modulation options CAA, will work with producers and other stakeholders to develop permanent membership fee incentives to reduce environmental outcomes. In CAA's view, in order to ensure the effectiveness of graduated fees to establish appropriate price signals that balance action and fairness, CAA considers it imperative to allow adequate time to assess the potential impacts of different approaches, criteria and the required underlying data. In addition, CAA believes that successful implementation requires flexibility to consider how best to structure the graduated fees within the fee-setting

¹³ The five factors listed in 459A.884(4) are (a) The post-consumer content of the material, if the use of post-consumer content in the covered product is not prohibited by federal law; (b) The product-to-package ratio; (c) The producer's choice of material; (d) Life cycle environmental impacts, as demonstrated by an evaluation performed in accordance with ORS 459A.944; and (e) The recycling rate of the material relative to the recycling rate of other covered products.

¹⁴ DEQ (2024). Guidance on Ecomodulated Fees - Plastic Pollution and Recycling Modernization Act (SB 582, 2021), pg. 3.



methodology, including appropriate linking of the level of impacts to the level of bonuses and penalties, the timeframes for their application and the appropriate application within and possibly across material groups.

Challenges with implementing graduated fees as of July 1, 2025

To ensure successful implementation of ecomodulation adjustments, CAA recommends further stakeholder consultation related to the development of graduated fee algorithms. Challenges with implementation at the start of the program include the following:

Supply data underpinning fees and fee rates is highly uncertain

Accurate supply data (quantities of each material supplied) is a critical variable used to set fees and to establish appropriate price signals and determine the most effective criteria and structure of the methodology. Both the base fees and graduated fees will be directly tied to the reported supply data. As producers have not yet reported supply data, the estimates of material supplied tons used for preliminary base fees are very uncertain. Based on experience with implementing EPR programs in other jurisdictions, the data will be highly variable in the initial years of the program. Experience has shown that it will take years for producers (and their suppliers) to become familiar with reporting requirements, material category and product mapping, and to establish reliable systems to compile their data.

Further complicating this, the number of producers that will fall within low volume exemption rules or paying flat rates is currently unknown. With exemptions from reporting the quantities supplied, it will take time for CAA to compile reliable data

Program costs are uncertain

As with supply data, reliable program financing is critical to the reliability of resulting price signals from both base and graduated fees. Some program obligations are currently being confirmed and refined. Cost estimates for meeting the range of obligations are therefore uncertain at this time. CAA will continue to refine program cost estimates prior to Program Plan implementation.

LCA rules are being finalized

The rules and standards for conducting LCA studies and for assessing and comparing their results (as per ORS459A.884 and ORS 459A.944) are not finalized and indeed some related to plastics are new. In this emerging context, proposing appropriate criteria and levels for fee graduation is challenging and possibly unfruitful. Finalizing graduated fee structure proposals needs to be coordinated with potential LCA impact reduction criteria and reporting requirements. Otherwise, producers may begin to plan for potential fee adjustment assessments which are subsequently subject to significant changes or refinements to criteria.

LCA data and the results of LCA studies are limited

Detailed and robust LCA data and the results of LCA studies are limited. Until CAA's Program Plan has been approved, CAA will not be in a position to raise the funds or have the capacity to undertake the necessary analyzes to determine the likely



or possible level of improvement, nor assess the levels of incentives that would be practical and result in the desired environmental outcomes. The corresponding uncertainty with base fee rates compounds this challenge.

Data for other potential factors that could be considered is also limited

Similarly, the data for most factors either suggested by DEQ for consideration (as per ORS459A.884) or that CAA considers potentially important to improving the environmental impact and cost-effectiveness of the program (e.g. post-consumer recycled content, designs causing operational problems), have not yet been compiled, are limited, or are not yet identified.

CAA believes that changes to material attributes may have environmental and/or program benefits, but to date it has not yet had the capacity or opportunity to undertake the research and analysis necessary to fully assess the relative merits, program implications, or levels of incentives that would result in the desired outcomes. For example, CAA believes that some incentives related to post-consumer recycled content might be developed and used judiciously in a reasonable market development action plan as the program evolves, as it has in other jurisdictions.

Flexibility and time will allow CAA to recommend the most impactful criteria for ecomodulation and program improvement, both of which are important to the program's success and consistent with the spirit of the RMA.

Given these considerations, CAA believes the desired outcomes of an effective long-term ecomodulation scheme to reduce environmental impacts will be more effectively implemented with additional input from RMA stakeholders and additional planning by CAA and its producers.

CAA also supports the implementation of eco-modulation factors in the producer fee schedule as contemplated under the RMA. While CAA understands the critical nature of, and fully supports establishing rules governing the clear and rigorous standards by which LCA studies are implemented and compared, it believes that the process for adjusting fees in relation to LCA results should be developed as part of the PRO Program Plan. This will provide the required flexibility to optimize the graduated fee structure over time. CAA strongly recommends that LCA rules do not define how the graduated fees should be implemented in relation to LCA results beyond what is already required through the statute. CAA welcomes the opportunity to establish a systematic process to work with DEQ and other stakeholders to ensure the graduated fees are implemented as soon as possible following the start of the program.

Interim Eco-modulation Options

While the full assessment of long-term graduated fee adjustments, in CAA's view, requires additional data and better information about actual material base fee rates to develop, in the short term, there are a number of fee adjustment options which could be implemented to offer producers incentives to improve environmental outcomes. These interim fee adjustment options could potentially be implemented closer to the start of the program provided that the overall financial implications associated with the adjustments were limited. For example, CAA could consider providing producers with a limited bonus for disclosures of voluntary LCAs that would be available before the data necessary to develop more comprehensive eco-modulation fee structures was available.



