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Update (June 18, 2026): Correction to fee schedule table in Chapter 9 - Fee Setting

An inconsistency in the fee schedule table found on pages 297-307 of Chapter 9 - Fee Setting has been corrected. Revised files are available below.

The [California illustrative fee schedule](#) posted to CAA's website on May 1 remains accurate and unchanged.

CALIFORNIA EXTENDED PRODUCER RESPONSIBILITY (EPR) PROGRAM PLAN

California Program Plan submitted to the Producer Responsibility Advisory Board on June 15, 2026



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Introduction

Senate Bill 54 Scope and Targets

Circular Action Alliance (CAA) California is pleased to submit the first-ever California program plan to California's Producer Responsibility Advisory Board (PRAB) in compliance with Senate Bill 54, the Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB 54).

Passed by the state Legislature and signed by the governor in 2022, SB 54 creates an Extended Producer Responsibility (EPR) program for packaging and single-use plastic food serviceware, with compliance targets beginning in 2027. The law sets ambitious targets for recycling rates, recyclability and compostability, and source reduction in plastic covered material (i.e., using less plastic over time compared to a baseline).

California was the fourth U.S. state to enact an EPR law, and three more have adopted legislation since SB 54. Still, many components of SB 54 are unique among U.S. EPR laws, and EPR laws around the world.

SB 54 sets the highest plastic recycling rate targets of any U.S. EPR bill. No other legislation contains similar source reduction measures. And once implemented, California will have the largest packaging EPR program in the world given the size of the state's population.

Who Is Circular Action Alliance

Under SB 54, producers may join a Producer Responsibility Organization (PRO) as part of their compliance with the law. CAA is a PRO established to support the implementation of EPR laws in multiple states for paper, packaging, and food serviceware. The organization was founded by leading U.S. producers representing retail, food, beverage, and consumer packaged goods manufacturing. CAA was incorporated as a nonprofit corporation on Dec. 21, 2022, and is recognized by the Internal Revenue Service as tax exempt under Internal Revenue Code Section 501(c)(3).

CAA has organized separate wholly owned nonprofit 501(c)(3) subsidiaries to serve as the representative organization for producers in each state that passes an EPR law. This approach is in keeping with the corporate structure of other recycling stewardship programs in California and is designed to maintain the financial and operational integrity of each state program. Under this structure, fees paid by California producers are expended to support the implementation of California's SB 54.

California law defines a PRO as an organization that is exempt from taxation under Section 501(c)(3) of the federal Internal Revenue Code of 1986 and is formed for the purpose of implementing a plan to meet the requirements of SB 54 [PRC 42041(x)].

CAA formed Circular Action Alliance California LLC (CAA California) as a single-member limited liability company with CAA as the sole member. Treasury Regulation 301.7701-3(c)(1)(v)(A) and IRS Announcement 99-102, 1999-43 I.R.B. 545 establishes that a limited liability company wholly owned by a section 501(c)(3) organization will automatically be treated as described in section 501(c)(3) and exempt under section 501(a) of the Internal Revenue Code. Thus, CAA California is a nonprofit organization described in section 501(c)(3) of the Internal Revenue Code and exempt from income tax under section 501(a) of the Internal Revenue Code. As a nonprofit, tax-exempt subsidiary, CAA California's revenues and expenses will be reportable within CAA's IRS Form 990 return and CAA California will be listed on Schedule R of the IRS Form 990.

CAA's Work in Other States

Outside of California, CAA operates active program plans in Oregon and Colorado, and it has been designated as the PRO in Maryland, Minnesota and Washington.

As an early leader in the U.S. packaging EPR space, CAA is uniquely positioned to operate such programs. Its foundational experience has strengthened its ability to develop and operate packaging EPR programs in a growing number of U.S. states.

California Program Plan Development

The California Department of Resources Recycling and Recovery (CalRecycle) selected CAA California as the state's inaugural, single PRO on Jan. 5, 2024. As of June 2026, more than 3,400 participant producers have registered with CAA California.

CAA California holds a non-voting seat on the Producer Responsibility Advisory Board and has participated in meetings since it was named as the PRO. Its engagement with the advisory board has helped shape this program plan, as has engagement through public channels.

CAA California held a series of public webinars in October 2025. These events provided CAA California the opportunity to engage with a diverse range of interested parties. These were held as CAA California was developing the program plan, and they provided key insights that informed the substance of each chapter. Each webinar featured a question-and-answer session, and CAA California also provided attendees an option to submit written comments after each webinar.

More than 2,500 registrants attended the webinar series, and more than 400 attendees submitted written responses.

CAA California circulated this program plan with several interested parties and worked closely with external subject matter experts throughout its development. The plan was reviewed, refined, and approved in accordance with CAA's internal governance processes prior to submission.

This program plan is organized into 12 chapters, each covering a key area of SB 54 compliance. These chapters are:

1. Environmental Justice
2. Reimbursement and Payment Process
3. Materials Strategy and Covered Material Compliance Plan
4. Strategy for Compostable Covered Materials
5. Responsible End Markets
6. Source Reduction
7. Education and Outreach
8. Budget Development
9. Fee-Setting
10. Eco-Modulation
11. CAA Management and Compliance
12. Closure and Transfer Plan

Work in Progress

CAA prepared this program plan under challenging and dynamic circumstances. The statewide Needs Assessment was delayed well beyond the initial deadlines and was not published until February 2026. Final implementing regulations, which SB 54 required CalRecycle to adopt by Jan. 1, 2025, were not approved by the Office of Administrative Law until May 1, 2026, a delay of 16 months. CAA has worked diligently throughout this period of regulatory uncertainty to incorporate new information, adapt to evolving requirements, and revise the program plan as the needs assessment and regulations were finalized.

Despite the persistent regulatory uncertainty, CAA launched a producer reporting process in Fall 2025 and in the absence of final regulations. CAA took these actions knowing that leaving producer reporting dependent on the timing of the final regulations could disrupt the submission of the program plan.

Notwithstanding these delays, challenges and open questions about critical components necessary for producer guidance on reporting supply and source reduction data, CAA has developed and is delivering a draft program plan for public consultation and advisory board review that will achieve source reduction, expand recycling infrastructure and support the development and maintenance of viable responsible end markets. Where specific compliance pathways remain constrained by infrastructure limitations, market conditions, or the compressed timeline created by the regulatory environment, CAA will use the compliance pathways established under SB 54 and the final regulations to ensure the program meets the requirements for an approved plan.

CAA is committed to working collaboratively with the advisory board, participant producers, CalRecycle and other interested parties to finalize a program plan that is both ambitious and achievable.

CAA anticipates continuing to revise this program plan between this submission and the final submission to CalRecycle in October 2026, reflecting ongoing regulatory analysis, advisory board feedback, public comment, and updated CalRecycle guidance as the program continues to take shape.

Public Comment

CAA California welcomes public comment on this program plan. The 60-day public comment period, which runs from June 15 through Aug. 14, is an important opportunity for interested parties to review the program plan and provide feedback to help inform its final development.

Feedback submitted during this period will be reviewed and considered as CAA California prepares the final program plan for submission to CalRecycle in October 2026.

Public comments can be submitted using a form located on CAA California's website:

<https://circularactionalliance.org/ca/program-plan-public-comment>.

Chapter 1: Equitable Access, Participation and Environmental Justice

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Chapter 1: Equitable Access, Participation and Environmental Justice

1.1 Introduction

1.1.1 Goals and Definitions

SB 54 is designed to reduce plastic pollution, improve recycling and reuse and refill systems, and make producers responsible for the packaging they supply. The law shifts the costs of collecting, processing, and recycling materials away from local governments and onto the companies that produce covered material. It also establishes the California Plastic Pollution Mitigation Fund (PPMF), defined in PRC 42064(e)(1) and managed by CalRecycle, to support projects that prevent and address plastic pollution.

In accordance with PRC section 42051.1(n), CAA California shall ensure that the program plan will be implemented in a way that avoids or minimizes disproportionate impacts on disadvantaged or low-income communities or rural areas and vulnerable communities outside the state. This chapter describes how the program plan will operationalize environmental justice principles through expanded access to program resources, meaningful participation by community partners, and equitable distribution of program investments under SB 54.

According to the California Government Code section 65040.12(e)(1-2), environmental justice is defined as "...the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."

Senate Bill 115, which made California the first state in the nation to put environmental justice considerations into law, defines environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."

CAA California's environmental justice engagement will focus on lower-income neighborhoods, disadvantaged communities and disadvantaged unincorporated communities (as identified by the California Government Code), rural areas, regions facing higher pollution burdens, places where English is not the predominant language, tribes and Native American communities, or other communities who have been historically under-served or left behind with regard to state policy or local planning efforts. To define and refer to these communities in this program plan, CAA California will collectively call them Environmental Justice Communities, or EJ Communities.

In this program plan, CAA California proposes to advance not only waste management system improvements, but also a broader public health and environmental equity strategy that looks to reduce pollution burdens while expanding more sustainable materials management systems statewide. This moment allows California to reduce pollution burdens and strengthen environmental protections in communities that have historically experienced underinvestment.

The SB 54 program plan establishes the operational structure through which financial resources, infrastructure investments and engagement efforts are delivered statewide. It includes mechanisms that support SB 54-related collection, processing, education and waste reduction activities performed by local jurisdictions, recycling and composting service providers, responsible end markets (REMs) and community-based organizations (CBOs). For example, jurisdictions may seek reimbursement for expanding recycling or composting services in multifamily housing, while CBOs may

receive support for conducting culturally relevant Education and Outreach (E&O) in EJ Communities. A tribe may access funding to improve local collection infrastructure or launch a reuse pilot tailored to community needs. Similarly, a regional MRF may pursue reimbursement to upgrade sorting equipment to reduce disposal rates.

The SB 54 program plan also provides funding pathways and technical assistance to help communities navigate application and reimbursement processes, particularly where administrative capacity is limited. This assistance may include application guidance, office hours and/or access to qualified consultants to help smaller jurisdictions or community organizations prepare funding requests. In addition to funding and engagement, the plan supports expansion of recycling, composting, and reuse and refill infrastructure, including investments in collection systems, sorting capacity and REMs. Public engagement efforts ensure residents understand what is changing under SB 54 and how to participate. Tracking and reporting on environmental and public health impacts in EJ Communities through annual reports helps ensure transparency, measure progress toward equity goals and inform adjustments to implementation where disparities persist. Together, these components create the financial, technical and structural foundation necessary to reduce plastic pollution while expanding equitable access to services and infrastructure across California.

Following direction from SB 54, CAA California's environmental justice approach is guided by three core principles, as per PRC 42040(b)(1) and 42051.1(j)(1)(G): access, meaningful participation and equitable distribution of resources and protections. These principles are embedded across program plan design, funding, engagement and communications, and are not treated as a standalone activity.

1.1.2 Why it Matters

SB 54 recognizes that disadvantaged and low-income communities are disproportionately impacted by the human health and environmental impacts of plastic pollution and fossil fuel extraction. Communities located near oil and gas extraction sites, refineries, plastic manufacturing facilities, landfills, incinerators, MRFs and recycling and transfer stations often experience a higher burden of pollution, increased truck traffic and greater risks to air and water quality. These environmental exposures often overlap with socioeconomic inequities such as lower household income, limited access to quality healthcare, housing patterns shaped by historic underinvestment, and reduced citizen participation in local planning processes or discriminatory land-use decisions. Together, these cumulative conditions are associated with higher rates of adverse health outcomes, including asthma and other respiratory illnesses, cardiovascular diseases, and stress-related conditions for children and adults living in these communities. As a result, EJ Communities have borne a greater share of the environmental and public health costs of plastic pollution while receiving fewer of its economic benefits.

CAA California's ongoing outreach to interest holders from CBOs, including environmental justice organizations, nonprofit partners and tribes across California, has confirmed strong and consistent concern about the upstream impacts of plastic production, including impacts from fossil fuel extraction, manufacturing emissions and cumulative pollution burdens in EJ Communities. Environmental justice organizations are a type of CBO defined as place-based nonprofit organizations serving specific communities of people residing in areas that face higher pollution impacts and negative health outcomes as the result of environmental health hazards and harms.

During outreach, interest holders also emphasized concerns about recycling facility siting, due to the potential for long-term health impacts and other burdens on already disadvantaged communities such as increased traffic, pollution, waste, noise, odor or other unintended consequences that negatively affect residents. To effectively reduce future environmental and human health

impacts, interest holders stressed that implementation of SB 54 must prioritize infrastructure and E&O around source reduction and waste prevention, not recycling alone. This means reducing the production of single-use packaging, expanding reuse and refill systems, supporting durable and recyclable design, and encouraging shifts toward less material-intensive delivery models. While recycling remains an important component of materials management, interest holders emphasized that recycling addresses waste after it has been created, whereas source reduction and reuse and refill systems prevent pollution, greenhouse gas emissions and cumulative community impacts upstream. A comprehensive approach must therefore invest not only in collection and processing capacity, but also in redesign, reuse and refill infrastructure, and E&O that supports lasting reductions in plastic production and disposal.

Additionally, interest holders expressed that meaningful participation must include engagement that respects the time, expertise and lived experience of community leaders and organizations contributing to SB 54 planning and implementation. Many organizations representing EJ Communities operate with limited staff and resources, and participation in planning, outreach or advisory processes often requires diverting capacity from other essential community services. Providing stipends, contracts or reimbursement for substantive contributions helps reduce barriers to participation, promotes equity in decision-making processes, and recognizes community expertise as a valued and necessary component of effective implementation.

In response to these concerns and consistent with the direction provided in SB 54, CAA California's environmental justice approach focuses on expanding equitable access to the benefits of system improvements. This approach includes prioritizing investments in communities facing cumulative pollution burdens, supporting meaningful community participation in planning and decision-making, and aligning infrastructure, funding and E&O strategies with source reduction and long-term public health protections. By embedding access, meaningful participation and equitable distribution of resources and protections into every aspect of implementation, CAA California seeks to ensure that SB 54 reduces pollution burdens rather than shifting them. CAA California's efforts will be complemented by the activities supported through the PPMF. Upon appropriation by the Legislature, 60% of the PPMF will be expended to monitor and reduce the historical and current environmental justice and public health impacts of plastics, including to mitigate the historical and current impact of plastics on disadvantaged or low-income communities or rural areas, with 75% of those funds directly and primarily benefiting residents living in disadvantaged or low-income communities.

The remaining 40% will be expended to monitor and reduce the environmental impacts of plastics on terrestrial, aquatic, and marine life and human health, including to restore, recover, and protect the natural environment, with 50% of those funds providing benefits to residents living in a disadvantaged or low-income community or rural area.

Table 1 provides examples of ways CAA California will advance access, meaningful participation and equitable distribution of resources and protections through program design, funding decisions, engagement strategies and infrastructure investments.

Table 1: CAA California’s Environmental Justice Guiding Principles for SB 54 Access, Meaningful Participation and Equitable Distribution

1	2	3
Access	Meaningful Participation	Equitable Distribution
Clear Pathways to Information and Resources	Community Voice in Design and Implementation	Fair Allocation of Investments and Protections
• Multilingual, culturally relevant E&O materials • Early, transparent notification of funding opportunities • Accessible application and reimbursement processes • Technical assistance and resources to support funding applications	• Ongoing consultation with CBOs, including environmental justice organizations and tribes • Engagement respecting time and talent from under-resourced communities • Documented feedback loops that inform program decisions	• Prioritization of communities with highest cumulative burdens • Transparent tracking of funding and infrastructure investments

1.1.3 How CAA California Advances Environmental Justice

CAA California recognizes that equitable participation requires more than making funding available. It requires clear pathways and proactive support. CAA California advances environmental justice by ensuring that EJ Communities have a meaningful voice in SB 54 implementation, can access funding, infrastructure, and information, and receive equitable environmental, economic and public health benefits. CAA California operationalizes SB 54’s equity expectations by expanding access, strengthening participation and prioritizing equitable distribution of resources and protections across all program plan activities. The following section describes how these commitments are put into practice across program plan design, funding, engagement, infrastructure development and accountability mechanisms.

This chapter focuses specifically on approaches and infrastructure considerations to achieving equitable access, participation and environmental justice. Detailed strategies and information about implementation can be found in the following chapters of this program plan: Materials Strategy and Covered Material Category Compliance Plan, Strategy for Compostable Covered Materials, Responsible End Markets, Source Reduction, and Education and Outreach.

1.2 Multi-Level Framework for Equitable Access and Participation: Social Ecological Model

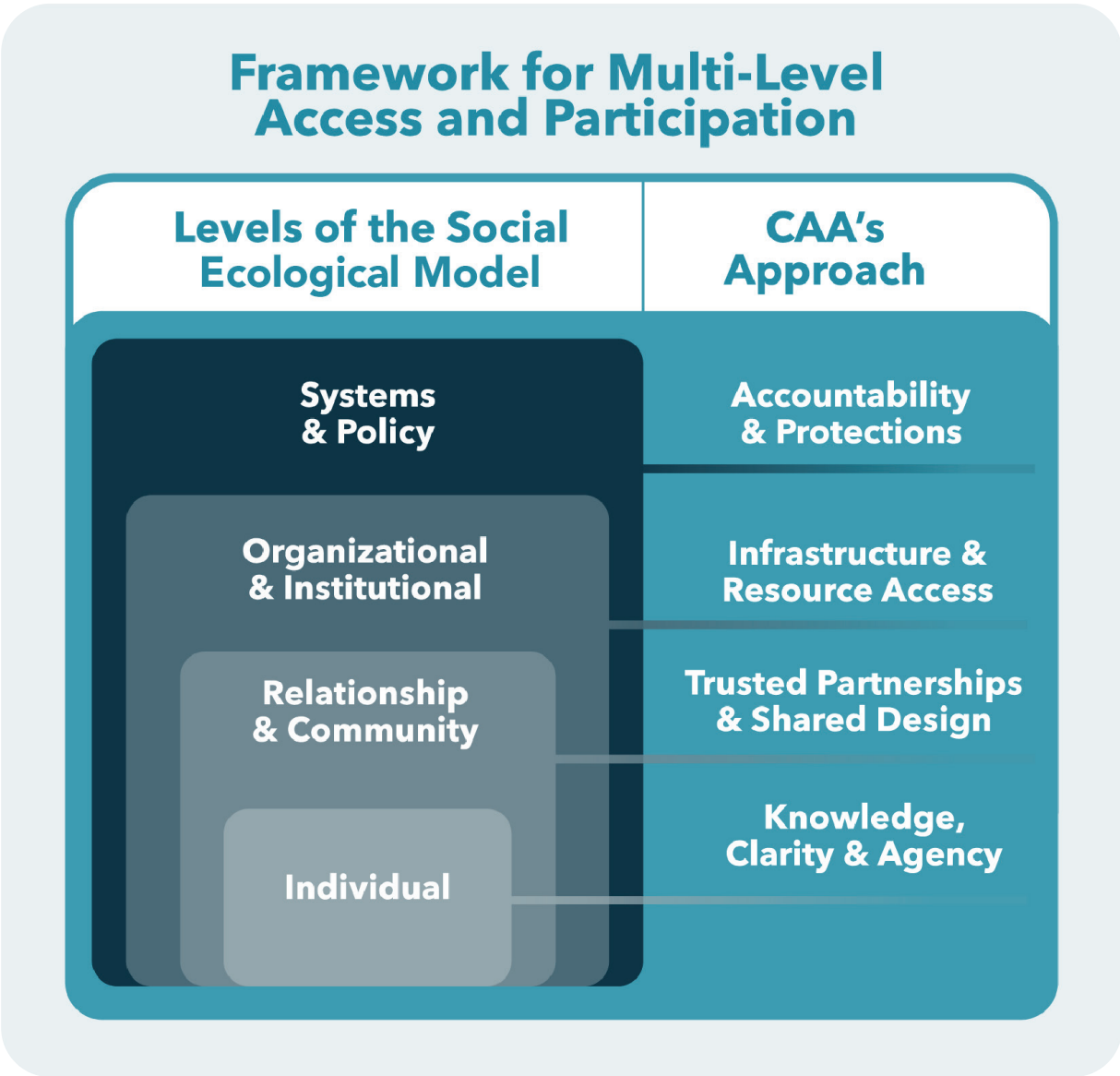
The Social Ecological Model is a public health framework that recognizes that behaviors and outcomes are shaped by interacting factors at multiple levels, including individual, relationship, community, organizational and policy environments. It recognizes that change does not occur through information alone. Individual awareness must be supported by trusted partnerships, institutional capacity, infrastructure access and clear accountability structures. Lasting impact requires coordinated action across these levels so that each reinforces the others.

CAA California applies this multi-level framework to guide equitable access and participation under SB 54. At the individual level, CAA California will provide clear, multilingual information and transparent reporting, so residents understand system changes and how to participate. At the relationship and community level, CAA California will work through CBOs and environmental justice organizations to co-design outreach efforts, facilitate engagement and ensure that local priorities

inform implementation. At the organizational and institutional level, CAA California will expand access to funding and infrastructure by assisting with reimbursement processes and prioritizing investments in communities facing cumulative pollution burdens. At the systems and policy level, CAA California will reinforce accountability through measurable goals, transparent reporting and alignment with statutory requirements to avoid and minimize disproportionate impacts.

For example, in a community identified as facing high pollution burdens and limited recycling access, CAA California may support a coordinated set of actions. Residents may receive culturally relevant information about new recycling or reuse and refill services. A local environmental justice organization may be compensated to help co-create E&O materials and facilitate community input sessions. A local jurisdiction may receive technical assistance to apply for reimbursement to expand service coverage. Progress will be tracked and reported annually to ensure investments reduce disparities rather than reinforce them. By coordinating actions across all levels, the model ensures that outreach, infrastructure, funding and accountability function together to expand equitable access and measurable benefits.

Figure 1: Framework for Multi-Level Access and Participation



1.2.1 Individual: Knowledge, Clarity and Agency

The individual level focuses on residents as participants in the materials management system. This level addresses what individuals know, understand and can do. It centers on access to clear information, transparency about system changes, and confidence in participation. At the individual level, CAA California focuses on ensuring that residents have the knowledge and confidence to participate in California's evolving recycling, composting and reuse and refill systems. System changes under SB 54 can be complex. Clear and accessible information is essential to building understanding and trust.

Through these areas of focus at the individual level, CAA California will ensure residents:

- Understand what is changing
- Have access to clear, multilingual, culturally relevant materials
- Can navigate recycling, composting and reuse and refill systems
- Gain trust that the system is improving over time

CAA California is developing messaging based on interest holder interviews, surveys, CalRecycle's SB 54 Statewide Needs Assessment, industry best practices and other research. This input also includes listening sessions with leaders of representative CBOs. Feedback about resource needs will continue to be informed by ongoing outreach to environmental justice organizations, local jurisdictions, CBOs and other interest holders as described in this chapter.

1.2.2 Relationship and Community: Trusted Partnerships and Shared Design

The relationship and community level focuses on how CAA California engages with organized community entities and trusted intermediaries. While the individual level centers on residents as participants, this level centers on CBOs, environmental justice organizations, Tribal Nations and other local partners that shape how information and services are delivered. At the relationship and community level, CAA California works in partnership with trusted CBO partners. To date, outreach has consistently shown that engagement must be ongoing rather than one-time and that communities prefer collaborative planning processes in which they help shape program design, outreach strategies, infrastructure priorities and success measures. Rather than extractive consultation, in which feedback is gathered without clear influence on outcomes, interest holders have expressed a preference for shared decision-making processes that incorporate community expertise into implementation and demonstrate how input informs final decisions.

Community engagement, as used in this chapter, refers to structured, ongoing processes designed to incorporate community expertise into planning and implementation, rather than one-way information sharing. Through community engagement, CAA California will convene consultation meetings with CBOs, environmental justice organizations, tribes and other interest holders. These engagements will include sharing funding information, providing guidance on reimbursement pathways, jointly designing culturally responsive E&O activities, and soliciting input on infrastructure priorities and service expansion strategies. Community engagement will also include documenting feedback, communicating how that feedback informs decisions, and maintaining recurring touch points to ensure continued alignment between program implementation and community priorities.

Through these areas of focus at the relationship and community level, CAA California will establish and maintain:

- Long-term community engagement structures
- Pathways for communities to access reimbursement and funding
- Customizable E&O materials for community use
- Culturally adaptable messaging for use by CBOs and other interest holders
- Coordinated engagement to prevent repeated information requests from CAA California
- Dedicated technical assistance and capacity-building support for EJ Communities

1.2.3 Organizational and Institutional: Infrastructure and Resource Access

The organizational and institutional level addresses the structural conditions that determine whether communities can access services, funding and infrastructure. This level focuses on systems of service delivery, funding pathways and administrative capacity. At the organizational and institutional level, CAA California addresses structural barriers that limit participation and access to benefits. EJ Communities often face infrastructure gaps, limited recycling service coverage or a history of underinvestment in public resources and community infrastructure including schools, parks, housing, healthcare facilities, grocery stores, transportation systems and other essential services.

CAA California uses and encourages use of environmental justice tools such as CalEnviroScreen to help identify and track priority areas facing higher pollution burdens and cumulative impacts. CalEnviroScreen is a statewide mapping tool developed by the California Environmental Protection Agency (CalEPA) that identifies communities facing higher cumulative pollution burdens and socioeconomic vulnerabilities. It uses environmental, health and demographic indicators to help prioritize areas for targeted investment and environmental justice action. This supports fair distribution of program plan investments and informs decisions about E&O activities and infrastructure development. Transparent communication about infrastructure changes and project development helps keep accountability and build public trust. CAA California strongly encourages local jurisdictions, recycling and waste collection service providers, and CBOs to include EJ Communities in their planning. To advance equity, access and environmental justice, CAA California will encourage applications for reimbursement of activities that:

1. Include EJ Communities in meaningful co-creation and planning
2. Demonstrate measurable reductions in environmental or public health harms
3. Expand access to infrastructure, services, or program benefits in EJ Communities

How equity, access and environmental justice are included in each project will look different, depending on the specific barriers and benefits within that community. CAA California will assist local jurisdictions and CBOs in applying for funding to engage communities and will offer direction on connecting community partners to available funding opportunities. By removing structural barriers and expanding institutional support, CAA California increases the ability of communities to access funding, infrastructure and long-term program plan benefits.

CAA California's E&O plan will also present additional opportunities for local jurisdictions and interest holders to take part in locally tailored E&O activities such as joint events, use of messaging toolkits and reimbursement for E&O activities and messages through local partner channels such as email and social media.

1.2.4 Systems and Policy: Accountability and Protections

The systems and policy level addresses the regulatory and accountability framework that governs implementation. At this level, CAA California will ensure that implementation avoids and minimizes disproportionate environmental and public health impacts, aligns funding decisions with cumulative burden indicators, and complies with statutory requirements intended to protect EJ Communities.

CAA California will annually assess SB 54 projects and funding in EJ Communities, calculate financial investments related to environmental justice activities, and promote transparency in how EJ Communities are actively included in implementation. Goals may include increasing the number of projects and infrastructure investments in EJ Communities identified through CalEnviroScreen, expanding access to recycling, composting, reuse and refill services in underserved areas, improving participation rates in E&O activities, and tracking progress toward reductions in waste generation or contamination where data is available. These goals will be time-bound, informed by available baseline data and developed in consultation with environmental justice organizations.

This coordinated, multi-level approach supports lasting change and advances a more equitable and sustainable materials management system for California.

Through these system and policy areas of focus, CAA California will:

- Support producer responsibility
- Increase transparency about what happens to covered material categories (CMCs)
- Provide clear, accurate information about program requirements, material flows and environmental impacts
- Ensure equitable consideration in facility siting and investment decisions
- Provide annual updates on equitable access, participation and environmental justice

1.2.5 CAA California's Approach to Advancing Equitable Access, Participation and Environmental Justice

The following process describes how CAA California will advance environmental justice through structured engagement, implementation, measurement and continuous improvement across levels of the Social Ecological Model. It is an ongoing environmental justice implementation process that connects outreach, funding, infrastructure investment and accountability, starting with relationships and community outreach.

Figure 2: CAA California's Approach to Advancing Equitable Access, Participation and Environmental Justice

CAA California's Approach to Advancing Equitable Access, Participation and Environmental Justice



Outreach

CAA California will build and maintain a network of CBOs, environmental justice organization, and other interest holders representing EJ communities.



Share & Listen

CAA California will share timely information and create structured opportunities for input.



Coordinate

CAA California will translate feedback into coordinated action with jurisdictions, service providers, and CBOs or other interest holders.



Measure

CAA California will measure whether environmental justice goals are being met and whether investments are reducing disparities.



Refine

CAA California will use data and feedback to adjust implementation strategies and improve outcomes over time.

Outreach: CAA California will build and maintain a network of CBOs, environmental justice organizations, tribes, local jurisdictions and other interest holders representing EJ Communities.

Outreach will include identifying and inviting organizations to participate, maintaining updated contact lists, hosting introductory meetings, and establishing recurring engagement structures. For example, CAA California may convene regional listening sessions or virtual briefings to introduce funding opportunities and explain how SB 54 implementation may affect specific communities.

Share and Listen: CAA California will share timely information and create structured opportunities for input. This includes activities such as:

- Sharing available funding and reimbursement opportunities
- Providing updates on program implementation and infrastructure planning
- Hosting listening sessions, advisory discussions and workshops
- Documenting feedback related to barriers, community priorities and potential unintended impacts

For example, environmental justice organizations may identify challenges such as limited multifamily recycling access or concerns about facility siting. CAA California will incorporate this input into program planning and implementation.

Coordinate: CAA California will translate feedback into coordinated action with jurisdictions, service providers, CBOs and other interest holders. This includes activities such as:

- Providing guidance on eligibility and reimbursement pathways
- Facilitating technical assistance with the funding process
- Coordinating efforts with CBOs and local jurisdictions
- Supporting co-created E&O strategies

For example, if a community identifies limited access to composting services, CAA California may assist the local jurisdiction in applying for reimbursement to expand service coverage while supporting a local environmental justice organization in developing culturally relevant outreach materials.

Measure: CAA California will measure whether environmental justice goals are being met and whether investments are equitable. This includes activities such as:

- Reviewing reimbursement data to track funding distribution in EJ Communities
- Assessing infrastructure expansion and service access in EJ Communities
- Evaluating E&O participation metrics
- Using data tools such as CalEnviroScreen to compare investments relative to cumulative burden indicators

CAA California will work with environmental justice organizations to define success measures that are specific, measurable, time-based and realistic. For example, goals may include increasing the number of projects in EJ Communities, expanding service coverage in underserved areas, or improving participation in reuse and refill programs.

Refine: CAA California will use data and feedback to adjust implementation strategies and improve outcomes over time. This includes activities such as:

- Reviewing data and CBO feedback regularly and modifying E&O strategies as needed
- Revisiting measurable goals and adjusting time-based milestones based on progress and new data
- Identifying gaps in funding access or participation, and developing plans to address them

Through this continuous improvement cycle, CAA California will ensure that environmental justice efforts are not static. Implementation will evolve in response to measurable results and community input, strengthening equitable access, participation and environmental protections statewide.

1.3 Environmental Justice Roles of CAA California and CalRecycle

This section describes the respective roles of CAA California and CalRecycle in implementing SB 54. It clarifies how responsibilities are divided between program plan administration, fund management, regulatory oversight and accountability. Together, these roles ensure that the SB 54 requirements are implemented consistently and according to environmental justice principles.

1.3.1 CAA California: Program Implementation, Fund Collection and E&O

CAA California implements the program plan with a focus on equitable access, meaningful participation, and equitable distribution of resources and protections. CAA California reviews and approves reimbursement applications submitted by eligible CBOs, service providers, local jurisdictions and tribes. CAA California also engages EJ Communities and environmental justice organizations on an ongoing basis. This engagement supports planning, E&O and implementation and helps ensure that program investments reflect community needs. Through E&O campaigns, reimbursement oversight and continued consultation, CAA California advances equitable access and participation under SB 54. For the PPMF, CAA California will collect fees and remit them to the California Department of Tax and Fee Administration.

1.3.2 CalRecycle: Regulatory Oversight, Standards and Accountability

CalRecycle establishes the regulations, standards, and requirements that govern SB 54 implementation, and approves the program plan. Regulations promote recycling practices that minimize the generation of hazardous waste, greenhouse gas emissions, environmental impacts, environmental justice impacts and risks to public health, consistent with PRC Section 42041(aa)(5).

CalRecycle established a Producer Responsibility Advisory Board, as per PRC Section 42070(a). The Advisory Board has 13 voting members and three non-voting members representing interest holder categories identified in the statute, including environmental justice, tribal, local jurisdiction, industry and public interest perspectives. The purpose of the Advisory Board is to identify barriers and solutions that advance a circular economy. CalRecycle facilitates the Advisory Board, while CAA California attends meetings but is not a voting member and is not responsible for board activities.

Beginning in 2026, CalRecycle will conduct a recycling rate review process every two years. The Department will consult with the Advisory Board and consider relevant data to decide whether to adjust these recycling rates. Prior to approving the program plan, CalRecycle conducted a statewide Needs Assessment that included outreach to a diverse range of local jurisdictions, recycling service providers and processors. The Needs Assessment gathered public input and reflected the varied needs of urban, suburban and rural communities.

CalRecycle is a department of CalEPA, one of the governmental entities that will expend the PPMF upon appropriation by the Legislature. CalRecycle also reviews CAA California's annual reports, including conducting audits and enforcing compliance with adopted regulations to ensure implementation aligns with SB 54 requirements.

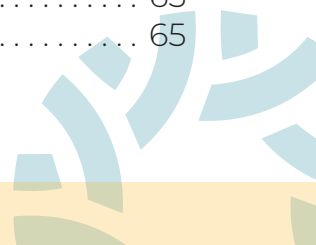


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Chapter 2: Reimbursement and Payment Process

2.1 Introduction

CAA California is responsible for developing and administering a reimbursement process that determines, verifies, and pays for eligible covered costs, in accordance with Section 18980.8(g).

The reimbursement process will support system improvements, infrastructure, and education and outreach (E&O) activities needed to meet SB 54 requirements. This chapter describes CAA California's reimbursement process for determining eligible covered costs and providing reimbursement in accordance with SB 54.

CAA California has developed this reimbursement process based on principles of transparency, fairness, and administrative efficiency for those entities that apply for reimbursement. The reimbursement process also requires that applicants provide operational and cost details to support proposed investments to advance SB 54 objectives.

The foundation of California's existing waste and recycling system is built on established contracts and franchise agreements with waste and recycling service providers. As required by SB 54, CAA California's reimbursement process will not violate franchise agreements and will not in any way restrict a local jurisdiction's ability to receive funding when amending a franchise agreement.

This chapter outlines how CAA California will manage the reimbursement of eligible covered costs as required under SB 54, including:

- Evaluation criteria to determine the eligibility of covered costs for reimbursement
- The application process that local jurisdictions and recycling service providers should follow to submit requests for reimbursement
- The service agreements that will be used to provide reimbursement and track system performance
- How disbursement of funds will be managed to reimburse local jurisdictions and service providers

An eligible covered cost is the extra cost that must be incurred to meet SB 54 targets, meaning it refers to the new or increased expense needed to add, expand, or change recycling, composting, E&O, or administrative activities to meet SB 54 requirements, above and beyond what was already being done before SB 54 passed.

Only the incremental portion of those costs qualifies as eligible covered cost. Costs that would have otherwise happened, are paid for by another program, are offset by savings or revenue, do not apply to covered material categories (CMCs), or are unrelated to SB 54 are not eligible. CAA California reviews all costs, removes those that do not qualify as eligible covered costs, and reimburses only the verified SB 54-related portion.

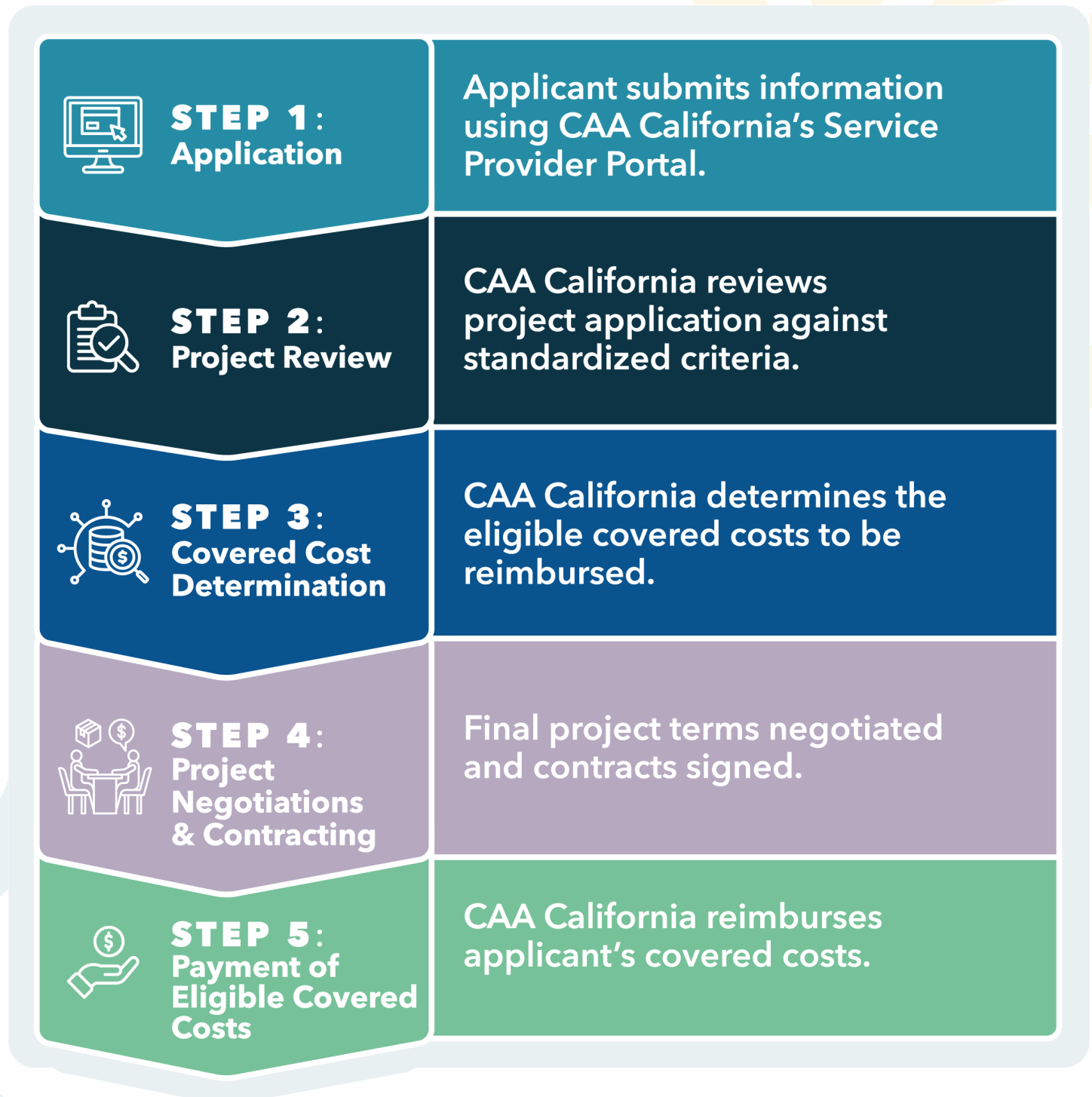
2.1.1 Overview of the Reimbursement Process

CAA California's reimbursement process will be used by local jurisdictions, recycling service providers, alternative collection service providers and other entities to apply for funding for projects to support the goals of SB 54. Funding for Responsible End Markets (REMs), reuse and refill infrastructure, and compostable packaging is addressed separately in their respective chapters.