Proposed Program Plan Amendment for Graduated Fees

At the time of drafting this initial submission, CAA proposes to use LCA results as a basis for graduated fee adjustments. Either those from the 25 largest producers by market share that must be submitted to DEQ by December 31, 2026, as per ORS 459A.944, or voluntary LCAs submitted by producers, subject to applicable rule concepts with regards to LCA criteria and their comparison. Similarly, where supported with evidence, CAA may consider modulating material base fees using specific design attributes. In both cases, CAA will propose the criteria by which it will apply the data on LCAs and any recommended attributes to establish graduated fees.

Specifically, CAA expects that the Program Plan amendment outlining the graduated fee structure will provide detailed information on the following items:

- → the set of criteria for which bonuses will be available and penalties will be applied, and how they will be used to adjust the fees (i.e. LCA criteria, other factors such as recycled content, either within material categories or if applicable, across material categories
- → the range and magnitude of each ecomodulation bonus and penalty
- → the timeframe for which bonuses and penalties for specific materials or producers are applicable
- → the administration process by which CAA will accept, assess and qualify approve requests for ecomodulation bonuses

ii. Methods by which the PRO will Accept and Consider Requests for Ecomodulation Credits

Conceptual Approach to Determining Graduated Fee Structure

CAA anticipates the probable approach to calculating graduated fee rates, after determining base fee rates, to be as follows:

- → Determine eligibility and level of bonuses and applicability of penalties based on:
 - Reported producer supply by reporting category
 - Reported environmental attributes and impact data (criteria yet to be determined)¹⁵
- → Determine which bonuses and penalties apply within each material category and if applicable, across material categories according to criteria yet to be determined

¹⁵ The factors and criteria for bonus eligibility and penalties and their levels will be determined before implementation in the 2028 program year in consultation with DEQ and producers.



- → Determine the values of bonuses and penalties to be issued with the intent of balancing the level of incentives and disincentives for each material category¹⁶
- → Determine the total value of bonuses and penalties including those between material categories where applicable
- → Publish graduated fee structure
- → Include graduated fee adjustments on producer base fee invoices where applicable

If on the other hand, graduated fee rates must be calculated using either forecasted producer supply data or estimated data for the applications for bonuses and for penalties, additional contingencies and possibly specific reserves will need to be incorporated into the fees and fee rates to address potential bonuses and penalties. This is likely to result in both higher fee rates in general to account for contingencies and establishing reserves, as well as more variable fee rates as CAA manages the variability between forecast and actual data. Moreover, it is likely that bonuses will be funded inequitably among producers because the distribution of fees to cover contingency and reserves likely will be different than the actual distribution of bonuses and maluses. It will require considerably more challenging accounting to ensure the most appropriate price signals and minimize inequities.

Consideration of Recycling Rate as a Factor for Ecomodulation

As part of the development of the base fee methodology, CAA considered including a factor to account for the recycling rate (one of the factors identified in ORS 459A.884(4), namely the "recycling rate of the material in relation to the recycling rate of other materials"). In that approach, a portion of total gross costs of managing covered products in Oregon would be allocated to individual materials according to their relative recycling rate, such that the materials with higher recycling rates would be assigned a smaller portion of the cost and vice versa.

CAA considered this option in conjunction with a corresponding allocation of a portion of the gross costs based on the quantities of material recycled and the associated cost. The recycling rate term was intended in part to mitigate the impact of the recycling cost term that tended to increase the fees for materials recycled to a greater extent relative to those that are recycled to a lesser extent and the creation of a perverse signal that costs can be lowered by selecting materials that are recycled less or substituting materials with a low recycling rate for those with a higher rate. CAA did not carry forward this option, which would have required declaration as an "alternative membership fee structure" pursuant to ORS 459A.884(5). CAA is not proposing to use the recycling rate as a factor in the graduated fee structure at this time.

Furthermore, within the definition of material categories that CAA is proposing, one individual producer's package is so similar to the next producer's package within the same fee category that there is no expected difference in recycling rates among covered materials in the same category that could be rewarded or penalized. For this reason, CAA is not proposing to use recycling rates in its graduated fee structure at this time.

However, as part of the process to implement graduated fees, CAA anticipates investigating further the merit and feasibility of using recycling rate within a covered material category, potentially relative to potential targets, either theoretical or established in regulations as a factor in graduated fees. However, obtaining data on an individual producer's covered

¹⁶ The factors and criteria for bonus eligibility and penalties and their levels will be determined before implementation in the 2028 program year in consultation with DEQ and producers.



material recycling rate to document the difference in recycling rate from other covered materials in the same category is anticipated to be challenging.

Consideration of Post-Consumer Recycled Content for Ecomodulation

ORS 459A.884(4) also lists the post-consumer content of a material as one of the factors that a PRO may consider in establishing criteria for the graduated fee schedule.

It is generally recognized that the incorporation of post-consumer content in any particular packaging, paper product, or food service ware item will lead to reduced environmental impacts compared to the same covered product that is made entirely of virgin material. Under these conditions, a producer's choice to design packaging with higher recycled content typically would yield lower environmental impacts. Thus, if a producer had already made the decision to use a particular material type for a packaging application, incorporating higher percentages of recycled content would lead to a positive outcome.

One of the challenges that CAA would have to consider in using post-consumer content in determining graduated fees and the criteria for applying it is the timing associated with the use of post-consumer content. The graduated fee schedule is intended to incentivize change and improvements. Therefore, while several packaging materials and types already have some and even significant portions of post-consumer recycled content, the desired outcome is positive change, i.e. increased content and associated environmental benefit. For incentives to be beneficial then, CAA will need to establish criteria, including a timeframe, that measure and reward such changes.