Local jurisdictions, recycling service providers, alternative collection systems and other entities will submit applications for reimbursement using CAA's Service Provider Portal. Each complete application submitted on the Service Provider Portal will be reviewed by CAA for a determination of eligible covered costs. Once this determination has been made, any final project negotiations can be completed, project contracts signed, and payments can begin.

The reimbursement process contains five steps. Details for each step are described in this chapter's corresponding subsections.

- 1. Application:** Entities submit reimbursement requests online through CAA California's Service Provider Portal.
- 2. Project Review:** Applications are evaluated against standardized eligibility and evaluation criteria.
- 3. Covered Cost Determination:** CAA California validates the applicant's proposed covered costs using baseline data and costing studies.
- 4. Project Negotiations and Contracting:** Contract Agreements are finalized for individual projects, outlining terms, performance expectations, reporting requirements, and reimbursement terms. (Projects means investments, services, and programs that could be eligible for reimbursement under SB 54.)
- 5. Payment:** Reimbursement funds are issued in accordance with the timelines and methods specified in the signed project agreement.

Figure 1: Overview of the Reimbursement Process

CAA California will rely on an online application and standardized forms to guide applicants through the process. Guidance documents and CAA staff will be available to support application submissions. The application submission will require applicants to submit information necessary for CAA California to evaluate projects for eligible covered cost determination, including:

- Financial information, including documentation of project costs
- Non-financial information, including the CMCs affected by the project, and the estimated tons of material to be recycled

With this information, CAA California will apply standardized eligibility and evaluation criteria to ensure fair and equitable determination of which project costs are eligible for reimbursement, before moving to the negotiation and contracting phase of the reimbursement process. Once project contracts are executed, reimbursement may begin. CAA California will provide a dispute resolution process for any reimbursement-related disagreements.

2.1.2 CAA California's Reimbursement Principles

CAA California's reimbursement process is grounded in the following key principles:

1. **Transparency and Fairness:** All applicants are ensured equitable treatment through transparent cost eligibility criteria and will be provided with access to guidance from CAA California.
2. **Efficiency and Timeliness in Review and Approval:** The review, determination, negotiation and payment stages of the reimbursement process are designed for clarity and speed. CAA California will establish expected review and reimbursement timelines, which may be adjusted based on actual timelines as SB 54 is implemented.
3. **Data-Driven Decision-Making:** Reimbursement determinations are informed by multiple sources of data, including information submitted by applicants, CAA California's cost databases, statewide cost studies, and other analytical tools such as cost studies where appropriate. CAA California's evaluation process recognizes that many California jurisdictions operate under bundled franchise agreements covering multiple services (e.g., waste, recycling, organics and disposal), which can affect how costs are allocated across sectors. As a result, reimbursement determinations will rely on a combination of applicant-submitted information and CAA California's cost study and analytical review to identify eligible covered costs.
4. **Accessibility and Support:** CAA California will ensure that all communities have access to assistance, tools, and information needed to participate effectively in the reimbursement process.

2.1.3 Funding Opportunities to Facilitate Implementation

CAA California will provide multiple funding options for entities as part of the application process.

- Standard-rate funding: Applicants opt for pre-determined reimbursement rates that enable eligible projects to move quickly through the application process to project implementation.
- Actual and modeled cost: Applicants opt to provide actual, or cost modeling information for project reimbursement.

Peer-reviewed research of actual costs will support both of these funding options, as applicable. After CAA has collected service provider cost and performance data in the Service Provider Portal, the data will be assessed to make any necessary adjustments to standard rates in subsequent years.

In addition to the reimbursement funding options described above, CAA California may incorporate payment mechanisms intended to support project performance and accountability, such as separate incentive payments tied to defined project performance, outlined in Section 2.6 Step 5: Payment of Eligible Covered Costs.

The two main funding options are introduced below and are described in detail in Section 2.3.4 Project Cost Review.

2.1.3.1. Standard-Rate Funding

The standard-rate funding approach will offer a streamlined process with predetermined funding provided for certain identified projects and services. This funding mechanism is an efficient way for CAA California to encourage the recycling system investments and service expansions necessary to meet the goals of SB 54.

CAA California will use the term “standard-rate funding” to refer to the “performance-based” approach described in Section 18980.8(g). CAA California will establish pre-determined flat-rate funding options for projects based on a calculation of their typical real-world cost. This funding mechanism will apply local labor rates and density adjustments, where relevant, to ensure that the rate accounts for regional cost differences.

2.1.3.2 Actual and Modeled Cost

Projects that are not funded through the standard-rate funding mechanism will be evaluated through applications based on actual and modeled costs. This option will be available for applicants who prefer actual cost reimbursements. It will also be required for projects that do not have pre-determined funding options, such as new facility investments (e.g., new materials recovery facilities (MRFs) or MRF rebuild projects) and complex program and service changes.

To facilitate the actual and modeled cost review process, CAA California conducted an extensive review of existing state recycling services – the System Mapping and Cost Modeling Study. It analyzed and modeled the cost of recycling collection in local jurisdictions and the cost of processing residential and commercial recyclables at MRFs. Based on this work, the study provides the baseline data and analytical framework used to evaluate reimbursement applications and determine reimbursement levels for eligible covered costs.

The modeling approach ensures that reimbursement determinations are grounded in data and are regionally equitable. The study accounts for California’s geographic and economic diversity, recognizing that recycling systems in urban areas may have lower per-ton costs than those in rural, coastal, or mountain regions, where longer distances to recycling points increase costs.

The System Mapping and Cost Modeling Study also assessed the anticipated new and additional costs required to achieve SB 54 targets. New and additional costs are eligible covered costs incurred after Jan. 1, 2023. These costs would not reasonably have been expected to be incurred in the absence of SB 54 (Section 18980.8(g)). This information informed CAA California’s five-year program plan budget (refer to the Budget Development chapter).

2.1.3.2.1 Reimbursement of Eligible Covered Costs incurred between Jan. 1, 2023 and Dec. 31, 2026

As a variation to the Actual Cost option, CAA has established a dedicated approach to reimbursing costs incurred between Jan. 1, 2023, and Dec. 31, 2026.

The cost portion of the application process relies on actual invoices, tons and other data relevant to the project. Once these have been verified and are determined to be eligible covered costs, the reimbursement process can be completed.

2.1.4 Covered Entities, Projects Categories, and Services

Entities eligible to apply for reimbursement include local jurisdictions, recycling service providers, alternative collection systems and others that incur SB 54-related eligible covered costs.

Tribes are equivalent to local jurisdictions for the purposes of reimbursement. Tribes may apply directly for reimbursement of eligible covered costs or may participate through contracted service providers or joint arrangements in the same manner as local jurisdictions.

School districts and other public educational institutions that operate independently from local jurisdictions may also directly incur eligible covered costs related to E&O activities, on-site collection or other SB 54-approved activities. Accordingly, school districts may apply directly for reimbursement where they are the entity implementing an approved project and incurring eligible covered costs.

CAA California's process for reimbursing eligible covered costs includes funding according to project categories, which have been developed by CAA California and are outlined in Table 1 below.

Table 1: Project Categories

Project Category	Description of Eligible Costs
Collection	New and additional costs of collecting recyclable and compostable CMCs Costs associated with on-ramping CMCs trending to recyclability or compostability
MRF investments, or other activities to achieve target recycling rates for all covered materials	Costs for new equipment, facilities, or processing of CMCs
Access to drop-off recycling where curbside collection services are not feasible	Costs of adding or expanding drop-off recycling services
Access to collection services in public spaces	Cost of adding containers and improving services on city streets, parks and public venues
Innovations that enhance collection, composting, and recycling systems within a recycling center or MRF	Costs to deploy innovations that improve the identification and sorting of CMCs
Access to recycling and composting services for multifamily dwellings	Costs to increase multifamily access and participation in recycling and composting CMCs
Efficient transfer of CMCs from rural areas to MRFs, brokers, or REMs	Increased transportation costs from rural sites
E&O activities	Costs for local E&O programs and activities
Transportation of CMCs to another sorting facility for additional sorting	Transportation costs for secondary sorting

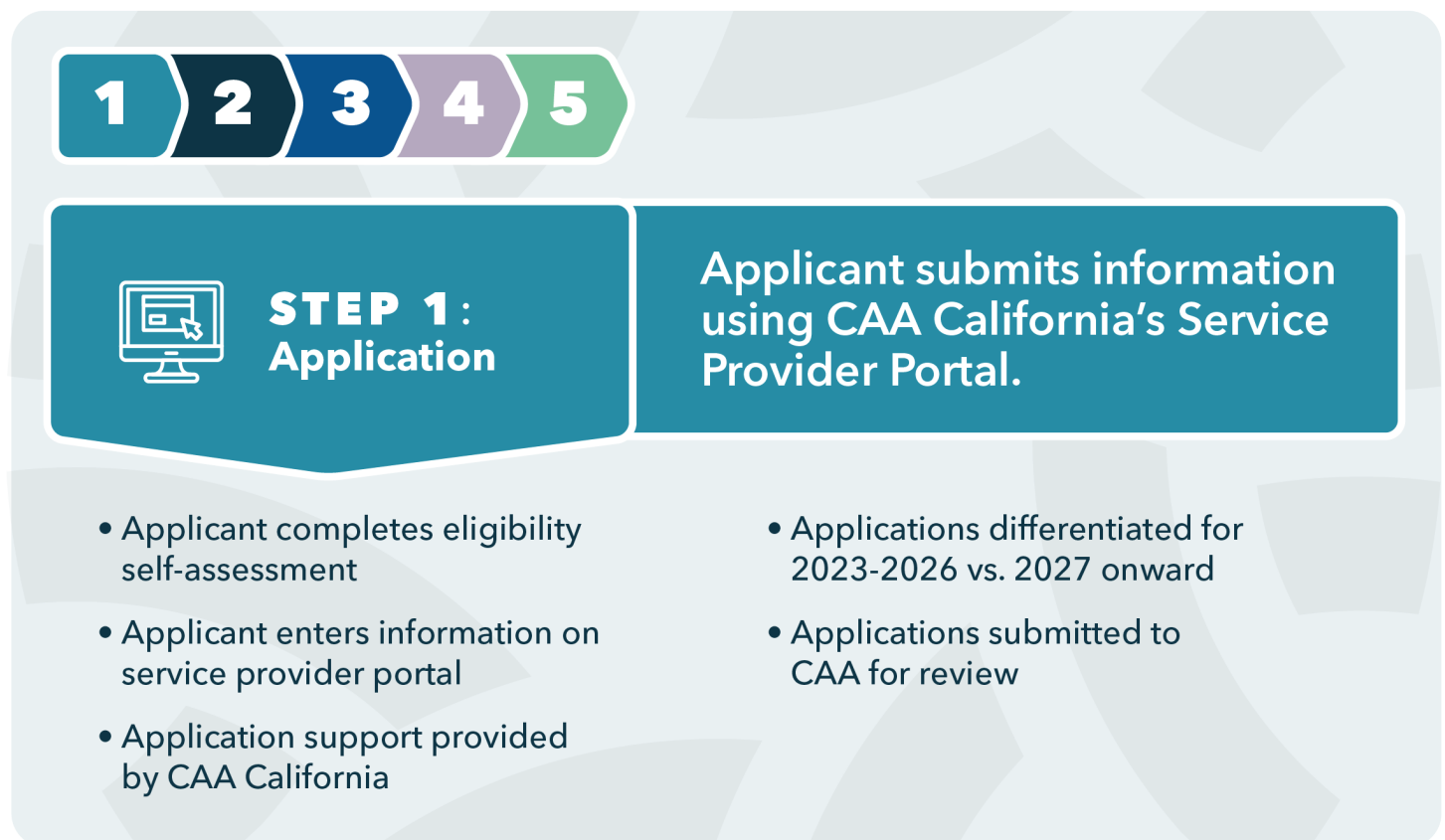
Certain initiatives related to compostable packaging are addressed further in the Strategy for Compostable Covered Materials chapter, including how they are evaluated. Where applicable, projects related to compostable packaging may utilize the reimbursement process described in this chapter.

CAA California anticipates that other project categories may be added to this list as new projects are identified, and the program evolves.

2.2 Step 1: Application

The application process provides the mechanism through which applicants submit information to CAA California for evaluation of project eligibility and confirmation of eligible covered costs. A clear, accessible, and administratively efficient application is critical to encourage participation and support SB 54 compliance.

Figure 2: Reimbursement Process Step 1: Application



The application process allows CAA California to work with applicants to assess projects and encourage submission that will support achievement of SB 54 targets.

Once all required information has been submitted through the application forms, CAA California will begin its review of the application submission.

2.2.1 Applicant Completes Eligibility Self-Assessment

Applicants provide information in the application to assess eligibility, and to confirm that both the applicant and the project fall within the scope of SB 54.

Applicants must confirm the following in their application:

1. Is the applicant an eligible entity? [PRC 42051.1(g)(1)]. Eligible applicants include:

- Local jurisdictions and tribes
- Recycling service providers (e.g., private recycling collectors and MRF processors)
- Alternative collection systems
- Other entities supporting achievement of SB 54 goals such as school districts and other public educational institutions that operate independently from local jurisdictions

2. Does the project support SB 54 targets? [PRC 41780.1, PRC 40051, 42057, 42060(6)(a), and 42355]. Applicants must confirm that the project:

- Is consistent with California's waste hierarchy
- Supports the requirement that all covered materials be recyclable or compostable by 2032
- Advances plastic recycling targets and applicable milestones, including the following recycling rates for plastic covered material:
 - 30% on and after 2028
 - 40% on and after 2030
 - 65% on and after 2032

Once an applicant confirms that both it and its project(s) are eligible, the applicant will complete the application forms on CAA California's online Service Provider Portal.

2.2.2 Applicant Enters Information on Service Provider Portal

Applicants must submit all reimbursement applications through CAA California's Service Provider Portal, which serves as the primary interface between CAA California and applicants. The Service Provider Portal is designed to be accessible and easy to use, with clear instructions and available support to guide applicants through the reimbursement process.

The online application relies on standardized forms to ensure:

- **Consistency:** All applicants provide information in the same format.
- **Accessibility:** The process can be completed remotely, at the applicant's own pace.
- **Efficiency:** Information is captured in a format that supports faster review.

Application forms are structured around different project categories. Through these forms, applicants will provide project information, volume, cost, and other data required for evaluation.

2.2.3 Application Support

The Service Provider Portal also provides the following support for applicants:

- Application guidance, including eligibility criteria and documentation requirements
- Decision trees to help applicants understand which funding stream applies to their project
- Definitions and examples of new and additional costs, eligible projects and typical cost categories
- Frequently Asked Questions (FAQs) to help applicants resolve common questions

When additional user assistance is required, applicants can contact CAA California staff by email or the Service Provider Portal to answer questions, offer support and guide applicants through the process.

2.2.4 Applications for 2023-2026 versus 2027 Onward

Applications for expenses incurred after Jan. 1, 2023, will be considered eligible for reimbursement, subject to determination of eligible covered costs.

- **2023-2026:** Reimbursement for costs incurred prior to the program plan implementation (between Jan. 1, 2023, and Dec. 31, 2026) will require detailed documentation of project costs, material types, and tonnages of CMCs managed before and after the project was implemented. Submitted information will be evaluated by CAA to determine eligible covered costs as required by SB 54. As part of this evaluation, CAA will review applicant-submitted cost data to assess the reasonableness and eligibility of claimed costs.
- **2027 and beyond:** CAA California encourages applicants to submit reimbursement applications for approval before projects are implemented. Approval of reimbursement for projects submitted after the project has either started or completed is not guaranteed and will depend on CAA California's eligible covered cost determination.

All projects will be reviewed in accordance with established eligibility and evaluation criteria, with reimbursement contingent upon execution of CAA's Funding and Services Agreement and the applicable Project Contract (see Step 4).

2.2.5 Application Submitted to CAA California for Review

CAA California will process all applications in a timely fashion, with review time dependent on project complexity.

The time needed to review reimbursement applications and determine funding is anticipated to be anywhere from a few weeks to several months, depending on the project. For instance, recurring E&O projects are likely to be reviewed much faster than large-scale MRF investments or new collection systems.

2.3 Step 2: Project Review

Citations: PRC 42051.1(g) and Section 18980.8(g)

2.3.1 Purpose of the Review

SB 54 requires that CAA California establish a reimbursement process for determining the eligible covered costs for eligible entities. After an applicant completes Step 1 (Application) through the Service Provider Portal, CAA will review and evaluate the application against non-financial eligibility, evaluation criteria, and financial and cost criteria to determine whether the proposed project is eligible, and the extent to which project costs qualify as eligible covered costs.

This section describes the criteria used to review applications and support a defensible eligible covered costs determination. The review serves four primary objectives:

1. **Compliance:** Aligns reimbursement determinations with SB 54 requirements
2. **Transparency:** Applies clear, standardized criteria to support consistent, documented determinations
3. **Standardized Application:** Uses standardized application forms for each project category to promote consistent inputs, metrics, and formatting
4. **Administrative efficiency:** Supports timely and consistent reimbursement decisions

2.3.1.1 Project Cost Evaluation

In evaluating project costs to determine whether costs qualify as eligible covered costs, CAA will apply the following principles:

- **Causality:** Costs are incurred directly because of SB 54 requirements.
- **Incrementality:** Costs represent an increase over pre-project baseline costs as relevant for each project.
- **Reasonableness:** Costs align and are consistent with industry norms and regional market conditions..
- **Verifiability:** Applicant provides documentation sufficient for audit and review.
- **Non-duplication:** Cost is not funded through another program or offset by external revenue.

Using these principles, CAA will evaluate project costs according to the type of funding option submitted. Evaluation requirements will differ depending on whether the project is submitted under the standard-rate funding option or the actual/modeled cost funding option.

2.3.1.1.1 Standard-Rate Funding Evaluation

Standard-rate funding is based on CAA California's predetermined funding rates for specific project or service types. These rates are intended to streamline implementation of priority projects and reduce administrative burden for applicants and CAA California.

Under the standard-rate funding option, CAA California's evaluation primarily focuses on:

- Confirming project eligibility and alignment with SB 54 requirements
- Validating project scope, service levels, and applicable operational characteristics
- Applying approved local adjustment factors, such as labor conditions, route density, collection frequency, geography, or other relevant variables

Because standard-rate funding relies on predetermined cost structures, applicants are generally not required to submit the same level of detailed cost documentation required under the actual/modeled cost funding pathway.

2.3.1.1.2 Actual or Modeled Cost

CAA will conduct a structured evaluation of actual/modeled cost applications that typically includes the following steps:

1. **Baseline Comparison:** Project costs will first be compared against relevant base-year costs for the same or equivalent activities.
2. **Validation:** Submitted figures are then checked against CAA California's modeled cost data.
3. **Reasonableness Testing:** As appropriate, modeled unit-cost benchmarks (e.g., cost per ton, cost per household, cost per route hour) are applied to detect costs that are much higher or lower than expected, based on other local jurisdiction or MRF costs. Applicants may be asked to justify variances.
4. **Savings and Efficiency Adjustment:** Documented savings resulting from the project (e.g., route optimization, reduced landfill fees) are netted from gross new costs to calculate new and additional costs.
5. **Staff and Technical Review:** CAA verifies data accuracy, operational feasibility and consistency with SB 54 requirements.
6. **Project Cost Evaluation Determination:** A written evaluation of eligible covered cost, cost basis, and applicable reimbursement mechanism, depending on the cost category (lump sum, per-ton, per-household, etc.), is communicated to the applicant.

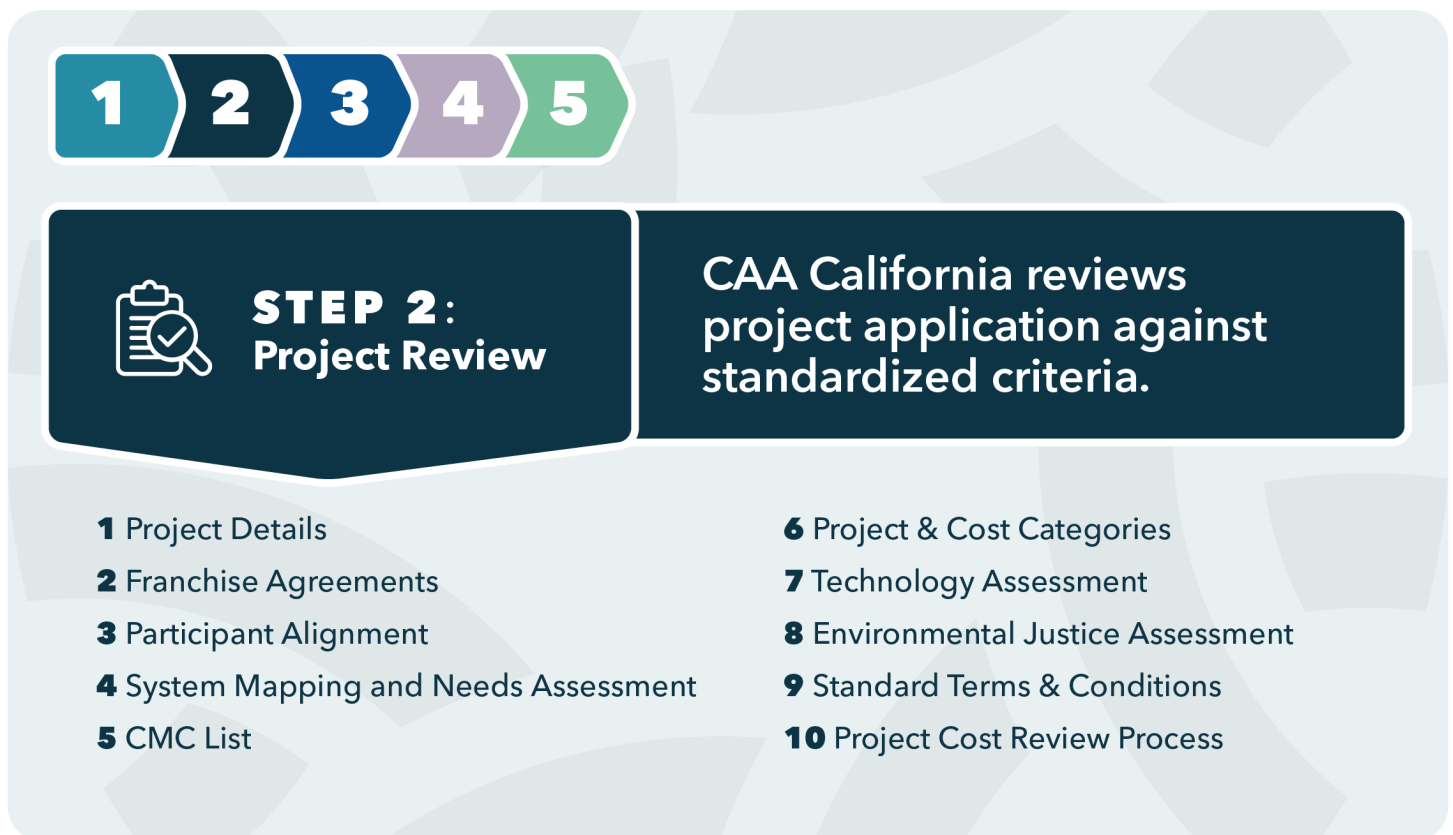
2.3.2 Overview of Project Review: Non-Financial, Financial and Cost

CAA California's review relies on two sets of criteria:

1. Non-financial criteria establish whether the applicant is eligible, as well as whether the project aligns with SB 54 requirements and is ready to implement. These criteria include execution of CAA California's required Funding and Services Agreement, which establishes requirements such as performance standards, terms for disbursement and use of funds, representations and warranties, reporting obligations, audits, insurance, indemnification and dispute resolution. The Funding and Services Agreement must be signed before a funding commitment is made.
2. Financial and cost criteria are used to evaluate baseline costs and proposed project costs, to identify new and additional costs, to validate documentation, and to determine the portion of costs that qualify as eligible covered costs.

The information submitted by applicants enables CAA to evaluate a project's technical feasibility, geographic scope, implementation readiness and potential impact (e.g., capacity, capture and quality improvements). Non-financial information is reviewed primarily for accuracy, completeness, and consistency with SB 54.

Figure 3: Reimbursement Process Step 2: Non-Financial Project Review



CAA California may also consider implementation factors (such as the status of project permitting and coordination with impacted jurisdictions) to inform project scheduling and budget planning.

2.3.3 Non-Financial Project Review

2.3.3.1 Project Details

The first criterion in the review process is details on the applicant's project. Applicants must provide the information listed below through the application forms. Table 2 lists examples of information to be provided in the application process.

Table 2: Project Details

Information Category	Example Required Details	Purpose of Information
Applicant Information	Organization name; contact; email; phone; address	Establish eligibility and communication channel
Project Identification	Project title; funding category	Link application to program budget
Project Description	Summary of scope, objectives and anticipated outcomes	Define intent and benefits of the project
Service Type	Collection, processing, transfer, education, administration	Identify the type of project to be reviewed
Status of Service	New, expansion, replacement, upgrade	Distinguish new and additional costs from baseline costs
Baseline and Projected Tonnage	Current tons handled; anticipated new tons	Quantify impact
Materials Targeted	CMCs affected	Link project to SB 54 goals
Jurisdiction(s)	Jurisdiction(s) impacted	Map projects, coordinate with jurisdictions
Population Served	Number of households or businesses affected	Gauge program reach and equity implications
Jurisdictional Approvals	Local jurisdiction approvals, franchise amendments, permits	Verify authority to implement
Implementation Timeline	Key milestones	Support budget and payment scheduling
Partnerships or Collaborations	Co-applicants, haulers, processors, vendors	Identify interest holders
Conflicts and Disclosure	Previous and current payments from or to CAA in any EPR state	Disclosure of potential conflicts

As a part of the project description requirements, CAA California may request supporting materials, including:

- Maps of service areas or facility locations for zoning and Environmental Justice reviews
- Copies of franchise or local jurisdiction agreements demonstrating that the project does not conflict with existing agreements
- Engineering plans or equipment specifications for capital projects
- Cost schedules and vendor quotes as applicable to ensure a competitive bidding and cost process
- Proof of community consultation or environmental review as part of the Environmental Justice review
- Relevant case studies, reports, or other technical documentation

2.3.3.2 Franchise Agreements

Citation PRC 420251.1(c)(3)(A) and (B); PRC 40059; PRC 40004

California's waste and recycling system is grounded in established contracts and franchise agreements with waste and recycling service providers. Recognizing the importance of these agreements, SB 54 is structured to build upon existing systems and avoid disruption of these agreements.

Applicants must describe how the project is new and additional and does not violate or conflict with existing services or franchise agreements.

Applicants may be required to provide a copy of, or link to, existing contracts or franchise agreements for the jurisdictions where the project will be implemented.

2.3.3.3 Participant Alignment

As part of Step 2, CAA California requires applicants to identify local jurisdictions that may be impacted by the proposed project, such as affecting a jurisdiction's existing programs or local operations. CAA California will communicate with impacted jurisdictions about proposed projects to promote proactive coordination and reduce implementation delays.

This criterion is intended to ensure coordination and alignment when projects impact multiple entities or jurisdictions.

It also facilitates timely implementation of a project once approved. For example, are permits required for the project already approved? Are local jurisdiction policies in place to support the project? Is other supporting infrastructure needed for the success of the project? This review will establish the timing of the project funding for budget purposes once an eligible project or cost determination has been made. Following approval, CAA California will notify impacted local jurisdictions of the reimbursement determination decision in writing, pursuant to Section 18980.8(g).

2.3.3.4 System Mapping and CalRecycle's Needs Assessment

Citation 42051.1

CAA California's review considers whether proposed projects address identified statewide needs, support program plan objectives, and reflect reasonable cost assumptions. These statewide needs include multifamily recycling collection access, MRF sorting limitations for certain CMCs (e.g., cartons) and REM development. This review is informed by:

- **CAA California's System Mapping and Cost Modeling Study**, which identified the status of current recycling programs and began to identify gaps in programs and services across the state. This study also quantifies the cost of recycling on a local jurisdiction and MRF level, establishing cost models for determining the total cost that must be funded to achieve SB 54 goals.
- **CalRecycle's Needs Assessment**, which provides information on the current and future state of recycling and composting, and has informed both gaps and proposed solutions.
- **California Recycling & Reuse System Optimization Project (CARRSOP)**, which will provide a comprehensive and defensible dataset describing the current recycling and reuse system, identify operational gaps and opportunities, collect new and additional system costs associated with SB 54 implementation, and validate findings against existing studies and datasets. CARRSOP will play an important role in the detailed funding requirements necessary for the programs and services that need to be addressed to achieve SB 54 requirements.

Other program plan chapters relevant to reimbursed projects include Chapter 1: Equitable Access, Participation And Environmental Justice, Chapter 3: Materials Strategy and Covered Material Category Compliance Plan, Chapter 6: Source Reduction (which encompasses Reuse and Refill), and Chapter 7: Education and Outreach. Each of these chapters includes strategies and evaluation criteria applicable to project prioritization and program design.

2.3.3.5 Covered Material Categories (CMC) List

To advance toward SB 54 targets, applicants must identify CMCs affected by the proposed project and describe how the project advances SB 54 objectives. Applicants must specify, as applicable:

1. The CMC(s) targeted by the project
2. Estimated incremental tons of CMC to be collected or processed
3. CMC contamination reduction expectations (where relevant)
4. The method by which the project increases CMC collection and processing capacity, capture or material quality
5. Other measurable impacts and timelines for achieving projected improvements

For E&O or contamination reduction projects, applicants must provide an estimate of expected benefits (e.g., increase in CMC tons collected within the service area). Where relevant, improvements may be quantified by sector (e.g., multifamily, commercial, drop-off). Public space recycling projects may be quantified by the number of collection locations in addition to tonnage.

CalRecycle's determinations of which CMCs satisfy SB 54 requirements to be considered recyclable or eligible for being labeled compostable will inform investment priorities and reimbursement decisions, particularly where infrastructure or program changes are necessary to enable implementation. The process by which a CMC is determined to be recyclable or eligible for being labeled compostable is described in the Materials Strategy and Covered Material Category Compliance Plan Chapter, which also identifies investment needs where current programs, infrastructure, or end markets are insufficient. Please refer to the Materials Strategy and Covered Material Category Compliance Plan Chapter for information on these strategies.

2.3.3.6 Project and Cost Categories

Applicants must provide information about SB 54 project categories and cost categories eligible for reimbursement (PRC 42051.1).

CAA California's project categories describe the types of reimbursable projects (the list of project categories can be found in Table 1: Project Categories).

The following table provides examples of the types of projects that may fall into each project category, and the type of costs appropriate for each cost category.

Table 3: Funding Scenarios Examples

Example of Funding Scenarios		
Project Category: MRF Investments		
	MRF Processing Cost Category	
Eligible Collection Costs	Capital Cost	Operating Cost
Facilities	MRF facility	
Equipment	Robotics	
Operating Labor		Processing labor
MRF Operations		Transportation to end markets
Administration		Reporting
Project Category: E&O		
	Public Education and Outreach Category	
	E&O Cost	Administrative Cost
Community events	Project cost for the event	Local jurisdiction contract management
Project Category: Collection		
	Collection Cost Category	
Eligible Collection Costs	Capital Cost	Operating Cost
Collection containers	Recycling carts and bins	Container maintenance and repair
Vehicles and Equipment	Recycling collection trucks	Fuel, on-board cameras
Facilities	Maintenance facilities	

Example of Funding Scenarios		
Labor		Collection route staffing
Administration		Route supervisors and managers
Fleet Operations		Recycling-related vehicle operations
Project Category: Drop Site and Transfer Stations		
	Drop Site and Transfer Station Cost Category	
	Capital Cost	Operating Cost
Facilities	New building	
Equipment	Onsite operating equipment	
Operating Labor		Site labor
Administration		Facility managers, data reporting
Project Category: Transportation of CMCs		
	Transportation Cost Category	
	Capital Cost	Operating Cost
Vehicles and Equipment	Over the road vehicles	Fuel
Labor		Drivers
Administration		Transportation coordination
Project Category: Administrative Costs		
	Administrative Cost Category	
	Staff Cost	
Administrative staff for SB 54 activities	- Contract management - Reporting	

SB 54 also defines four primary cost categories. Applicants must identify the category under which their project falls:

- Capital Costs
- Operating Costs
- E&O Costs
- Administrative Costs

The following table provides examples of the types of projects for funding that may fall into each cost category, and the required documentation for the application. The examples in the table below are not exhaustive and are for illustrative purposes only. Each requires covered cost determination for funding.

Table 4: Cost Categories

Cost Category	Examples of Eligible Covered Costs	Examples of Documentation Support	Examples of Non-Eligible Costs
Capital Costs (new and incremental)	• Facility construction or expansion • Processing equipment (screens, optical sorters, bunkers) • Collection vehicles and carts • Transfer station and drop-off infrastructure • Weigh-scale and data tracking systems	Engineering drawings, bid documents or purchase orders, proof of installation/construction, invoices and depreciation schedules	Replacement of aging assets unrelated to SB54; upgrades funded through other programs
Education and Outreach	• Local advertising campaigns (print, digital, radio) • Community events, school programs and presentations • Language translation and accessibility services • Contamination-reduction initiatives	Media invoices, campaign plans, samples of materials, attendance logs, cost summaries, examples of similar projects, peer reviewed research, case studies, or other reports supporting the basis for the project	Outreach focused on hazardous waste management or electronic waste management
Administrative Costs	• Staff time for program planning and reporting • Consultant or auditor fees • Training and capacity-building for data management • Preparation of funding applications and compliance reports • Software and IT licensing for tracking and analysis	Timesheets, consulting contracts, software licenses, budget/actual financial statements	General office administration; human resources costs unrelated to program delivery

2.3.3.7 Technology Assessment

SB 54 includes requirements related to allowable technologies and methods [PRC 42051.1(b) and Section 18980.4.1(d)], including limitations on the use of certain technologies. Please refer to the Materials Strategy and Covered Material Category Compliance Plan chapter for a description of CAA California-driven end market project funding.

Projects seeking reimbursement must meet California's definition of recycling [PRC 42041(aa)] to be eligible for a covered cost determination. SB 54 excludes certain types of technologies, including:

- Combustion
- Incineration
- Energy generation
- Fuel production, except anaerobic digestion of source-separated organic materials
- Other forms of disposal

Applicants whose projects do not rely on excluded technologies may describe the proposed technology without completing the full technology questionnaire. Applicants whose projects involve any excluded technologies must complete a more detailed technology review and provide, at minimum:

1. Technology Description: Functional overview, process flow diagram
2. Material Scope: Types of covered materials accepted, contamination tolerance
3. Inputs and Outputs: Energy use, chemical inputs, residual streams, end products
4. Environmental and Public Health Impacts: Air emissions, water discharges, analysis of the proximity of communities to identified public health impacts
5. Compliance Statement: Attestation addressing any excluded technologies
6. Operational Status: Location, throughput capacity, demonstrated performance
7. Financial Feasibility: Capital and operating costs, unit cost per ton
8. Community Impact: Identification of benefits or potential risks to Environmental Justice (EJ) Communities

2.3.3.8 Environmental Justice Assessment

Citation PRC 42051.1(j)(1)(G)

CAA California has an obligation to ensure that implementation of SB 54 avoids and minimizes negative environmental or public health impacts on EJ Communities. If a proposed project with potential negative environmental or public health impacts is located in or adjacent to an EJ Community, the applicant must provide:

1. An impact assessment identifying potential emissions, traffic, noise, or odor effects
2. A mitigation plan demonstrating how impacts will be avoided or reduced
3. Documentation of community consultation and support, such as letters from local organizations or public meeting summaries.

CAA California's review may include considerations detailed in the following table.

Table 5: Environmental Justice Assessment Criteria

Criterion	Considerations
Environmental Protection	Confirmation that all local, state and federal permits are in place and that the applicant is in good standing with overseeing regulatory bodies.
Public Health Safeguards	Are controls in place to prevent exposure to hazardous materials?
Economic Benefits	Will the project create local employment or training opportunities?
Access to Recycling Services	Does the project improve collection in underserved areas?
Community Engagement	Were residents consulted in planning and decision-making?

CAA California may reference CalEnviroScreen or other publicly available data sources when reviewing projects.

2.3.3.9 Standard Funding and Services Agreement

The California Funding and Services Agreement is a binding contract between CAA California and each applicant with projects approved for reimbursement. The California Funding and Services Agreement establishes terms and conditions for reimbursement, including financial management standards, reporting obligations and performance expectations.

One California Funding and Services Agreement is required per applicant. Each approved project is also governed by a separate Project Schedule defining scope, budget, and schedule. No project may proceed to contracting for reimbursement until CAA California has received an executed California Funding and Services Agreement.

The following table describes the type of requirements included in the California Funding and Services Agreement.

Table 6: Representative California Funding and Services Agreement Requirements

Topic	Requirement
Insurance and Liability	Maintain comprehensive insurance
Licensing and Compliance	Provide proof of business registration, applicable permits, and certifications
Customer Service	Meet standards for collection complaints and service delivery as detailed in the Project Schedule(s) (separate from any existing franchise agreement requirements)
Environmental Performance	Comply with all relevant federal, state and local environmental laws, rules and regulations
Data and Recordkeeping	Provide data and reports as outlined in the Project Schedule(s)
Financial Reporting	Submit invoices with supporting documentation and periodic summaries
Audit Access	Grant CAA California or its agents access to records for verification

2.3.4 Project Cost Review

Citations: Section 18980.8(g)(2); 18980.8(g)(3)

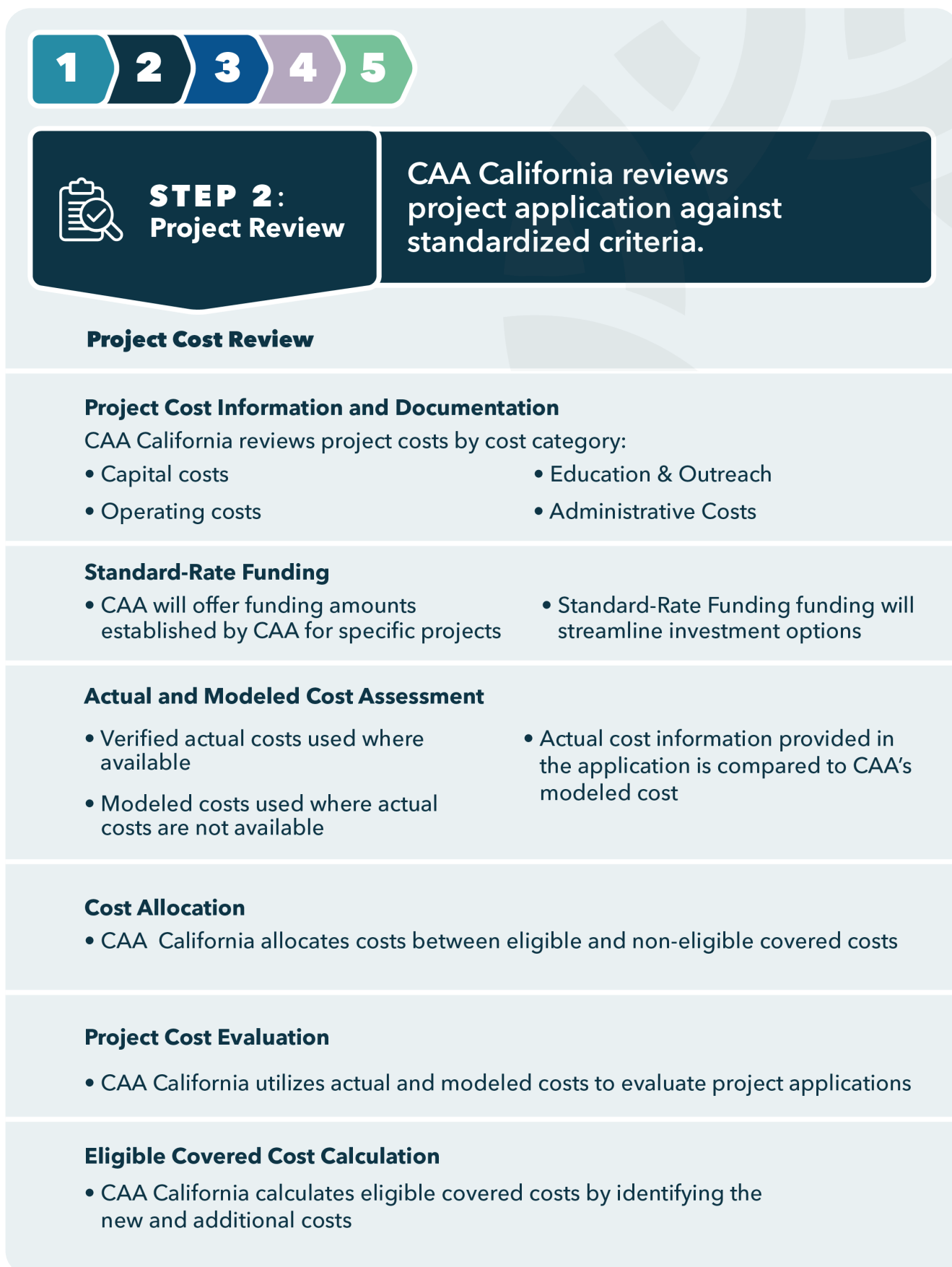
This section describes the process CAA California will use to review applicants' project cost information, assessing the project's cost and evaluating how much of the project cost is an eligible covered cost.