Initiatives to use post-consumer recycled material in products and packaging have been used successfully to strengthen local markets for recycled material and increased commodity revenue. CAA believes that incentives to improving post-consumer recycled content might be developed and used judiciously in a reasonable market development action plan as the program evolves, as it has in other jurisdictions.

As such, CAA anticipates further investigating the suitability of using this factor in its future proposal for a graduated fee structure.



c. Alternative membership fee structure (if applicable)

CAA is not considering developing an alternative fee structure at this time.



d. Adequacy of Financing

In accordance with ORS 459A.875(2)(i), CAA is required to establish fees that adequately fund the program operations, ensuring the fulfillment of the RMA requirements and enabling program implementation. These fees shall cover the expected management costs of materials, including collection service expansion, depot network setup and CRPF compensation as well as REM and other strategic development costs. The fees will also cover departmental reimbursements, administrative fees, PRO operations and program reserves.

For the first year of the program, CAA developed a range of program cost estimates that informed the amount of producer fees to be generated.

- → Under the base case scenario, CAA expects to generate \$226 million in producer fees to cover estimated program costs of \$219 million.
- → Under the high case scenario, CAA expects to generate \$292 million in producer fees to cover estimated program costs of \$287 million.

Note that the discrepancy between forecasted fee revenues and program cost budgets is due to fee rate rounding.

Program Reserves and Contingencies

CAA is committed to striking an appropriate balance between maintaining a healthy balance sheet while also running an efficient organization with high value for fees for participating producers. Guided by a corporate reserves policy, CAA has established a reserve target and a funding strategy based on the working capital needs, risk mitigation and other financial needs of the Oregon program.

As per ORS 459A.875(2)(m), the preliminary fee budgets under the two scenarios include provisions for program reserves and contingencies. Under the base case scenario, the provision is budgeted at \$46 million and under the high case scenario, the provision is budgeted at \$70 million.

These reserve levels reflect the amounts to be raised in the first year of fees. These will accumulate over two and half years to reach the reserves target by the end of the 2027 program year, which is being considered as steady-state. The reserve target reflects six months of projected annual variable operating costs under a steady-state program year in 2027.

The initial reserve targets referenced in the program plan budget, and rate of accumulation, will be further evaluated before next version of the program plan submission.



Equity

There is no one-size-fits-all solution to recycling because motivators and barriers vary across age, region, race, ethnicity and other factors.¹⁷ In particular, CAA recognizes that the following factors may influence equity and outcomes in the Oregon recycling system:

- → Lack of access to infrastructure and/or practical knowledge about how to recycle properly
- → Functional barrier of preparing items to recycle (cleaning, emptying, breaking down items)
- → Ability and disability (for example, color blindness might affect a resident's ability to understand educational materials)
- → Knowledge barriers (for example, residents might not feel confident in their abilty to recycle properly)
- → Recycling programs not being set up for full community participation
- → Investment in relevant resources and tools as well as information shared differently across the resident population
- → Language barriers
- → How community members see themselves represented in the education and outreach materials (visuals, language, staff handing out resources)
- → Geography/location and practical considerations tied to location

CAA's Proposed Approach to Equity

CAA's approach to equity is to strive toward meeting our program goals while being as fair and inclusive as possible in providing access to recycling services and recycling information in Oregon.

To help meet this objective, CAA has sought the expertise of the community-based organization (CBO) Trash for Peace in developing the equity components of this plan. If selected, CAA will continue to work with Trash for Peace and other CBOs in operationalizing its plan in Oregon.

To assess and review equity issues during program plan implementation CAA will consult regularly with the ORSAC and the DEQ to ensure that CAA's activities in Oregon align with the equity requirements of the RMA and CAA's goals for equity.

CAA also proposes some specific equity approaches corresponding to key aspects of its operations plan:

Equity in the Establishment of a PRO Depot Network

CAA proposes to explore a number of approaches to ensure its depot network is tailored to the varying needs of different Oregonians.

¹⁷ https://recyclingpartnership.org/equitable-recycling-outreach



First, the depot network will adhere to statutory and regulatory requirements around convenience standards. Meanwhile, program leaders will identify opportunities to provide collection for people with mobility challenges, including considering funding for at-home collection, store drop-off, and neighborhood collection events.

Because transportation is an equity issue, CAA proposes to prioritize events and mobile collections that bring recycling closer to communities that must travel farther distances to existing recycling depots.

Furthermore, CAA will work to identify any depot sites on tribal lands, and once identified, CAA will prioritize contracting with these sites.

Program leaders will also explore how compensation plans for collection point staff can be made fair and equitable. And CAA will explore partnerships with community groups that collect PRO depot materials but may not qualify for permits or meet the definition of "depot" or "drop off center."

Equity in Responsible End Markets

CAA will work to ensure that new markets for materials collected in Oregon are developed in ways that minimize risks to public health and worker health and safety.