Applicants' cost data is collected through structured application forms. CAA California's reimbursement process ensures that all funding reflects eligible covered costs and is compliant with SB 54. The foundation of CAA California's review process for this determination is Section 18980.8(g), defining eligible covered costs as new and additional costs necessary to comply with SB 54, incurred after Jan. 1, 2023.

CAA California will work with applicants to clarify submitted cost information, request additional documentation, or recommend project modifications prior to issuing a final determination of eligible covered costs.

The following figure summarizes the project cost review process.

Figure 4: Reimbursement Process Step 2: Project Cost Review



2.3.4.1 Project Cost Information and Documentation

In the first stage of Step 2 of the reimbursement process, applicants must submit detailed information for their proposed project, including information about the type and the cost of the project. Illustrative examples of the required information can be found in Table 4: Cost Categories.

All information and documentation must be traceable to source records. CAA California reserves the right to audit submissions at any time before or after reimbursement.

2.3.4.2 Funding Options

CAA California will offer applicants two options for funding in the application process:

1. Standard-rate funding for specific project types
2. Actual and modeled cost funding, using an applicant's verified actual costs, or modeled cost to determine funding where actual costs are not available

Standard-rate funding reflects the known reimbursement cost parameters, allowing applicants that choose this approach to move through the cost evaluation process more efficiently using CAA California's pre-determined funding rates.

Actual and modeled covered cost funding relies on a detailed review of an applicant's baseline costs, project specific costs and supporting documentation. This funding pathway is generally intended for more complex projects, including new facilities, significant program changes or projects where predetermined standard-rate funding is not available.

Applicants may apply for either standard-rate funding (where offered) or actual and modeled cost reimbursement, depending on the nature of the project and information available to support the application. Similarly, qualified projects with cost incurred between Jan. 1, 2023, and Dec. 31, 2026, will be eligible for reimbursement through these funding pathways using project specific historical cost and operational information.

2.3.4.3 Standard-Rate Funding

For certain projects, CAA California will offer a standard-rate funding option, with funding pre-determined by CAA California. The purpose of this funding option is to offer applicants a streamlined funding option for recycling services with recognized positive outcomes to facilitate improvements to local programs as efficiently as possible.

Cost evaluation will be limited to the project itself, and payment will be based on a pre-determined fixed contract amount, with adjustments for key cost criteria such as local labor costs and local density.

The following are examples of new and additional MRF investments, collection program costs, E&O and administrative expenses that may be considered eligible candidates for standard-rate funding:

Table 7: Examples of Eligible Standard-Rate Funding Projects

Topic	Requirement
MRF equipment	• Optical sorting equipment • Film recovery equipment • Glass cleanup equipment • Screening technology
E&O	• Communications about CMCs added to programs such as cart labeling, and program education materials • Intervention activities focused and targeted at contamination reduction such as cart inspection and tagging of repeat offenders and related enforcement
Collection costs	• Addition of specified CMCs to curbside collection programs, adjusted for local criteria such as labor rates and route densities. • On-board cart/bin inspection software and hardware
Drop-off location costs	• New drop-off containers • Allocated cost of equipment needed to load/unload CMCs at drop-off locations • On-site signage
Administrative	• Administrative allowance is set as a percentage of program cost for reporting to CAA California • A payment for reportproviding data not associated with a project application/fund-ed project.

CAA California may modify and expand the list of eligible costs available for standard-rate funding over time. This could occur if projects demonstrate results that reflect different system needs. For example, if a pilot project in a category not already on this list demonstrates success, CAA California may create a standard rate funding option for that project type to drive progress toward SB 54 targets.

CAA California will maintain a schedule of these standard rates on the Service Provider Portal for entities to consider as they begin the application process. CAA California will adjust the pre-determined funding based on criteria such as local labor costs and route density.

Applicants can shift their funding approach during the application process. For example, if they start with the standard-rate funding approach but choose not to accept CAA California's pre-determined funding option, they can shift to the actual and modeled cost funding approach. However, once a Project Schedule has been signed, the standard-rate payment will be set for the duration of the agreement, pursuant to Section 18980.8(g).

For all other funding, applicants will proceed to the actual and modeled cost assessment process.

2.3.4.3 Actual and Modeled Cost Assessment

Projects that do not qualify for or opt for standard-rate funding must go through CAA California's cost evaluation process.

The availability and quality of recycling cost data vary significantly across California's local jurisdictions and programs. To address these challenges, CAA California will utilize a three-tiered data approach to assess project costs: applicant-submitted information, publicly available data, and data from CAA California's System Mapping and Cost Modeling Study. The primary cost determination methods are:

- **Verified Actual Costs:** Where complete and verifiable, applicant-provided baseline and project costs will be the primary basis for evaluating a project's covered cost eligibility.
- **Modeled Costs:** Where actual costs are incomplete, unavailable, or unreliable, CAA California may use modeled costs to estimate baseline costs or assess the cost compared to other similar systems or programs. Common reasons include limited historical cost tracking, incomplete allocation details across service lines, new programs without cost history, lack of information or staff time for resource-constrained entities, or limited disclosure provided by service providers.

For modeled costs, CAA California relies on information developed through its System Mapping and Cost Modeling Project, which established unique collection and MRF cost estimates for local jurisdictions and facilities across the state.

Primary criteria used to establish modeled costs for collection include:

- Labor costs
- Route density (stops per road mile)
- Type and volume of materials collected
- Collection frequency
- Transport distance to MRF
- Type and age of collection equipment

Primary criteria used to establish modeled costs for MRFs include:

- Labor costs
- Level of equipment automation
- Volume of tons processed
- Type and composition of material processed
- Distance to markets and ports
- Residue disposal costs

CAA California relies on statewide systems analysis and cost modeling to estimate California's total recycling system costs. These analyses inform the program plan's budget estimates and help ensure that the program plan includes sufficient funding to support the state's recycling and material management requirements under SB 54.

Furthermore, these models provide a defensible, consistent benchmark (such as per-household or per-ton metrics) to evaluate new reimbursement claims. They serve as a vital means to identify unusually high- or low-cost claims that may require further substantiation. CAA California will update these models periodically to reflect shifts in the cost of living, operating practices, and evolving systems and service levels.

2.3.4.4 Cost Allocation

Applicants must provide detailed cost data to establish the specific project costs directly attributable to covered versus non-covered costs. CAA California recognizes that many proposed projects will enhance the recycling of both CMCs and non-CMCs, such as California Redemption Value (CRV) materials and non-CMC plastics (e.g., non-packaging materials such as bulky plastic toys). Investments such as MRF processing equipment or E&O campaigns often impact the total volume of materials collected beyond the scope of SB 54. Additionally, projects may be situated at facilities that manage non-covered materials, such as out-of-state MRFs processing materials from multiple jurisdictions.

To manage these scenarios, CAA California will utilize a formal process to allocate covered versus non-covered project costs through measurable factors such as tonnage, time or activity. This process includes identifying a project's anticipated ratio of covered to non-covered materials to determine final eligible funding. For projects benefiting both CMCs and non-covered materials, CAA California requires cost allocations to be proportional to the measurable factors used. This cost allocation would be accomplished through unit allocation by tons, by time, or by cost. If an applicant's allocation data is incomplete, CAA California may apply standard default ratios derived from its modeled costs.

Furthermore, applicants are expected to allocate costs among multiple impacted parties (including local jurisdictions, MRFs, and service providers) when a reimbursement request is relevant to multiple parties, or when it applies to only a portion of the material being recycled. Common such scenarios include:

- Multiple MRFs: CMCs collected from a single jurisdiction are delivered to multiple MRFs
- Consolidated Facilities: MRFs receive materials from separate collectors or multiple local jurisdictions
- Shared Services: Allocations between a jurisdiction and its private service providers where funding may require allocation to both entities.
- Multiple Service Providers: Service in a single jurisdiction is provided by multiple private service providers.
- Generator Segregation: Where a collection truck services any combination of single-family residences, multifamily dwellings, and commercial businesses, CAA California will allocate tonnage percentages to each sector type based on actual applicant sampling or CAA California-provided characterization studies
- Cross-Border Logistics: When tonnage from a California jurisdiction is delivered to an out-of-state MRF, the facility must isolate and allocate the costs specifically associated with processing materials from California

The table below provides examples of how costs are allocated.

Table 8: Cost Allocation

Project Example	Cost Allocation Method
MRF Upgrade: Processing 80% CMCs and 20% non-CMCs	New and additional costs incurred for the 80% of eligible capital and operating costs may qualify for reimbursement
Out-of-State MRF: The local jurisdiction relies on an out-of-state MRF to process its recyclables; when additional CMCs are added to the local jurisdiction's recycling program, the MRF incurs additional costs to handle these new materials, which account for 20% of the MRF's total tons	The out-of-state MRF will isolate the new costs associated with the additional tons of new and additional CMCs it processes from the California local jurisdiction. Reimbursement will be allocated to only the new and additional cost of new and additional CMCs from the California local jurisdiction
E&O: Campaign shared among multiple local jurisdictions addressing trash, recycling and organics	Costs allocated based on proportion of content that addresses CMCs, as well as size of audience targeted or reached in each local jurisdiction
Transfer Station: Improvements serving mixed loads with tracking by weight	Eligibility based on verified scale data for CMC tons
Organics Processing Facility: Processing a mix of compostable packaging and food service-ware, food waste and green waste	Costs allocated based on proportion of CMCs (compostable packaging and food serviceware)

2.3.4.5 Project Evaluation Process

After applicants' project costs are allocated between covered and non-covered costs, CAA California will utilize both actual and modeled costs to evaluate the overall project cost, and the costs that are eligible covered costs. This part of the process ensures that reimbursement for covered costs is grounded in verifiable data. The evaluation process used depends on the quality and availability of the data provided:

- **Actual Cost Evaluation:** Applications submitted with validated actual costs are evaluated directly against those figures. During this process, CAA California compares the proposed actual costs to its internal modeled benchmarks. This comparison allows CAA California to contextualize the application's specific labor rates, equipment types, route density and other factors, ensuring a nuanced understanding of the project's unique operational characteristics.
- **Modeled Cost Evaluation:** Recognizing that some applicants may have insufficient cost information, CAA California utilizes modeled costs to assess the new and additional costs of a proposed project. When actual cost data are unavailable, these costing studies – derived from the System Mapping and Cost Modeling Project – provide a standardized and defensible basis for evaluation.
- **Hybrid Evaluation:** In many cases, a hybrid approach is required. For example, an applicant may provide comprehensive documentation for new capital and labor costs for a MRF upgrade but lack sufficient historical data for the baseline costs of pre-project operations. Because establishing a baseline is essential to calculating incremental costs, CAA California will supplement the applicant's data with modeled costs to fill these gaps.

In these hybrid scenarios, CAA California will follow a structured reconciliation process: it utilizes actual costs where documentation is complete, applies modeled benchmarks where data is missing or unreliable, and identifies any cost outliers. CAA California then will work collaboratively with the applicant to reconcile these discrepancies before finalizing the eligible covered cost determination.

This multi-tiered approach serves a dual purpose: it mitigates the risk of inflated claims by anchoring them to data-driven benchmarks, and it ensures that smaller or resource-constrained applicants are not excluded from the program due to a lack of modern cost-accounting systems. Over time, as more actual cost data is reported through the Service Provider Portal, CAA California will recalibrate these models to ensure data accuracy.

2.3.4.6 Eligible Covered Cost Calculation

CAA California calculates eligible covered costs by identifying the new and additional costs required to implement an approved project, including reasonable return on invested capital, where applicable. This calculation is based on the difference between pre-project baseline costs, including the costs associated with managing baseline quantities of CMCs, and the costs associated with managing the anticipated additional quantities of the same or additional CMCs following project implementation. Eligible covered costs include only those costs, adjustments, and capital returns directly attributable to SB 54 requirements and the investments necessary to achieve compliance

Eligible covered costs are assessed at the project level and are grounded in five core elements:

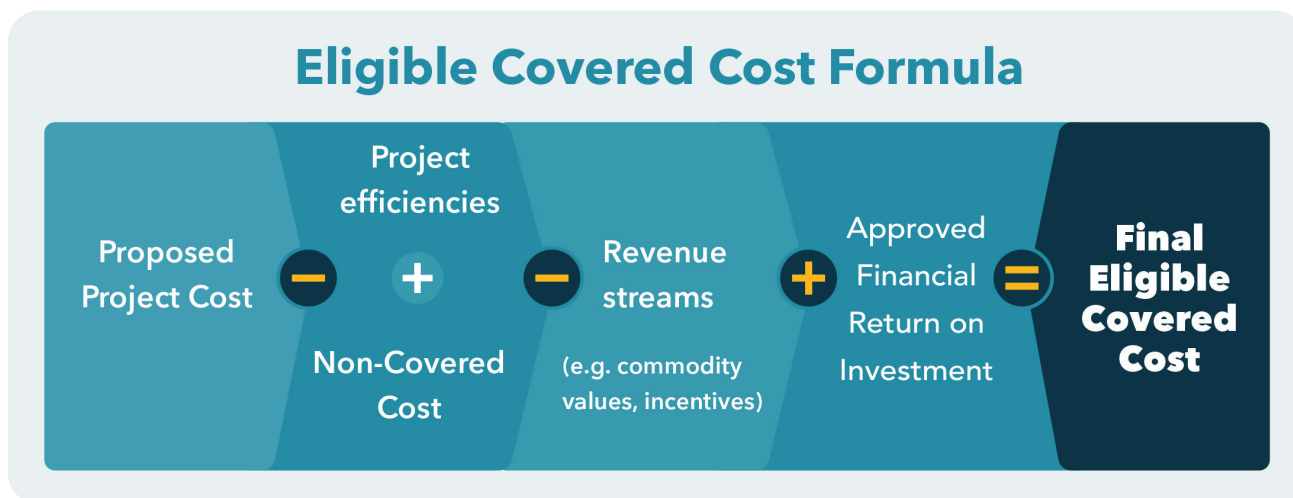
1. Proposed Project Costs (may include capital and/or operating costs)
2. Non-Covered Cost Adjustments (where applicable)
3. Documented Efficiencies or Cost Savings
4. Revenue Offsets (including commodity revenue and other funding sources such as grants or other reimbursements)
5. Reasonable financial return on investment (where applicable)

Using these inputs, CAA California evaluates the net new and additional costs associated with the proposed project, including the extent to which project revenues, efficiencies, and reasonable returns offset the investment required. If the project's new and additional costs, net of revenue and efficiencies, do not deliver reasonable financial returns, then CAA California may provide additional funding to cover the gap.

CAA California's cost analysis focuses only on those costs and savings that are directly associated with and impacted by the proposed project and does not constitute a comprehensive cost-benefit analysis of an applicant's overall program or facility operations. The purpose of this calculation is to isolate the portion of project costs that qualify as new and additional under SB 54 and is therefore eligible for reimbursement.

The eligible covered cost is calculated using the formula in Figure 5 below:

Figure 5: Eligible Covered Cost Formula



For purposes of the eligible covered cost calculation, each component of the formula is defined and applied as described below. These elements are evaluated at the project level and must be supported by documentation sufficient to support audit and regulatory review:

- Proposed project cost includes documented capital, operating, education and outreach, and administrative costs required to implement the approved project.
- Non-covered costs include cost components outside the scope of SB 54 or attributable to materials or services not defined as CMCs.
- Efficiencies or cost savings include verifiable reductions in pre-project costs directly attributable to the proposed project (e.g., labor savings, route optimization, avoided disposal costs, operational streamlining). Recurring efficiencies may be evaluated over an appropriate amortization period.
- Additional revenue associated with the project, such as commodity values, grants, external funding and CAA California incentives, where applicable.
- CAA California will account for reasonable financial return on investment when reimbursing non-governmental entities. Details will be included in the Project Schedule and may include standardized definitions and mechanisms to assess reasonableness.

Treatment of Commodity Revenues

Commodity values are a revenue source that may be considered an offset to new and additional project costs, depending on the characteristics of the CMCs and associated market risk. Because commodity volumes, values, and end market stability vary significantly across CMCs, CAA California evaluates the treatment of commodity revenue on a project-specific basis.

In determining whether and how commodity revenues are applied as an offset, CAA California may consider:

- Whether the material is low-volume, low-value, or subject to high market volatility
- Whether commodity revenue meaningfully reduces project risk or is necessary to incentivize participation by processors
- The extent to which retaining commodity revenue supports the feasibility of adding or expanding processing for specific CMCs

Where appropriate, CAA California and applicants may enter into commodity revenue-sharing agreements, particularly for materials or projects where revenue recovery is uncertain or where revenue retention is necessary to enable implementation.

Strategic and Equity-Based Considerations

CAA California may, in a discretionary manner, waive commodity revenue offsets altogether for projects that are identified as high priority, equity-driven, or system transforming. This may include projects serving rural, remote or disadvantaged communities, or projects that address critical system gaps where market incentives alone are insufficient to achieve SB 54 targets.

All such determinations will be documented as part of the eligible covered cost determination and applied consistently with the principles described in section 2.4.4 Notification of Approved Covered Cost.

2.3.5 Supporting Strategic Objectives

CAA California will identify and support projects that it considers crucial to achieving SB 54 goals. An example is CAA California's flexible film recycling strategy, which is addressed in the Materials Strategy and Covered Material Category Compliance Plan chapter. Incentives may be used to drive investments in secondary processing and end market development, and other innovations that attract and build businesses and create a stronger and more resilient recycling sector and supply chain in California.

2.4 Step 3: Covered Cost Determination

Once eligible covered costs have been evaluated in accordance with Steps 1 and 2 of the reimbursement process, CAA California proceeds to Step 3: Eligible Covered Cost Determination. This step represents the formal decision point at which CAA California confirms, in writing, whether a proposed project qualifies for reimbursement under SB 54 and the extent to which submitted costs are determined to be eligible covered costs.

This determination fulfills CAA California's obligations under PRC 42051.1(g) and Section 18980.8(g). It provides applicants with a clear, documented outcome of the reimbursement review process and establishes the basis for subsequent contracting and payment.

Figure 6 below provides a high-level overview of the eligible covered cost determination process.

Figure 6: Reimbursement Process Step 3: Covered Cost Determination

Step 3 does not introduce new criteria; rather, it consolidates the outcomes of Steps 1 and 2 into a final, integrated determination. In making an eligible covered cost determination, CAA California relies on:

- The information submitted by the applicant through the Service Provider Portal
- Any clarifications, revisions, or project adjustments agreed to with the applicant during the review process
- The application of eligibility, evaluation, and cost determination criteria described in sections 2.3.3 Non-Financial Project Review and 2.3.4 Project Cost Review.

2.4.1 Applicant and Project Eligibility Confirmation

The first part of this step is for CAA California to confirm that:

- The applicant qualifies as an eligible entity under SB 54
- The proposed project aligns with SB 54 requirements, including consistency with California's waste hierarchy and applicable recycling and composting targets

Projects that meet these requirements proceed to the next step.

2.4.2 Confirmation of Non-Financial Requirements

CAA California then confirms that the project satisfies all applicable non-financial criteria, including:

- Completeness and accuracy of project information
- Alignment with existing recycling systems and avoidance of conflict with franchise or service agreements
- Coordination with impacted jurisdictions, as applicable
- Consistency with identified system needs and relevant needs assessments
- Identification and quantification of CMC tons
- Compliance with SB 54 technology requirements
- Compliance with Environmental Justice requirements
- Execution of CAA California's Funding and Services Agreement

If non-financial requirements are satisfied, CAA California confirms that the project is eligible to proceed to final cost determination.

2.4.3 Final Project Cost Determination and Allocation

CAA California then confirms the final project costs by:

- Reviewing and accepting the final project plan
- Validating submitted cost documentation
- Confirming any project revisions or cost adjustments made during review
- Identifying cost efficiencies, offsets, or savings directly attributable to the project
- Applying approved cost allocations between covered and non-covered materials or activities

If cost allocations or adjustments are made, CAA California confirms that these have been reviewed with, and acknowledged by, the applicant. CAA California then determines the portion of the project cost that qualifies as an eligible covered cost.

2.4.4 Notification of Approved Covered Cost

2.4.4.1 CAA California Issues Standardized Letter of Determination

As required under Section 18980.8(g)(3), CAA California issues a standardized written determination for each reimbursement request. This written determination documents CAA California's final eligible covered cost determination. Each determination is issued at the project level and may encompass multiple cost elements or categories included in the reimbursement request. The determination confirms the overall eligibility decision and the total amount of eligible covered costs associated with the project.

The written determination includes:

- Applicant and project identification
- A description of approved project activities
- Identification of eligible and ineligible cost components
- The total approved eligible covered cost and applicable reimbursement structure
- The rationale for approval, modification, or exclusion of costs
- Any conditions, contingencies, or implementation requirements tied to the approval.

Where detailed cost schedules, milestones, or payment structures are required, these may be incorporated into the Project Schedule or associated contractual attachments.

Projects that are determined not to include eligible covered costs will receive a written explanation.

2.4.4.2 Notification to Applicant and Impacted Jurisdictions

CAA California provides written notification of eligible covered cost determinations to the applicant. Where a determination involves reimbursement to a service provider operating within a local jurisdiction, CAA California will also provide notification to the impacted jurisdiction in accordance with Section 18980.8(g)(8). This notification will identify the nature of the approved project and the amount of eligible covered costs associated with the determination. The written determination serves as the formal record of CAA California's decision and forms the basis for this notification.

2.4.4.3 Timeliness of Notification

CAA California defines a reasonable notification period as a function of project complexity and the completeness of application materials. While timelines may vary, CAA California's goal is to provide predictable and transparent processing periods.

Following program plan approval, CAA California will issue written status updates to applicants for any application review exceeding 60 days and maintain public metrics on processing times.

CAA California's final covered cost eligibility review focuses on:

- Confirming eligibility and consistency with all criteria included in the application process (these criteria establish compliance with SB 54 funding requirements)
- Ensuring cost allocations between covered and non-covered materials are justified
- Verifying that project timing, scale and methodology align with operational realities

CAA California may reach out to the applicant with questions about the project, or with suggested modifications to the project. This stage is iterative and collaborative; CAA California and the applicant may collectively refine project details.

2.4.4.4 Project Adjustments and Negotiations

CAA California will evaluate proposed adjustments to the scope of the project, including facility design, equipment modifications, tonnage assumptions, materials additions or subtractions, project phasing, the overall size of the project, service level changes, or other operating modifications. If CAA California and the applicant agree to any adjustments, the applicant may be asked to submit an updated project description. CAA California will review the revised submission and confirm final cost allocations before proceeding to determination.

2.4.4.5 Confirmation

Depending on the size and complexity of the project, and changes made from the original project application, CAA California and the applicant may conduct a final project confirmation meeting before written determination is issued. The meeting's purpose is to verify that:

- All cost and project revisions are accurately reflected
- Covered versus non-covered cost allocations are agreed upon
- Reporting obligations are understood
- Payment conditions and milestones are finalized

Following verification, the agreed-upon scope, allocations, milestones, and payment terms will become part of the final Project Schedule(s) incorporated into the California Funding and Services Agreement.

2.5 Step 4: Project Negotiation and Contracting

Execution of a Project Schedule marks the transition from project approval to implementation. At this stage, the approved project scope, eligible covered cost, and associated conditions form the basis of binding contractual documents that govern performance, reporting, and reimbursement.

This section outlines CAA California's approach to contract negotiation and contracting, including the structure, content, and administration of Project Schedules and associated reimbursement mechanisms. CAA California's contracting framework is designed to ensure that all reimbursed projects operate under consistent, transparent, and enforceable terms that safeguard public and producer investments while allowing flexibility to accommodate the diverse range of recycling and composting projects implemented across California.

Figure 7: Reimbursement Process Step 4: Project Negotiations and Contracting



Project negotiation and contracting consists of five sequential components, each with a defined outcome supporting project implementation.

Table 9: Contracting Process Overview

Step	Activity	Outcome
1	Contract drafting and review	Project Schedule package
2	Contract terms negotiation	Confirmation that statutory and administrative requirements are addressed in the contract
3	Payment conditions	Establishment of payment types and timelines
4	Supporting contract documents	Documentation of contract requirements
5	Contract signature and payment activation	Execution of legally binding contract Commencement of funding and milestone payments

2.5.1 Contract Drafting and Review

Applicants with approved projects will execute the California Funding and Services Agreement and any necessary schedules, which together form the contract package.

The California Funding and Services Agreement is executed once per applicant and applies to all of the applicant’s approved individual projects. The California Funding and Services Agreement establishes general contractual obligations across projects, including legal compliance, insurance requirements, recordkeeping and audit rights, indemnification, assignment clauses, and other administrative and compliance requirements consistent with both state and CAA California standards.

Schedules define specific requirements and are tailored to the approved project's scope, implementation approach, and reimbursement structure. These contract schedules outline the expectations of both parties and identify final eligible covered cost determination, operating expectations, reporting requirements, payment terms, and other unique project requirements.

Execution of the California Funding and Services Agreement follows the completion of the application and is required before a Project Schedule may be finalized and before an eligible reimbursement may occur.

CAA California will provide standardized contract templates to streamline review and ensure consistency across projects. Where project-specific modifications are required, legal and financial reviews will be conducted to confirm compliance with SB 54, alignment with available funding, and consistency with CAA California accounting standards. Project Schedule components are summarized in Table 10.

Table 10: Project Schedule Components

Component	Description and Purpose
Funding request summary	Project title, location and applicant entity
Approved eligible cost determination	Includes the final eligible covered cost decision, itemizing approved amounts and reimbursement mechanism
Terms and definitions	Establishes project start and end dates, key milestones and definitions consistent with statutory terminology
Project scope of work	Outlines objectives, performance targets and operational parameters (e.g. tons collected, households served, processing throughput)
Operating requirements	Specifies technical or service-level expectations unique to the project type (collection, processing, outreach, etc.)
Performance standards	Implementation milestones, operational performance metrics, delivery of CMCs to REMs, participation rates, contamination management standards, construction or service launch schedules and other performance metrics as defined in the Project Schedule
Incentives	Defines available performance incentives, amounts and criteria
Monitoring and reporting	Defines data submission frequency, performance metrics and evaluation protocols
Payment terms	Details reimbursement method (lump sum, per ton, per household or milestone), required documentation and payment schedule
Compliance and audit clauses	Grants CAA California access to verify expenditures and performance

CAA California will work with applicants to finalize Project Schedule terms needed to support implementation. This phase is intended to clarify expectations and address practical considerations without reopening eligibility or cost decisions.

Applicants are required to submit reports through CAA California's Service Provider Portal, which may include, but are not limited to:

- Expenses summarized by cost category
- CMC tonnage collected, processed, and marketed
- Number of participating households or businesses
- Identification of issues affecting scope or timeline

Frequency of reporting will depend on the project type. CAA California will review these reports to verify ongoing eligibility and authorize subsequent payments. Failure to report within the specified period may result in suspension of reimbursement until compliance is restored.

Applicants must retain auditable records for at least five years following final reimbursement. CAA California may conduct desktop or field audits to confirm accuracy of reported costs and performance data. Identification of ineligible costs or non-performance will trigger corrective action, up to and including repayment and future funding suspension. CAA California may suspend or terminate a Project Schedule if contractual or reporting requirements are not met, fraudulent or misleading information is identified, or project activities cease without authorization. CAA California will provide written notice and an opportunity to address deficiencies prior to termination.

Upon project completion, applicants must submit documentation demonstrating completion and financial reconciliation. CAA California will verify completion.

2.5.2 Contract Terms Negotiations

When applicants request adjustments to Project Schedule terms, CAA California will engage in a collaborative negotiation process focused on clarifying expectations and facilitating implementation. Contract negotiations are not meant for applicants to revisit funding levels already established through the covered cost determination, except where necessary to reflect approved scope changes.

These contract term discussions may address:

- Scheduling and sequencing of project milestones
- Adjustments to accommodate local permitting or procurement timelines
- Coordination with parallel funding sources
- Refinement of reporting tools and data definitions

2.5.3 Payment Conditions

Reimbursement payments are issued for approved eligible covered costs after execution of the Project Schedule. Payment conditions are designed to ensure that reimbursements are tied to verified performance, cost incurrence or delivery of agreed-upon project outcomes while complying with CAA California's financial controls and US GAAP accounting standards.

While payment approaches may vary by project type, scale, and implementation timing, all payments are subject to uniform requirements for documentation, verification, and traceability.

CAA California may employ different payment types to support effective implementation across a diverse range of projects, including capital investments, operational services, E&O programs, and system-enhancing initiatives. The payment type does not alter the amount of approved eligible covered costs but rather defines how and when reimbursement is issued.

Project Schedules specify the payment type applicable to the approved project, including, but not limited to, the examples summarized in Table 11.

Table 11: Example Reimbursement Payment Types

Payment Type	Description	Typical Application
Advance Payment	Up-front reimbursement; subject to strict reporting and holdback/clawback conditions	Select capital investments, resource-constrained applicants
Milestone Payment	Payment released upon verified completion of defined project milestones	Capital projects, infrastructure or multi-phase initiatives
Unit-Based Payment	Per household (collection) or per ton (MRF processing) payment submitted monthly	Operational payments
Standard-Rate Funding Payment	Per-unit payment for services provided, submitted monthly, or one-time payment for capital investments	CAA California-determined payment for specific services, adjusted for unique local jurisdictional and MRF costs
Periodic Payment	Reimbursement based on actual expenditures submitted monthly or quarterly	Operational and E&O programs
Automated Portal Payment	Streamlined electronic payment for pre-approved, low-risk projects	Recurring E&O projects
Incentive Payment	Payment over and above costs to drive additional effort or reward success	- Additional per-ton fee paid to handle high-risk materials - Reduction in contamination rates beyond performance expectations

Requests for payment are submitted through CAA's Service Provider and financial portals, and must include invoices and supporting documentation, along with any project progress information required in the terms of the Project Schedule. CAA California will review submitted materials to verify consistency with the approved project scope, eligible covered costs, and reporting requirements prior to authorizing payment.

CAA California may withhold, delay, or suspend payment where documentation is incomplete, performance requirements are not met, or compliance issues are identified. All reimbursements are recorded within CAA California's financial systems and are traceable to the original eligible covered cost determination and associated Project Schedule, supporting audit and oversight requirements.

2.5.4 Supporting Contract Documents

Depending on complexity, Project Schedules may include additional documents, such as:

- Detailed budget and cost allocations
- Performance metrics and reporting templates
- Insurance certificates and licensing proof
- Closure and Transfer Plan confirmation (if applicable)
- Environmental and community impact mitigation plan

2.5.5 Contract Signed and Payment Activated

Any changes to an executed Project Schedule require a formal Contract Amendment to comply with SB 54 requirements and the covered cost determination. Amendments must be reviewed, approved, and executed by both parties prior to implementation of the proposed changes and are documented within CAA California’s contract management system.

Once the Project Schedule has been fully executed and any required amendments are finalized, the contract becomes legally binding. At that point, the project may proceed with implementation, and reimbursement issued in accordance with the approved payment structure, performance requirements, and contract terms.

2.6 Step 5: Payment of Eligible Covered Costs

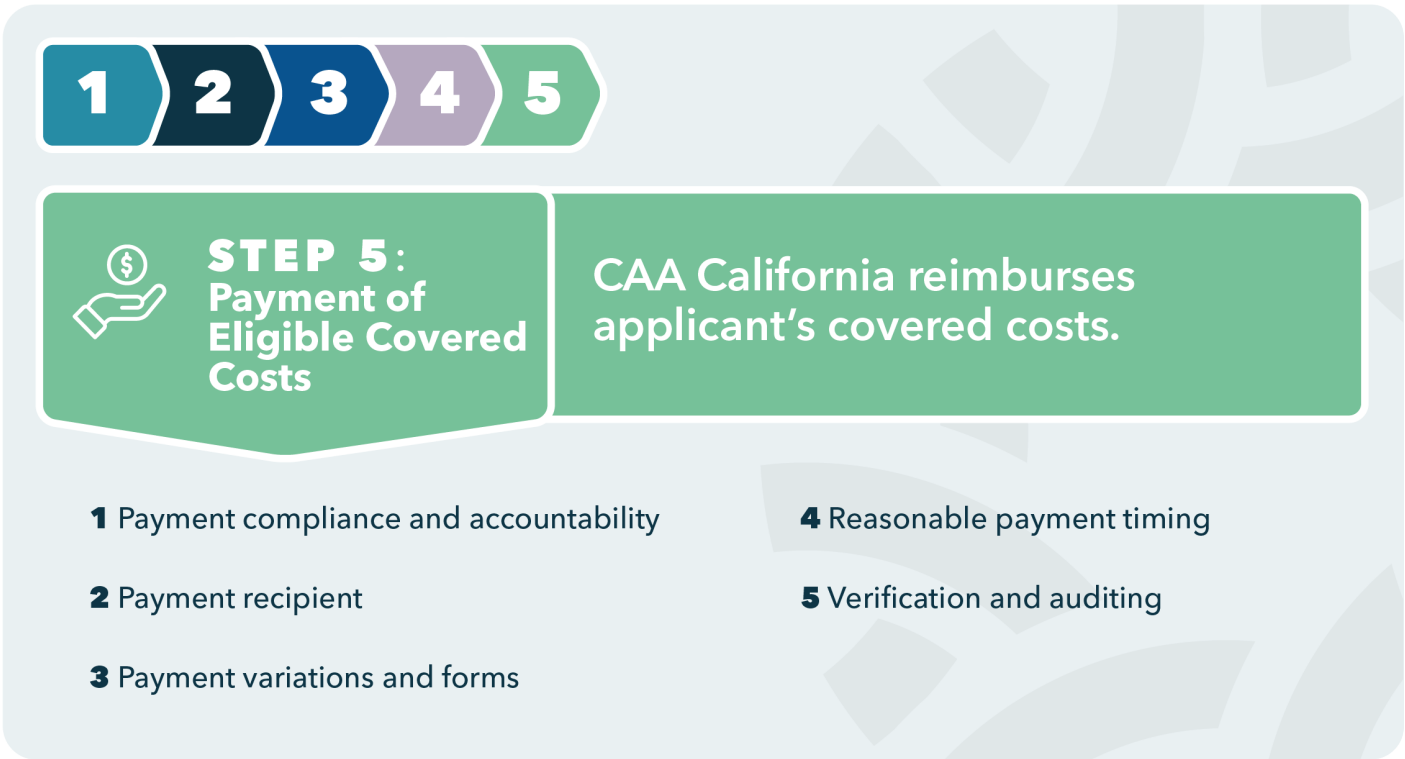
Citation: Section 18980.8(g), Section 18980.8

This section describes how approved eligible covered costs are reimbursed, including payment recipients, the basis on which payments are issued, applicable accounting controls, and reimbursement timing. CAA California’s payment system is designed to be transparent, auditable, and compliant with SB 54 requirements.

Reimbursement payments are issued only after all the following conditions are met:

- 1. Issuance of an Eligible Covered Cost Determination, as required by 18980.8(g)
- 2. Signed Contracts and Execution of a Project Schedule
- 3. Submission and approval of required invoices, performance data or milestone verification

Figure 8: Reimbursement Process Step 5: Payment of Eligible Covered Costs



2.6.1 Payment Compliance and Accountability

CAA California's reimbursement process has been developed to ensure that reimbursement complies with SB 54 requirements, avoids duplication of costs and maintains robust financial controls throughout the reimbursement process. To support CAA California's expectations for compliance and accountability, only costs that have been formally reviewed and determined to be eligible covered costs are reimbursed.

To meet this requirement, CAA California's financial system ensures that:

- Every reimbursed cost submitted is supported by a written determination
- Only the approved portion of a cost is reimbursed
- All determinations are recorded, traceable, and retained for audit and regulatory review.

These safeguards ensure that reimbursements are limited to new and additional costs incurred after Jan. 1, 2023, and are directly attributable to meeting the requirements of SB 54. CAA California will ensure that reimbursement funds are used exclusively to advance SB 54 objectives.

2.6.1.1 Prevention of Duplicative or Ineligible Payments

CAA California's payment system is designed to prevent costs from being reimbursed more than once or through multiple entities. Reimbursement claims are reviewed to confirm that eligible covered costs do not duplicate:

- Ratepayer-funded base services
- Franchise or contract payments
- Existing federal or state grants
- CRV revenues (i.e., CalRecycle's refund value per commingled pound payment or Quality Incentive Payment Program payments)
- Previously funded capital or administrative costs
- Other revenue sources such as third-party subsidies or grant funding

CAA reimburses only the net costs of eligible SB 54 activities defined as the total eligible cost minus any amounts received, awarded, or reasonably expected to be received from any other funding source for the same activity. Submitting a claim for any portion of the costs already funded by another source will not be funded.

To support this, CAA California may require supporting documentation such as:

- Franchise agreements
- Grant agreements
- Budget schedules
- Audited cost-of-service statements
- Prior-year allocations or depreciation schedules

Where CAA California identifies any duplication, reimbursement amounts will be adjusted to exclude those costs.

2.6.1.2 Notification to Local Jurisdictions

Consistent with Section 18980.8(g)(8), CAA California will provide written notification, including the nature and amount of the approved costs, to impacted local jurisdictions when a service provider receives an eligible covered cost determination.

2.6.1.3 Cost Determination

CAA California will evaluate costs to determine which portions qualify as eligible covered costs and which portions are not. Each determination will be documented in writing and provided to the applicant and, where applicable, to local jurisdictions. This ensures full transparency regarding which costs are reimbursable.

2.6.1.4 Payment Tied to Verified Performance

Payments will be tied directly to documented invoices, as described in the Project Schedule. Performance payments are based on either:

- Lump sum or project milestones payments
- Unit-based payments according to the quantity of covered materials handled for the invoice period

Verification of performance will be supported by shipping receipts, paid invoices, photos, or other documents as described in the Project Schedule.

2.6.1.5 Audit and Verification

CAA California will conduct periodic audits to verify reimbursed costs, confirm contractual compliance, and comply with SB 54 requirements. Audit activities may include invoice review, validation of reported tonnage or participation data, verification of facility or equipment installation, and confirmation of environmental justice compliance.

Applicants are required to retain documentation for the duration specified in the California Funding and Services Agreement and any relevant Project Schedule. CAA California maintains audit records to support a transparent and accountable reimbursement system.

2.6.2 Payment Recipient

Unless otherwise specified in a Project Schedule, reimbursement payments are issued directly to the applicant, defined as the entity that is financially responsible for the project and that incurs the associated eligible covered costs.

2.6.2.1 General Payment Rules

In most cases, the payment recipient is the entity that both performs the funded work and incurs the associated new and additional costs. For publicly-operated programs, payments are issued to the local jurisdiction. Where a private service provider performs services under contract to a local jurisdiction, reimbursement may be issued directly to that provider if it is the financially responsible party for expenses associated with the services provided (e.g., purchases and owns equipment, or pays labor directly).

Unless otherwise specified in the applicable Project Schedule, reimbursement for MRF-related costs will be issued to the entity financially responsible for the approved costs.

2.6.2.2 Accountability in Multi-Party Projects

Projects that involve multiple jurisdictions, service providers, or shared assets require additional coordination to clarify who is reimbursed. In these cases, the applicant must demonstrate that participating entities agree on the reimbursement structure and designated payment recipient.

2.6.2.3 Transparency in Recipient Designation

To ensure transparency, accountability and regulatory compliance, the entity designated to receive reimbursement is formally identified and confirmed at three points in the reimbursement process:

1. The California Funding and Services Agreement establishes the overarching legal framework governing participation in the reimbursement program and identifies the eligible entity authorized to receive reimbursement under SB 54.
2. CAA California's written covered cost determination restates the approved payment recipient and the associated cost determinations.
3. The Project Schedule(s) identifies the entity responsible for implementing the approved project and specifies the entity authorized to receive reimbursement for eligible covered costs associated with that project.

This reduces ambiguity, supports auditability, and ensures alignment among CAA California, the applicant, and any impacted local jurisdictions.

2.6.3 Payment Variations and Forms

2.6.3.1 Reimbursement versus Pre-Payment

This section explains the distinction between standard reimbursement and limited pre-payment options, including when each may be used and how CAA California manages financial and operational risk.

Reimbursement is the default payment approach under SB 54. Under this model, eligible entities are reimbursed for documented expenditures incurred in accordance with approved Project Schedule and eligible covered cost determinations. Reimbursement supports strong financial controls, reduces the risk of overpayment, and aligns with established accepted accounting practices.

CAA California recognizes that some resource-constrained entities may face barriers to implementing approved projects without access to upfront funding. In limited and defined circumstances, CAA California may offer pre-payment to support project implementation. Any use of pre-payment is subject to enhanced accountability, verification, and risk-mitigation measures and does not reduce compliance, reporting or performance obligations.

2.6.3.2 Reimbursement (Default Payment Method)

When the reimbursement payment method is used, the applicant incurs eligible covered costs within the approved project scope and submits invoices or performance data through CAA's online portals. CAA California validates submitted information against the eligible covered cost determination and the Project Schedule prior to issuing payment.

This approach supports strong fiscal oversight by ensuring that reimbursement is tied to verified expenditures or performance. It minimizes the risk of overpayment or underpayment, supports auditability, and aligns with established public-sector accounting practices. Reimbursement also enables CAA California to confirm that costs remain consistent with the approved project scope, contractual obligations and SB 54 requirements throughout implementation.

2.6.3.3 Pre-Payment (*Limited and Conditional Method*)

Pre-payment may be offered in limited circumstances, at CAA California's sole discretion, to support participation by entities that lack the financial capacity to carry significant upfront costs, such as:

- Resource-constrained jurisdictions with limited cash reserves or seasonal revenue cycles
- Small or independent private haulers and processors lacking access to financing or credit for capital purchases
- Tribes with funding restrictions or limited borrowing capacity

Pre-payment is intended to remove barriers for eligible applicants while maintaining appropriate safeguards. CAA California will evaluate each pre-payment request based on:

- Financial need: Documented inability to carry costs upfront whether the project requires upfront cash (e.g., equipment purchase, down payments, deposits or mobilization fees)
- Timing constraints: Whether reimbursement would materially delay or prevent implementation of a project critical for meeting SB 54 requirements
- Risk assessment: CAA California will evaluate whether issuing pre-payment presents material risk to project completion. This may include reviewing previous performance under CAA agreements (if applicable) and confirming that the applicant has sufficient administrative and financial capacity to carry out the project. Based on its evaluation of the above factors, CAA California may implement appropriate safeguards and verification measures for pre-payments. These may include bonding, staged disbursements tied to project milestones, enhanced reporting requirements, claw-backs or other reasonable controls designed to mitigate financial and performance risk.

Pre-payment does not alter or reduce any compliance, reporting, or performance obligations. Entities receiving pre-payment remain fully subject to:

- All verification requirements
- Documentation of actual expenditures
- Site visits or audits
- Adherence to California Funding and Services Agreement and Project Schedule requirements
- Repayment obligations if funds are misused or the project is not completed

Pre-payment will generally take the form of staged disbursements tied to milestones, such as issuance of a purchase order, delivery of equipment, or completion of installation. This structure limits financial exposure and ensures accountability.

2.6.3.4 Form of Payment by Cost Category

CAA California will use multiple forms of payment to reimburse eligible covered costs. All payment forms are designed to be transparent, verifiable, and compatible with performance monitoring and audit requirements.

The following subsections describe each form of payment and the policy basis for its use.

2.6.3.4.1 Capital Costs

Capital Investments - Lump-Sum, Progress-Based Payment

Capital projects are anticipated to be reimbursed using lump-sum or milestone based payments tied to defined stages of project completion. Typical milestones may include:

- Completion of preliminary or final engineering design
- Initiation of construction or civil works
- Execution of purchase orders for major equipment
- Delivery and installation of equipment
- Commissioning and operational readiness

Each milestone requires verification, such as contractor invoices, progress reports, site photographs, permitting documentation, or proof of procurement. This approach protects CAA California funds, supports timely project delivery, and accommodates the staged financing needs of capital-intensive projects.

2.6.3.4.2 Operating Costs

Collection Services - Per-Household Unit Payment

Collection services are anticipated to be reimbursed based on an established unit cost per household for a local jurisdiction or service area, multiplied by the number of documented households with collection service. This payment will factor in the total new and additional service cost on a per-household basis.

One-time capital expenses (isolated capital expenditures for carts or other items) may be reimbursed separately as lump sum payments, independent of ongoing per-household reimbursement.

Figure 9: Payment Formula for Curbside Collection Reimbursement



The payment formula for curbside collection reimbursement is based on the cost per household.

The per-household unit cost calculation may rely on the following information:

- Actual cost-of-service submitted and validated through the eligible covered cost determination process
- Costing studies from CAA California's Systems Mapping and Cost Modeling Study (if actual cost-of-service data is incomplete or unavailable)
- Adjusted or negotiated unit costs when project modifications, route redesign, operational efficiencies, or material changes warrant refinement

This unit-based formula aligns reimbursement with actual service delivery by recognizing that the service provider's cost is impacted by the number of households serviced. Payment is supported by monthly or quarterly payment cycles.

MRF and Processing Services - Per-Ton Unit Payment

Processing costs are anticipated to be reimbursed on a per-ton basis tied to the tons of CMCs processed. The per-ton rate established by CAA California through the cost determination and allocation process reflects new and additional costs determined by CAA California. This rate will be documented in the project contract, and includes:

- Incremental changes in labor
- New equipment operation, depreciation or maintenance
- Contamination management and quality control
- Operational changes associated with new CMCs
- Throughput expansion or secondary processing for specific CMCs

This approach ensures payment corresponds directly to measured output and supports the standard-rate funding approach (the "performance-based" framework allowed under 18980.8(g)(6)).

Transportation Funding

CAA California may reimburse new and additional transportation costs where distance, geography or system constraints result in incremental costs for managing CMCs.

Transportation from Rural Drop Sites and Transfer Facilities: CAA California will reimburse new and additional transportation costs associated with managing and transporting CMCs more than 50 miles from collection point (e.g., drop site or transfer point) to:

- The nearest MRF with capacity to process commingled recyclables
- The nearest processing or sorting facility that will prepare CMCs for market or REM, if the material is collected separately or is not fully commingled
- The nearest REM if the material is collected separately and in condition to be sent to a REM

In rural and border communities, the nearest appropriate processing facility or REM with the necessary capacity and technical capability may be located outside of California. In these circumstances, transportation to an out-of-state facility may be eligible for reimbursement where the facility meets CAA California's REM requirements, represents the closest feasible option for managing the material, and the associated costs are reasonable, documented, and directly attributable to the management of CMCs.

Eligible covered costs to receive, consolidate, load and transport CMCs include purchasing and maintaining equipment, signage, and administrative costs. Transportation costs of CMCs directly from source to MRFs or REMs are not eligible for reimbursement.

Payment will be based on rate schedules developed as part of the project determination and funding process. Periodic adjustments may be made for cost-of-living increases, fuel prices, or other variable factors.

CAA California will reimburse the collector's transportation costs for new and additional materials going to the nearest participating MRF or transfer location within a specified geographic boundary. If a collector chooses to deliver materials to a different MRF, CAA California will not cover the additional transportation costs unless mutually agreed to. Project Schedules will outline the conditions that may require materials to be delivered to alternative locations.

Transportation from MRFs to Secondary Processors: As described in PRC 42051.1(l)(2), CAA California will rebate a MRF for the cost of transporting materials to a secondary MRF for processing (e.g., mixed plastics). The material must be free of hazardous material to be eligible for this rebate. The rebate will cover the transportation cost of new and additional materials exceeding 50 miles from the initial MRF.

2.6.3.4.3 Education and Outreach: Per-Capita or Project-Based Payment

E&O activities are anticipated to be reimbursed using two approaches:

- 1. Per-Capita Payment:** A standardized per-capita amount for contamination reduction, recycling participation, or eligible E&O related expenses
- 2. Project-Based Payment:** Reimbursement of the full cost of approved campaigns with documented expenses

All funded E&O activities must be incremental to existing programs funded through contracts or grants, and must comply with CAA California's E&O standards.

2.6.3.4.4 Administrative Costs: Hourly or Percentage-Based Payment

Administrative reimbursement is available for costs directly tied to SB 54 implementation, such as project funding proposals, project management, and required reporting. These costs may be claimed in two ways:

- 1. Hourly Payment:** For documented staff time spent on project proposals and management
 - Cost tracking and reporting
 - Participation in CAA California regulatory or data reporting processes
 - Contract oversight
 - Service Agreement compliance
- 2. Standardized Percentage-of-Project Payment:** CAA may establish standard-rate funding rates (Standing Offers) for administrative costs. Variable percentages may be established to differentiate between ongoing reporting costs and project-based administrative fees. Standard-rate funding administrative cost rates will be developed by CAA and reference in applicable Project Schedules. Alternatively, actual cost reimbursement is available through the standard application process.

Administrative costs must be directly related to SB 54 implementation, quantifiable and documented, and must not duplicate costs recovered through other funding sources.

2.6.3.5 Summary of Payment Forms

The form in which payments are made varies by project, reflecting industry norms for each type of service provided. For example, the cost of curbside collection is established by the cost per household whereas the cost of processing recyclables at a MRF is incurred by the volume processed, or by ton. CAA will use these common forms of payment in the industry for each type of project funded.

2.6.3.6 Incentive-Based Payment

CAA California may also use an incentive-based payment where covered cost reimbursement alone is unlikely to achieve the desired outcomes. Incentive payments are intended to address strategic gaps, de-risk innovation, and reward performance.

Examples of activities that may be eligible for these incentive payments include early adoption of advanced sorting technologies and high-risk pilots or infrastructure improvements that open access for previously underserved regions.

Incentive-based payments can be used where a project has demonstrated advancements in CAA California’s priority objectives, such as:

- Achieving material contamination levels below target
- Producing bales that consistently meet or exceed industry standards, or similar recyclability specifications
- Implementing secondary processing for hard-to-recycle CMCs
- Establishing or expanding REMs for CMCs that lack robust end market demand
- Delivering significant improvements in EJ Communities where service gaps are most acute

The table below provides illustrative examples of the difference between standard-rate funding and incentive payments.

Table 12: Standard-Rate Funding Versus Incentive Payment Examples

Standard-Rate Funding Payment	
Description	Payment
• CAA California offers a standard-rate payment to add priority CMC(s) to a collection program in a community with 10,000 households where the base cost of collection is \$10/household.	• CAA California pays the collector $\\$1/\text{household} \times 10,000 \text{ households} = \\$10,000$. • Collector remains responsible for the base cost of $\\$10/\text{household} \times 10,000 \text{ households} = \\$100,000$. * Unit cost adjusted for model jurisdictional differences.
Incentive Payment	
Description	Formula
• CAA California has an agreement to pay a MRF for the cost of processing new and additional CMCs. • CAA California offers the MRF an additional incentive payment to achieve a contamination rate below 5%.	• CAA California pays the MRF $\\$100/\text{ton}$ for processing new and additional CMCs. • CAA California pays the MRF an additional $\\$10/\text{ton}$ incentive payment for achieving the contamination rate below 5%.

Incentive-based payment opportunities will be defined in advance through written guidance, including eligible activities, performance thresholds, and how incentive rates are set. Specific incentive terms will be included in individual Project Schedules.

Incentives may also be used to address unattractive investments where the riskreward profile is insufficient for private capital funding. Examples include remote, low-margin secondary sorting lines, or the MRF costs of processing additional small-volume, low-value CMCs. CAA California may pay a premium to incentivize recovering targeted materials (e.g., PET thermoforms) to expand capacity to meet SB 54 targets. In such a case, a MRF would receive its standard per-ton reimbursement for eligible covered costs, plus a per-ton bonus for verified recovery above an agreed baseline.

CAA California will ensure that incentive payments are:

- Tied to clearly measurable and verifiable performance
- Structured to avoid creating windfalls or distorting baseline cost determinations

In practice, incentive payments will be documented separately in project contracts, tracked in CAA California's financial systems and subject to the same audit and reporting expectations as other payments. This separation ensures a clear distinction between the costs of compliance and overperformance.

2.6.4 Reasonable Payment Timing

CAA California is committed to a timely reimbursement to ensure that projects are implemented in support of SB 54's date-based targets.

Payments will be made following submission of accurate invoices subject to payment terms outlined in the applicant's signed California Funding and Project Schedule agreements.

2.6.5 Verification and Audit

CAA California may conduct desktop or field audits to validate reimbursed activities, including:

- Site inspections of facilities or routes
- Review of procurement records
- Interviews with financial officers or operations staff
- Noncompliance or unsupported costs may result in withheld payments, clawbacks, or suspension of future eligibility for reimbursement.

2.7 Dispute Resolution

2.7.1 Statutory and Regulatory Basis

CAA California must establish a formal, equitable, and transparent process for resolving disputes related to eligible covered cost determinations and reimbursement, as per PRC 42051.1(g)(2).

2.7.2 Purpose and Scope

The purpose of the dispute-resolution process is to provide an equitable and structured method for resolving disagreements related to the reimbursement process including but not limited to:

- Covered cost determinations
- The extent to which costs are reimbursable
- Modeled versus actual costs
- Project scope modifications tied to funding eligibility
- Payment timing
- Interpretations of contractual terms governing reimbursement

2.7.3 Implementation

CAA California has incorporated SB 54 requirements in its dispute resolution process, which is designed to:

- Provide multiple opportunities for early clarification and resolution
- Ensure that disputes can be elevated to mediation or binding arbitration at the applicant's request

- Maintain strict neutrality and fairness in determining reasonable costs
- Avoid unnecessary administrative burden, particularly for small jurisdictions and service providers
- Provide clear timelines consistent with 18980.8(g)(4), including reasonable periods for determinations and payments
- Ensure that parties may choose alternative means of resolution if mutually agreed

This ensures a transparent, accessible, and compliant dispute resolution process that protects the rights of jurisdictions and service providers while supporting the efficient implementation of SB 54.

2.7.4 CAA California's Approach to Dispute Resolution

Recognizing the complexity of California's regulatory landscape, CAA California prioritizes early intervention to resolve disagreements and prevent unnecessary escalation and costs. Our approach emphasizes collaborative problem-solving as a first step, resolving disputes before they reach formal proceedings.

2.7.5 Triggers for Dispute Resolution

The dispute resolution process is applicant driven. Applicants may initiate the dispute resolution process when CAA California:

- Issues an eligible covered cost determination with which the applicant disagrees
- Determines that a cost is not reimbursable
- Identifies only a portion of a cost as an eligible covered cost
- Fails to issue payment within the terms negotiated in the California Funding and Services Agreement and/or Project Schedules

These conditions ensure that the process is available both for substantive disagreements and for administrative delays.

2.7.6 CAA California's Three-Stage Dispute Resolution Process

The dispute resolution process consists of three sequential steps designed to resolve issues at the lowest possible level of formality, consistent with the regulatory requirement to avoid unnecessary burden.

Step 1: Direct Discussion and Clarification: Upon initiation of a dispute, CAA California and the applicant meet to review the underlying basis for disagreement. CAA California's intent is to resolve most disagreements within this stage.

Step 2: Mediation (Mandatory Upon Applicant Request): If the disagreement remains unresolved, either party may request mediation administered by a nationally recognized mediation service provider. The mediator may define procedural requirements if the parties cannot agree on process. Mediation focuses on finding a mutually acceptable resolution without the formality of arbitration. The mediation period typically extends up to 90 days. Either party may withdraw from mediation.

Step 3: Binding Arbitration (Mandatory Upon Applicant Request): If mediation does not lead to resolution, the applicant may require binding arbitration conducted in accordance with rules of a nationally recognized arbitration body (e.g., JAMS). The arbitrator or arbitration panel is empowered under regulation to determine: "The reasonable costs, if any, for which the PRO must pay the local jurisdiction or the service provider." (Section 18980.8(h)(4)(F).).

Arbitration decisions are final and binding, subject only to the limited grounds for judicial review under California law. Parties bear their own attorneys' fees and share arbitration and administrative fees equally.

2.7.7 Common Types of Disputes and Resolution Pathways

Disputes may arise in several predictable areas which are outlined below, along with CAA California's framework resolution pathways outlined below.

A. Disputes over the Project Eligible Funding Determination Process

Disputes may arise when CAA California identifies that components of a proposed project are not eligible covered costs or pre-project service costs, or are unrelated to SB 54 requirements. Resolution typically involves:

- Clarification of cost components and what qualifies as eligible
- Submission of additional invoices, contracts or budget schedules

B. Modeled Cost versus Actual Cost-of-Service

Disputes may occur if an applicant asserts that modeled costs do not reflect local conditions. CAA California resolves these disputes by:

- Reviewing model inputs with the applicant
- Applicants submitting actual cost data to replace modeled values
- Using third-party cost validation if disagreement persists

C. Disagreements Over CAA California-Requested Project Modifications

Applicants may disagree with CAA California-requested modifications to a proposed project, such as:

- Revised equipment specifications
- Adjustments to material flow or collection routes
- Scope refinements to avoid overlapping with existing ratepayer-funded activities

These disputes follow CAA California's dispute resolution process with an emphasis on technical clarification in early stages.

D. Documentation and Recordkeeping

All stages of the dispute resolution process will be documented to ensure compliance with the dispute resolution process. Documentation may include:

- Meeting summaries
- Written statements of position from both parties
- Mediator or arbitrator filings
- Third-party verification reports
- Executed settlement agreements

2.7.8 Continuity of Service and Payment During Dispute

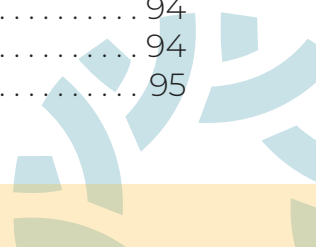
During the dispute resolution process, service providers must continue delivering contracted services, while CAA California will continue to pay undisputed portions of reimbursement claims. Neither party may suspend performance solely because a dispute has been initiated, ensuring continuity of recycling services and avoiding operational disruption.

Chapter 3: Materials Strategy and Covered Material Category Compliance Plan

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Chapter 3: Materials Strategy and Covered Material Category Compliance Plan

3.1 Introduction

In this chapter, CAA California lays out its plan for leveling up recyclability and recycling rates for covered materials across California over the course of the program plan. It presents a picture of California's current recycling system, lays out the gaps between the current system and SB 54's requirements, and describes how CAA California will address those gaps. The chapter also explains how, where necessary, CAA California will maintain regulatory compliance using targeted exemptions and other mechanisms afforded under SB 54.

CAA California has designed an action plan that brings all covered material categories (CMCs) into compliance with SB 54 and the regulations. CAA California must:

- Ensure all covered material supplied into California after Jan. 1, 2032, is recyclable or eligible to be labeled compostable. (PRC 42050)
- Ensure all plastic covered material supplied into California achieves a 30% recycling rate by Jan. 1, 2028; a 40% recycling rate by Jan. 1, 2030; and a 65% recycling rate by Jan. 1, 2032. (PRC 42050)
- Ensure that materials that can't meet these requirements maintain compliance through exemptions or discontinued use. (PRC 42051.1 and Section 18980.2.4)

To ensure these foundational criteria are met, PRC 42051.1 indicates CAA California's action plan must describe how:

- CAA California will provide the infrastructure and Responsible End Markets (REMs) necessary.
- CAA California will support, budget for, and achieve the collection, processing, recycling or composting of, and the development of REMs for, covered materials.
- The program plan complements, and does not conflict with, existing recycling services in the state.
- The plan will be implemented in compliance with state and local laws, rules and regulations, and how it won't violate existing franchise agreements.
- Covered material will be collected, processed, managed, recycled, remanufactured or composted consistent with SB 54 standards.
- Materials routed through alternative collection programs will be recycled at REMs.
- Post-consumer recycled (PCR) content will be incorporated into covered material, including the amounts of PCR.
- The program plan follows a hierarchy that prioritizes source reduction, then recycling and composting, then disposal.

CAA California addresses additional SB 54 requirements covering source reduction in the Source Reduction chapter. This chapter also references the Education and Outreach (E&O), Reimbursement and Payment Process, REMs, and Strategy for Covered Compostable Materials chapters.

3.2 Where California Stands Today: System Baseline

In this section, CAA California offers a comprehensive baseline assessment of the state's current collection, processing, and end market systems, laying the foundation for CAA California's action plan.

3.2.1 Access

Recycling access serves as the starting point for the entire California recycling system.

Access refers to the consistent availability of recycling collection services, whether they are provided through onsite curbside collection from single-family residential, commercial or multifamily properties, drop-off centers, or other innovative collection programs. Where there is a lack of services or where they are inconvenient, generators don't have the ability to divert their generated materials into the recycling stream.

CAA California recognizes that providing residential and commercial generators with convenient and reliable recycling services is a critical foundation for achieving California's recycling targets. Access in California is more robust than in other states, but gaps remain.

The Needs Assessment found a wide range of recycling and organics collection access in different regions of the state. The study considered three metrics: "Full access," meaning any generator of any size type or location is eligible to subscribe to solid waste, recycling and organics collection services; "partial access," meaning there are onsite curbside collection services in the jurisdiction, but different generators are eligible for different levels of service; and "no access."

Table 1: Access to Full, Partial and No Collection Service by Region and Statewide
(from the Needs Assessment)

Access type	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Full (households)	7,307,534	1,005,816	61,956	20,719,926	5,357,778	34,453,010
Full (percent)	95.4%	55.5%	10.4%	93.8%	72.8%	87.2%
Partial (households)	341,403	624,677	225,832	1,352,570	1,832,290	4,376,772
Partial (percent)	4.5%	34.5%	37.8%	6.1%	24.9%	11.1%
No access (households)	7,754	182,781	310,013	28,449	170,322	699,319
No access (percent)	0.1%	10.1%	51.9%	0.1%	2.3%	1.8%

3.2.1.1 Single-Family Recycling Access Utilization

In addition to overall access to collection service, the Needs Assessment explored the percentage of generators with access that are subscribed to collection services. CAA California will refer to this metric as access utilization.

The Needs Assessment found that 98.3% of residential generators statewide are subscribed to on-site curbside recycling collection service. The percentage varies slightly in different regions of the state, as shown in Table 2 below.

Table 2: Percentage of Residential Generators Subscribed to Onsite Curbside Collection Service (from the Needs Assessment)

Material type	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Materials collected for recycling	99.3%	99.2%	98.7%	97.5%	99.3%	98.3%

3.2.1.2 Multifamily Recycling Access Utilization

The Needs Assessment found that 95.4% of multifamily property generators statewide are subscribed to onsite curbside collection service. The percentage varies slightly in different regions of the state, as shown in Table 3 below.

Table 3: Percentage of Multifamily Property Generators Subscribed to Onsite Curbside Collection Service (from the Needs Assessment)

Material type	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Materials collected for recycling	97.4%	97.3%	100.0%	92.5%	92.0%	95.4%

3.2.1.3 Commercial Access Utilization

The Needs Assessment found 82.6% of commercial generators statewide are subscribed to on-site curbside collection service. This metric includes multifamily properties with five or more units, meaning the multifamily data in Table 3 is a subset of this commercial data.

Table 4: Percentage of Commercial Generators Subscribed to Onsite Curbside Collection Service (from the Needs Assessment)

Material type	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Materials collected for recycling	92.5%	85.7%	63.8%	83.0%	69.1%	82.6%

3.2.1.4 *Alternatives to Onsite Curbside Collection Program Access*

California statute defines “curbside collection” as any type of collection program operated by a local jurisdiction or its contractor. This means a drop-off collection program operated by a local jurisdiction or its contractor would be considered “curbside recycling” under the statutory definition. Further, SB 54 regulations define “alternative collection” as any type of collection program not operated by a local jurisdiction or its contractor.

This chapter follows the statutory and regulatory definitions of “curbside recycling” and “alternative collection.” However, because the term “curbside recycling” has a generally accepted meaning that is different from the statutory definition, CAA California will use the term “onsite curbside collection” to refer to the collection method of picking up recyclables at the curb (i.e., single or dual stream pick up of carts from residences or commercial businesses).

Consistent with statute, CAA California has a strong preference for utilizing local jurisdiction recycling infrastructure and will use the term “alternative collection” only when referring explicitly to collection programs not operated by a local jurisdiction or its contractor. CAA California is currently proposing to use “alternative collection” programs only as a bridge or complement to local jurisdiction programs, not as a primary compliance pathway.

CAA California will use the term “alternatives to onsite curbside collection” to refer to the wide range of recycling program types beyond onsite curbside collection, regardless of whether they may be operated by a local jurisdiction or contractor. Because of the statutory definitions, alternatives to onsite curbside collection could fall under either “curbside recycling” or “alternative collection,” depending on the entity that operates the collection program. This is an important distinction because alternatives to onsite curbside collection that are operated by a local jurisdiction (and are therefore considered “curbside collection”) will count toward recycling access as measured under PRC 42355.51(d)(2)(A).

Alternatives to onsite curbside collection programs may include doorstep collection and return-to-retail collection programs. Both approaches allow material generators to recycle materials that are not typically accepted in onsite curbside collection or drop-off collection programs run by local jurisdictions and contracted service providers.

The Needs Assessment does not directly quantify the extent of alternatives to onsite curbside collection. It provides a general overview of available services, describing programs and services ranging from store film drop-off to mail-back, doorstep collection, and retail take-back.

The Needs Assessment includes survey results from local jurisdiction respondents that provides a partial picture of alternatives to onsite curbside collection throughout the state.

Table 5: Alternative Collection Program Types by Region (from the Needs Assessment)

Alternative collection program type	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Home pick-up	7	0	0	4	0	11
Mail-back	4	0	0	1	1	6
Drop-off	2	2	0	0	0	4
Other	2	1	0	3	0	6
Total	15	3	0	8	1	27

There is no direct data on doorstep collection program use in California, but CAA California has assumed subscription services are used by less than 5% of California households.

The most widespread alternative to onsite curbside collection is likely return-to-retail service for PE film. A study commissioned by the Sustainable Packaging Coalition found that in 2026, 88% of California residents lived within three miles' driving distance of a drop-off site, 97% within a 10-mile driving radius, and 99% within a 20-mile driving radius. The Plastic Film Recycling Directory, a resource maintained by the Flexible Film Recycling Alliance, listed 1,990 drop-off film recycling locations in 2026.

3.2.1.5 Material Generation by Each Sector

Limited available data makes it difficult to develop detailed CMC generation estimates by each of the above-mentioned sectors.

The Needs Assessment does not contain definitive data on CMC generation, and it acknowledges that gaps in material generation data make it challenging to calculate accurate recycling rates.

Without current, official numbers, CAA California in Table 6 instead presents estimates based on data from The Recycling Partnership, modified to apply specifically to California.

The Recycling Partnership's 2023 State of Residential Recycling report modeled residential generation for broad categories of materials that align with typical commodity streams sorted and marketed by materials recovery facilities (MRFs). CAA California took these per-household generation figures and multiplied them by the number of California households. Commercial estimates are listed as "unknown," reflecting that there is no known authoritative or official data on commercial material generation.

As an example calculation, the State of Residential Recycling report found that an average single-family household generates 131 pounds of cardboard per year. CAA California multiplied this by the 9,435,863 single-family households in California, resulting in an estimated 620,000 tons of cardboard generation. Similar calculations were applied to the State of Residential Recycling report's multifamily figures – the report found the average multifamily household nationally generated 98 pounds of cardboard per year, and after multiplying by the 3,666,618 multifamily households in California, CAA California estimated multifamily generation of 180,000 tons for the state.

Table 6: California Material Generation Estimates (in Tons)

Commodity Material	Single-Family Statewide Annual Tonnage Generation Estimate	Multifamily Statewide Annual Tonnage Generation Estimate	Commercial Statewide Annual Tonnage Generation Estimate
Cardboard	620,000	180,000	Unknown
Mixed Paper	1,220,000	360,000	Unknown
Aseptic & Gabletop Cartons	30,000	10,000	Unknown
Glass Containers	660,000	20,000	Unknown
Steel Cans	100,000	30,000	Unknown
Aluminum Cans	110,000	30,000	Unknown
PET Bottles	280,000	80,000	Unknown
Non-bottle PET	60,000	20,000	Unknown
HDPE Natural Bottles & Jars	60,000	20,000	Unknown
HDPE Colored Bottles & Jars	80,000	20,000	Unknown
PP rigid packaging	100,000	30,000	Unknown
Film packaging	390,000	110,000	Unknown

In the absence of reliable generation figures, CAA California also sourced data on disposed tonnages from CalRecycle's 2025 final "What's in California Landfills" report. CAA California combined specific CMCs from the CalRecycle report to align with the broad material categories in the "Commodity Material" column in Table 7.

Table 7: Disposal Tonnages from CalRecycle's 'What's in California Landfills' Report (in Tons)

Commodity Material	Total Annual Disposed Tonnage Estimate (All Sectors)
Cardboard	2,042,929
Mixed Paper	1,085,771
Aseptic & Gabletop Cartons	141,796
Glass Containers	154,149
Steel Cans	137,393
Aluminum Cans	24,454
PET Bottles	122,849

Commodity Material	Total Annual Disposed Tonnage Estimate (All Sectors)
Non-bottle PET	229,641
HDPE Natural Bottles & Jars	99,816
HDPE Colored Bottles & Jars	94,893
PP rigid packaging	386,081
Film packaging	1,413,612

3.2.2 Acceptance

Recycling acceptance refers to the specific materials that generators can recycle within a specific program.

The Needs Assessment provided material acceptance data using numbers reported by local jurisdictions, augmented by a survey of local jurisdictions. Table 8 shows the percentage of local jurisdictions that collect materials via source-separated residential onsite curbside collection service, in different regions of the state and statewide. The Needs Assessment grouped CMCs together into collection categories that jurisdictions commonly communicate in messaging.

Table 8: Material Acceptance by Region and Statewide (from the Needs Assessment)

CMC Collection Group	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Aluminum	100%	96%	73%	98%	96%	96%
Aseptic Cartons	48%	15%	8%	63%	26%	42%
Ceramic	0%	23%	0%	18%	0%	9%
Flexible and Film Plastic	21%	4%	15%	28%	12%	19%
Flexible and Film Plastic Designed for Compostability	13%	31%	0%	18%	18%	17%
Gable-Top Cartons	50%	20%	13%	71%	37%	49%
Glass	99%	96%	88%	98%	95%	96%
Mixed Paper	99%	97%	65%	100%	97%	96%
Old Corrugated Cardboard (OCC)	100%	97%	90%	100%	98%	98%
Other Ferrous	88%	85%	50%	70%	73%	78%
Other Metal	65%	77%	50%	50%	64%	60%

CMC Collection Group	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Other Mixed Organic	12%	32%	0%	40%	15%	25%
Other Mixed Plastics	25%	38%	50%	33%	55%	33%
Other Multi-material laminate	3%	23%	0%	18%	9%	11%
Other Nonferrous	85%	85%	50%	70%	73%	77%
Paperboard	96%	90%	50%	96%	92%	91%
Plastic #1 - Polyethylene terephthalate (PET) Rigid	100%	96%	88%	98%	98%	98%
Plastic #2 - High-density polyethylene (HDPE) Rigid	100%	97%	88%	99%	96%	97%
Plastic #3 - Polyvinyl chloride (PVC) Rigid	66%	65%	35%	82%	66%	70%
Plastic #4 - Low-density polyethylene (LDPE) Rigid	67%	68%	31%	76%	60%	66%
Plastic #5 - Polypropylene (PP) Rigid	89%	90%	35%	92%	92%	87%
Plastic #6 - Expanded or Foamed Plastic, Rigid	6%	1%	13%	36%	10%	18%
Plastic #6 - Polystyrene (PS) Rigid	52%	56%	29%	70%	60%	59%
Plastic #7 - Other Rigid Designed for Compostability	58%	58%	31%	66%	58%	59%
Plastic Pouches and Envelopes	10%	23%	0%	15%	9%	13%
Textiles	10%	51%	25%	37%	18%	28%
Tin/Steel/Bimetal	98%	96%	67%	97%	95%	94%

CMC Collection Group	Bay Area	Coastal	Mountain	Southern	Valley	Statewide
Waxed OCC	58%	23%	0%	25%	36%	38%
Wood - Treated	35%	63%	25%	59%	48%	50%
Wood - Untreated	67%	75%	27%	78%	62%	68%

CAA California has also reviewed multiple data sources to characterize specific CMC acceptance in California collection programs serving single-family, multifamily, and commercial generators. CAA California found robust single-family program data, but less information on acceptance for the multifamily and commercial sectors.

CalRecycle's SB 343 material characterization study found no single material is universally accepted in collection programs across California, which is consistent with the Needs Assessment's findings. This means every material requires work to achieve universal acceptance. CAA California's research has found 54% of programs across the state collect less than 80% of CMCs currently designated recyclable.

PRC 42060.5(a) requires local jurisdictions and recycling service providers to collect all materials currently designated as recyclable or eligible to be labeled compostable. Additionally, Section 18980.11(a) specifies this acceptance threshold must be met by the date the program plan is approved. These requirements will change the baseline of accepted materials over time.

To establish a baseline for optimizing acceptance, CMCs could be divided into four categories:

1. Materials near universal acceptance

This category includes the most commonly accepted materials in local jurisdiction collection programs and MRFs, such as glass, cardboard, metal cans, PET and HDPE bottles, and many types of recyclable paper. As noted above, the SB 343 material characterization study indicates all these materials have minor acceptance gaps, a finding supported by the Needs Assessment and data from The Recycling Partnership.

2. Materials above 60% collection acceptance with a path to universal acceptance

This category includes many materials that have relatively high acceptance, such as PET non-bottle rigid packaging, PP rigid packaging, metal aerosol containers, and aluminum foil and tray material. Materials in this category require focus to bolster acceptance by some local jurisdiction collection programs and by some MRFs. This category is informed by CAA California's review of the Needs Assessment and SB 343 study, cross-checked with other industry sources.

3. Materials under 60% acceptance with a near-term path to 60% acceptance

Materials in this category are close to 60% acceptance according to the SB 343 study and may be able to reach 60% in the near term. Materials in this category face broader challenges achieving widespread local jurisdiction collection programs and MRF acceptance. Material examples include carton and aseptic packaging, molded paper, and to some degree, bulky rigid packaging. These materials may require extensive interventions at the collection, processing or market levels to achieve universal acceptance.

4. Materials showing low acceptance without a near-term path to 60% acceptance

This final category represents materials generally below 10% acceptance by local jurisdiction collection programs and MRFs. It includes packaging such as plastic tubes, multi-laminate film, polystyrene, and some types of polycoated fiber products. With this low acceptance, establishing successful MRF processing and MRF access to consistent markets will present significant challenges.

3.2.3 Regionality

The Needs Assessment figures highlighted in Table 1, Table 2, Table 3, Table 4, Table 5 and Table 8 indicate differences in recycling access and material acceptance in different regions of the state.

The Needs Assessment notes that collection programs have different considerations based on their region of the state. It also notes that about 87% of California residents have access to onsite curbside recycling collection and organics collection, but that access varies widely (as indicated in Table 1): While 95% of Bay Area residents have access to full collection service, only 56% of Coastal and 10% of Mountain region residents have the same access.

3.2.4 Participation and Participant Capture

Beyond having collection access and subscribing to collection service, the Needs Assessment explores participation, meaning the consistent use of an available recycling service by generators. For example, if nine out of 10 residents in a local jurisdiction recycling program consistently set out their materials for recycling, the program has a 90% participation rate.