For materials CAA owns, and wherever possible, CAA will also explore options to:

- → Provide opportunities to businesses that are small businesses, veteran owned businesses, owned by a disadvantaged class, are not-for-profit businesses, or are B Corp certified
- → Provide opportunities to businesses with affirmative labor practices, such as hiring preferences for underserved groups, providing living wages, or utilizing organized labor

Equity in Education and Outreach

As described in the Education and Outreach section above, CAA plans to ensure that educational materials and campaigns are culturally responsive to diverse audiences across Oregon by:

- → Translating and transcreating all education and outreach materials into Spanish, Simplified Chinese, Traditional Chinese, Korean, Arabic, Russian, Vietnamese and Ukrainian
- → Applying a co-creation approach to give community members a chance to participate in campaign design through community-level listening, Partnering with CBOs as advisors to education and outreach development, as well as implementation partners
- → Designing for accessibility, ensuring all collateral follows ADA compliance and best practices as well as the principles of universal design, where products, services or environments are designed so that anyone no matter their age or ability can use that design with minimal or no accommodations
- → Accounting for disparities in access to information technology, ensuring rural audiences are engaged as well as urban populations



Equity in PRO Administration

When contracting work to third parties, CAA will develop an approach that provides opportunities to businesses that have certification under the Oregon Certification Office for Business Inclusion and Diversity (COBID) as minority-owned businesses, women-owned businesses, service-disabled veteran-owned businesses, or emerging small businesses. CAA will utilize the COBID website to obtain information on these potential business partners.



CAA Management and Compliance

In this section, CAA describes its plans for day-to-day management of the program, communications, data gathering, and reporting processes; managing producer compliance; and related policies and procedures. This section directly addresses CAA's Objective 4 for this program plan: "Create a system that fulfills the needs and regulatory requirements of the PRO, its members, and all other relevant stakeholders."

CAA is committed to upholding the highest standards of ethics, integrity, and compliance with all relevant local, state, and federal laws and regulations. CAA recognizes the importance of adhering to legal requirements to ensure the trust and confidence of our stakeholders, including the Oregon Department of Environmental Quality (DEQ), producers, partners, employees, service providers, local municipalities, and the state of Oregon as a whole.

a. Overall Day-to-Day Management

CAA will provide management of the program's overall day-to-day program operations, steward services, finance and administration, and local government and community activities, utilizing key qualified personnel dedicated to the Oregon program. Collaboration with CAA National and additional CAA state program personnel will occur to ensure all programs are functioning in the most consistent and efficient manner. The CAA management team will conduct activities in accordance with defined policies and procedures.

CAA will staff the program with dedicated resources responsible for the success of the overall program. The CAA National office will also provide support where applicable.

The following resources will be the main points of contact and responsible for program compliance:

Primary Contact

Name: Doug Mander

Position: Oregon Program Manager

Phone: (416) 346-2294

Email: doug.mander@circularaction.org

Secondary Contact

Name: Shane Buckingham

Position: EPR Program Planning Lead

Phone: (647) 210-5527

Email: shane.buckingham@circularaction.org

A full list of CAA Oregon team members and their roles will be maintained on the staff page on the website. CAA will notify DEQ within 30 days of key personnel changes related to the Oregon program.



b. Communications

In this subsection, CAA describes its planned approach to communication and coordination with key stakeholders as part of the implementation of this plan. It also outlines a proposed approach to gathering data and key metrics to inform the measurement of key outcomes, and how key metrics will address elements of the annual reporting structure required by the RMA.

CAA Plans for Communication and Coordination

CAA understands the effective collaboration and communication with Oregon recycling stakeholders is critical to CAA successfully meeting RMA obligations and delivering on anticipated recycling system improvements.

CAA proposes several multi-stakeholder coordination and communication activities and welcomes feedback from Oregon DEQ regarding these proposals. Note that the frequency of each activity will, by necessity, fluctuate to reflect the program's evolving needs. A set cadence for each effort will be determined that is agreeable to the relevant stakeholders and reflects the program's ongoing needs.

CAA will engage with other stakeholders not specifically highlighted here as necessary.

General Communications

CAA's website already features a professionally designed and maintained <u>section</u> dedicated to Oregon and the Recycling Modernization Act. This online resource is currently geared toward potential producers, but it will be expanded to target additional audiences, including sections tailored to Oregonians (waste generators), service providers, local governments, and others.

CAA expects it will employ other effective communication tools as demand for information is established in both format and frequency.

Oregon DEQ

CAA will establish meetings between relevant CAA representatives and Oregon DEQ. CAA and Oregon DEQ would select the appropriate project team members to be included on the recurring event, and each party would be expected to invite others when relevant for specific discussion items identified in advance. This step builds on the strong communication ties that have already been developed between CAA and DEQ.

CAA will also communicate updates and data to DEQ through required reports and according to recommendations developed in consultation between CAA/DEQ and ORSAC.



Oregon Recycling System Advisory Council (ORSAC)

CAA will appoint a single point of contact for ORSAC, and CAA will have standing attendance at ORSAC meetings and offer the opportunity for consultation as needed.

CAA expects to engage in a regular series of meetings with ORSAC and DEQ to review implementation issues that could arise after submission of this first program plan.

Local Governments and Service Providers

CAA will undertake a significant amount of communication and coordination activity with local governments and their service providers as part of the proposed Oregon Recycling System Optimization Project.

As detailed in the "Collection and Recycling of USCL Materials" section of this plan, CAA intends to utilize an online portal to process local government and service provider funding requests under different local government reimbursement programs. These programs will be supported by dedicated CAA operations staff that will facilitate stakeholder participation.

CAA will also provide an online portal for local governments and their designated service providers to easily access, customize, print and mail education and outreach collateral at no cost, as described in the "Education and Outreach" section of this plan.

CAA will also host dedicated webinars to support program implementation, and local governments and service providers will be a key audience for these communication efforts.

In addition, CAA will plan to connect with and inform local government stakeholders through connections with groups such as the Association of Oregon Counties and the League of Oregon Cities.