The Needs Assessment does not include data measuring participation beyond subscription rates, but it includes survey results highlighting major barriers to greater resident participation across the state. It found the top barriers were:

- Accessibility (generators are either unable to access onsite collection containers, or the capacity of their containers is insufficient)
- Knowledge gaps (generators are unaware of programs, are otherwise not provided with the resources they need to participate, or lack faith in the system)
- Cost (service or infrastructure costs are too high for the generator to participate, or recycling collection may cost more than garbage collection, disincentivizing participation)

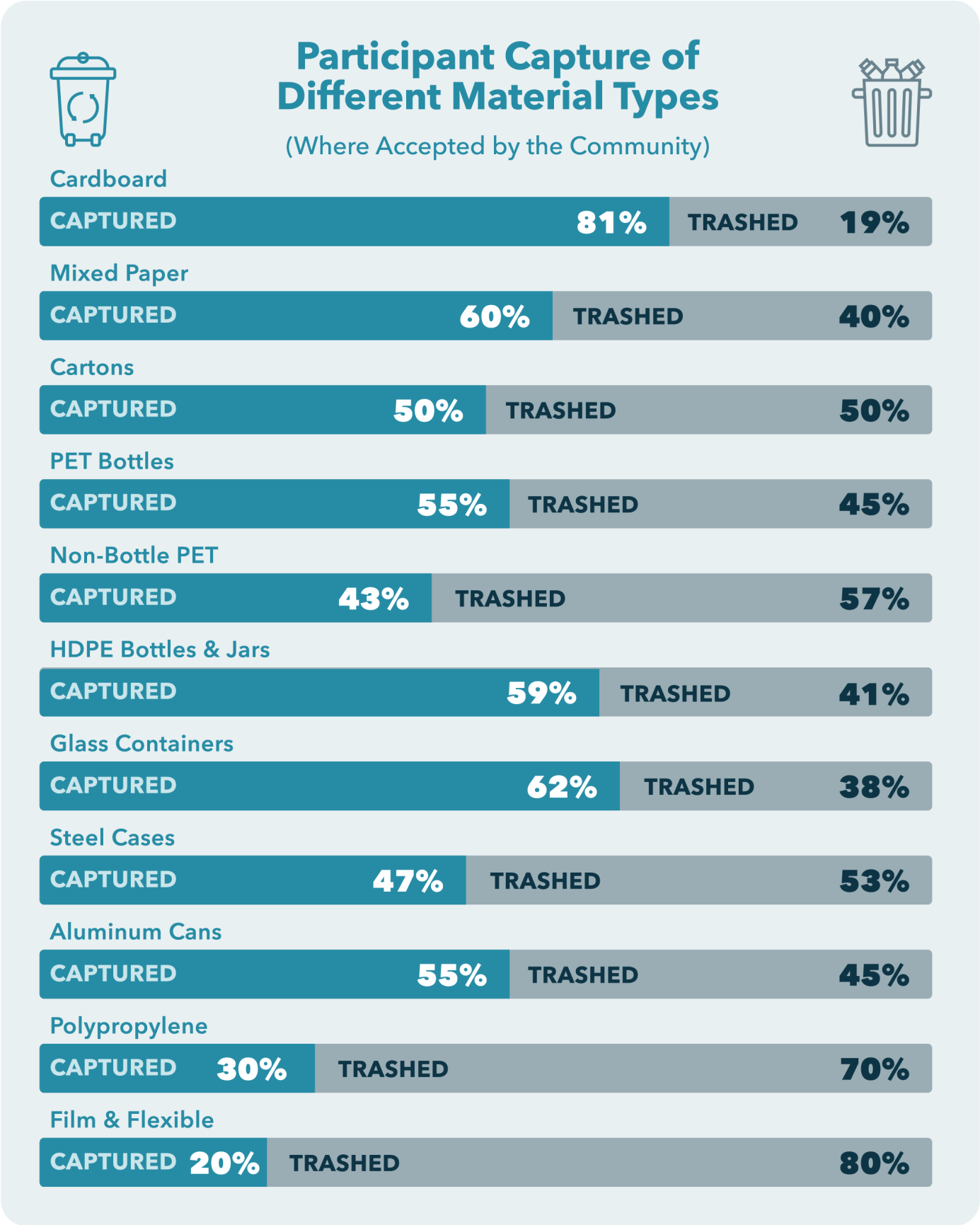
Comprehensive data on statewide participation is lacking in California. Industry sources, however, provide some indication of current participation rates. The Recycling Partnership's 2023 State of Residential Recycling Report took participation rates in onsite curbside collection, drop-off and multifamily on-property recycling, and applied them to California's collection access profile. The study found a 65% residential participation rate for the state.

A related concept is participant capture, which refers to how well a participant recycles a particular material type. For example, a household that regularly participates in an onsite curbside collection program still puts some of its recyclable materials in the trash. The participant capture rate measures the percentage of recyclable material from the generator that correctly makes its way to the recycling stream.

The 2023 State of Residential Recycling Report includes data on relative participant capture rates for common household recyclables. This data comes from studies around the U.S. and is not California-specific, but CAA California assumes these represent a reasonable baseline for the state until California-specific data is produced.¹

¹ The Recycling Partnership's capture study database includes three 2023 California communities where participant capture rates were generally at or below the rates seen in the chart.

Figure 1: Participant Capture of Different Material Types, Where the Material is Accepted by the Community



Source: The Recycling Partnership’s 2023 State of Residential Recycling Report

3.2.5 MRF Sorting Capability

3.2.5.1 Needs Assessment

The Needs Assessment identified 89 recycling processing facilities in California, a figure that includes MRFs and mixed waste processors. It found 50 single-stream MRFs, 10 dual-stream MRFs, 11 mixed waste processors and 18 “other” facilities, a category that “may contain single-stream, dual-stream or mixed waste operations.”

The Needs Assessment found these facilities receive 5.9 million tons per year of covered material and estimated they produce 2.9 million tons per year of sorted covered material, after removing contamination and accounting for yield loss.

The processing facilities are largely concentrated in the Southern (34 facilities), Bay Area (23 facilities) and Valley (20 facilities) regions, with only nine in the Coastal and three in the Mountain regions.

The majority (62%) of facilities process more than 500 tons per day, with 24% processing less than 250 tons per day and 15% processing between 250 and 500 tons per day.

3.2.5.2 CAA California’s Research

CAA separately reviewed data sources highlighting 79 MRFs (not including mixed waste processing facilities) serving residential recycling programs in California. CAA has reviewed data to characterize each facility’s acceptance. Additional data and insights will help further refine this baseline.

CMCs can be divided into several categories to describe MRF acceptance across California: broad acceptance, moderate acceptance, and little to no acceptance. The SB 343 material characterization study and other industry-provided data points inform these characterizations.

Table 9: CAA California’s Material Acceptance Categories

Acceptance Category	Material Category	Material Type
Broad Acceptance	Paper and Fiber	All fiber CMCs <i>except for</i> molded fiber, cartons and polycoated paperboard
	Glass	All glass CMCs <i>except for</i> : • Glass - Other Forms
	Metal	All metal CMCs <i>except for</i> aerosol cans, foil molded containers and foil sheets
	Plastic	All plastic CMCs <i>except for</i> : • HDPE - Pails & buckets • PVC - All CMCs • LDPE - All CMCs • PS - All CMCs • Flexible and film - All CMCs (categorized by material type) • Small formats CMCs

Acceptance Category	Material Category	Material Type
Moderate Acceptance	Paper and Fiber	Molded fiber, cartons, polycoated paperboard CMCs
	Metal	Aerosol cans, foil molded containers and foil sheets CMCs
	Plastics	HDPE - Pails & buckets
	Wood	All untreated wood CMCs
Little to no Acceptance	Paper and Fiber	Small formats
	Ceramic	All ceramic CMCs
	Plastic	• PVC - All CMCs • LDPE - All CMCs • PP - Utensils • PS - All CMCs • Flexible and Film - All CMCs (categorized by material type) • Compostable - All CMCs • Multi-material laminate • Small formats
	Wood and Other Organic Materials	All treated or painted wood CMCs, wood small formats, all textile CMCs

3.2.5.3 Broad MRF Acceptance

For materials with broad MRF acceptance, contributing factors include:

- Stronger end markets for the material
- Incentives, such as the commingled PET bales pricing structure, although there are downstream implications to this practice

3.2.5.4 Moderate MRF Acceptance

For materials with moderate MRF acceptance, contributing factors include:

- MRFs may be able to accept small quantities of the item but struggle to efficiently process or sort larger volumes into viable outbound streams.
- There may be communication gaps between MRFs and community programs, leading to a lack of harmonization on the materials accepted for processing.
- Market specifications may limit the percentage of certain materials in bales, and universal acceptance of those materials in communities that share the same MRF may lead to the MRF exceeding those limits.

3.2.5.5 Little to No MRF Acceptance

For materials with little to no MRF acceptance, contributing factors include:

- Limited physical space at MRFs
- Operational barriers, such as a lack of equipment to effectively recover the material
- Economic barriers, such as a lack of end markets, that limit the MRF's financial incentive to accept the material

3.2.6 Secondary Sorting Capability

MRF processing capability is shaped by factors such as facility size, equipment age, modernization investments, access to end markets, and geographic constraints. Many California MRFs lack the equipment or space needed to sort plastics beyond PET and HDPE bottles into separate bales. Additionally, even well-equipped MRFs experience yield loss in processing, resulting in lower overall material recovery.

These constraints create an opportunity for secondary processors. These facilities bring in baled materials that have been sorted at a MRF, and further sort them into narrower material streams, improving commodity quality and increasing the material’s marketability to end markets. They can help address MRF capacity gaps, improve material purity, and manage streams that primary MRFs cannot fully sort or prepare for market on their own.

The Needs Assessment found the only active secondary processing facilities in California are operations that take in MRF-sorted glass and further process it, also known as glass beneficiation facilities. It found that one secondary processor was handling mixed plastics, flexibles and film, but that it closed in 2020.

The Needs Assessment noted that, while secondary processors can play a key role in California’s recycling system, “secondary processing for plastics requires significant contract and feedstock security to justify the investment because only approximately half of the inbound material is marketable.”

3.2.7 End Market Number and Capacity

3.2.7.1 Needs Assessment

The Needs Assessment evaluated the flow of California-generated covered materials in 2024, considering end markets inside and outside California. It found the following recycled material end market utilization that year.

Table 10: California-Generated Covered Material Sent to Conventional End Markets in 2024 (from the Needs Assessment)

CMC Class/Type	Accepted by or Sent to Conventional End Markets (Tons)	Recovered Material Produced (Tons)	CMC Conversion Rate (%)
Glass	223,300	216,600	97%
Ceramic	No end markets found	No end markets found	No end markets found
Metal	14,850	Unknown	Unknown
Paper and Fiber	5,582,800	5,071,400	91%
Polyethylene terephthalate (PET #1) Rigid	31,300	20,800	66%
High-density polyethylene (HDPE #2) Rigid	46,120	37,770	82%

CMC Class/Type	Accepted by or Sent to Conventional End Markets (Tons)	Recovered Material Produced (Tons)	CMC Conversion Rate (%)
Polypropylene (PP #5) Rigid	17,200	9,600	56%
PE Plastic Films	33,730	29,900	89%
Other Plastic	5,243	Unknown	Unknown
Wood and Other Organic Materials*	80,700	Unknown	Unknown

*This category includes wood packaging such as wood pallets, non-synthetic textile packaging, and packaging made from materials such as mushroom, coconut or bamboo.

The Needs Assessment examined the number of end markets for each CMC material class, finding:

- Seven in-state end markets for glass, which consume nearly 100% of California-generated glass.
- No in-state or out-of-state end markets for ceramics.
- No in-state end markets for metal, and seven U.S. end markets outside of California.
- Three in-state end markets for paper and fiber, with the majority of California-generated material exported out of the U.S.
- Thirteen in-state end markets for plastics, and four U.S. end markets outside of California.
- In this analysis, “conventional” end markets for wood and other organic materials included facilities that produced mulch and animal bedding, while organics end markets were covered by a separate analysis. The Needs Assessment did not quantify the number of facilities processing wood in this way.

The Needs Assessment outlined the quantities of different covered material groups that were sent to end markets in 2024. CAA California combined the Needs Assessment data on different covered material groups to create the following comprehensive table.

Table 11: CMC End Market Groups Sent to End Markets in 2024 (from Needs Assessment)

CMC End Market Group	Accepted by End Markets in California (Tons)	Exported Domestically (Tons)	Exported Internationally (Tons)	Total (Tons)
Plastic #1 - PET Clear Bottles, Jugs, Jars - Non-CRV	12,500	1,300	3,700	17,500
Plastic #1 - PET Pigmented Bottles, Jugs, Jars - Non-CRV	700	100	1,400	2,200
Plastic #1 - PET Rigid	7,400	1,200	3,000	11,600
Plastic #2 - HDPE (pigmented and natural) Bottles, Jugs, Jars - Non-CRV	24,050	6,830	10,840	41,720

CMC End Market Group	Accepted by End Markets in California (Tons)	Exported Domestically (Tons)	Exported Internationally (Tons)	Total (Tons)
Plastic #2 - HDPE Pails and Buckets	200	None identified	None identified	200
Plastic #2 - Other HDPE Rigid	1,660	1,060	1,480	4,200
Plastic #5 - PP Rigid Items	490	3,710	13,000	17,200
Plastic #5 - Other PP	None identified	None identified	None identified	None identified
PE Film	25,700	3,480	4,550	33,730
Kraft Paper	8,100	14,800	106,100	129,000
Aseptic Cartons	100	500	2,500	3,100
Gable Top Cartons	200	300	2,000	2,500
Paperboard	14,200	23,300	175,900	213,400
OCC	442,300	340,800	3,927,500	4,710,600
Mixed Paper	17,600	68,900	379,400	465,900
Molded Pulp	600	1,000	8,300	9,900
Small Format - Paper	3,300	5,200	39,900	48,400
Other Aluminum	0	200	200	400
Aluminum Containers - Non-CRV	0	Limited	Limited	Limited
Tin/Steel/Bimetal - Non-CRV	0	8,200	3,100	11,300
Other Ferrous	0	1,700	600	2,300
Small Format - Metal	0	500	200	700
Other Nonferrous	0	100	50	150
All Glass CMC end market groups	222,300	None identified	1,000	223,300

3.2.7.2 CAA California Research

CAA California conducted end market research separate from the Needs Assessment. This analysis indicated end market volatility remains a major factor shaping California's recycling system. For instance, significant volumes of rigid plastics, film and paper continue to be exported, with economic factors pulling material to overseas markets. Meanwhile, domestic reclaimers producing post-consumer recycled content PCR plastic must compete with imported PCR and low-cost virgin resin. Limited domestic demand for recovered materials remains a significant barrier to scaling recovery and encouraging investment in secondary sorting and processing infrastructure.

In addition, securing sufficient high-quality recycled feedstock to increase recycled content use remains a challenge for some end markets. This, in turn, suppresses demand growth and delays the investments needed to expand recovery and processing capacity. Emerging end markets outside of packaging, such as durable goods, remain under-stimulated and under-utilized, and products containing recycled content often carry little market advantage or consumer appeal.

End markets accepting some level of material generated in California are outlined below.

Table 12: California End Market Capacity in Tons, by Material Type (CAA California Research)

Material		Available Capacity (Tons Per Year)*		
Material Category	Specific Material	In-State	Out-of-State Domestic	North American (non-U.S.)
Metal	Aluminum	Limited data on size and scale	Limited data on size and scale	N/A
Metal	Steel			
Metal	Ferrous			
Metal	Non-ferrous			
Plastic	PET	88,000	338,000	100,000
Plastic	PP	87,000	38,000	25,000
Plastic	HDPE	113,000	38,000	125,000
Plastic	Film	63,000	150,000	25,000
Glass	Glass	Limited data on size and scale	Limited data on size and scale	N/A
Fiber	OCC	596,000	845,000	903,000
Fiber	Mixed paper	135,000	425,000	230,000
Fiber	Aseptic / gable top	9,000	N/A	142,000

*End markets for recovered material from California also typically recycle material from other states or countries. For this reason, it is challenging to precisely estimate end market capacity expansion needs based on trends in a single state.

3.2.7.3 Additional End Market Factors

3.2.7.3.1 Metals

Aluminum

- The vast majority of recycled aluminum packaging that moves to end markets is not covered material. The Needs Assessment found that post-consumer aluminum can stock (CRV beverage can aluminum, which is not covered material) made up 99% of the California-generated aluminum moving to end markets in 2024. Just 400 tons of covered aluminum materials (e.g., aerosol and non-aerosol containers, foil sheets, foil-molded containers) moved to end markets that year.
- Of the covered aluminum materials that moved to market in 2024, none were sent to end markets in state, 200 tons went to U.S. markets outside of California and 200 tons were exported internationally.

Steel

- The Needs Assessment found 14,450 tons of California-generated covered steel materials moved to end markets in 2024. Of that, 10,500 tons went to U.S. end markets outside of California, and 3,950 tons were exported. The Needs Assessment found no steel end markets within California.
- The majority of steel can material, including non-CRV covered material, moved to Oregon end markets in 2024.

3.2.7.3.2 Plastic

In-State Markets

- The Needs Assessment studied considered a plastic end market to be the entity that produces a pellet or other feedstock that can be used in lieu of virgin material (i.e., a reclaimer).
- The Needs Assessment found 13 operational end markets handling covered plastic materials in California in 2024 – six processed PET, four processed HDPE and PP rigids, and three processed PE film.
- Two of the in-state PET end markets have closed since 2024.
- No in-state markets exclusively handle mixed plastic bales (i.e., a bale containing mixtures of resins including PE, PVC, PP, PS or other resins), but some PP and HDPE processors accept mixed plastic bales. The Needs Assessment found California end markets accepted just 300 tons of mixed plastic bales in 2024.
- The Needs Assessment found in-state markets handled 66% of California-generated covered PET in 2024, 42% of covered HDPE and PP, and 76% of covered PE film.
- CAA California's research indicates current in-state processing cannot absorb all the plastic volume that is anticipated by 2032. Estimated in-state capacity relative to recycling volumes required in 2032 is:
 - PET: 27%
 - HDPE: 58%
 - PP: 27%
 - Film: 6%

Out-of-State Domestic Markets

- The Needs Assessment found four out-of-state end markets handling California-generated plastic covered materials in 2024. Out-of-state domestic markets handled about 8% of covered PET, 18% of covered HDPE and PP, and 10% of covered PE film that year.
- Similar to in-state markets, there are no exclusive mixed plastic bale processors, though some PP and HDPE reclaimers purchase these bales.
- CAA California's research suggests out-of-state capacities relative to California's estimated 2032 recycling volumes for other resins are:
 - HDPE: 19%
 - PP: 12%
 - Film: 17%

North American (Non-U.S.) Markets

- Additional capacity in Mexico and Canada may be able to absorb some California HDPE, PP, and film, but further assessments must be done to identify total capacity.
- Markets in Mexico already purchase CRV PET bales and may have capacity to take more.

Overseas Markets

- The Needs Assessment found that international markets handled 26% of covered PET in 2024, 40% of covered HDPE and PP, and 13% of covered PE film.

3.2.7.3.3 Glass

In-State Markets

- The Needs Assessment found seven California facilities currently handle the state's recovered glass. It found no out-of-state facilities that receive California-generated glass.
- Glass covered material made up 29% of the total volume of glass sent to end markets in 2024. The majority were CRV glass containers.
- In-state markets handled over 99% of California-generated covered glass in 2024.

Out-of-State Domestic / Overseas Markets

- Because glass is highly regional and expensive to ship, it is unlikely that significant volumes of California glass flow to out-of-state or overseas markets.
- The Needs Assessment found the small fraction that left the country in 2024 went to Mexico or Asia.

3.2.7.3.4 Fiber

In-State Markets

- The Needs Assessment found three in-state fiber end markets handling California-generated material in 2024.
- These facilities handled 486,400 tons of covered fiber materials, about 9% of overall covered fiber materials that moved to end markets that year.

Out-of-State Domestic Markets

- The Needs Assessment found 454,800 tons of covered fiber materials moved to out-of-state domestic markets in 2024, or about 8% of the covered fiber that moved to market that year.

Export Markets

- Overseas markets have long absorbed most of California's fiber. According to the Needs Assessment, in 2024, 4.6 million tons of paper and fiber covered materials were exported from the state to international buyers, representing 83% of the covered fiber materials that moved to market that year.
- Common destination countries include Indonesia, Malaysia, South Korea, Taiwan, Thailand and Vietnam.

3.2.8 Marketability

California's recycled materials are, overall, marketable today. However, the strength and stability of those markets vary significantly by material type. Volatile commodity pricing, competition from export markets, limited domestic processing capacity, and variable quality of collected materials all affect marketability. Materials with mature domestic market infrastructure – such as metals, glass, and some paper grades – continue to have relatively steady demand, while plastics face the greatest uncertainty and constraint.

3.2.8.1 Metals and Glass

Metals and glass are highly marketable currently. Demand for aluminum and steel is strong, and California glass beneficiation sites absorb most in-state supply. These materials face fewer marketability challenges because they have established processing infrastructure and stable end markets.

3.2.8.2 Fiber

Fiber markets are active, but California relies heavily on overseas buyers. Domestic mill capacity exists, but it is geographically distant and already serving other states, creating logistical and competitive barriers for California-generated fiber. Marketability therefore depends on export channels that are sensitive to global policy and pricing shifts.

3.2.8.3 Plastics

Plastics represent the most constrained and volatile end market category. PET and HDPE maintain relatively strong markets, supported by packaging demand and bottle-to-bottle infrastructure, although recent reclamation facility closures have lessened domestic PET capacity. PP has growing, but still limited, domestic capacity. Mixed plastics and flexible plastics remain the least marketable due to limited reprocessing infrastructure, fluctuating demand, and competition from low-cost virgin resin and imported recycled feedstocks. EPR implementation will increase the recovered plastic supply, straining existing markets unless new processing capacity comes online.

3.3 Gap Analysis

This section explores gaps between the current system baseline, and the recycling outcomes required under SB 54. These gaps form the basis for CAA California's action plan.

3.3.1 System Gaps

3.3.1.1 Access

California has high, but not universal, single-family residential recycling access. Multifamily and commercial recycling access is strong but variable, with notable gaps in the quality and adequacy of collection services.

These access gaps disproportionately affect CMCs that rely on consistent service quality to achieve

meaningful capture rates. Inadequate or inconsistent access limits the volume and quality of material entering the recycling system, constraining downstream processing and recycling outcomes.

3.3.1.2 Material Acceptance in Recycling

Some traditional recyclables are nearly universally accepted in California recycling programs, but many CMCs do not have consistent, statewide acceptance. Inconsistent acceptance creates confusion among participants, reduces collection volumes, and complicates measurement of recyclability and recycling rates under SB 54.

3.3.1.3 Participation in Recycling

Data limitations prevent precise quantification of participation rates across all sectors. However, CAA California assumes relatively high participation in single-family settings in California, with lower and more variable participation in multifamily and commercial sectors.

Participation is a foundational driver of collection performance. Even where access and acceptance exist, insufficient recycling participation in single-family, multifamily, and commercial sectors limits the system's ability to achieve recycling rate targets.

3.3.1.4 Participant Capture

Participant capture presents a significant challenge in California, particularly for CMCs that are less understood to be recyclable among consumers or more complex.

Low participant capture rates reduce effective recycling, increase contamination, and suppress yield throughout the system. Capture challenges directly affect the system's ability to translate access and participation into measurable recycling outcomes.

3.3.1.5 MRF Sorting Capability

MRF sorting capabilities vary across California, due to differences in MRF equipment, configuration, and operational practices. These differences affect MRFs' abilities to sort CMCs to the required specifications, and at the needed volumes, to demonstrate SB 54 compliance.

While some CMCs are broadly accepted and processed, others remain facility-dependent or are sorted only into broader commingled bale streams (e.g., mixed paper, mixed plastics, or bottle-grade bales).

Where sorting capability is limited by physical, operational, or economic constraints, collected materials may be downgraded, incorporated into mixed bales with performance variability, or lost as residue. These dynamics directly affect recovery yields, recycling rate calculation, and stable recyclability designations under SB 54.

CAA California's assessment of MRF capability must consider not only whether a material is technically sortable, but whether statewide sorting stability, bale quality, and yield performance are sufficient to reliably support recycling rate targets over the program plan period.

3.3.1.6 Secondary Sorting Capability

As stated in the Baseline section, the Needs Assessment found no active secondary processing facilities in California, except those processing recovered glass.

For rigid plastic CMCs, shifting MRF practices – such as increased production of dedicated PP bales, thus reducing mixed rigid bale production – have reduced the amount of feedstock that could flow to secondary processors. These market-driven sorting decisions affect the availability of materials requiring secondary upgrading.

MRFs have generally not made similar moves to process flexible plastics, so they remain unequipped to sort these materials into discrete, market-ready commodity streams. As a result, recovery performance for these materials depends on the availability of secondary sorting facilities capable of additional separation, densification, contamination removal, and preparation to meet end market specifications. Where secondary capacity is insufficient or unevenly distributed, materials may remain technically recyclable but unable to consistently reach viable markets.

The lack of secondary facilities handling California material creates a gap that:

- Limits achievable material yield
- Limits the range of materials that can be marketed at required quality thresholds
- Constrains end market participation

Secondary sorting capacity assessment must therefore consider not only existing facility presence, but statewide capacity sufficiency, infrastructure redundancy, feedstock stability, and alignment with end market quality specifications. These factors play into a material's ability to achieve SB 54 recycling rate targets and sustain recyclability designation over the program plan period.

3.3.1.7 End Market Capacity

CAA California has assessed whether existing end markets in California, and elsewhere in the U.S. and North America, are sufficient to manage the anticipated increased volumes of material that will be collected and processed under California's EPR program.

The research has led CAA California to develop four categories of market adequacy, tied to different materials.

3.3.1.7.1 Adequate

Existing markets are likely adequate to absorb the volumes anticipated for the following materials:

- Metals
- Glass
- Paper and fiber (note that these materials remain heavily dependent on overseas buyers)

3.3.1.7.2 Adequate but at Risk

Existing markets likely have adequate capacity to absorb the volumes anticipated for the following materials but with caveats:

- PET (recent facility closures have resulted in a loss of capacity)
- HDPE (low demand for final product can impact end market capacity)

3.3.1.7.3 Likely Insufficient

The following materials have viable end markets, but they are unlikely sufficient to absorb anticipated volume increases:

- Polypropylene
- Mixed plastics

3.3.1.7.4 Likely Insufficient and Nascent

Capacity exists for the following materials, but capabilities may need to be addressed to absorb the anticipated volumes:

- Film and flexibles

These market adequacy findings indicate California's end market capacity is uneven across material categories and is subject to volatility. Materials such as metals, glass, and fiber currently demonstrate significant absorption capacity, but materials such as PP, mixed plastics, and film and flexible packaging face clear capacity and capability constraints, particularly compared to anticipated future recovery volumes.

Fiber markets remain heavily reliant on overseas buyers. Metals and plastics are also exported, with limited clarity on whether overseas markets can consistently absorb California-generated materials in these categories as the landscape continues to evolve. Dependence on export markets introduces exposure to trade policy shifts and contamination restrictions.

For plastics, available in-state processing capacity is insufficient to absorb projected future volumes for several resins. While domestic out-of-state and North American markets may supplement in-state capacity, capability constraints remain, particularly for commingled PET bales, polypropylene, mixed plastics, and film. For film and flexible packaging, in-state capacity represents only a small fraction of anticipated need, and recovery pathways depend on a combination of mechanical and non-mechanical recycling technologies, each with varying scalability and regulatory alignment.

Capacity figures must also be evaluated in light of feedstock competition and demand dynamics. Domestic reclaimers compete with imported recycled plastic and low-cost virgin resin, which can suppress demand for California-generated recovered material. Where feedstock quality is inconsistent or volumes remain low, end market expansion may be constrained, limiting infrastructure investment and recycling rate scalability.

End market constraints therefore present a direct compliance risk. Where capacity is insufficient, capability is limited, or markets are unstable, materials may be downgraded, exported under uncertain qualification, or directed to disposal. These dynamics affect recycling rate growth and the long-term stability of recyclability designations under SB 54.

3.3.1.8 Data Limitations

Additional data is needed on virtually every aspect of California's recycling system. This includes more precise accounting around access, participation rates, participant capture rates, MRF capture rates, and downstream capture rates. Data on contamination rates in collection and the specific nature of contamination is also lacking. CAA California recognizes that it can play a significant role in closing these data gaps in partnership with CalRecycle, local jurisdictions, service providers, MRFs and markets.

3.3.2 Material Compliance Gaps

Material compliance gap baselining starts with data and information that CalRecycle has released related to material categories, recyclability designations, and recycling rate determinations. This information can be combined with details from the System Gaps section above to formulate CMC-specific strategies to ensure compliance with SB 54 goals.

3.3.2.1 CalRecycle's CMC Baseline: Recyclability, Compostability and Recycling Rates

In July 2024, CalRecycle published a list of CMCs that will be used to track SB 54 compliance and for reporting, fee setting, and other SB 54 administrative purposes. CalRecycle published an updated CMC list² in September 2025.³

² <https://www2.calrecycle.ca.gov/Docs/Web/131535>

³ Per Section 18980.2.5(b) CalRecycle may update this list in the future if new information or changed circumstances renders the list out of date, incomplete, or otherwise inaccurate with respect to how it relates to waste generation and the handling and end-of-life management of covered material.

Additionally, in April 2025, CalRecycle published the SB 343 Material Characterization Study Final Findings. This report showed, for each CMC, the percentage of California's population that has collection access and the percentage of counties served by large volume transfer/processing facilities that sort the material type and form into defined streams.

On Dec. 31, 2025, CalRecycle published another updated CMC list, identifying CMC recycling rates as well as newly updated designations of each CMC's recyclability or eligibility to be labeled compostable⁴. The recyclability designations were based on the access and processing findings outlined for each CMC in the SB 343 Material Characterization report. The details for each CMC are listed in Table 14, under Intervention Plan for Each Material Grouping.

3.4 CAA's Action Plan

3.4.1 Introduction

CAA California's action plan includes many components working together to bring California's recycling system up to the standards established under SB 54. CAA California is focusing on creating and following realistic pathways to meet SB 54's ambitious targets. These pathways are composed of concrete actions, decision points, and opportunities to reflect on lessons learned and make course corrections along the way.

The action plan should be viewed as a series of interconnected actions, some carried out in sequence, and some implemented simultaneously. CAA California will require every possible tool to bridge the substantial gap between California's recycling system today, and the future system required under SB 54. CAA California needs to influence diverse and expansive areas such as infrastructure upgrades and expansion, end market demand, product design, and consumer behavior change. It also needs to improve the quality of data available to track outcomes.

At the same time, all interest holders must remain realistic about what is possible within a limited time frame. Decades of advancement have made California's recycling system among the highest performing in the U.S. Still, by CalRecycle's calculation, even the highest-recycled categories of plastic – such as bottles, jugs and jars made from PET or HDPE – are more than 10 percentage points away from meeting the 30% recycling rate required within one year of program start-up.

These substantial compliance gaps mean that, even as CAA California is facilitating a range of improvements to the state's recycling system, it must also use mechanisms outlined within SB 54 and the regulations to exempt packaging materials with a viable pathway to full compliance from meeting interim targets. This ensures CAA California and producers maintain regulatory compliance. Seeking exemptions for certain materials while simultaneously taking action to improve those materials' recycling rates reflects the reality that progress takes time. CAA California will seek temporary exemptions for many plastic material types, which are described later in this chapter, while it facilitates their integration into the state's recycling system via a proposed phase-in plan.

Still, not all materials will be viable to bring into the system by SB 54's target deadlines, and CAA California will reflect this reality either through longer-term proposed phase-in plans or a phase-out process (i.e., discontinuing the material's use in California over a period of time per PRC 42051.1(b)(2)). CAA California will engage with producers and use exemptions within SB 54 and the regulations, facilitating a phased process where packaging types that are not viable for recovery are removed from the California market while maintaining regulatory compliance in the short-term.

⁴ <https://www2.calrecycle.ca.gov/Docs/Publications/Details/1764>

In this section, CAA California will:

- Discuss recyclability or compostability and recycling rate compliance designations – assigned to each material
- Introduce a system of grouping materials together based on how they are handled in the recycling system
- Lay out the actions – termed interventions – it will take throughout the program plan
- Identify which interventions will target which grouping, and provide examples of how these strategies will work for specific materials

3.4.2 Recyclability or Compostability and Recycling Rate Compliance Designations

Using a consistent, rigorous, and defensible methodology, CAA California assigned each CMC a recyclability or compostability and recycling rate compliance designation, denoting how each CMC is anticipated to achieve compliance with recyclability or compostability and recycling rate requirements. This designation serves as the basis of CAA California's overarching material strategy.

The methodology for assigning compliance designations is described in greater detail below. CAA California applied this methodology relying on limited amounts of currently available data. Accordingly, this section identifies its current work and future efforts needed to improve data reporting and tracking.

3.4.2.1 Overview of Recyclability or Compostability and Recycling Rate Compliance Designations

Recyclability or compostability and recycling rate compliance designations (compliance designations) reflect a CMC's current performance within California's recycling and composting system and whether it can be reasonably anticipated for such a material to achieve compliance with SB 54 recyclability or compostability and recycling rate requirements through targeted system interventions. CAA California established three compliance designations:

- 1. Maintain and Strengthen Compliance:** These materials typically are already designated recyclable or compostable by CalRecycle (meaning they are already collected at scale, sorted into defined streams, and supported by multiple end markets) and, if applicable, meet required recycling rates. These materials primarily require actions to maintain system performance and manage increased volumes.
- 2. Phase In to Achieve Compliance:** These materials typically are not already designated recyclable or compostable by CalRecycle and, if applicable, do not meet required recycling rates. These materials face known challenges in material design, collection, sortation, and/or viable end markets, but they demonstrate reasonable potential to meet recyclability or compostability and recycling rate targets through targeted system interventions.
- 3. Phase Out to Achieve Compliance:** These materials typically are not already designated recyclable or compostable by CalRecycle and, if applicable, do not meet required recycling rates. These materials face significant challenges in material design, collection, sortation, and viable end markets, and they fail to demonstrate reasonable potential to meet recyclability or compostability and recycling rate targets even with substantial system interventions. As such, these materials are designated to be phased out of California's recycling and composting system by discontinuing their use, as required by PRC 42051.1(b)(2).

3.4.2.2 Evaluation Methodology

The evaluation methodology for assigning compliance designations to CMCs is designed to be objective, evidence-based, measurable, and defensible. It evaluates how each CMC currently performs within California's recycling and composting system and identifies the level and type of intervention needed to achieve SB 54 targets. For each material, CAA California considered the following:

1. SB 343 access requirements (i.e., whether the CMC is collected in recycling programs serving 60% of Californians)
2. Onsite curbside collection performance (based on data captured within the Needs Assessment)
3. Performance in drop-off collection programs or alternatives to onsite curbside collection (based on publicly available information)
4. SB 343 sortation performance (i.e., the CMC is sorted into a defined stream by large volume transfer or processing facilities collectively serving 60% of programs statewide)
5. General sortation performance (based on Needs Assessment and other data)
6. End market acceptance (based on industry standard bale specifications and other end market research)
7. Packaging design requirements (i.e., design for recyclability or compostability based on common industry design guide resources, inclusion of chemicals of concern)

CAA prioritized the application of objective, evidence-based, and expert-reviewed data sources wherever possible. Where data sources were limited or non-existent, CAA relied on industry expertise.

3.4.2.3 Recycling and Composting Alignment

Recyclable and compostable materials will require different interventions to improve their performance. CAA California addresses materials CalRecycle has designated compostable in the Strategy for Compostable Covered Materials chapter. All other materials are addressed in this chapter.

If CalRecycle has designated a CMC as both compostable and recyclable, CAA California will address the recyclable variant of the CMC in this chapter and the compostable variant in the Strategy for Compostable Covered Materials chapter.

This distinction aligns CAA California's strategy with SB 54's dual recycling and composting objectives while avoiding double-counting or misapplication of performance requirements.

3.4.2.4 Improve Data Reporting and Tracking

This chapter's Gap Analysis section indicates that data gaps present a major challenge in providing a comprehensive assessment of California's landscape system today. Without solid data, CAA California will also be challenged to measure the results of its action plan over time, which is why building a robust data collection and analysis system is a major component of CAA California's materials strategy.

CAA California is establishing a comprehensive data reporting and tracking framework to support standardized reporting and performance monitoring under SB 54. All of CAA California's reimbursement contracts with service providers will include requirements for data reporting. The data reporting will be critical for:

- Accurate reimbursement tracking
- Tracking material to REMs
- Evaluating and adjusting the system interventions into which CAA will invest

CAA California will use its online Service Provider Portal to receive and process data from each of the recycling supply chain entities, including haulers, MRFs, secondary processors, brokers, and end markets. Each entity will provide data on shipments of material it has received, processed, sold, or disposed. Each of these shipment transactions can be linked between facilities so that the output of one facility can be matched with the input of the next facility. The collected data will be used to ensure materials are tracked to the end market. Unlike Oregon, which requires MRFs to ship materials to an end market and to provide final disposition reporting, the SB 54 regulations do not expressly require MRFs to report on covered material shipped to end markets. As such, CAA California will work reporting requirements into reimbursement agreements with service providers wherever possible.

CAA California will prioritize data collection at critical points in the recycling supply chain where it can measure progress for each intervention. CAA California will strive to create a complete picture of the state's recycling system with information illustrating the following areas:

- Access to recycling for single-family and multifamily residences, including both onsite curbside collection and drop-off collection
- Access to recycling for commercial entities
- MRF acceptance of CMCs
- Inbound MRF tons and composition (tied to community of origin when possible)
- Outbound MRF tons, bale type, and composition
- Secondary sorting tons and composition (both inbound and outbound)
- Mixed waste processing tons and composition (both inbound and outbound)

3.4.2.5 Material Characterization Plan

SB 54 requires CAA California to develop, implement, and maintain a comprehensive waste sampling and material characterization program to support compliance with statutory recycling, composting, source reduction, and recovery requirements for covered material.

SB 54 establishes outcome-based performance targets for recycling, reduction, and recovery of covered material and requires that producer responsibility plans be grounded in credible, transparent, consistent and statistically valid data. To meet these obligations, CAA California will independently plan, fund, and execute characterization studies that generate the data necessary to:

- Quantify material generation, capture, and disposal
- Measure recycling and composting system performance
- Measure source reduction by weight and by plastic component against a multi-year baseline
- Calculate recycling rates by CMC, including how much of each CMC is generated and how much is recycled versus disposed
- Monitor contamination over time and evaluate whether CAA California's reduction actions are working
- Evaluate the effectiveness of outreach and education campaigns
- Evaluate other intervention programs and infrastructure investments
- Inform program optimization, fee setting, and help prioritize investments

CAA California's characterization program is designed to directly support compliance with PRC 42057, 42060, 42061, and 42067, including recycling rate calculations, needs assessment inputs, and continuous improvement of California's recycling and organics management systems.

Characterization Strategy During the Program Plan

CAA California's approach prioritizes non-duplication and triangulation with existing efforts:

- Leverage existing data. Where existing or planned third-party studies meet CAA California's methodological standards, sort-category requirements, and timeline for the relevant waste stream, CAA California will treat those studies as the anchor dataset for the stream and generators they cover and will not replicate them. CAA California may conduct limited supplemental sampling but will not run a parallel study of equivalent scope.
- Coordinate with partial-fit studies. Where a planned study does not fully meet CAA California's standards or sort categories, CAA California will work with the conducting entity to align scope, potentially providing incremental funding for additional samples or an expanded sort-category list.
- Conduct ongoing data gap analysis. CAA California will continuously identify gaps – by geography, stream, generator type, or facility type – and fill them through CAA California-led studies.

Baseline and Ongoing Studies

In the first year of the program, CAA California will establish a baseline using a combination of its own characterization studies and data from other parties, including CalRecycle's SB 54 disposal study, to capture the full waste stream. In later years, where the cadence of required statewide studies does not match CAA California's annual obligations, CAA California will conduct full statewide studies of all streams and generators, with samples collected and sorted throughout the year across different generators, geographies, and streams. These studies will cover:

- Inbound residential single-family and multifamily waste and recycling streams
- Inbound commercial and institutional waste and recycling streams
- Outbound recyclables from transfer stations and MRFs
- Inbound organics processing facilities where compostable covered material is expected to flow
- Outbound material to disposal facilities, where necessary to quantify covered material in residuals
- Self-haul streams, where necessary to fully characterize a given generator or stream

The program will cover recycling, organics, and disposal streams, with sampling designed to reflect California's heterogeneous waste management landscape across geography, demographics, and system types. Where operationally feasible, studies will be conducted across seasons to capture seasonal variation in waste generation.

Methodology and Standards

CAA has developed national inbound and outbound characterization protocols consistent with widely accepted best practices (ASTM-aligned). CAA California will adapt these into a California-specific protocol tailored to SB 54 requirements.