Commingled Recycling Processing Facilities (CRPFs)

CAA will form a CRPF working group to establish a forum for interaction with processors and also to provide technical assistance, review relevant program timelines and requirements, discuss investment opportunities, and more. CAA will continue to cultivate relationships with processors on an individual level as well in an effort to understand needs and shifting realities at the materials processing level.

CAA will establish standing meetings with the Oregon Refuse & Recycling Association (ORRA), a statewide trade group that serves as a key conduit to processing entities.

Producers

CAA has been hosting a monthly Producer Working Group (PWG) since 2023 and will continue to do so. The PWG offers a forum for information-sharing and discussion among companies with producer obligations, providing practical guidance on producer-specific topics such as deadlines, requirements, reporting, and more.

PWG members also have access to the Producer Working Group Library, which includes past PWG meeting summaries and materials.



In addition, CAA's website features a Producer Resource Center, which is regularly updated.

For producers, the CAA portal will enable secure registration and password protected login, transaction and balance history, and reports and notices. It will also allow producers to submit their production volumes to CAA for annual fee calculations via data exchange, structures file upload, or direct entry.

Trade Associations

The Association of Oregon Recyclers (AOR) is an important stakeholder relationship, as AOR membership spans the entire materials management industry in Oregon. CAA will participate in the organization's annual conference (including presenting at the discretion of AOR's conference planning committee) and collaborate on educational forums and/or webinars for AOR members. CAA is open to other forms of engagement that mutually benefit CAA and AOR.

As mentioned earlier, ORRA is another important stakeholder relationship, with ORRA members accounting for a large portion of the solid waste management sector in Oregon. Ongoing communication and relationship-building within ORRA will be a key focus for CAA.

Other PROs and Multi-PRO Coordination

Given developments prior to the program plan submission deadline, CAA submitted this program plan with the expectation that it is the only PRO submitting an RMA PRO program plan at this time. If additional PROs indicate an interest in submitting program plans, CAA will work with DEQ and those prospective PROs to develop an interim coordination process as required by the RMA framework.

With respect to program plan development tasks, CAA is tracking all program development costs that should be shared with future PROs if they join the Oregon RMA program prior to CAA's recovery of those start-up costs from membership fees.

CAA will include a breakdown of 2024 start-up costs in the proposed 2024 Annual Report anticipated by DEQ in its Phase II RMA rule concepts. CAA's 2025 Annual Report will also identify program development start-up costs incurred in 2025 prior to the start of the program that will need to be recovered from producer fees once the program starts on July 1, 2025.

CAA will then track the recovery of these start-up costs over time so that in the event a new prospective PRO emerges, DEQ and CAA can identify remaining program start-up costs applicable to that new PRO at the time of its proposed entry into the RMA program.



c. Reporting

Metrics and Data Collection

Many aspects of this plan will require tracking of key outcomes and metrics to measure the achievement of program goals articulated in the "Program Goals" section. CAA will use its interactions with key stakeholders to collect data relevant to the objectives, goals, expected outcomes, and key metrics discussed in that section. CAA will establish survey, reporting, and other data collection mechanisms for routine program measurement. CAA will develop standardized reporting templates to ensure consistency of records and provide clear guidelines to all stakeholders required to report data to CAA.

CAA will also ideally receive critical information from DEQ on key elements, in particular related to inbound contamination, capture rate and outbound bale quality at CRPFs. CAA may in some instances pursue studies or other data-gathering exercises to collect essential information. It will use this data and corresponding analytics to report annually to DEQ on plan implementation and goal achievement. CAA will also use this performance information to update its goals, to adjust its plan, and to suggest or recommend overall adjustments to RMA implementation. CAA's intention is to use the submittal of its five-year plan updates as the main mechanism for altering program goals.

Producer Reporting

CAA will provide participant producers with access to a secure online reporting portal to facilitate the submission of annual supply data. This reporting portal will allow for CAA to capture and aggregate the information that must be submitted to Oregon in the PRO Annual Report, as well as the applicable individual producer data where required.

CAA will monitor the effectiveness of this reporting portal and make adjustments as necessary to improve efficiency and accuracy. CAA will also provide necessary training and support to all producers and relevant stakeholders on the reporting portal's use.

Annual Reporting

CAA will submit Annual Reports to Oregon DEQ no later than July 1 of each program year, starting in 2026. CAA's Annual Report will contain all information required by 459A.887(2)(a), OAR 340-090-0660(1)(a), OAR 340-090-0670(4), and OAR 340-090-0700(1)(d). It will be written and presented in a manner that can be understood by the general public. The Annual Report will be delivered each year to Oregon DEQ as a searchable electronic file.

CAA will follow the outline for annual reporting proposed in DEQ's management directive including the following elements.

PRO Description: Total amount, by weight and type of material, of covered products sold or distributed in or into this state by participating producers in the prior calendar year

Goals of the Program: Description of progress toward meeting topline goals in relation to identified program plan outcomes and metrics along with any recommendations to improve recovery and recycling outcomes.