Key methodological elements include:

- Statistically valid sampling designs with documented confidence levels and margins of error
- Material categories aligned with SB 54 covered material definitions, with consistent sort categories across inbound and outbound studies to enable material-flow analysis
- Chain-of-custody procedures and QA/QC protocols for both sample collection and sorting
- Transparent assumptions, conversion factors, and extrapolation methods for scaling results to communities, counties, and the state as a whole
- Repeatable procedures supporting longitudinal analysis and trend tracking
- Statewide geographic coverage

- Seasonal coverage to capture seasonal variation
- Sectoral breakdown across residential, commercial, and institutional generators – with multi-family sampled directly, where operationally feasible, rather than combined with commercial
- Sample sizes that are statistically representative and support repeatable measurement
- Sample collection methods consistent with ASTM, EPA, and prior CalRecycle study standards

Organics

As part of its characterization program, CAA California will conduct targeted studies focused on compostable covered material, including but not limited to:

- Capture of compostable packaging and food service ware in organics collection systems
- Contamination associated with compostable covered material, including identification of look-alikes that create processing issues
- Sorting, processing, and screening losses at composting and anaerobic digestion facilities
- Quantities and percentages of compostable covered material present in disposal and recycling streams

Use of Characterization Data in Program Implementation

Characterization data will support CAA California's efforts to:

- Identify operational areas for improvement across the recycling collection and processing supply chain
- Establish and refine eco-modulated producer fees that reflect real system costs and material performance
- Prioritize investments in recycling and organics infrastructure
- Design education, labeling, and contamination reduction initiatives
- Support recycling rate calculations and statutory compliance demonstrations
- Inform updates to CAA's program plan, budget, and implementation strategy

Characterization data will be refreshed on a recurring basis so program decisions continue to reflect changes in packaging formats, consumer behavior, and system performance.

Funding and Execution Responsibility

All waste sampling and characterization activities described in this plan will be:

- Planned, funded, and administered by CAA California
- Conducted by qualified technical teams under CAA California oversight
- Integrated into CAA California's annual budget, workplan, and reporting framework

CAA California will maintain sufficient internal technical and analytical capacity to oversee study design, audit sampling performance, validate data, and meet regulatory reporting requirements.

Regulatory Interface and Data Transparency

While CAA California retains full responsibility for executing characterization studies, the program will be designed to align with CalRecycle's regulatory frameworks, definitions, and data expectations, ensuring CAA California-generated data is suitable for regulatory review and decision-making.

This characterization effort is intended to complement, not duplicate, local and state characterization studies currently or historically conducted. CAA California will work to avoid duplicative effort and duplicative funding for the same projects. However, where a review of existing data identifies shortcomings that make it difficult to integrate with CAA California-generated data, CAA California may undertake sampling in an area already covered by another study.

CAA California will provide characterization study results, methodologies, and supporting datasets to CalRecycle in accordance with applicable regulatory and statutory reporting requirements, enabling transparency, auditability, and regulatory confidence in CAA California-generated data.

3.4.2.6 Pilot Study Data

CAA California will conduct pilot studies to track detailed data on more targeted interventions and generate data that will help to expand these interventions on a wider scale. Pilot studies will be critical to testing interventions in diverse settings to ensure their effectiveness at scale. These pilot studies will likely include:

- E&O campaign data and measurable system change metrics
- Single-family residential recycling set-out and participation
- Multifamily residential participation
- Commercial collection, including quantities and types of CMCs
- Recyclable material capture data (i.e., the percentage of recyclable materials residents are putting into their recycling bins)
- MRF material capture data with different equipment configurations
- Mixed waste processing capture of recyclable materials

This comprehensive data collection plan will also be leveraged for recycling rate calculations, regulatory reporting, fair reimbursement calculations, and other daily operations.

3.4.3 Groupings Reflect Shared Intervention Need

CAA California's action plan groups CMCs together based on the types of interventions required, rather than treating each CMC as a standalone material. This approach reflects the reality that many CMCs face similar barriers and therefore benefit from the same set of coordinated solutions.

Each grouping represents a common intervention need (such as expanded access, alternatives to onsite collection, MRF upgrades, secondary sorting, mixed waste processing, and end market support). While individual CMCs may require different intervention combinations or intensities, grouping by intervention provides a structure for explaining how CAA California intends to move materials toward compliance over time.

3.4.3.1 Grouping Categories

Table 13: CAA California's List of Material Groupings

Material Grouping
Glass Bottles & Jars
Other Glass
Ceramic
Non-UBC Aluminum
UBC Aluminum
Aluminum Aerosols
Ferrous Metal Packaging
Other metal
Steel Aerosols
Small Format
Mixed Paper
Polycoated Paper
Cartons
Waxed Cardboard
Cardboard (OCC)
PET Bottles, Jugs & Jars (Clear/Natural)
PET Bottles, Jugs & Jars (Pigmented/Colored)
PET Thermoforms
HDPE Bottles, Jugs and Jars (Clear/Natural)
HDPE Bottles, Jugs and Jars (Pigmented/Colored)
HDPE Pails & Buckets
Other HDPE Rigid
PVC

Material Grouping
Rigid LDPE
Rigid Polypropylene
Utensils
Expanded Polystyrene
Rigid Polystyrene
Compostable Plastic
Other Rigid Plastic
Non-Polyolefin Mono-Material Plastic Film
PE Plastic Film/Flex
PET Plastic Film/Flex
PP Plastic Film
Multi-Material Plastic Film
Textiles
Compostable Wood/Organics
Non-Compostable Wood/Organics

3.4.4 Intervention Categories

CAA California's list of interventions is made up of actions intended to improve different areas of California's recycling system. The list spans packaging redesign, infrastructure upgrades, behavior change and more.

The varied list of interventions reflects that material recycling rates are constrained for different reasons and at different points in the system. Some materials are recovered at low rates because Californians lack collection access for that packaging type. Others may be collected but fail to move properly through the sorting process. Others make it through the MRF and into a commodity-specification bale, but they lack reliable end markets. Still other materials may be fundamentally incompatible with the materials recovery system in California today.

With this range of constraints, interventions were developed to address a variety of specific barriers. CAA California's current list of interventions to improve California's recycling system includes, but is not limited to:

- Incentivizing packaging design changes to achieve recyclability or compostability and recycling rate requirements
- Increasing recycling access and material acceptance

- Alternatives to onsite curbside collection
- E&O campaigns
- Expanding and enhancing processing capacities
- Developing and sustaining REMS
- Incentivizing reuse and refill

CAA California designed these interventions to work in conjunction with each other. Most materials will require multiple interventions to improve their recycling system performance. The interventions are designed to be layered and combined based on the characteristics of each material grouping and the nature of its performance gap.

The sections that follow provide an overview of each intervention and the actions it encompasses. Following the list of interventions, Table 14 indicates which intervention CAA California will implement for each CMC.

3.4.4.1 Packaging Design Intervention Approach

Packaging design changes may improve both collection and end market performance for given materials. Producers may have opportunities to make packaging design changes to remove attributes that are detrimental to the recycling process, or to use alternate materials with better end market demand for the recycled material. These changes can improve CMC recycling performance and bring the materials closer to their recycling rate targets.

CAA California will use a defined process to identify these design interventions and determine how to facilitate their implementation.

3.4.4.1.1 Design Assessment to Increase Recycling Performance

CAA California's assessment process will draw on the work of existing EPR programs, packaging and recycling coalitions and other organizations that promote recycling, to ensure it leverages the extensive research, analysis and consultation available from reputable sources and standards-setters.

While some design attributes can impact the recyclability of multiple CMCs, CAA California's assessment process will focus first on individual CMCs that have the greatest potential to improve recycling performance, recognizing that changes successfully implemented for one CMC may have benefits for others.

CAA California's process will:

1. Catalogue packaging formats associated with each CMC, prioritized based on which are most likely to improve recycling performance
2. Identify design attributes that are detrimental to recycling, or otherwise render the package non-recyclable, associated with each format, as outlined in industry design guides
3. Identify changes to the detrimental design attributes that may be possible to introduce while maintaining essential performance criteria
4. Identify formats with detrimental design attributes that cannot be altered, but which have alternatives in-market
5. Work with interested parties to understand if packaging alternatives exist
6. Catalogue interventions that would enable the elimination of the detrimental design attributes
7. Prioritize interventions based on their capacity to enhance recycling rates

3.4.4.1.2 Assessment to Address Materials that will be Phased Out

For materials that are unlikely to reach targets even with substantial interventions, CAA will follow a clear process to collaborate with trades and producers to implement phase-out plans.

3.4.4.1.3 Examples of Potential Design Interventions

The following five examples highlight materials CAA California has earmarked for potential design attention.

Multi-Material Plastic Film

CAA California will place high priority on addressing the challenge of recycling multi-material plastic films. CAA California's efforts will focus on minimizing its supply by promoting the use of alternatives such as polyolefin-based mono-material films, while supporting and expanding current and future solutions for the volume of this multi-material format that remains after producers who can switch out of this material complete that change.

CAA California will work with plastic suppliers and converters to enhance the supply of alternatives.

Thermoform PET

Some variations of thermoform PET contain additives or barrier layers that can be detrimental to the recycling process. CAA will work with producers and packaging suppliers to enable producers to promote emerging technologies for adhesives, barriers and labels per the Association of Plastic Recyclers (APR) Design Guide. CAA will also work with producers to understand the challenges presented by alternatives and determine the investments, if any, that are required to make alternatives viable for different applications.

PVC/PVDC Films (Shrink Sleeves)

Shrink sleeves made from vinyl materials can contaminate other viable recycling streams. CAA California is not aware of unique performance qualities that cannot be replaced with polyolefin-based alternatives.

CAA California will work with producers to understand the challenges presented by alternatives and determine what, if any, investments are required to make alternatives viable for different applications.

Polycoated Paper

While technically feasible, recycling fiber materials that contain polymers is more difficult and costly than polymer-free fibers. Some paper mills are reluctant to accept this material, particularly as the percentage of polycoated fiber is increasing, leading to more pulping issues in mills not set up to manage the material.

CAA will work with producers to mitigate the impact of polymers on the recycling process and make polymer-containing fiberres more widely accepted, to meet recognized standards of repulability/recyclability and make the material more acceptable to pulp mills.

Rigid Polypropylene (PP)

Additives used in the manufacture of rigid PP packaging can present barriers to recycling. CAA will support producers and packaging suppliers to help them understand these impacts and facilitate the PP packaging that complies with the APR Design Guide, as much as possible.

3.4.4.2 Increasing Recycling Access and Material Acceptance

Although an estimated 90% of Californians have some form of recycling access, CAA California must identify the remaining households, businesses, and communities that lack service, understand the specific barriers (whether geographic isolation, property type, or jurisdictional gaps), and expand access where feasible. This includes ensuring all generators with existing service can recycle the full range of CMCs required under SB 54, meaning it requires increasing material acceptance beyond overall recycling service access. It also means ensuring underserved populations, including rural, Tribal, and linguistically isolated (i.e., limited English-speaking) communities, are incorporated into access expansion planning.

CAA California will apply a hierarchy of preferred collection systems, with the guiding principle that recycling should be as convenient as trash collection. This hierarchy prioritizes onsite curbside collection service wherever practical, drop-off systems in low-density areas, and alternatives to onsite curbside collection as a bridge strategy to onsite curbside collection. Access strategies will reflect the distinct needs of single-family households, multifamily buildings, and commercial or business-to-business generators.

Additionally, single-family areas may require route extensions or service adjustments; multifamily properties often need dedicated service configurations and contamination controls, and commercial generators may require flexible co-collection or additional pickup options suited to their operations.

Implementation will also vary across urban, suburban, rural, and Tribal regions, based on each area's infrastructure, distance, and economic constraints. In urban and suburban areas, expanding access may focus integrating newly required CMCs into existing collection programs, while rural regions may rely more heavily on establishing drop-off or transfer-station-based systems. Tribal communities may also require culturally appropriate, locally designed solutions.

CAA California will support these expansions by funding new collection routes, providing resources for multifamily and commercial service expansion, supporting co-collection approaches where standalone routes are cost-prohibitive, and deploying alternatives to onsite curbside collection in locations where onsite curbside collection access is infeasible or inefficient.

3.4.4.3 Alternatives to Onsite Curbside Collection

Some materials are recyclable if they make it to a reprocessor, but they may face technical or operational barriers to effective recovery at a MRF. Small items often fall through sorting screens and are disposed as residue, despite their valuable material composition. Other materials (like expanded polystyrene) are unattractive for MRFs to sort and bale without investing in additional equipment, which is unrealistic because they only handle low volumes of these materials.

To bridge this gap, CAA California will implement and promote alternatives to onsite collection programs specifically designed for hard-to-recycle material streams. There are several active U.S. examples of mail-back or retail drop-off solutions for items like cosmetics packaging, coffee capsules, and even expanded polystyrene.

There are also examples of specialized pickup services offering subscription-based models for categories typically excluded from the recycling bin. CAA California will work with existing programs and look to develop new ones that can capture and move hard-to-recycle materials directly to processors, thus bypassing the MRF.

CAA California will coordinate or consult with local jurisdictions and recycling service providers when considering alternatives to onsite collection programs. These programs will not interfere with existing recycling programs and franchise agreements.

3.4.4.4 Education and Outreach

Actions to improve E&O will be key to boosting recyclability and recycling rates. Strategic E&O campaigns will help generate cleaner streams of recyclables that will drive processing facilities to sort those materials into defined streams, contributing to recyclability status for more materials. It will also directly contribute to higher recycling rates for plastic materials, moving the state closer to SB 54's goal of recycling 65% of single-use plastic by 2032.

CAA California is focusing its E&O efforts on interventions that drive measurable impact on material quality and participation. These include targeted media campaigns, practical tools and materials for local jurisdictions, and direct, behavior-based interventions such as bin labeling, cart tagging, route audits, and feedback loops.

A comprehensive description of CAA California's full education and outreach strategy is provided in the Education and Outreach chapter.

3.4.4.5 Processing interventions

3.4.4.5.1 MRF Upgrades

California's recycling system depends heavily on MRF infrastructure, yet many facilities do not currently sort all targeted materials under SB 54. Additionally, many facilities operate without the automation, labor capacity, or sufficient economic incentives needed to achieve recovery levels for SB 54 compliance. CAA California will therefore reimburse MRFs for new and additional capital and operating expenses, access to technology, and software and automation upgrades. This financial assistance will enable MRFs to increase recovery and improve outbound quality.

CAA California will conduct research on how and where CMCs are currently being missorted and lost, and to quantify the value and amount of these materials. This will include audits of commodities and residue, quantification of missorted materials, and identification of high-value recovery opportunities. CAA California will then work directly with MRF operators to understand and communicate the revenue and efficiency potential associated with installing technology aimed at recovering more materials from the existing streams and explore options to overcome barriers.

3.4.4.5.2 Recovery Incentives

In addition to upgrades, a structured performance-based incentive program can help drive consistent improvements in capture rates, residue reduction, and the use of REMs. Financial incentives paid following demonstrated recovery improvements can make it more feasible for MRF operators to invest in improved sortation. This incentive system would need to use a standardized process for obtaining inbound, outbound, and residue samples from each participating MRF, as well as a process for conducting waste characterization studies.

Incentives could take the form of per-ton performance payments, bonuses for documented increases in capture rates, improved bale quality, or enhanced payments for materials delivered to REMs. Over time, these incentives could also support harmonization of MRF practices statewide, narrowing the performance gap between high- and low-performing facilities.

3.4.4.5.3 New MRFs

Some regions may require entirely new MRF capacity to meet SB 54's system-wide recovery targets. Existing MRFs vary widely in age, automation levels, and ability to adapt to increasing volumes of covered materials. In some cases, retrofitting an older facility may be less effective or more costly than developing a modern facility designed for capturing all required materials, at high rates, with advanced sorting technologies.

CAA California will assess how much additional MRF processing capacity is needed to manage the higher inbound volumes that will come with satisfying SB 54 recycling rate targets. This analysis will identify older MRFs with minimal automation, limited sorting capability, or operational constraints that make upgrades impractical. CAA California will explore opportunities to support new MRF development, particularly in regions with long transport distances or limited processing options, which would help offset gaps in regional processing capacity.

3.4.4.5.4 Secondary Sorting Facilities

CAA California anticipates that the state will not reach SB 54's plastic recycling targets using MRF sorting alone and is therefore exploring investing in secondary sorting capacity to augment MRF sortation.

Under the typical MRF-to-reprocessor system, MRFs produce commodity bales that are sold to reprocessors. The reprocessor (such as a plastics reclaimer) typically pulls certain target materials from the bale, often discarding the remainder as residue. For example, a reclaimer might purchase a mixed plastics bale. The reclaimer pulls target materials from the bale and may discard the rest.

Secondary sorting adds another step between the MRF and the reprocessor, further refining commodity streams and reducing the amount of material disposed as residue. Secondary sorting can also occur within a reprocessor's facility, as an additional step at the front end of the processing phase. CAA California will explore supporting standalone secondary sorting facilities as a processing intervention that is auxiliary to its primary focus on MRF sortation and reprocessor pre-sort improvements.

Altogether, secondary sorting can improve commodity purity, increase recovery of target CMCs, and reduce contamination. It will be a valuable tool in CAA California's action plan.

3.4.4.5.5 Mixed Waste Processing

CAA California anticipates that, even with continued improvements to front-end collection, public education, and MRF sorting infrastructure, California's recycling system will not fully achieve SB 54 recycling rate targets through source-separated pathways alone – particularly for plastics. Mixed waste processing (i.e., the sorting of municipal solid waste to recover recyclable materials) may therefore serve as a complementary, back-stop strategy to capture recyclable materials that currently bypass the recycling system and flow directly to disposal.

CAA California does not assume that mixed waste processing will be implemented uniformly across the state or at a fixed scale. Instead, its potential role will be determined through targeted piloting efforts and ongoing evaluation of system performance. Key considerations include the measured efficacy of mixed waste processing in recovering additional recyclable material; the quality, marketability, and end-market acceptance of recovered materials; net diversion impacts; and interactions with other program interventions, including education and behavior-change initiatives and MRF upgrades.

As investments in collection access, MRF modernization, and participation improvement are implemented, the composition of residual waste streams is expected to evolve. CAA California will use observed changes in residual composition – together with data from pilot projects – to assess whether mixed waste processing is warranted, where it may be most effective, and under what operating parameters it can support broader system improvements without undermining source-separated recycling or material quality. Any deployment of mixed waste processing will be designed to complement, not replace, upstream investments and will be adapted over time as system performance improves.

3.4.4.6 Supporting and Expanding End Markets

CAA California anticipates that California's significant end market capacity for metal and glass commodities will likely be able to absorb the additional volumes collected under SB 54. Fiber end market capacity may also be sufficient, but California remains heavily dependent on overseas buyers for fiber grades.

However, there's a significant shortage of plastic end markets in the state. CAA California's end market intervention strategy has the following components:

1. Develop a shared roadmap
2. Maximize existing end markets
3. Drive demand for PCR
4. Diversify end market applications
5. Grow and add new capacity

CAA California will carry out interventions under a hierarchy that prioritizes California's local and regional end markets before moving to larger jurisdictional tiers. For example, interventions will be prioritized in California end markets, followed by U.S. markets, then North American markets, and finally overseas markets if gaps remain.

3.4.4.6.1 Develop a Shared Roadmap

This intervention seeks to promote standards that can be used to enhance end markets overall and to help build a cohesive end market system. It will seek to develop a shared roadmap of the future system being built with industry, including specifications and design goals, material pathways, and REM development, and it will strengthen information flows between supply and end-market opportunities.

As California remains heavily dependent on overseas markets for certain recycled materials, including fiber commodities, this intervention will establish a priority verification and support process for markets currently handling materials originating in California and ensure greater transparency and compliance with environmental and waste management policies. The detailed strategy for REM verification is presented in the Responsible End Markets chapter. This intervention aims to mitigate environmental and social risks while preserving access to critical global markets.

3.4.4.6.2 Maximize Existing End Markets

This intervention seeks to mitigate economic barriers that put recycled materials at a competitive disadvantage compared with virgin materials. It will strengthen existing end markets by improving quality, maximizing volume, reducing costs, and making existing pathways more economically viable.

CAA California will consider transportation subsidies, price stabilization mechanisms, performance-based incentives, and other financial tools that support material movement, market access, cost reduction, and end market utilization.

Over the long-term, CAA California will encourage end markets to strategically invest in regional recycling capacity to reduce transportation costs.

3.4.4.6.3 Drive Demand for PCR

CAA California is focused on ensuring stable, viable and long-term end markets, especially for plastics. As CAA California invests in collection access expansion and sorting infrastructure, the supply of available recyclables will increase. If recycled material demand does not increase accordingly, end markets could become saturated with recycled materials, without buyers for their output

PCR. Supply saturation would add to existing economic pressures, such as the low cost of virgin resin, that have challenged end markets in California, across the U.S., and globally in recent years. This intervention will support producers and packaging converters in boosting PCR use, through incentives and technical assistance. CAA California will grant bonuses through eco-modulation for use of recycled content back into packaging. All packaging formats will be eligible for these bonuses. This includes primary packaging that directly contacts the product, secondary packaging that is used to contain multiple primary packages, or tertiary packaging that is used in bulk handling (i.e., pallets or plastic wrap).

Some packaging materials have barriers to being reprocessed back into new packaging. For these cases, CAA California will design incentives that can be implemented in non-packaging applications on a cost-per-ton basis. CAA California will develop detailed eligibility criteria and the mechanisms of how these incentives will function.

CAA California may also engage in regional or sectoral market development initiatives through technical assistance. This can include supporting pilot projects that demonstrate performance and scalability.

3.4.4.6.4 Diversify End Market Applications

This intervention supports installing innovative processing technologies that increase the quality of recycled materials, expanding the range of end markets into which materials can move and unlocking new large volume applications. Diversifying local and other domestic end markets will fortify California's recycling system to endure shifts in domestic or global economics.

CAA California will focus on incentivizing and de-risking investment in new and emerging technologies that improve material purity, consistency, and performance, and grow the amount of demand for recycled materials. It will collaborate with market development organizations to support capital grants, low-interest financing, pilot and demonstration projects, and public-private partnerships to accelerate commercialization. CAA California will prioritize technologies that enable closed-loop recycling (i.e., a product being recycled back into the same type of product), expand domestic processing capacity, and reduce reliance on export markets.

CAA California also recognizes that developing closed-loop recycling systems requires significant testing and development time. For materials without current packaging-to-packaging recycling viability, CAA California will support investments to boost non-packaging end markets to rapidly scale capacity. This approach will allow sufficient development time for end markets that can recycle materials back into packaging.

3.4.4.6.5 Grow and Add New Capacity

As demand grows, CAA California can attract large-scale third-party investment in reclamation and end markets by using targeted support tools to reduce risk. This intervention seeks to catalyze third-party investment where longer-term market development is required.

Growing collection requires new end-market capacity, supported by a healthy base industry.

3.4.4.7 Incentivizing Reuse and Refill

Reusable and refillable packaging options play a key role in CAA California's source reduction strategy, but they are also marginally connected to recyclability targets. Producers of packaging that are unlikely to hit recyclability targets may choose to switch to reusable or refillable alternatives, representing a material intervention that supports the producer's ability to comply with recyclability targets. CAA California's reuse and refill interventions include financial incentives for design changes, and financial subsidies to launch reuse and refill packaging in food service establishments, retail

settings, transport packaging, and elsewhere. The Source Reduction chapter details all of CAA California's reuse and refill interventions.

3.4.4.8 Composting Interventions

CAA California's compost-related interventions, which include providing guidance to producers on labeling and design, providing support for field testing of compostables, providing support for market development, and evaluating the feasibility of secondary sorting of compostables, are covered in detail in the Strategy for Compostable Covered Materials chapter.

3.4.5 Application of Interventions Across CMC Groupings

Although the intervention categories are presented individually, CAA California will not apply interventions in isolation. They will work in tandem with other interventions and will target multiple groupings simultaneously. This approach mirrors CAA California's logic for creating material groupings: Materials with similar physical characteristics, collection behaviors, and processing challenges tend to have similar challenges, and as such, they will benefit from similar interventions.

For example, materials that are widely accepted but have low recovery rates often require a combination of access expansion, E&O, and processing improvements. Materials that disrupt sorting systems or degrade commodity quality may require alternatives to onsite collection, targeted MRF investments, or secondary sortation. Materials with persistent end market limitations may require market development support, packaging design changes (or, in some cases, clearly defined phase-out strategies to discontinue the material's use). This application avoids overreliance on any single intervention type.

By applying interventions across CMC groupings in this way, CAA California's action plan directs resources toward the barriers that most directly limit recovery outcomes for each class of material. Additionally, grouping CMCs by intervention allows CAA California to deploy resources more efficiently, scale solutions across multiple materials, and ensure that interventions are logically aligned with observed system constraints rather than applied in isolation.

3.4.6 Intervention Plan for Each Material Grouping

Table 14 lists each CMC, its recyclability or compostability status, its CalRecycle-determined recycling rate, the CAA material grouping it falls into, CAA's compliance designation for the material, and the interventions CAA California may implement to improve that material's performance in the recycling system. It also indicates the CMCs CAA California will target for unique challenges exemptions, and indicates whether the exemption request will come with or without a phase-in plan.

Table 14: CMCs by CAA material grouping, CAA ompliance designation, and interventions needed to hit targets.

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Glass	25_G1N - Glass - Bottles and Jars w/o plastic component	Yes	65%	Glass Bottles & Jars	Maintain & Strengthen Compliance	Recovery Incentives Secondary Sorting Facilities Increase Access to Recycling E&O MRF Upgrades New MRFs	
Glass	25_G1P - Glass - Bottles and Jars w/ plastic component	Yes	65%	Glass Bottles & Jars	Maintain & Strengthen Compliance	Recovery Incentives Secondary Sorting Facilities Increase access to recycling E&O MRF Upgrades New MRFs	
Glass	25_G2N - Glass - Other Forms w/o plastic component	No	65%	Other Glass	Phase-In to Achieve Compliance	Increase access to recycling E&O Recovery Incentives Secondary Sorting Facilities New MRFs Alternatives to Onsite Curbside Collection	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Glass	25_G2P - Glass - Other Forms w/ plastic component	No	65%	Other Glass	Phase-In to Achieve Compliance	Increase access to recycling E&O Recovery Incentives Secondary Sorting Facilities New MRFs Alternatives to Onsite Curbside Collection	Yes, with phase-in plan
Glass	25_G3N - Glass - Small - Two or more sides measuring 2" or less w/o plastic component	Yes	65%	Glass Bottles & Jars	Maintain & Strengthen Compliance	Recovery Incentives Secondary Sorting Facilities Increase Access to Recycling E&O MRF Upgrades New MRFs	
Glass	25_G3P - Glass - Small - Two or more sides measuring 2" or less w/ plastic component	Yes	65%	Glass Bottles & Jars	Maintain & Strengthen Compliance	Recovery Incentives Secondary Sorting Facilities Increase Access to Recycling E&O MRF Upgrades New MRFs	
Ceramics	25_C1N - Ceramic - All Forms w/o plastic component	No	0%	Ceramic	Phase-Out to Achieve Compliance ⁵		

⁵ CAA California anticipates this CMC will not achieve the required recyclability or compostability requirements by 2032. This CMC is therefore targeted for phase-out. However, the 2032 compliance target falls outside of the timeline of this program plan, so this program plan does not include a unique challenges exemption application.

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Ceramics	25_C1P - Ceramic - All Forms w/ plastic component	No	0%	Ceramic	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Ceramics	25_C2N - Ceramic - Small - Two or more sides measuring 2" or less w/o plastic component	No	Insufficient Information	Ceramic	Phase-Out to Achieve Compliance ⁶		
Ceramics	25_C2P - Ceramic - Small - Two or more sides measuring 2" or less w/ plastic component	No	Insufficient Information	Ceramic	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Metal	25_M1N - Aluminum - Non-aerosol Container w/o plastic component	Yes	<39%	Non-UBC Aluminum	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Mixed Waste Processing	

⁶ CAA California anticipates this CMC will not achieve the required recyclability or compostability requirements by 2032. This CMC is therefore targeted for phase-out. However, the 2032 compliance target falls outside of the timeline of this program plan, so this program plan does not include a unique challenges exemption application.

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Metal	25_M1P - Aluminum - Non-aerosol Container w/ plastic component	Yes	<39%	UBC Aluminum	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Mixed Waste Processing	
Metal	25_M2N - Aluminum - Foil sheets w/o plastic component	Yes	<9%	Non-UBC Aluminum	Maintain & Strengthen Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs	
Metal	25_M2P - Aluminum - Foil sheets w/ plastic component	Yes	<9%	Non-UBC Aluminum	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs	Yes, with phase-in plan
Metal	25_M3N - Aluminum - Foil Molded Containers w/o plastic component	Yes	<9%	Non-UBC Aluminum	Maintain & Strengthen Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Metal	25_M3P - Aluminum - Foil Molded Containers w/ plastic component	Yes	<9%	Non-UBC Aluminum	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs	Yes, with phase-in plan
Metal	25_M4P - Aluminum - Aerosol Can w/ plastic component	Yes	<39%	Aluminum Aerosols	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Mixed Waste Processing	
Metal	25_M5N - Aluminum - Other Forms w/o plastic component	Yes	<9%	Non-UBC Aluminum	Maintain & Strengthen Compliance	Increase Access to Recycling MRF Upgrades Recovery Incentives Mixed Waste Processing E&O New MRFs	
Metal	25_M5P - Aluminum - Other Forms w/ plastic component	Yes	<9%	Non-UBC Aluminum	Phase-In to Achieve Compliance	Increase Access to Recycling MRF Upgrades Recovery Incentives Mixed Waste Processing E&O New MRFs	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Metal	25_M6N - Tin/Steel/Bimetal - Non-aerosol Container w/o plastic component	Yes	<45%	Ferrous Metal Packaging	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Mixed Waste Processing	
Metal	25_M6P - Tin/Steel/Bi-metal - Non-aerosol Container w/ plastic component	Yes	<45%	Ferrous Metal Packaging	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Mixed Waste Processing	
Metal	25_M7P - Tin/Steel/Bi-metal - Aerosol Can w/ plastic component	Yes	<45%	Steel Aerosols	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Mixed Waste Processing	
Metal	25_M8N - Tin/Steel/Bi-metal - Other Forms w/o plastic component	Yes	<45%	Ferrous Metal Packaging	Maintain & Strengthen Compliance	Increase Access to Recycling Recovery Incentives E&O MRF Upgrades New MRFs Mixed Waste Processing	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Metal	25_M8P - Tin/ Steel/Bi-metal - Other Forms w/ plastic component	Yes	<45%	Ferrous Metal Packaging	Maintain & Strengthen Compliance	Increase Access to Recycling Recovery Incentives E&O MRF Upgrades New MRFs Mixed Waste Processing	
Metal	25_M9N - Other Nonferrous - All Forms w/o plastic component	Yes	Insufficient Information	Other metal	Maintain & Strengthen Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection Recovery Incentives E&O	
Metal	25_M9P - Other Nonferrous - All Forms w/ plastic component	Yes	Insufficient Information	Other metal	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection Recovery Incentives E&O	Yes, with phase-in plan
Metal	25_M10N - Other Ferrous - All Forms w/o plastic component	Yes	25%	Other metal	Maintain & Strengthen Compliance	Increase Access to Recycling Recovery Incentives E&O MRF Upgrades New MRFs Mixed Waste Processing	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Metal	25_M10P - Other Ferrous - All Forms w/ plastic component	Yes	25%	Other metal	Phase-In to Achieve Compliance	Increase Access to Recycling Recovery Incentives E&O MRF Upgrades New MRFs Mixed Waste Processing	Yes, with phase-in plan
Metal	25_M12N - Metal - Small - Two or more sides measuring 2" or less w/o plastic component	Yes	Insufficient Information	Small Format	Maintain & Strengthen Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection MRF Upgrades Recovery Incentives Secondary Sorting Facilities E&O New MRFs	
Metal	25_M12P - Metal - Small - Two or more sides measuring 2" or less w/ plastic component	No	Insufficient Information	Small Format	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection MRF Upgrades Recovery Incentives Secondary Sorting Facilities E&O New MRF	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Paper / Fiber	25_PPF1N - Paper/Fiber - Kraft Paper - All Forms w/o plastic component	Yes	30%	Mixed Paper	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PPF1P - Paper/Fiber - Kraft Paper - All Forms w/ plastic component	Yes	30%	Mixed Paper	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PPF14N - Paper/Fiber - Molded Fiber - All Forms w/o plastic component	Yes	7%	Mixed Paper	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PPF14P - Paper/Fiber - Molded Fiber - All Forms w/ plastic component	Yes	7%	Polycoated Paper	Phase-In to Achieve Compliance	Increase Access to Recycling End Market Support E&O MRF Upgrades Recovery Incentives New MRFs	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Paper / Fiber	25_PF15P - Paper/Fiber - Aseptic Cartons	No	<1%	Cartons	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support Increase Access to Recycling E&O New MRFs	Yes, with phase-in plan
Paper / Fiber	25_PF5P - Paper/Fiber - Gable-top Cartons	No	<1%	Cartons	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support Increase Access to Recycling E&O New MRFs	Yes, with phase-in plan
Paper / Fiber	25_PF7P - Paper/Fiber - Multi-Material Laminate - Other Forms w/ plastic component	Yes	<6%	Polycoated Paper	Phase-In to Achieve Compliance	Increase Access to Recycling Recovery Incentives End Market Support E&O MRF Upgrades New MRFs	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Paper / Fiber	25_PF8N - Paper/Fiber - Waxed Cardboard w/o plastic component	Yes	0%	Waxed Cardboard	Maintain & Strengthen Compliance		
Paper / Fiber	25_PF8P - Paper/Fiber - Waxed Cardboard w/ plastic component	No	0%	Waxed Cardboard	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Paper / Fiber	25_PF9N - Paper/Fiber - Cardboard w/o plastic component	Yes	68%	Cardboard (OCC)	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PF9P - Paper/Fiber - Cardboard w/ plastic component	Yes	68%	Cardboard (OCC)	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PF10N - Paper/Fiber - Paperboard - All Forms w/o plastic component	Yes	30%	Mixed Paper	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Paper / Fiber	25_PF10P - Paper/Fiber - Paperboard - All Forms w/ plastic component	Yes	30%	Polycoated Paper	Maintain & Strengthen Compliance	Recovery Incentives End Market Support Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PF17P - Paper/Fiber - Multi-Material Laminate - Paperboard with a Plastic Coating / Lining	Yes	<6%	Polycoated Paper	Phase-In to Achieve Compliance	Increase Access to Recycling End Market Support Recovery Incentives E&O MRF Upgrades New MRFs	Yes, with phase-in plan
Paper / Fiber	25_PF11N - Paper/Fiber - White Paper - All Forms w/o plastic component	Yes	71%	Mixed Paper	Maintain & Strengthen Compliance	Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PF11P - Paper/Fiber - White Paper - All Forms w/ plastic component	Yes	71%	Mixed Paper	Maintain & Strengthen Compliance	End Market Support Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Paper / Fiber	25_PF12N - Paper/ Fiber - Other/ Mixed Paper - All Forms w/o plastic component	Yes	71%	Mixed Paper	Maintain & Strengthen Compliance	End Market Support Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PF12P - Paper/ Fiber - Other/ Mixed Paper - All Forms w/ plastic component	Yes	71%	Mixed Paper	Maintain & Strengthen Compliance	End Market Support Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs	
Paper / Fiber	25_PF16N - Paper/Fiber - Small - Two or more sides measuring 2" or less w/o plastic component	Yes	Insufficient Information	Mixed Paper	Maintain & Strengthen Compliance	End Market Support Recovery Incentives Increase Access to Recycling E&O MRF Upgrades New MRFs Secondary Sorting Facilities	

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Paper / Fiber	25_P16P - Paper/Fiber - Small - Two or more sides measuring 2" or less w/ plastic component	Yes	Insufficient Information	Polycoated Paper	Phase-In to Achieve Compliance	Increase Access to Recycling Recovery Incentives End Market Support E&O MRF Upgrades New MRFs Secondary Sorting Facilities	Yes, with phase-in plan
Plastic - Rigid	25_P1P - PET (#1) - Bottles, Jugs, and Jars (Clear / Natural)	Yes	16%	PET Bottles, Jugs & Jars (Clear / Natural)	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P2P - PET (#1) - Bottles, Jugs, and Jars (Pigmented / Color)	Yes	5%	PET Bottles, Jugs & Jars (Pigmented / Colored)	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Rigid	25_P38P - PET (#1) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs	Yes	4%	PET Thermoforms	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support Increase Access to Recycling E&O New MRFs	Yes, with phase-in plan
Plastic - Rigid	25_P39P - PET (#1) - Other Rigid Items	Yes	4%	PET Thermoforms	Phase-In to Achieve Compliance	Increase Access to Recycling E&O MRF Upgrades Recovery Incentives End Market Support New MRFs Secondary Sorting Facilities Mixed Waste Processing	Yes, with phase-in plan
Plastic - Rigid	25_P6P - HDPE (#2) - Bottles, Jugs and Jars (Clear / Natural)	Yes	19%	HDPE-N Bottles, Jugs and Jars	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Rigid	25_P7P - HDPE (#2) - Bottles, Jugs and Jars (Pigmented / Color)	Yes	19%	HDPE-C Bottles, Jugs and Jars	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P8P - HDPE (#2) - Pails & Buckets	Yes	0%	HDPE- Pails & Buckets	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P40P - HDPE (#2) - Other Rigid Items	Yes	<23%	Other HDPE Rigids	Phase-In to Achieve Compliance	MRF Upgrades Mixed Waste Processing Increase Access to Recycling E&O New MRFs Recovery Incentives Secondary Sorting Facilities End Market Support	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Rigid	25_P11P - PVC (#3) - Rigid Items	No	Insufficient Information	PVC	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Plastic - Rigid	25_P13P - LDPE (#4) - Bottles, Jugs and Jars	No	Insufficient Information	Rigid LDPE	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Mixed Waste Processing End Market Support New MRFs Secondary Sorting Facilities	Yes, with phase-in plan
Plastic - Rigid	25_P14P - LDPE (#4) - Other Rigid Items	No	0%	Rigid LDPE	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Mixed Waste Processing End Market Support New MRFs Secondary Sorting Facilities	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Rigid	25_P17P - PP (#5) - Bottles, Jugs and Jars	Yes	2%	Rigid Polypropylene	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P41P - PP (#5) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs	Yes	2%	Rigid Polypropylene	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P19P - PP (#5) - Utensils	No	Insufficient Information	Utensils	Phase-In to Achieve Compliance	Secondary Sorting Facilities Mixed Waste Processing E&O	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Rigid	25_P20P - PP (#5) - Other Rigid Items	Yes	2%	Rigid Polypropylene	Phase-In to Achieve Compliance	MRF Upgrades Recovery Incentives Mixed Waste Processing Increase Access to Recycling E&O New MRFs Secondary Sorting Facilities End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P23P - PS (#6) - Expanded / Foamed Hinged Containers, Plates, Cups, Tubs, Trays, and Other Foamed Containers	No	<1%	Expanded Polystyrene	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection E&O Incentivizing Reuse and Refill	Yes, with phase-in plan
Plastic - Rigid	25_P42P - PS (#6) - Other Expanded / Foamed Forms	No	<1%	Expanded Polystyrene	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection E&O Incentivizing Reuse and Refill	Yes, with phase-in plan
Plastic - Rigid	25_P27P - PS (#6) - Utensils	No	<1%	Utensils	Phase-Out to Achieve Compliance		Yes, without phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Rigid	25_P43P - PS (#6) - Solid Hinged Containers, Plates, Cups, Tubs, Trays, and Other Solid Containers	No	<2%	Rigid Polystyrene	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Plastic - Rigid	25_P44P - Plastics and Polymers Designed for Compostability - Rigid Items	Yes	18%	Compostable Plastic	Phase-In to Achieve Compliance	End Market Support	Yes, with phase-in plan
Plastic - Rigid	25_P35P - Other/Mixed Plastics - Rigid Items	No	<3%	Other Rigid Plastic	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Plastic - Flexible	25_P5P - PET (#1) - Flexible and Film Items	No	Insufficient Information	PET Plastic Film/ Flex	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Flexible	25_P10P - HDPE (#2) - Flexible and Film Items	No	5%	PE Plastic Film/ Flex	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan
Plastic - Flexible	25_P12P - PVC (#3) - Flexible and Film Items	No	Insufficient Information	Non-Polyolefin Mono-material Plastic Film	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Plastic - Flexible	25_P15P - LDPE (#4) - Clear Non-Bag Film	No	5%	PE Plastic Film/ Flex	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Flexible	25_P16P - LDPE (#4) - Other Flexible and Film Items	No	5%	PE Plastic Film/ Flex	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan
Plastic - Flexible	25_P21P - PP (#5) - Clear Non-Bag Film	No	Insufficient Information	PP Plastic Film	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Flexible	25_P22P - PP (#5) - Other Flexible and Film Items	No	Insufficient Information	PP Plastic Film	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan
Plastic - Flexible	25_P29P - PS (#6) - Flexible and Film Items	No	Insufficient Information	Non-Polyolefin Mono-material Plastic Film	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Plastic - Flexible	25_P45P - Plastics and Polymers Designed for Compostability - Flexible and Film Items	Yes	4%	Compostable Plastic	Phase-In to Achieve Compliance	End Market Support	Yes, with phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Flexible	25_P46P - Multi-Material Laminate - Pouches and Envelopes	No	<2%	Multi-Material Plastic Film	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan
Plastic - Flexible	25_P33P - Multi-Material Laminate - Other Forms	No	<2%	Multi-Material Plastic Film	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan
Plastic - Flexible	25_P34P - Other/Mixed Plastics - Textiles	No	<33%	Textiles	Phase-Out to Achieve Compliance		Yes, without phase-in plan

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Plastic - Flexible	25_P36P - Other/Mixed Plastics - Flexible and Film Items	No	Insufficient Information	Multi-Material Plastic Film	Phase-In to Achieve Compliance	Increase access to recycling Alternatives to Onsite Curbside Collection E&O MRF Upgrades Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing End Market Support New MRFs	Yes, with phase-in plan
Plastic - Other	25_P47P - Plastic - Small - Two or more sides measuring 2" or less	No	Insufficient Information	Small Format	Phase-In to Achieve Compliance	Increase Access to Recycling Alternatives to Onsite Curbside Collection Recovery Incentives Secondary Sorting Facilities Mixed Waste Processing E&O MRF Upgrades New MRFs	Yes, with phase-in plan
Wood and Other Organic Materials	25_WO1N - Wood / Organics - All Untreated Forms w/o plastic component	Yes	Insufficient Information	Compostable Wood / Organics	Maintain & Strengthen Compliance		

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Wood and Other Organic Materials	25_WO1P - Wood / Organics - All Untreated Forms w/ plastic component	No	Insufficient Information	Non-Compostable Wood / Organics	Phase-Out to Achieve Compliance		Yes, without phase-in plan
Wood and Other Organic Materials	25_WO2N - Wood / Organics - All Treated or Painted Forms w/o plastic component	No	Insufficient Information	Non-Compostable Wood / Organics	Phase-Out to Achieve Compliance ⁷		
Wood and Other Organic Materials	25_WO2P - Wood / Organics - All Treated or Painted Forms w/ plastic component	No	Insufficient Information	Non-Compostable Wood / Organics	Phase-Out to Achieve Compliance		Yes, without phase-in plan

⁷ CAA California anticipates this CMC will not achieve the required recyclability or compostability requirements by 2032. This CMC is therefore targeted for phase-out. However, the 2032 compliance target falls outside of the timeline of this program plan, so this program plan does not include a unique challenges exemption application.