Program Operations: Summary of program operations including:



- → Progress toward implementing local government recycling system service expansions and improvements
 - Progress toward meeting PRO Recycling Acceptance List material collection targets and convenience and performance standards
 - Measures taken to address the recycling of specifically identified materials
 - o Summary of performance in relation to fulfilling responsible end market (REM) obligations including:
 - A summary of quarterly disposition reports and evaluation of adequacy of REMs
 - A summary of actions taken in support of REMs
 - A summary of certification and verification results
 - A description of actions taken in relation to upholding progress in relation to achieving the statewide plastic recycling goal
 - o A summary of education and outreach activities
 - Results of any in-person site inspections, material tracking or other audits conducted during the reporting year, including whether any major safety or environmental management practices were not properly followed and, if so, the corrective actions taken

Financing and Budget: Annual reports would include:

- → A summary of the financial status of CAA, including annual expenditures, revenues and assets
- → A description of the membership fee schedule, along with information on the number of producers that received fee adjustments and total fee revenues and an evaluation of the effectiveness of membership fee adjustments in reducing the environmental and human health impacts of covered products
- → A complete accounting and summary of payments requested by local governments and local governments' service providers and paid by CAA related to:
 - Service expansion requests
 - Transportation funding
 - o Contamination reduction funding
 - Roll cart funding
 - Contamination reduction evaluation funding
- → A summary of payments requested by local governments or local governments' service providers that were denied or reduced by CAA
- → A summary of payments made CRPFs
- → A summary of all other payments made to satisfy CAA's obligations under ORS 459A.860 (Legislative Findings) to 459A.975 (Rules), including but not limited to payments made to support responsible recycling of specifically identified materials (SIMs), as described in ORS 459A.917

Finally, annual reports will include any additional information required by RMA rules and statute. Reports will detail updates around organizational compliance and include findings from an independent accountant's audit of CAA's financial statements.



d. Managing Compliance

To encourage the compliance of all stakeholders with the RMA, CAA will offer robust support and training to educate producers about program plan requirements. Any material changes to program plan requirements impacting stakeholders will be communicated to producers.

Records pertaining to CAA's implementation and administration of its producer responsibility program will be retained in accordance with applicable law and with CAA's records retention policy.

CAA is committed to maintaining open lines of communication with state and local rule makers and will actively seek clarification on any regulations deemed unclear. Internal controls will be designed to promote adherence to regulatory standards.

Producer Compliance

Per ORS 459A.869(8), CAA will establish a searchable registry on its website disclosing all CAA's compliant members and the identities of any members determined to be non-compliant members through DEQ enforcement processes alongside the reasons for their non-compliance. In instances where a member or non-member organization is potentially non-compliant with the program plan and/or the RMA, CAA will notify DEQ and the allegedly delinquent producer of the deficiency and provide the producer and opportunity to respond and to cure the delinquency as applicable.

CAA will endeavor to monitor compliance by producer members by conducting periodic operational and record audits, utilizing an audit cycle that will be a mix of on-site and desk top audits. The desk top audit and on-site audits will assess the same criteria. When a desk top audit is performed rather than an on-site audit, documentation via photos, promotional efforts, and compliance documentation will be requested. All the same documentation will be gathered by the CAA staff when conducting an on-site audit. In the event of a non-compliant finding, CAA will send a notification to DEQ after certain internal compliance processes and timelines have passed.

Designated CAA personnel will be assigned to providers to cultivate relationships with providers and foster on-going communication, trust, and transparency to identify and address issues as soon as possible.

Preventive Measures

CAA is undertaking several producer education activities prior to the start of the program plan designed to educate producers of their obligations under the RMA in Oregon. This includes direct outreach to producers, informational webinars, and engagement with relevant trade associations to disseminate broad awareness of the new program requirements. CAA will also develop additional outreach materials to facilitate producer packaging reports required by the program as the RMA moves closer to implementation.

These preventative measures are intended to support the processes outlined below for notifying DEQ, ORSAC, and producers of potential non-compliance.



Membership Rules

CAA will develop a Membership Rules Schedule related to fee payments and reporting requirements. Membership rules will specify producer reporting and fee payment obligations, and may address such issues such as membership reporting obligations, voluntary reporter agreements, reporting timelines and categories, errors in reports, membership-initiated adjustment requests, billing process, timing of fee payments, penalties and interest associated with late payments, verifications audits process, and compliance process along with a timeline by which a non-compliant member would be referred to the DEQ for potential disciplinary action and/or dispute settlement.

Compliance Process

Below are components of a compliance process that could be incorporated into the Membership Rules:

- → Duty to Pay Required Fees CAA may impose financial penalties and interest on members for failure to pay invoices in accordance with membership rules
- → Retention of Records CAA members will be required to retain records to substantiate and verify the accuracy of the information submitted in their reports for a to-be-determined period of time following the submission, and such records will be subject to inspection by CAA
- → Duty to Comply with Requests for Documentation Upon written request from CAA, members shall provide documentation in support of their reports to CAA. This may include specific data, calculation methodologies, and/or audit reports, among other items.
- → Duty to Provide Access Members will be required to grant access during business hours to CAA or its authorized representatives to inspect and review records relevant to information submitted in their reports as maintained in accordance with the Retention of Records policy
- → Duty to Cooperate with a Verification Audit At the request of CAA, members must cooperate with CAA's verification process, described in the "Responsible End Markets" of this plan. This may include providing requested documentation, data, records, and reports within a reasonable timeline of such requests, providing confirmation from a senior officer with authority to confirm and oversee reporting, and providing access to the member's business premises.

Notification of Non-Compliance

For non-compliance related to a producer who is or was a member of CAA in accordance with RMA requirements, but which failed to comply with membership reporting and/or fee payment requirements, CAA Membership Rules would include notification to DEQ after certain internal compliance processes and timelines had passed.

CAA would notify the DEQ of any members that are not in good standing (this may include a membership suspension and process), subject to a time frame outlined in the Membership Rules. For example, members who had failed to report and/or pay fees within the specified time frame could be:

- → Suspended by CAA and considered members not in good standing, following requisite due process of the reasons for the suspension and the steps necessary to remove the suspension or become in good standing
- → Reported to DEQ to take such corrective action as DEQ deems necessary or appropriate



CAA would also propose that in a multiple PRO situation, a searchable online database be maintained where PROs could confirm whether producers were members of an approved PRO and in compliance with RMA requirements.

Obligated Producers under the RMA

CAA membership reporting review and assessments may identify situations where there is a dispute between producers about which entity is an obligated producer with respect to a particular material application. In such circumstances, CAA may consult with DEQ regarding the interpretation of RMA "obligated producer" provisions to ensure that the application of the RMA to producers is consistent with DEQ's intentions.

CAA may also become aware of producers that are not CAA members but that appear to be obligated producers under the RMA. CAA will conduct outreach to encourage such producers to register with a PRO to fulfill their obligations under the RMA. In such situations, however, CAA may not necessarily have access to information that would confirm whether a non-member producer is actually obligated under the RMA. If such producers fail to take action, CAA would refer these producers to DEQ, along with the information that led it to believe the producer was obligated under the RMA, for DEQ to take such action as it may deem necessary

Non-Compliance with LCA Requirements

Failure of a CAA member to conduct and report on required LCA requirements in the case of the 25 largest producers in the state is also a potential RMA compliance issue. Given the unique nature of LCA process and related rules, CAA would propose to develop specific compliance reporting processes and protocols related to this issue that would likely be different than processes and protocols in place to address violations of CAA producer reporting and fee payment requirements. CAA would propose to develop a specific membership compliance process and policy related to producer LCA requirements and would consult with DEQ regarding timelines and steps that would be taken to regain compliance.



e. Dispute Resolution (Local Governments and CRPFs)

A number of areas under the RMA will require dispute settlement processes to address potential disagreements between CAA and local governments and other stakeholders that are receiving funding from CAA under various RMA programs.

In many cases, standard commercial dispute settlement mechanisms, such as an agreement by the parties to refer a dispute to a third-party arbitrator, can be utilized to resolve such disputes. As noted in other program plan sections, CAA is proposing to finalize the details of various funding programs through further consultation with relevant stakeholders. This would include a review of proposed dispute settlement procedures for each program funding area. Based on the results of stakeholder consultation and input, CAA will provide a more detailed description of the dispute settlement procedures for individual funding programs as part of its anticipated program plan revisions to be submitted in September 2024.

As also noted earlier, program funding in relation to local government service expansion requests may involve more difficult dispute resolution issues than those normally associated with typical commercial contracts as there may be different interpretations about what qualifies as costs associated with the expansion and provision of recycling collection service for covered products. CAA is proposing that one of the objectives of the Oregon Recycling System Optimization Project (ORSOP) will be to identify possible areas of disagreement between local governments and CAA regarding eligible funding requests. Once more clarity on individual local government funding requests is received, CAA is proposing to create a working group consisting of representatives from CAA, local governments, and DEQ to attempt to mediate disagreements over service funding requests between the approval of the second program plan and the start of the program plan on July 1, 2025. This process would be intended to minimize potential disagreements between CAA and local governments prior to the processing of individual local government service expansion requests once the program begins as of July 1, 2025.

Given that some funding request eligibility issues may require a resolution of the interpretation of the RMA and its implementing rules, parties would retain the right to address issues through legal mechanisms in the event that CAA and local governments and the DEQ cannot align on the same understanding of what the RMA requires.



f. General Policies, Procedures, and Practices

CAA will regularly monitor the state of operations for the entirety of the program. CAA recognizes that defined and consistently executed policies, procedures, and practices are critical for ensuring the well-being of its personnel and the integrity of data provided to various stakeholders.

CAA has developed national and state specific (where applicable) policies, procedures, and practices to enable consistent handling of activities while providing services required to operate key aspects of the program. The policies, procedures, and practices are defined to address specific tasks and to ensure the below concepts are addressed where applicable.

Consistent with best practices, CAA anticipates that it will periodically review and update its policies, procedures, and practices as determined to be necessary or appropriate.

i. Management of Contracts

CAA will maintain appropriate records of contracts that have been entered into in writing pertaining to the Oregon Recycling Modernization Act. Prior to execution, written contractual agreements between CAA and relevant parties will undergo appropriate internal review in accordance with CAA's business practices and policies.

ii. Workplace Safety and Conduct

CAA is committed to maintaining a safe work environment. In order to provide a safe and healthy work environment, personnel will be required to take appropriate and reasonable precautions by complying with established safety and workplace conduct standards. CAA is committed to providing proper equipment, procedures, and training in safe practices to aid in awareness and prevention of potential individual and community safety issues. Employees will be encouraged to familiarize themselves with their safety and conduct responsibilities, to follow safety and conduct practices at all times, and to make every effort to prevent accidents and injuries. Failure to adhere to safety and conduct rules could result in disciplinary action, up to and including termination of employment.

CAA will promptly and thoroughly investigate all reports of suspected nonconformance by personnel with safety or conduct requirements.

CAA will comply with all applicable laws pertaining to workplace safety.

iii. Protection of Confidential Information

CAA will adopt an information security plan that outlines appropriate technical, physical, and organizational measures designed to protect against unauthorized or accidental access, destruction, loss, alteration, or disclosure of nonpublic information subject to confidentiality undertakings.

The information security program will address native encryption of all data, event monitoring, audit trails, and other relevant topics. When information is no longer needed or required to be maintained by organizational policy or applicable



law, CAA will securely dispose of all data and records in accordance with its records retention policy and information security program requirements.

All personnel will be required to periodically undergo appropriate training on their responsibilities for protecting confidential information.

iv. Successful and Timely Delivery

CAA will establish contractual agreements with service providers that outline the requirements and expectations designed to foster the successful and punctual achievement of project objectives by contractors.