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Wood and Other Organic Materials	25_WO3N - Wood / Organics - Textiles w/o plastic component	No	Insufficient Information	Textiles	Phase-Out to Achieve Compliance ⁸	Incentivizing Reuse and Refill	
Wood and Other Organic Materials	25_WO3P - Wood / Organics - Textiles w/ plastic component	No	Insufficient Information	Textiles	Phase-Out to Achieve Compliance	Incentivizing Reuse and Refill	Yes, without phase-in plan
Wood and Other Organic Materials	25_WO4N - Wood / Organics - Other Forms w/o plastic component	Yes	Insufficient Information	Compostable Wood / Organics	Maintain & Strengthen Compliance		
Wood and Other Organic Materials	25_WO4P - Wood / Organics - Other Forms w/ plastic component	No	Insufficient Information	Non-Compostable Wood / Organics	Phase-Out to Achieve Compliance		Yes, without phase-in plan

⁸ CAA California anticipates this CMC will not achieve the required recyclability or compostability requirements by 2032. This CMC is therefore targeted for phase-out. However, the 2032 compliance target falls outside of the timeline of this program plan, so this program plan does not include a unique challenges exemption application.

Material type	CMC	Recyclable or compostable	CalRecycle recycling rate (2026)	CAA material grouping	CAA compliance designation	Interventions needed to hit target	Unique challenges exemption
Wood and Other Organic Materials	25_WO6N - Wood / Organics - Small - Two or more sides measuring 2" or less w/o plastic component	Yes	Insufficient Information	Compostable Wood / Organics	Maintain & Strengthen Compliance		
Wood and Other Organic Materials	25_WO6P - Wood / Organics - Small - Two or more sides measuring 2" or less w/ plastic component	No	Insufficient Information	Non-Compostable Wood / Organics	Phase-Out to Achieve Compliance		Yes, without phase-in plan

3.4.7 Film and Flexible Plastic Packaging

Film and flexible plastic (FFP) presents a substantial challenge in meeting SB 54 targets and warrants special attention in this program plan. It offers uniquely beneficial packaging characteristics, and is therefore in widespread use, but is rarely accepted in onsite curbside collection programs. CalRecycle's CMC list indicates PE film, a common type of FFP, has a 5% recycling rate, far short of the 30% it must reach by 2028.

Not only are these materials considered contaminants in most onsite collection programs, but most MRFs today are not equipped to effectively sort these materials. As such, these materials are rarely accepted by U.S. MRFs. Additionally, while there are end markets for clean commercial film, post-consumer film is typically of a lower grade with limited end market demand. Additional sorting may be required to process this material in the future.

FFP collection in the U.S. is largely concentrated in the commercial recycling stream, with some post-consumer film collection available through drop-off collection. Often, these drop-off sites are located at retail stores.

CAA California will implement a multi-faceted strategy to increase recovery of FFP while gathering the data needed to guide long-term system design. CAA California will deploy, evaluate and adjust interventions based on measured performance and system data.

Because of limited current system data, CAA California's early program actions, beginning in 2026, are prioritizing data collection and pilot testing to inform future scaling decisions. The following section outlines CAA California's phase-in plan for the FFP covered by material groupings PET Plastic Film/Flex, PE Plastic Film/Flex, PP Plastic Film, and Multi-Material Plastic Film.

3.4.7.1 Phase-In Plan for California Film and Flexibles

CAA California will implement the following actions to improve recovery and generate data needed to guide future program design.

These interventions are planned to span multiple years and will likely overlap, carrying out in parallel. The interventions below are not listed in order of priority. CAA California will complete additional research, and as learnings come in, will adapt its strategy as needed to meet compliance targets.

- Improve design
 - Move to recyclable structures where technically feasible and minimize multi-material generation.
- Support existing end markets and increase demand
 - Work with existing reclaimers to meet REM requirements; improve front-end sortation, quality and yield; and improve overall competitiveness against virgin materials.
- Improve collection
 - Invest in commercial collection.
 - Work with MRFs and local jurisdictions to determine the best collection approach for their region. This could include residential collection of commingled film, or separate curbside collection.
- Improve sortation
 - Invest in MRFs and reclaimers as the primary sortation strategy and, if necessary, develop independent secondary sortation.
- Expand into new end markets to grow demand

- Work with reclaimers to increase demand by driving new applications for recycled materials, and catalyze investment in new reclamation capacity to handle increased volumes.
- Integrate non-mechanical recycling into the system as capacity comes online.
- Support the flow of materials through the value chain
 - Consider incentives, offtake agreements, transportation support and other mechanisms to develop and support viable REMs for film and flexibles.

3.4.8 Outcome Modeling

For CAA California to meet SB 54's recycling rate targets, it will need to understand where materials are being lost at each stage of the recycling system. This knowledge enables CAA California to implement targeted interventions at scale, focusing investments on known challenges. CAA California will need to bolster data collection and analysis to facilitate that understanding.

Each plastic CMC's compliance status will be determined solely by its recycling rate. However, other metrics will also show progress toward meeting those rates. These include:

- Access to recycling for each CMC
- Residential capture rate
- MRF capture rate
- End market capacity and yield rate

Measuring each of these metrics will allow CAA California to measure progress toward meeting the overall recycling rate targets. In addition, CAA California will use these metrics to adjust its interventions, targeting the stages where it can reduce the most material being lost as residue (i.e., recyclable material that is collected but lost to disposal during the recycling process). CAA California will also calculate the recycling rates for each CMC annually to track progress on this critical compliance measurement.

CAA California will have a defined set of decision points for each CMC to determine if significant progress is being made toward the recycling rate targets. These are distinct decision points, but CAA California will facilitate studies and investments in all three areas in parallel (listed below).

1. CAA California will first focus on developing and supporting end markets. This primary decision point ensures the entire recycling process is viable. If material that is collected, sorted and sent to an end market can reliably be turned into feedstock for a new product or package, then CAA California can turn its focus to increasing the volume of material sent to end markets.
2. The second decision point is whether the material can successfully be sorted into a commodity without negatively affecting other commodities (i.e., targeting the material does not create additional contamination for other commodities). If this cannot be done, either through MRF improvements or through secondary sorting infrastructure, then CAA California will consider alternatives to onsite curbside collection.
3. Finally, CAA California will focus on increasing participation and capture in single-family and multifamily residences, at businesses and outside the home. These interventions will generally target increasing capture of all materials, not just specific CMCs. CAA California will also examine materials recovered at particularly low rates to determine their recovery barriers.

3.4.8.1 Risk Analysis

The decision points provide an adaptive intervention mechanism to gauge progress and adjust plans based on results. However, there are still significant risks associated with making investments at scale to achieve the recycling rate targets. CAA California does not have control over all factors that contribute to these risks.

One primary risk is whether recycling participation can scale up to the level necessary to drive up recycling rates and achieve SB 54 targets. CAA California's interventions can influence participation, but participation ultimately depends on public behavior, which involves unpredictability.

Another significant risk is whether producers can make design changes that meet high recyclability specifications while still achieving desired packaging qualities, in a short time. The substantial communication and coordination involved with scaled design changes will take time. It's uncertain whether the statutory deadlines match up with the real-world pace of change, creating some risk.

Other risks are associated with CAA California's intervention strategies, including (but not limited to) stranded assets, volatile pricing for material, and consumer habits and expectations shifting over time.

3.4.9 Exclusions and Exemptions

This chapter began with a key theme: CAA California will require every possible tool to transform California's recycling system from its present state to the system required under SB 54. This chapter has laid out interventions that will contribute to that improvement. However, CAA California must remain realistic about what is possible within a limited time frame.

CAA California's materials strategy – and the adaptive intervention framework at its core – is grounded in international experience and presented in good faith as a data-based, practicable, and cutting-edge approach to satisfy SB 54 requirements.

Still, SB 54 envisioned a potential need to provide flexibility on certain requirements under specified circumstances.

SB 54 includes a variety of provisions allowing some materials or producers to be excluded from the program altogether, exempted from certain requirements, or granted time extensions to meet certain deadlines. These provisions are driven by different entities, have distinct determination processes, and create different effects. They are both a key component of producers achieving SB 54 compliance as well as a point of tension for how they will impact SB 54 outcomes.

This closing section describes SB 54 exclusions, exemptions and related provisions, and how they fit into CAA California's materials strategy.

First, CAA California describes exclusions that do not involve the PRO but directly influence the scope and tonnage of covered materials addressed in this program plan.

Next, CAA California describes the remaining SB 54 exclusions and exemptions that directly or indirectly involve the PRO, and thus have a role in the materials strategy.

Finally, CAA California lists additional provisions pertinent to maintaining regulatory compliance while the interventions drive progress toward achieving SB 54 requirements.

3.4.9.1 Exclusions and Exemptions that Narrow the Scope and Tonnage of Covered Materials Addressed in the Program Plan

Table 15 summarizes four SB 54 exclusions and exemptions that are not part of CAA California's materials strategy because the PRO plays no direct role in applying for or determining which materials qualify. Materials that qualify for these provisions are not considered covered material under the law and are therefore not within SB 54's scope.

These are statutory categorical exclusions, exclusions for conflicts with federal mandates, exclusions for packaging used for long-term protection or storage, and exemptions for small producers.

Materials exempted or excluded through these provisions are not part of this program plan, but these provisions directly affect CAA California's materials strategy because they reduce the scope and tonnage of covered materials that must satisfy SB 54 requirements.

Table 15: SB 54 Exclusions and Exemptions That Narrow the Scope and Tonnage of Covered Materials (with no CAA California's role in determining qualifying materials)

Exclusion or Exemption	Regulatory Effect	Selected Key Criteria	Determination Process
Categorical exclusion PRC 42041(e)(2) 18980.2(a)(1)	Not covered materials	Packaging used for specified product types listed in statute (e.g., medical products or CRV deposit containers) ⁹	Producers identify and exclude qualifying packaging from reports
Exclusion for conflicts with federal mandates PRC 42060(b) 18980.2(a)(2)	Not covered materials	Conflicts between the Act and federal mandates that are not reasonably possible to eliminate by changing packaging or	Entities notify CalRecycle with a justification; excluded by default unless and until CalRecycle rules otherwise
Exclusion for long-term product protection or storage PRC 42041(e)(2)(F) 18980.2.2(a)	Not covered materials	Packaging used for five years or more	Producers identify and exclude qualifying packaging from reports
Exemption for small producers PRC 42060(a)(5) 18980.5.2	Exempted producers do not report but must still register	Producers with gross sales less than \$1 million	Producers apply/renew exemption application with CalRecycle every two years

⁹ This exclusion applies to primary, secondary and tertiary packaging, except tertiary packaging is not excluded if also used for non-specified product types.

3.4.9.2 Exclusions and Exemptions Addressed in the Materials Strategy

Table 16 summarizes SB 54 exclusions and exemptions that involve CAA California and play a role in CAA California's materials strategy.

Table 16: Exclusions and exemptions addressed in CAA California's materials strategy

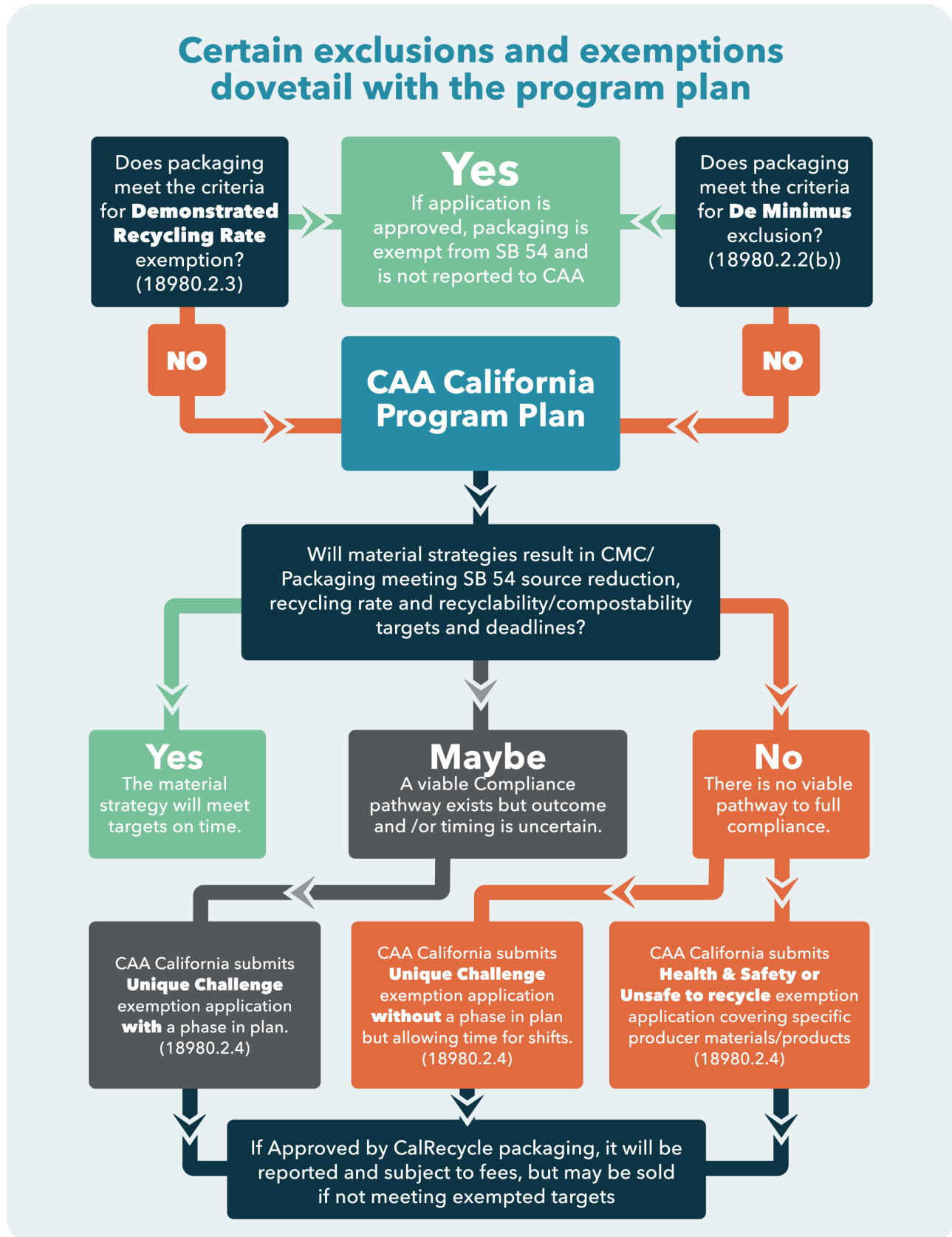
Exclusion or Exemption	Regulatory Effect	Selected Key Criteria ¹⁰	Determination Process	Role in Materials Strategy
Exclusion for reusable and refillable packaging PRC 42041 af) 18980.2.1	Reusable and refillable materials are not covered materials and are counted toward source reduction targets.	Specified standards in statute and regulations to ensure products are designed for and re-used and/or refilled in practice.	Producers make design shifts, determine if qualified, and maintain records. CAA California establishes procedures to confirm producer claims.	Promote producer shifts via fee incentives, infrastructure investments, and E&O.
Exemption for demonstrated high recycling rates PRC 42041(e) (2)(H) 18980.2.3	Qualified materials are not covered materials, but producers still must register with CAA California. Producers must re-apply every two years.	Producer material streams collected in non-residential programs, not commingled with unsorted curbside material, accepted by end markets meeting REM standards, with three-year recycling rate greater than 65% before Jan. 1, 2027, and greater than 70% afterward.	Producers apply to CalRecycle. CAA California provides information support and is allowed to apply on behalf of member producers but does not intend to.	Incentivize producers to keep materials in the program plan even if qualified, to help satisfy recycling rate targets.
Exclusion for de minimis plastic PRC 42041(s) (4) 18980.2.2(b)	Qualified materials are not covered materials.	Plastic components of small size or weight with no impact on recyclability or environmental health and safety risks.	Producers cannot apply directly. CAA California coordinates with producers and CalRecycle (CAA California anticipates submitting multiple de minimis determination requests on behalf of producers).	Seek exclusions to focus resources on achieving targets and reporting for plastic covered materials present in higher volumes and with higher impacts.

¹⁰ Listed criteria are paraphrased and incomplete, for brevity.

Exclusion or Exemption	Regulatory Effect	Selected Key Criteria ¹⁰	Determination Process	Role in Materials Strategy
Exemption for unique challenges (with or without a phase-In plan) PRC 42060(a) (3) 18980.2.4	Producers may use or sell these materials even if the targets are not met. But they are still covered materials and producers must register and pay fees. Exemptions are active for two to five years with the possibility for renewal.	Multiple standards involve considerations related to packaging alternatives and impacts on recycling system, environmental justice, and overall Act goals and intent. Must include phase-in to full compliance unless unneeded or infeasible. Phase-in periods may be longer than five years, but continued exemption requires approval of new requests.	Only CAA California as the PRO may apply. After consultations with producers and CalRecycle, CAA California is submitting two applications covering 56 CMCs for recycling rate targets, in parallel with this program plan.	Initial applications cover 41 CMCs with a viable compliance pathway but at risk of missing interim recycling rate targets; and 15 CMCs without a viable compliance pathway that need time for a plan to phase out use. Additional requests for specific covered materials may be identified.
Exemption for Health and Safety or Unsafe to Recycle PRC 42060(a) (4) 18980.2.4	Same as for unique challenges exemptions above.	Similar to unique challenges but without a phase-in. The key standard is that compliance is not possible without increasing overall health, safety or environmental risks compared to risks posed by exemption.	Same as unique challenges but driven by producers, with CAA California review and synthesis. CAA California anticipates submitting vetted applications upon completion of this process.	CAA California anticipates limited requests covering specific producer packaging and products, not CMCs. Requests may be identified on an ongoing basis as producers identify needs.
Trending Towards Recyclable Designations PRC 42061(a) (3)(B) 18980.3.1	Not termed an exemption, but a conditional recyclable designation even if criteria are not yet fully met.	Must be more likely than not that specified CMCs will achieve the 60/60 SB 343 recyclability criteria before the next CalRecycle MCS study is completed.	CalRecycle makes a preliminary designation based on SB 343 MCS study findings or updates, with final determination after public input. CAA California and producers may submit to CalRecycle data and recommendations.	CAA California may recommend this designation for certain CMC groupings not currently recyclable that require significant system improvements.
Extensions or Exemptions for Local Jurisdictions and Recycling Service Providers PRC 42060.5 18980.11.1	Exempt from requirement to include designated CMCs for two years with possible renewal.	Must be impracticable due to local conditions, circumstances or challenges (e.g., no REM); rural jurisdiction resolution; material collected outside of local programs; or local ban adopted prior to CMC designation.	Local jurisdictions or recycling service providers apply to CalRecycle, but must first share applications with CAA California as the PRO.	Seek to minimize these exemptions where possible, by addressing local concerns.

Each of the exclusions and exemptions in Table 16 has a distinct role in the program plan and materials strategy depending on its effect on SB 54 requirements and regulatory compliance. Figure 2 visually illustrates this for certain exclusions and exemptions.

Figure 2: Flow chart illustrating how certain exclusions and exemptions dovetail with the program plan



3.4.9.2.1 Exclusion for Reusable and Refillable Packaging

SB 54 considers only single-use packaging and plastic food serviceware covered material.

That means reusable and refillable packaging that meets statutory and regulatory standards is excluded from covered material requirements.

Producers will independently determine whether these standards are satisfied. They must document design changes they seek to count toward source reduction targets in both their Individual Source Reduction (ISR) Plan and subsequent annual source reduction reporting. CAA California must establish procedures and methods to ensure that all items claimed as the basis for reuse and refill source reduction satisfy the standards. This is further detailed in the Source Reduction chapter.

SB 54 requires the PRO to achieve source reduction targets that include a minimum level of shifts to reusable or refillable formats. The materials strategy reflects this by incentivizing and supporting producers in shifting packaging from single-use to reusable and refillable formats and investing in infrastructure. Further details are provided in the Source Reduction, Fee Setting, Eco-Modulation, and Education and Outreach chapters.

3.4.9.2.2 Exemption for Demonstrated High Recycling Rates

As shown in Figure 2, materials qualifying for this exemption are not considered covered materials and will not be included in SB 54 recycling rate calculations.

Specified portions of a producer's covered materials must be shown to have had a recycling rate of at least 65% in 2024, 2025, and 2026, and at least 70% in 2027 and each year thereafter. The recycling rates only apply to materials originating from items satisfying these additional criteria:

- Collected by alternative collection programs or non-residential programs
- Not commingled with unsorted curbside collected material
- Some or all of the materials are accepted by end markets satisfying REM standards

Producers apply directly with CalRecycle. CAA California may submit applications on behalf of its member producers but does not anticipate doing so. If the application is submitted before Jan. 1, 2028 (and therefore based only on pre-2027 recycling rates), it shall be valid for one year from the submission date; otherwise, it is valid for two years.

These standards are high, and CAA California anticipates only a small portion of producer materials may qualify (such as well-documented, commercially-generated PE film or OCC that retailers ship directly to mills). Although CAA California is providing informational support to producers related to this exemption, as part of its materials strategy CAA California is encouraging and incentivizing producers to keep covered materials within the program plan, even if they may qualify for the exemption.

That would allow these currently high-performing CMCs to contribute toward the program plan recycling rates. Since residential and commercial materials in these CMCs share the same recycling rate, excluding the higher performing commercial materials will significantly hinder the remaining materials in these CMCs to achieve the program plan recycling rates. As these materials typically receive a positive value from reclaimers, CAA California is working with producers to assess the right incentive mechanism (i.e. bonus through eco-modulation, payment as a service provider) to ensure these materials remain in the program.

3.4.9.2.3 Exclusion for De Minimis Plastic

As shown in Figure 2, plastic material that is part of or directly connected to packaging, but is of de minimis weight or volume, is not itself packaging under SB 54. This exclusion applies only to packaging and not plastic food serviceware. If approved by CalRecycle, the de minimis exclusion has the effect of reclassifying applicable covered materials from being considered plastic to non-plastic, assuming there is no other non-detachable plastic component on the applicable covered material. Such items are therefore not subject to the source reduction and recycling rate requirements, and producers do not need to report or pay fees associated with these plastic components. However, since only non-independent, non-detachable components are eligible, producers still need to meet SB 54 requirements on the remaining packaging covered material of which the excluded plastic components are a part.

Additional criteria for a plastic packaging component to qualify include the following:

- It has no effect on whether any covered material satisfies SB 343 recyclability criteria.
- It satisfies design for recycling and composting criteria as specified in regulations.
- Designating it as having a de minimis weight or volume enables usage of recyclable, compostable, reusable, or refillable packaging.
- Its disposal, processing, and handling does not create health or safety risks or have a significant effect on the environment.
- Its use in packaging is not prohibited under any California or federal law.

CAA California may submit requests to CalRecycle for the de minimis exclusion. Under the regulations, member producers may not submit such requests. After consultations with member producers and CalRecycle, including submitting a draft de minimis application template to CalRecycle for feedback, CAA California anticipates submitting multiple de minimis designation requests to CalRecycle. The requests include, but are not limited to:

- Polymer Cold End Coating on Glass Containers
- Polymer Coatings/Liners on Metal Packaging
- Polymer Dispersion Coatings on Paper/Fiber Substrates
- Wax Alternative Coatings on Corrugated Cardboard and Equivalents (e.g. kraft paper bags without polycoat lining)
- Polymer Adhesive on Paper Labels
- Polymer Adhesive (water-based and hot melt) on Folding Paperboard Boxes or Corrugated Boxes and Other Paper Packaging Applications
- Polymer Tape and Paper Tape with Polymer Adhesives on Corrugated Cardboard Boxes
- Water-based Inks with Polymer Binders used on Packaging
- Plastic Window in a Paper/Fiber Envelope, Paper/Fiber Bag or Paperboard Box
- Polymers used as Binders, Color Coatings, Sizing Agents (incorporated in the paper content of paper packaging)
- Single-sided (inside-only) Polycoated Paperboard and Corrugated Cardboard Packaging

While these requests are still pending, CAA California is directing producers to assume they are not approved and to fully report on the plastic components covered in these applications.

CAA will consider additional de minimis exclusion requests as new requirements are identified by participant producers and other interest holders.

The de minimis exclusion supports CAA California's materials strategy by focusing resources on the highest volume and most impactful plastic covered materials. If approved, the exclusions will greatly simplify producer reporting and source reduction plans without compromising SB 54 goals.

3.4.9.2.4 Exemption for Unique Challenges (With or Without a Phase-In Plan)

This exemption applies to covered material that presents unique compliance challenges. The effect is that a producer may continue to use covered materials for a specified period, regardless of whether the covered material complies with SB 54's source reduction, recycling rate, and recyclability and compostability target mandates in PRC 42050, or the separate EPS-related recycling rates in PRC 42057(i). The exempted covered material also does not need to satisfy the SB 54 targets covered in the approved exemption application.

The exempted materials are still considered covered materials, and other producer obligations are not affected (such as the requirement to register, report and pay producer fees). By default, the exemptions last two years but may run as long as five years if CalRecycle determines there is no reasonable likelihood that the circumstances justifying the exemption will change and render the exemption no longer justified.

As the PRO, only CAA California may submit exemption applications. CAA California will only submit applications for exemptions it determines meet the regulatory standards, and CAA California may establish any procedure it deems appropriate for receiving and considering applications prepared in part or in whole by producers. The exemption scope is flexible in applications, and CalRecycle may adjust the scope in its determinations. The scope may cover any clearly defined class of products or covered materials with certain characteristics in common.

Unique challenges exemptions dictate which covered materials may be granted additional time to satisfy core SB 54 performance targets. Therefore, applications must provide documentation on a broad range of considerations, including:

- Identifying the SB 54 requirements for which the covered materials present unique challenges, and why they cannot be recycled, composted, or source-reduced to meet the targets
- Explaining the practical necessity of the covered material that justifies the exemptions being sought, including the extent to which the exemption is necessary to minimize risks with respect to: public health, the environment, economic development, burdens on vulnerable populations, disproportionate effects on identifiable classes or industries, and conflicting obligations under other laws
- Explaining any potential impacts on disadvantaged, low-income communities, or rural areas from granting or not granting this exemption
- Describing potential alternatives for the covered material and why each is infeasible or unreasonable – including technological or financial limitations, if any – and the extent to which the alternatives also present challenges or risks
- Describing current impacts of the covered materials on existing collection, processing, or recycling infrastructure, and how an exemption will affect those impacts
- Describing the unique challenges, including why they are unique; circumstances that render them unique; applicable technical, legal, and financial elements; and how the characteristics of the material cause the unique challenges
- Inclusion of an explanation, information, and evidence demonstrating how the challenges will be overcome to satisfy the applicable requirements; the efforts to overcome them to date; and the extent to which such efforts have been successful
- Detailed information on existing or planned alternative collection programs, if applicable

- The applications must include a phase-in plan for the exempted covered materials, unless one is infeasible or unnecessary. The phase-in plan can be longer than the maximum 5-year exemption approval, with continued exemption status dependent upon CalRecycle approval of a renewal request.
- If a phase-in plan is included, it must contain:
 - The timeline anticipated for phase-in to full compliance with SB 54
 - A description of the SB 54 targets for which compliance is already on track
 - Yearly progress requirements for each year of the program plan timeline, including addressing each unique challenge justifying the exemption; and planned periodic reporting to CalRecycle to demonstrate plan implementation
- If a phase-in plan is not included, the application must contain:
 - A description of unique challenges that make a time-based phase-in plan unfeasible or unnecessary
 - A description of why an exemption without a phase-in plan will not interfere with the intent of SB 54, including targets for plastic source reduction, recycling rates, and recyclability and compostability of covered materials

CalRecycle must also consider this fundamental criterion when evaluating exemptions: 18980.2.4(f)(2)(B) *The request must clearly and convincingly establish that the exemption and the accompanying phase-in plan, if any, will promote achievement of the requirements of section 42050 of the Public Resources Code in a manner consistent with the intent of the Act.*

CAA California is coordinating closely with producers as it develops unique challenge exemption applications. CAA California gauged producer interest in these exemptions as part of a November 2025 reporting cycle and in a February 2026 survey. CAA California also held preliminary consultations with CalRecycle that informed development of unique challenge requests for specific CMCs related to compliance with the initial recycling rate requirements, listed in Table 17, which are being submitted with the October 2026 program plan. These applications are described further after Table 17. As CAA California continues to evaluate and consolidate additional requests from producers, CAA California may submit additional exemption requests that are targeted more narrowly at specific covered material types.

In addition to unique challenges exemptions for recycling rate compliance, CAA California is considering a unique challenges exemption application for 2027 source reduction targets. This is further described in the Source Reduction chapter, under 6.2.1.1 Source Reduction Target Challenges.

Table 17: Scope of Unique Challenge Exemption Applications Related to Recycling Rate Compliance to be Submitted in Parallel with the Program Plan

	Applications With a Phase-In Plan to Comply With Recycling Rate Targets	Applications With a Plan to Phase Out Use
Description	Have a viable pathway to full SB 54 compliance but at risk of missing initial recycling rate targets	Do not appear to have a viable pathway to full SB 54 compliance and targeted for phase-out, but will miss initial recycling rate targets during phase-out process
Included CMC Groupings - Affected CMCs	Other Glass - 25_G2P Non UBC Aluminum - 25_M2P, 25_M3P, 25_M5P Other metal - 25_M9P, 25_M10P Small format - 25_M12P, 25_P47P Cartons - 25_PF15P, 25_PF5P Poly coated paper - 25_PF14P, 25_PF7P, 25_PF17P, 25_PF16P PET Bottles, Jugs & Jars (Clear / Natural) - 25_P1P PET Bottles, Jugs & Jars (Pigmented / Colored) - 25_P2P PET Thermoforms - 25_P38P, 25_P39P HDPE-N Bottles, Jugs and Jars - 25_P6P HDPE-C Bottles, Jugs and Jars - 25_P7P HDPE- Pails & Buckets - 25_P8P Other HDPE Rigids - 25_P40P Rigid LDPE - 25_P13P, 25_P14P Rigid Polypropylene - 25_P17P, 25_P20P, 25_P41P Utensils - 25_P19P Expanded Polystyrene - 25_P23P, 25_P42P Compostable Plastic - 25_P44P, 25_P45P PET Plastic Film/Flex - 25_P5P PE Plastic Film/Flex - 25_P10P, 25_P15P, 25_P16P PP Plastic Film - 25_P21P, 25_P22P Multi-Material Plastic Film - 25_P46P, 25_P33P, 25_P36P	Ceramic - 25_C1P, 25_C2P Waxed Cardboard - 25_PF8P PVC - 25_P11P Utensils - 25_P27P Rigid Polystyrene - 25_P43P Other Rigid Plastic - 25_P35P Non-Polyolefin Mono-material Plastic Film - 25_P12P Non-Polyolefin Mono-material Plastic Film - 25_P29P Non-Compostable Wood / Organics - 25_WO1P, 25_WO2P, 25_WO4P, 25_WO6P Textiles - 25_P34P, 25_WO3P

CAA's approach to developing unique challenge exemption requests recognizes the critical difference between covered material that has a viable pathway to phase in and reach full compliance, versus covered material for which full compliance is not practical. For those materials, producers may comply with a plan to phase out use. The producer may shift to alternative covered materials that do have a viable compliance pathway, or materials that are excluded due to being reusable or refillable.

CAA California will submit unique challenges exemption applications with phase-in plans to achieve recycling rates for 41 CMCs, indicating these materials have viable pathways to full SB 54 compliance. CAA California has determined the material groupings and CMCs covered in these applications have a viable pathway to full compliance under SB 54 via the interventions in this chapter. However, they are at risk of missing the initial recycling rate targets due to circumstances unique to their characteristics and related circumstances such as inadequate collection and sortation capacity; needed but feasible REM expansion; and insufficient time to make recycling system improvements under the statutory deadlines. Given the very low initial recycling rates discussed earlier in this chapter, the majority of these requests are for five-year exemptions covering both the 2028 30% and the 2030 40% recycling rate targets. CAA California is requesting a two-year exemption for only five of the 41 CMCs that with current recycling rates above 15% which may be able to satisfy the 40% recycling rate target by 2030.

CAA California will submit unique challenges exemption applications with a plan to phase out use for 15 CMCs, indicating these materials are targeted for phasing out. These applications exclusively cover material groupings and affected CMCs within the Phase Out to Achieve Compliance designation as listed in Table 17. These materials lack meaningful collection, sortation, and end market access and are unlikely to become viable even with substantial interventions. They are therefore targeted for phasing out, as further discussed below. While these applications do not include a phase-in plan for the exempted covered materials, they do include a plan to phase out use, including a timeline with milestones for producer shifts to either eliminate plastic components or shift them to more readily recyclable or reusable and refillable formats. Fourteen of the included CMCs are plastic covered material not expected to achieve the mandated recycling rate targets and/or recyclability criteria, and four of the CMCs are non-plastic CMCs not anticipated to achieve recyclability or compostability criteria.

CAA California understands the sensitive nature of unique challenge applications and has taken care to ensure they satisfy regulatory standards. Given the potential penalties under SB 54, maintaining regulatory compliance is of the utmost importance to CAA California and member producers. CAA California believes unique challenge exemptions promote achievement of the SB 54 performance targets by allowing covered materials with a viable pathway to full compliance additional time to meet interim targets, or to provide covered materials without a viable pathway to full compliance additional time to be shifted to covered materials with a viable pathway for full compliance.

3.4.8.2.5 Exemption for Health and Safety or Unsafe to Recycle Reasons

The exemptions for health and safety reasons or because certain covered materials are unsafe to recycle are similar to the unique challenge exemptions, but with a few important distinctions. While CAA California is developing these applications, they are effectively driven by producers and are intended to mitigate health and safety risks related to specific types of covered materials and circumstances as identified by producers.

The effect of the exemptions is the same, in that exempted materials are still considered covered materials, and other producer obligations are not affected. One difference is that these exemptions do not require a phase-in plan.

Health and safety exemption applications must describe the nature of the health and safety concerns, including how the characteristics of the covered material relate to the concerns, and how the concerns prevent compliance with SB 54.

Unsafe to recycle exemption applications must describe the characteristics of the covered material that render recycling unsafe. They must also describe the nature of the safety risks, why they cannot reasonably be mitigated without an exemption, and how granting the exemption would mitigate or avoid them. This must address the extent to which such risks relate to the environment, health and safety, and worker health and safety, and the extent to which recycling the covered material creates or exacerbates risks, including contamination of equipment by a toxic or hazardous substance, as well as risks to end markets, processors, and intermediate supply chain entities.

Applications must also provide information on the other considerations listed for unique challenges above, but with respect to health and safety concerns asserted in the request and the challenges related to them, rather than to the unique compliance challenges.

Exemptions due to health and safety concerns or because materials are unsafe to recycle will be approved if the following two criteria are satisfied:

1. Compliance with SB 54 is not possible without increasing overall risks to health or safety, or risks significant effects on the environment compared to the risks posed by exempting the packaging or food serviceware.
2. The exemption will not make it more difficult for any other producer to satisfy SB 54's source reduction, recycling rate, and recyclability – and compostability-mandated targets.

The application process is the same as for unique challenges, and only CAA California as the PRO – not member producers – may submit an application. However, unlike unique challenge applications covering CMCs that are driven largely by CAA California's materials strategy to guide compliance phase-in, CAA California is deferring to individual producers to propose specific health and safety and unsafe to recycle exemptions that will generally be targeted at the specific product classes or individual producer packaging application level (rather than at the CMC level).

CAA California's role is to review, synthesize, and submit applications on behalf of member producers. Based on the same consultation process used to engage producers on unique challenges exemptions as described above, CAA California is evaluating a number of proposed health and safety and unsafe to recycle exemptions, and anticipates submitting applications it deems satisfy regulatory standards upon completion of this process. CAA California anticipates submitting additional applications over time as producers continue to review their portfolios and engage in SB 54 implementation.

3.4.9.2.6 Trending Toward Recyclability Designations

SB 54 authorizes CalRecycle to effectively make conditional recyclable designations if it determines they are likely to satisfy the SB 343 recyclability criteria before the next SB 343 material characterization study is completed. Such designated CMCs will be added to the CMC list, and CAA California tentatively assumes that they therefore are subject to the requirement to be included in local jurisdiction recycling programs.