Communication will be maintained with all contractors, with verbal and written notifications issued if timelines are not met or project outcomes are delayed. Additionally, contractors will be asked to submit status reports as deemed necessary by CAA.

CAA will request the contractual capability to inspect contractors and conduct quality checks to ensure that projects meet the standards of the program. Furthermore, CAA will offer comprehensive training and support to all contractors to ensure they understand and meet CAA's expectations.

v. Retention of Information

Per ORS 459A.962, CAA will retain records related to the implementation and administration of its producer responsibility program plan for at least five years and have them available for inspection by DEQ upon request. CAA will designate a records custodian who will be responsible for the administration of the records retention policies. These documents will facilitate the creation of the annual report elements specified in ORS 459A.878 and addressed in the "Reporting" section of this plan. The annual report will be submitted to DEQ on July 1 of each year.



g. Closure Plan

CAA financing proposals include the development of program reserve targets equivalent to at least six months of variable operating expenses. Reserves ensure that CAA has the necessary resources for a transition period in the event CAA ceases operations as a PRO in Oregon.

Potential closure scenarios related to CAA operations in Oregon involve several potential scenarios, which may include but are not limited to:

- 1. A decision by the CAA Board of Directors to cease operations in Oregon
- 2. Failure to maintain membership representing 10% market share or other qualifying criteria of a PRO as is required by the RMA
- 3. Changes in relevant laws, regulations, or other RMA program requirements

With respect to Scenario 3 above, CAA assumes that a change to the statutory and/or regulatory framework requiring CAA to cease operations in Oregon would likely be accompanied by conditions that provide notification and timing of required program termination dates. As such, this closure plan will focus on the other two possible closure scenarios.

In the case of an internal CAA decision to cease operations in Oregon (Scenario 1 above), CAA will endeavor to give its producers, service providers, DEQ, the ORSAC, local governments and other RMA stakeholders a minimum of six months notice that it intends to cease operations as a PRO in Oregon. CAA would also endeavor to align such a decision, if suitable under the circumstances, with the renewal dates associated with RMA Producer Plans.

In the case of Scenario 2 above, where CAA closure is due to a failure to maintain membership representing the required 10% market share or other qualifying criteria, CAA would implement a closure plan that aligns with timelines related to closure of operations associated with OAR 340-090-0730.

A notice of closure would include the intention for the termination of CAA's Oregon program, the anticipated CAA program termination date, and an outline of the steps CAA would take to wind up its operations in Oregon in an orderly fashion.

The CAA closure plan will include the following information:

- → Key steps and activities CAA will undertake before and after the termination date to ensure:
 - o That RMA obligations have been maintained during the wind up of activities
 - That service providers, local governments, and other stakeholders are given adequate notice of the wind up
 of individual CAA programs and contractual arrangements
- → Implementation timelines, key steps and cut off dates for various program operations (final day to submit transportation compensation claims, for example)
- → Communications plan and stakeholder notifications
- → A closure financial plan and budget, including the process to ensure resolution of any liabilities and resolution of tax and other financial issues
- → A plan to disburse any remaining assets and reserves once all financial and operational obligations have been addressed



Please note that in order to cease operations, CAA will have to conduct a number of activities after the termination date for the CAA RMA program. This would include final payments required under the RMA for activities that took place prior to the termination date.

Once CAA completes the steps required under the closure plan, it will provide notice to DEQ of the completion of the closure plan.



Certification and Attestation

a. Contents

i. Contact Information

Authorized Representative:	Charles Schwarze
Title:	Chair
Address:	20 F Street NW, Suite 700, Washington, D.C. 20001
Phone Number:	336-840-9860
Email Address:	info@circularaction.org

ii. The Prospective PRO's Employer Identification Number

The Employer Identification Number for Circular Action Alliance is 92-3197259.

iii. Proof of the Prospective PRO's Status as a Nonprofit

Documents showing proof of Circular Action Alliance's status as a nonprofit, 501(c)3 organization able to operate in Oregon are located in the **Appendices** as follows:

- → Circular Action Alliance's bylaws of incorporation as a nonprofit corporation: Appendix H
- → Circular Action Alliance's 501(c)3 determination letter from the Internal Revenue Service: Appendix I
- → Circular Action Alliance's proof of status in Oregon (proof of registration as a charitable organization with the Oregon Department of Justice): Appendix J
- → Circular Action Alliance's proof of registration as a foreign corporation with Oregon's Secretary of State: Appendix K
- → Circular Action Alliance's revised bylaws: Appendix L



iv. Certifying Statement

I hereby declare under penalty of false swearing (Oregon Revised Statute 162.075ⁱ and ORS 162.085ⁱⁱ) that the above information and all of the statements, documents and attachments submitted with this plan are true and correct.

Charles Schwarze – Circular Action Alliance Chair

Date: March 31, 2024

Signed



Appendices

The following appendices are available in separate documents:

- → Appendix A: Definitions
- → Appendix B: List of Member Producers and Market Share Calculation
- → Appendix C: CAA Organizational Structure
- → Appendix D: Stakeholder Engagement
- → Appendix E: Itemized Budgets by Program Year
- → Appendix F: PRO Depot Lists and Coverage
- → Appendix G: Detailed Fee-Setting Methodology (confidential)
- → Appendix H: CAA Articles of Incorporation
- → Appendix I: 501(c)3 Letter of Determination
- → Appendix J: Proof of Registration as a Charitable Organization
- → Appendix K: Proof of Registration Foreign Corporation
- → Appendix L: CAA Revised Bylaws
- → Appendix M: Preliminary Program Implementation Timelines