SB 54 indicates CalRecycle may make a preliminary recyclable designation if new information in an SB 343 material characterization study or other information published by CalRecycle, pursuant to its authority under SB 343, shows that the criterion above is satisfied. CalRecycle may then confirm the preliminary designation after consideration of public input.

CAA California's materials strategy is designed to satisfy recyclable or compostable criteria for targeted CMCs by the 2032 deadline. The adaptive intervention framework at the strategy's core

is designed to incrementally add targeted CMCs to local jurisdiction programs through a combination of incentives, new contracts, and system improvements. CAA California will track progress towards the SB 343 recyclability criteria.

CAA California will request CalRecycle consider the trending toward recyclability designation for certain CMCs that may not achieve required 2032 targets, or where demonstrated progress clearly meets the trending designation criteria prior to the deadline. This will provide a critical boost to access and E&O efforts, since the trending designation allows for recyclability labeling. These requests will likely target materials that are not currently designated recyclable or compostable, but that exhibit some existing collection, processing, or market activity and potential for improvement.

3.4.9.2.7 Extensions or Exemptions for Local Jurisdictions and Recycling Service Providers

This last exemption under SB 54 is distinct because it applies only to local jurisdictions and recycling service providers. These entities are generally required to include in their collection programs any CMCs designated as recyclable or compostable on the CalRecycle CMC list. However, they may qualify for a two-year extension or exemption, which may be extended under certain circumstances. Extensions begin upon the application date, while exemptions begin on the date the requirement would have otherwise taken effect.

One of several criteria must be satisfied for the exemption to apply, including:

- It is impractical to collect the material due to local conditions, circumstances, or challenges (including absence of a REM).
- A rural jurisdiction's governing body adopts a resolution.
- The material is collected outside of curbside programs and does not meet statutory criteria requiring curbside collection.
- A local jurisdiction adopted an ordinance prohibiting sale of the material, prior to CalRecycle designating it on the CMC list.

To receive this exemption, local jurisdictions or recycling service providers must route the application to CAA California for review and then submit it to CalRecycle. CAA California will seek to address concerns to minimize such exemptions where possible, since these will make it more difficult to achieve mandated recycling rate targets on time. They will also reduce efforts to maximize recycling access equity across all of California.

3.4.9.3 Additional Provisions Pertinent to Maintaining Regulatory Compliance While Progressing Towards SB 54 Goals

SB 54 provides additional provisions that may help CAA California and producers maintain regulatory compliance if certain target deadlines are missed, but progress is being made toward full SB 54 compliance. CAA California has not integrated these into its materials strategy, but describes them here to more thoroughly contextualize the above exclusions and exemptions. These include:

CalRecycle Temporary Adjustment to Recycling Rate Targets: Some materials face substantial, perhaps insurmountable, barriers to achieving SB 54's recycling rate targets and deadlines. They may, however, be able to reach these targets in a moderately longer time frame. This reality is acknowledged with PRC 42062(b), which allows CalRecycle to temporarily adjust statutory recycling rate requirements, in consultation with the Producer Responsibility Advisory Board.

CalRecycle is required by statute to review the recycling rate targets in consultation with the Producer Responsibility Advisory Board in 2026 and then every two years, and may adjust recycling rate requirements for specific CMCs if it finds "current unforeseen and anomalous market condi-

tions,” such as “recycling infrastructure conditions,” warrant lowering the target. CalRecycle may adjust specific CMC recycling rate requirements by up to 10 percentage points, for a maximum of two years. The rate requirement then reverts to the statutory figure.

CAA California cannot act to deploy this intervention, but it will be an important mechanism for addressing specific material challenges while allowing time for investments to yield progress. CAA California will support temporarily adjusting recycling rates for CMCs as appropriate (PRC 42062).

Corrective Action Plans: If CalRecycle issues a notice of violation, it may also permit the entity to submit a corrective action plan and provide two years to remedy the noncompliance. In certain circumstances, this may be extended to three years (18980.13.3).

Alternative Recycling Rate Calculations: Where data gaps or quality issues preclude calculation of a CMC recycling rate:

- CalRecycle may calculate a recycling rate for a combination of CMCs if one cannot be calculated for the individual CMCs separately, as was done in several cases in the initial recycling rate report published in December 2025 (18980.3.2(d)(3)).
- Producers may submit data showing that a portion of covered materials within a given CMC has satisfied the recycling rate target, even if the overall CMC has not (18980.13(h)(3)).
- Producers or the PRO may submit data related to CMC list designations for CalRecycle consideration (18980.2.5(f)) and make a recommendation for changes to the recycling rate and other CMC designations (18980.2.6(a)).

3.4.10 Material Phase-Out

CMCs assigned to the Phase Out to Achieve Compliance designation are those that lack meaningful collection, sortation, and end-market support in California and – based on current data and foreseeable system conditions – are not expected to achieve recyclability or compostability at scale, even with significant intervention. This designation reflects CalRecycle’s recyclability and compostability determinations and CAA California’s evaluation of system performance, infrastructure readiness, and market viability under SB 54.

For materials in this category, CAA California will maintain regulatory compliance by transparently documenting infeasibility, engaging producers on potential alternatives, and where no viable pathway exists requesting unique challenge exemptions to provide producers with the time needed to implement shifts to alternative packaging or plastic food serviceware that does have a viable compliance pathway.

CAA California will work with producers that are unable to discontinue use of a phased-out material, to develop additional plans and strategies to achieve compliance.

3.4.10.1 Lack of Viable Pathway

Materials will maintain the Phase Out to Achieve Compliance designation when CAA California’s engagement with producers confirms that no combination of interventions would enable a CMC to meet SB 54’s recyclability or compostability requirements within a reasonable time frame.

SB 54 and the regulations acknowledge that not all materials will be able to meet statutory targets. They establish mechanisms to address these cases through exemptions or other regulatory determinations made by CalRecycle.

Consistent with this framework, CAA California is working with producers of these CMCs to prepare and submit exemption requests to maintain compliance as they shift to alternative packaging formats. These exemption applications document why compliance is not reasonably achievable, and provide the necessary justification, timeline, and milestones as required in the regulations.

3.4.10.2 Phase-Out and Program Planning

Where materials remain in this pathway after producer engagement and exemption evaluation, CAA California will provide a plan to phase these materials out of use, removing them from the program plan's recycling and composting performance pathways. Phasing materials out does not represent a relaxation of SB 54 requirements, but rather a reflection that certain materials cannot reasonably be made compliant with recyclability or compostability mandates, so their use must be discontinued under a specified timeline as required by 42061.1(b)(2).

CAA California will maintain clear documentation of compliance designations, producer engagement, and regulatory outcomes to ensure transparency and alignment with CalRecycle oversight. This approach ensures that the program plan remains accurate, defensible, and consistent with SB 54 requirements, while avoiding the inclusion of material streams that cannot realistically achieve statutory performance targets.

3.5 Implementation Sequencing

CAA California's action plan reimburses local governments and service providers for projects undertaken to implement SB 54. The action plan's timing therefore depends on those entities' willingness and ability to undertake those projects.

CAA California also needs to know more about individual community needs before setting a timeline. CAA California needs to know where communities stand now, so it can prioritize communities accordingly.

To gather this information, CAA California has commenced the California Recycling and Reuse System Optimization Project (CARRSOP), a statewide project through which CAA California will contact recycling and reuse system operators throughout the state. CAA California will survey these entities, asking each about:

- Recent investments made
- Which materials it accepts today
- An inventory of its current equipment
- Any plans for additional investments
- Space restrictions limiting equipment installation, specifically for MRFs

Through the CARRSOP project, CAA California will also learn about non-financial factors that affect the speed of change – for example, conversations may cover the nuances of procurement and contract processes.

The CARRSOP project will work in conjunction with CAA California's data collection efforts outlined in section 3.4.2.4 Improve Data Reporting and Tracking. They will generate the information CAA California needs to properly prioritize and sequence its interventions throughout the state.



Chapter 4: Strategy for Compostable Covered Materials

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Chapter 4: Strategy for Compostable Covered Materials

4.1 Introduction

This chapter outlines CAA California's approach to managing compostable packaging and food serviceware, including how CAA California will support the collection and processing of compostables at Responsible End Markets (REMs) as required by SB 54.

Throughout this chapter, the terms "compostables," "compostable packaging" and "compostable food serviceware" are used interchangeably. These terms broadly include fiber and wood items, fiber items that incorporate compostable plastic (e.g., fiber cup lined with compostable plastic), and compostable plastic items. Compostables are designed to decompose entirely into water, carbon dioxide, and biomass (i.e., nutrient-rich compost) within a specific time frame when placed in defined composting conditions.

In this chapter, the terms "plastic designed for compostability" and "compostable plastic" are used interchangeably and refer to plastic designed to decompose entirely, such as polylactic acid (PLA) and polyhydroxyalkanoates (PHA). Compostable plastics include both fiber items that incorporate compostable plastic (e.g., a paper bowl lined with compostable plastic) and compostable plastic items (e.g., a PLA cup).

This chapter is connected to the Materials Strategy and Covered Material Category Compliance Plan chapter as it explains the interventions that CAA California will deploy to meet SB 54 compostables requirements. This chapter also connects to the Reimbursement and Payment Process chapter, as well as the Education and Outreach chapter.

The chapter is structured as follows:

- **Section 4.2 Compostability Labeling Requirements** provides an overview of the four requirements that must be met for packaging to be labeled compostable in California.
- **Section 4.3 Compostability Determination** identifies those covered material categories (CMCs) that are listed as eligible to be labeled compostable on the CMC List published by CalRecycle on Dec. 31, 2025.
- **Section 4.4 Quantity of Compostable Packaging and Food Serviceware Generated** provides CAA California's estimate of the quantity of CMCs generated annually that meet all compostability requirements.
- **Section 4.5 Overview of California's Organic Waste Management Landscape** describes the composting landscape in California and identifies the current barriers contributing to the low acceptance of compostables in local jurisdiction organics collection programs and at processing facilities.
- **Section 4.6 CAA California's Approach to Managing Compostables** presents the two types of actions that CAA California will use to address those barriers: interventions and reimbursement.
- **Section 4.7 Eligibility Requirements for Organics Processing Facilities** lists the requirements for organics processing facilities to receive reimbursements from CAA California.
- **Section 4.8 Summary of Actions** summarizes the actions that CAA California will deploy in relation to compostable material types.

4.2 Compostability Labeling Requirements

SB 54 requires producers to ensure that 100% of single-use packaging and food serviceware sold in the state is recyclable, compostable, or reusable by 2032.

SB 54's compostability labeling requirements are in accordance with the compostability labeling requirements laid out in Chapter 5.7 of the PRC (sections 42355 through 42358.5). These sections correspond to AB 1201 Solid waste: products: labeling: compostability and biodegradability, passed in 2021.

The term "eligible to be labeled compostable" is used interchangeably with the term "compostability claim" throughout this chapter. Both refer to the requirements that a producer must fulfill in order to feature the word "compostable" on the package that the producer offers for sale in California.

An example of a compostability claim is presented in Figure 1. Producers must fulfill all the requirements listed in Table 1 to make a compostability claim.

Figure 1: Compostability Claim



Table 1: Compostability Claim Requirements for Packaging, per SB 54

Requirement	Explanation
Third-party certification to scientific compostability standards	The item must be certified by a third party to ensure it meets scientific standards for compostability (ASTM D6400 and ASTM D6868) in an industrial composting facility. Items that are composed of fiber only and do not incorporate any plastics or polymers, as defined in SB 54, are exempt from this third-party certification requirement.
Organic fluorine (PFAS) restriction	The item does not have a total organic fluorine (PFAS) concentration of greater than 100 parts per million. This requirement is captured in the third-party certification referred to above. As such, packaging that meets requirement 1 automatically meets requirement 2.
Design for the recovery of organic wastes	The item must be associated with the recovery of desirable organics such as food scraps or green waste, that are collected for composting. Packaging designed to be composted but used for products that are not food or green waste (e.g., cosmetics packaging) does not meet this requirement.
National Organic Program (NOP) compliance	The item must qualify as an allowable input under the United States Department of Agriculture (USDA) National Organic Program (NOP) by the compliance deadline of June 30, 2027. Synthetics, such as compostable plastics, are not allowed under the NOP. However, up until the expiry of the compliance deadline (June 30, 2027), compostable plastics are considered compliant with this requirement. AB 1201 grants CalRecycle the authority to extend the compliance deadline for this requirement up to five years (to Jan. 1, 2031).

4.3 Compostability Determination

SB 54 requires CalRecycle to publish an annual list of CMCs eligible to labeled compostable.

4.3.1 CalRecycle Process for Determining Compostability

In its determination of CMCs, CalRecycle does not evaluate the first three requirements in Table 1. Only the fourth requirement (NOP compliance) is evaluated by CalRecycle in determining if a CMC is eligible to be labeled compostable. Table 2 presents those requirements that are evaluated by CalRecycle and those that are not.

Table 2: Requirements Evaluated by CalRecycle in Determining CMC Compostability

Requirement	Explanation
1. Certification to scientific compostability standards	NO
2. PFAS restriction	NO
3. Design for the recovery of organic wastes	NO
4. NOP compliance	YES

4.3.2 Compostable CMCs as per the CMC List

There are 21 CMCs that are eligible to be labeled compostable from CalRecycle’s 2026 CMC list (published Dec. 31, 2025), of which 11 are compostable only, and 10 are both compostable and recyclable.

Because CalRecycle evaluates compliance with only one of the four requirements that must be met, not all the individual packaging within a compostable CMC are compostable. For example, a molded fiber box used to contain a cosmetic product is not compostable, even if the molded fiber CMC is designed for compostability. This is because Requirement 3 does not allow for packaging used for products that are not food or green waste, such as cosmetics. Similarly, a cup made of plastic that is designed for composting but that is not certified to compostability standards is not compostable because it does not meet Requirement 1 (third-party certification).

Table 3 presents the CMCs that are currently deemed compostable by CalRecycle. In the table, “Material Class” refers to the dominant material (Paper and Fiber, Plastic, Wood and Other Organic Materials). “Material Type” refers to the specific type of material within the dominant category. “Form” indicates whether the category includes a plastic component.

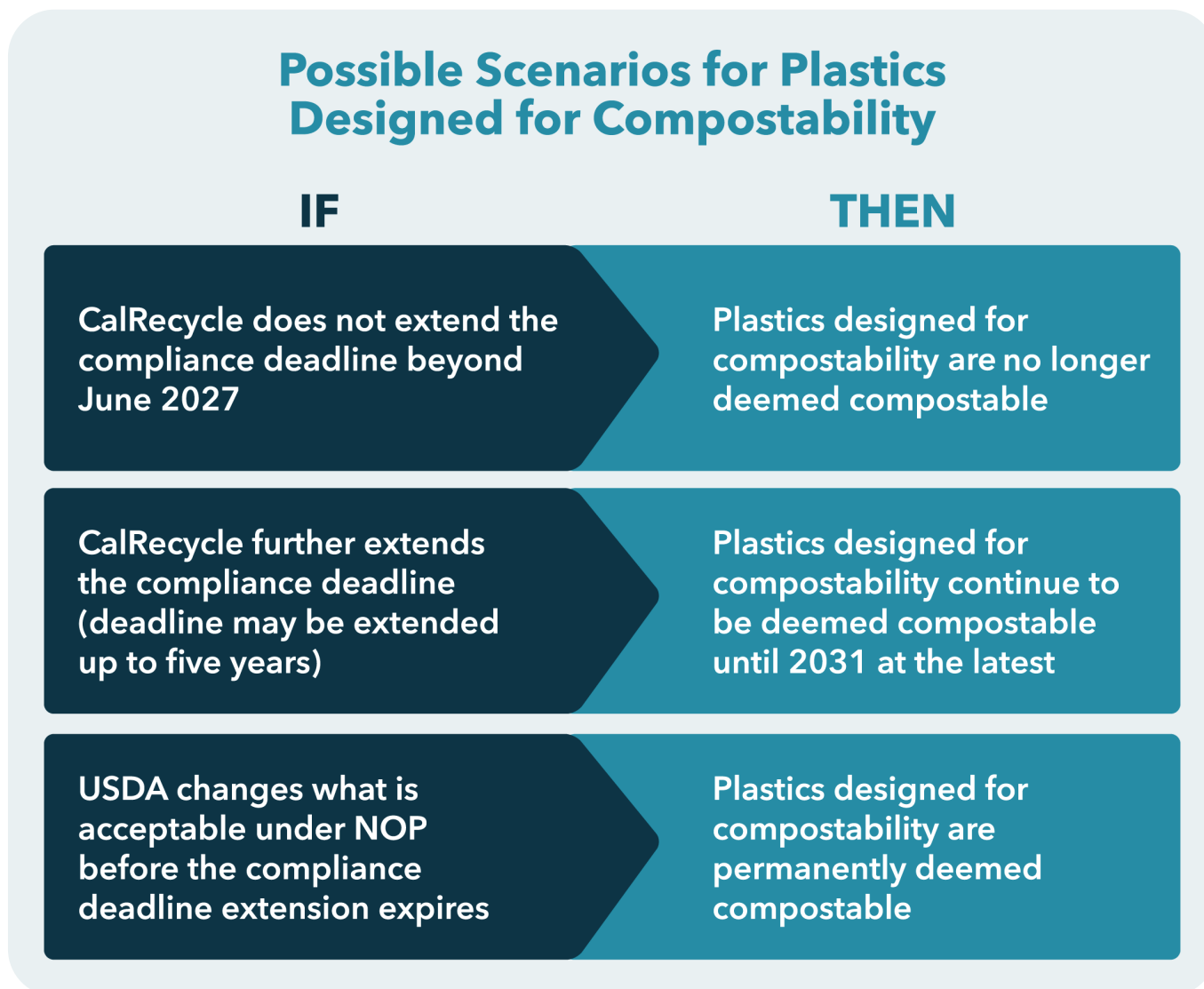
Table 3 shows that several paper and fiber CMCs with a plastic component are deemed compostable by CalRecycle. For those CMCs, CAA California assumes that the plastic component is designed for compostability (as opposed to being conventional plastic). For example, the plastic component in the molded fiber with plastic component CMC is assumed to be plastic designed for compostability (e.g., PLA) as opposed to being conventional plastic (e.g., low density polyethylene). Paper with conventional plastic CMCs are addressed in the Materials Strategy and Covered Material Category Compliance Plan chapter.

Table 3: Covered Material Categories (CMCs) that are deemed compostable as of Dec. 31, 2025

Material Class	Material Type	Material Form
Paper and Fiber	Kraft Paper	All Forms w/o plastic component
Paper and Fiber	Kraft Paper	All Forms w/ plastic component
Paper and Fiber	Molded Fiber	All Forms w/o plastic component
Paper and Fiber	Molded Fiber	All Forms w/ plastic component
Paper and Fiber	Multi-Material Laminate	Paperboard w/ Plastic Coating/Lining
Paper and Fiber	Multi-Material Laminate	Other Forms w/ plastic component
Paper and Fiber	Old Corrugated Cardboard (OCC)	Waxed Cardboard w/o plastic component
Paper and Fiber	OCC	Cardboard w/o plastic component
Paper and Fiber	Paperboard	All Forms w/o plastic component
Paper and Fiber	Paperboard	All Forms w/ plastic component
Paper and Fiber	White Paper	All Forms w/o plastic component
Paper and Fiber	White Paper	All Forms w/ plastic component
Paper and Fiber	Other/Mixed Paper	All Forms w/o plastic component
Paper and Fiber	Other/Mixed Paper	All Forms w/ plastic component
Paper and Fiber	Paper and Fiber	Small w/o plastic component
Paper and Fiber	Paper and Fiber	Small w/ plastic component
Plastic	Plastics and Polymers Designed for Compostability	Rigid Items
Plastic	Plastics and Polymers Designed for Compostability	Flexible and Film Items
Wood and Other Organic Materials	Wood	All Untreated Forms w/o plastic component
Wood and Other Organic Materials	Other/Mixed Organic	Other Forms w/o plastic component

4.3.3 Impact of NOP Compliance Requirement on Compostability of Certain CMCs

Plastics designed for compostability will no longer be deemed compostable under SB 54 once the NOP compliance deadline passes (June 30, 2027), unless CalRecycle further extends the compliance deadline, or the USDA makes changes to what is acceptable under the NOP. These scenarios are presented in Figure 2.

Figure 2: Possible Scenarios for Plastics Designed for Compostability

4.3.4 Other Legislative Developments Pertaining to Compostability Claims

CAA California is aware of, and actively monitoring, AB 1812. If adopted as currently drafted, it would restrict “compostable” labeling for products made wholly or partially of plastic. This would effectively prevent compostable plastic packaging and serveware from being labelled compostable. Refer to section 4.6 for CAA’s planned course of action in the event of the passing of AB 1812.

4.4 Quantity of Compostable Packaging and Food Serviceware Generated and Supplied

Funding for the management of compostable packaging is based on fees paid by compostable packaging producers, with those fees determined by volume supplied by producers.

While the quantity of compostable packaging supplied by producers is not yet known, CAA California expects it to be low compared with the overall supply of materials covered under SB 54. This is the case because compostables are almost exclusively used in food service applications. Additionally, SB 54 excludes certain compostable categories, including:

- Single-use food serviceware items that do not incorporate plastic or polymers.¹
- Bags provided by stores (both at checkout and before checkout, such as produce bags).
- Compostable plastic liners sold for the containment of food waste in organics recovery programs.

A good proxy for supply estimates is generation. However, generation is usually higher than supply because it includes the sum of all materials that were disposed and recycled, regardless of any program scoping, such as the exemption for small producers under SB 54.

CAA California developed a model to estimate the annual generation of compostable covered materials in California that meet all four requirements for a compostability claim. The model is based on the CalRecycle report, "What's in California Landfills: Measuring Single-Use Packaging and Plastic Food Serviceware Disposed" (final version published in December 2025), as well as the recycling rate of each CMC from the 2026 CMC List.

¹ As per regulations Section 18980.3. (c)(4)(A), documentation proving that the item does not incorporate plastics must be provided by the producer to CalRecycle upon request. "Plastic" is defined in subdivision (t) of Section 42041 of the Public Resources Code and includes compostable plastics.

Table 4: CAA California's Estimated Generation of Compostables that Meet All Compostability Requirements (2024)

CMC	Estimated Generation (Tons)
Paper and Fiber - Kraft Paper All Forms w/o plastic component	40,998
Paper and Fiber - Kraft Paper All Forms w/ plastic component	4,555
Paper and Fiber - Molded Fiber All Forms w/o plastic component	17,401
Paper and Fiber - Molded Fiber All Forms w/ plastic component	1,933
Paper and Fiber - Laminates	64,295
Paper and Fiber - OCC Waxed Cardboard w/o plastic component	109,451
Paper and Fiber - OCC Cardboard w/o plastic component	702,257
Paper and Fiber- Paperboard All Forms w/o plastic component	68,936
Paper and Fiber- Paperboard All Forms w/ plastic component	3,830
Paper and Fiber - Multi-Material Laminate Paperboard w/ Plastic Coating/Lining	2,852
Paper and Fiber- White Paper All Forms w/o plastic component	6,320
Paper and Fiber - White Paper All Forms w/ plastic component	702
Paper and Fiber - Other/Mixed Paper All Forms w/o plastic component	38,381
Paper and Fiber - Other/Mixed Paper All Forms w/ plastic component	4,265
Paper and Fiber - Paper and Fiber Small w/o plastic component	1,391
Paper and Fiber - Paper and Fiber Small w/ plastic component	155
Plastic - Plastics and Polymers Designed for Compostability Rigid Items	31,121
Plastic - Plastics and Polymers Designed for Compostability Flexible and Film Items	15,882
Wood and Other Organic Materials - Wood All Untreated Forms w/o plastic component	35,153
Wood and Other Organic Materials - Other/Mixed Organic Other Forms w/o plastic component	1,074
Wood and Other Organic Materials - Other/Mixed Organic - Small w/o plastic component	1,961
TOTAL	1,152,912

As shown in Table 4, the data suggests that over 1 million tons of compostables were generated in California in 2024. The supply of compostables is expected to be less than this quantity.

In contrast, the “What’s in California’s Landfills” report estimates that almost 8.5 million tons of covered material were disposed of in California in 2024. Although CalRecycle’s study does not estimate the generation of covered materials, it is necessarily larger by many orders of magnitude than the generation of compostable CMCs.

In this context, it may be challenging to secure hundreds of millions of dollars for the construction of new compost facilities or upgrades to existing facilities. Rather, CAA California’s approach to managing compostables, as described in section 4.6, will focus on a gradual expansion of the acceptance of compostable packaging by local jurisdictions’ organics collection programs and by processing facilities.

4.5 Overview of California’s Organic Waste Management Landscape

Compostable packaging and serveware items are designed for compostability and are therefore intended to be collected and processed with organic waste (specifically with food waste). The management of compostable packaging is therefore dictated by the organic waste management system.

SB 54 requires CAA California’s program plan to describe how compostable covered material will be composted, including ensuring covered materials collected for organic recycling are transferred to REMs. In the case of compostables, REMs are defined as entities that convert material into a recycled organic product (i.e., composting facilities and anaerobic digestion facilities).

This section presents an overview of the current organic waste management landscape in California and outlines the barriers to managing compostable packaging within this context.

4.5.1 Organic Waste Diversion in Early Stages

Across most of North America, the diversion of organic waste – in particular, food waste – lags behind recycling. While municipal recycling has been in place since the 1970s, the first organics waste collection program in California did not begin until 1996.

Nonetheless, California is arguably the state with the most advanced organics diversion system in the country, largely due to California’s 2014 mandatory commercial organics collection law (AB 1826) and subsequent short-lived climate pollutants law (SB 1383), which mandated organic waste collection services for most residents and businesses starting in 2022.

However, participation in these organics collections programs lags behind recycling. A survey of California consumers commissioned by CAA California² revealed that 56% of respondents composted in the past year while 44% did not. Furthermore, consumers are confused about composting and compostability, with nearly half (45% to 49%) of respondents saying they didn’t understand the difference between compostable and biodegradable. Many added they mistakenly place compostable packaging in recycling bins.

Composting, a process that relies on the presence of oxygen, is the most common method of recycling organic materials. While the state’s infrastructure to process green waste (organic materials generated from maintaining lawns and gardens such as leaves, grass clippings, and branches) is robust, the composting infrastructure to process food waste is not as developed. For example,

² Survey commissioned by CAA California in September 2025 involving 2,010 homeowners and renters 18+ across a sample reflecting California’s diversity and geographical regions.

there are about 215 composting facilities that process organic waste in California,³ but only 46 of these accept food waste according to CalRecycle's Needs Assessment. The remainder process other types of organic waste only, such as green waste.

Anaerobic digestion (AD), a process that converts organic matter into biogas and digestate in the absence of oxygen, is an alternative approach to the recycling of organic waste. AD has traditionally been used to process non-food types of organic waste (animal manure, wastewater, and biosolids). Though several AD facilities in California now process food waste, their numbers are limited, with only 12 AD facilities accepting food waste according to the Needs Assessment. Comparatively, there are over 356 AD facilities in the state according to the American Biogas Council.⁴

Notwithstanding the relatively small number of organic processing facilities that accept food waste, the Needs Assessment found that there are up to 2.6 million tons per year (TPY) of available (i.e., unused) permitted capacity. The study also noted, however, that organic processing facilities are concentrated in two of the five regions (Southern and Valley).

Untreated wood is accepted at composting and in-vessel digestion facilities but assumed to generally be chipped and ground and not incorporated into composting or in-vessel digestion processes. Final products include mulch, animal bedding, or other end products, which do not undergo biological conversion and are therefore not considered recycled organics products.

4.5.2 Barriers to Effective Compostables Management

In 2025, CAA California engaged an external consultant to gather perspectives from different interest holders on the barriers that compostable packaging faces in meeting SB 54 requirements. Interviews were conducted with over 40 interest holders from various sectors, including processing facilities (composters and AD facility operators), producers, compostable packaging manufacturers, trade associations, certifiers, regulators, and jurisdictions.

The project concluded that acceptance of compostables in local jurisdiction organic waste collection programs and at organics processing facilities was generally low. Nonetheless, important distinctions between types of compostables were made, as presented in Figure 3 below. Paper and fiber packaging and untreated wood are generally accepted, while compostable plastics and waxed cardboard are generally not accepted. This is in alignment with the Needs Assessment, which found that multiple processing facilities currently accept or are interested in accepting fiber-based packaging and food serviceware designed for compostability (e.g., OCC, kraft paper, molded pulp, and untreated wood), while most facilities surveyed reported that they are not currently accepting or interested in accepting plastic packaging designed for compostability. The Needs Assessment found that no processing facility accepted the following covered materials: nonsynthetic textiles such as cotton or hemp, and other packaging made from organic material such as mushroom, coconut, or bamboo.

³ Data provided by CalRecycle (Brian Stalker, Statewide Technical & Analytical Resources at CalRecycle), Fall 2025.

⁴ See <https://americanbiogascouncil.org/resources/state-profiles/california/>

Figure 3: Acceptance of Compostable Packaging in Local Jurisdiction Organic Waste Collection Programs and at Organic Waste Processing Facilities

Compostable packaging Type	Example	Acceptance in local jurisdiction organic waste collection programs	Acceptance at organic waste processing facilities
Paper and fiber packaging	<i>Molded fiber berry container</i> 	Generally accepted, when food-soiled	Generally accepted
Untreated wood	<i>Vegetable wood crate</i> 	Generally accepted in local jurisdiction programs	Not generally desired by processing facilities because woody waste is already abundant. Wood packaging is therefore considered low-priority feedstocks by processing facilities.
Compostable plastics	<i>Compostable fiber hot cup with compostable plastic liner</i>  <i>Compostable plastic cold cup</i> 	Excluded by the majority of local jurisdictions For example, local jurisdictions typically exclude "takeout containers made from compostable plastic," and "Compostable" or "Biodegradable" plastic products	Excluded by the majority of organics processing facilities
Waxed cardboard	<i>Produce box</i> 	Not commonly accepted, because it often contains a non-compostable plastic coating or synthetic wax that is difficult to distinguish from natural wax	Not commonly accepted

These barriers to acceptance of compostables are listed in order of significance below.

Barrier 1: Difficulty in Identifying Compostables

Consumers and operators struggle to distinguish compostable plastic products from conventional plastic products ("lookalikes"). At organics processing facilities, visual identification is impractical due to high throughput rates. Consequently, operators must screen all similar-looking materials, regardless of their actual compostability.

Barrier 2: High Rates of Contamination at Facilities

High rates of contamination at composting facilities necessitate extensive screening processes. The contamination often includes film plastics, bags and various packaging materials that consumers mistake as compostable. A recent Closed Loop Partners (CLP) study that was national in focus found that on average, 21% of composter operating costs are spent on contamination removal.⁵ The same study indicated that 85% of the volume of contamination at organics processing facilities is conventional plastic. Many processing operators find that accepting compostable plastics increases contamination from conventional plastics. At the same time, the aforementioned CLP study⁶ found that contamination is a common issue for composting facilities regardless of accepted materials.

Barrier 3: End Uses and Organic Certification

According to CalRecycle, agriculture is the single largest market for compost in California.⁷ Despite organic agriculture representing a small portion of California's agriculture market, organic certification is used by many compost facility operators as a quality benchmark for compost products. Many compost facility operators therefore pursue organic certification of their compost, even when serving non-organic agricultural markets. Because compostable plastics are not an allowable input into organic agriculture (as per USDA's NOP), organics processing facilities tend not to accept compostables as feedstock.

Barrier 4: Ability of Compostable Packaging to Reliably Disintegrate Under Individual Facility Conditions

The "real world" or in-field performance of certified compostable products may vary significantly based on facility conditions, processing methods and time frames.

A number of compost facility operators report that certified compostable packaging does not break down in their process, with packaging pieces appearing in near final stages of the composting process. This material must be screened out in the final stage to produce finished compost. The compostables that are screened out are typically sent for disposal.

A number of compost facility operators have highlighted the limitations of scientific compostability standards (requirement 1 in Table 1) which are based on laboratory tests only. Compost facility operators also note that each compost facility operates under different conditions. For example, the length of time needed by one operator to produce finished compost might be different than the time needed at another. Other variations between processing sites include the temperature that the organic waste reaches and the moisture level. In addition, a compostable packaging type will behave differently based on the compost process being employed (e.g., windrow, aerated static pile, in vessel composting).

⁵ "Don't Spoil the Soil - The Challenge of Contamination at Composting Facilities." Closed Loop Partners. Last modified March 13, 2024. <https://www.closedlooppartners.com/research/contamination-at-composting-facilities/>

⁶ The same study indicated that 85% of the volume of contamination at organics processing facilities is conventional plastic. Many processing operators find that accepting compostable plastics increases contamination from conventional plastics. At the same time, the aforementioned CLP study⁶ found that contamination is a common issue for composting facilities regardless of accepted materials.

⁷ <https://calrecycle.ca.gov/organics/farming/>

4.6 CAA California's Approach to Managing Compostables

CAA California considers plastics designed for compostability to have a viable pathway to SB 54 compliance because they have been deemed compostable by CalRecycle (refer to section 4.3.2).

CAA California's approach to managing compostables consists of a combination of interventions for producers and processors, as well as reimbursements for jurisdictions and processors.

While compostable plastics are subject to the statutory plastics recycling targets, because of limited acceptance by local jurisdictions and organics processing facilities, they are at risk of missing the initial recycling rate targets. For this reason, CAA California is pursuing a Unique Challenge Exemption (UCE) Application with a phase-in plan to be submitted in parallel with the Program Plan for these CMCs, as outlined in the Materials Strategy and Covered Material Category Compliance Plan chapter.

However, if CalRecycle does not extend the NOP compliance deadline beyond June 2027, if the compliance deadline expires without any changes to the NOP, or if AB 1812 comes into effect, CAA would shift to a UCE without a phase-in plan, effectively phasing out the material, but still giving producers regulatory relief from the targets.

4.6.1 Interventions

As stated in section 4.5.2, there is low acceptance of compostables, in particular compostable plastics, by local jurisdictions and organics processing facilities.

While SB 54 requires local jurisdictions and service providers to collect and manage compostable CMCs (per PRC 42060.5), it also offers a two-year exemption, which may be renewed. SB 54 regulations identify the absence of a REM as a local condition, circumstance, or challenge rendering inclusion of the covered material in the program impracticable and therefore qualifying for an exemption per Section 18980.11(b). Given this and the low acceptance of compostables and the other barriers discussed above, CAA California expects several local jurisdictions and service providers (i.e., organics processors) to apply for and receive this exemption.

Given these realities, CAA California will proactively implement interventions focused on compostable plastics with willing participants. It will also engage with local jurisdictions and processors to seek to address the barriers they face before applications are submitted to CalRecycle, during the mandatory PRO review period outlined in regulations Section 18980.11 (b). The interventions and the associated barriers are presented in Table 5 below.

Table 5: Interventions and Barriers Addressed

Intervention	Barriers Addressed
Provide guidance to producers on labeling and design	• Difficulty identifying compostables • High rates of contamination at facilities • Ability of compostable packaging to reliably disintegrate under individual facility conditions
Provide support for field testing of compostables	• Ability of compostable packaging to reliably disintegrate under individual facility conditions
Drive Demand for Non-Agricultural End Uses for Finished Compost	• End Uses and organic certification
Evaluate the feasibility of secondary sorting of compostable plastics at organics processing facilities	• Difficulty identifying compostables • High rates of contamination at facilities

4.6.1.1 Provide Guidance to Producers on Labeling and Design

Many compostable packaging items on the market today are hard to effectively manage in the organics collection and processing system due to how the packaging is designed and labeled. CAA California will provide clear design guidance to producers on how to make packaging more easily compostable, both from an identification perspective (i.e., ensuring that consumers and operators are able to easily recognize compostables) and from an operational perspective (i.e., ensuring that compostables break down in the composting process).

Guidance falls into two categories: labeling and design interventions.

4.6.1.1.1 Labeling

CAA California will provide labeling guidance to its producers on how to ensure certified compostable packaging items are immediately distinguishable. Effective labeling should drive easier identification and decision-making for consumers and processors by requiring the following packaging elements:

- The word “compostable”
- Third-party compostable certification mark
- Labeling that is green, brown or beige

CAA California’s labeling guidance will be further informed by joint consumer perception research carried out by CLP’s Compost Consortium and BPI, the nonprofit organization operating the largest certification program for compostables in North America, as well as by best practices for designing compostable packaging.⁸ Labeling guidance will also be informed by the US Composting Council’s principles for labeling compostable products.⁹

⁸ Refer to the report entitled Unpacking Labeling and Design: U.S. Consumer Perception of Compostable Packaging, available at <https://www.closedlooppartners.com/research/us-consumer-perception-of-compostable-packaging/>

⁹ https://cdn.ymaws.com/www.compostingcouncil.org/resource/resmgr/documents/model_principles_for_labelin.pdf

4.6.1.2 Design Interventions

CAA will conduct an inventory and analysis of existing design guidance for compostables and will summarize and adapt it for CAA producers. For example, the EU-based Compostable by Design platform has published a set of guidelines that offer a framework and practical tools to assess when and where compostable packaging and serviceware are most appropriate, when and where they are not appropriate, and which materials are best suited for their design.¹⁰ Examples of most appropriate applications for compostables mentioned in the Guide include small format packaging for condiments and sauces, serviceware used to hold messy foods, etc.

In addition to the design recommendations mentioned above, there are initiatives that evaluate how certified compostables break down in real-world industrial composting operations. This is referred to as field testing of compostable packaging. Such initiatives have been undertaken by the Compostable Field Testing Program (CFTP)¹¹ and the Compost Manufacturing Alliance (CMA).¹²

CAA California will collaborate with these two entities to analyze the results of the testing that has been conducted to date and to identify any design elements that cause a compostable item to perform poorly in field testing (i.e., that causes it not to break down under normal composting operating conditions). Based on this analysis, CAA California will develop best practice design interventions. Examples of design intervention could include increasing the surface area available on the handle of a compostable plastic cutlery to maximize exposure to water during the composting process (water exposure enables hydrolysis, the breakdown of complex molecules into simple molecules) and reducing the packaging's thickness so that it will compost within shorter time frames.

4.6.1.2 Provide Support for Field Testing of Compostables

In addition to leveraging the results of the field testing that has happened to date, CAA California will help facilitate field testing of participant producers' compostable packaging. In doing so, CAA California will leverage the two newly approved ASTM standards that outline how to test the breakdown of certified compostable products as intended in real world composting facilities.¹³

Such facilitation will be developed in collaboration with CFTP and CMA and may involve covering a portion of field-testing costs on behalf of participant producers and matching producers seeking to field test their packaging with processors who are willing and available to conduct the tests.

4.6.1.3 Drive Demand for Non-Agricultural Uses for Finished Compost

Complications around markets and organic certification are at the heart of why many processing facilities do not accept compostable plastics in their feedstock (refer to Barrier 3: End Uses and Organic Certification). Given this reality, it is important for CAA California to support the development of non-agricultural markets for compost made from compostable plastics. CAA California will deploy research and trials that will advance the development of non-agricultural markets for finished compost. Examples of alternate markets include highway infrastructure maintenance, construction and development, restoration of degraded lands, stormwater management, and golf courses.

¹⁰ Available at <https://www.compostablebydesign.com/>

¹¹ <https://www.compostabletesting.org/>

¹² <https://compostmanufacturingalliance.com/>

¹³ See <https://www.biocycle.net/new-astm-standards-for-field-testing-of-compostable-products/>

In addition, one of the intended outcomes of SB 1383 is to drive demand for the use of compost and other recovered organic waste products by requiring local jurisdictions to procure annually a targeted quantity of these products, based on their respective population. The law allows for the use of compost by entities external to local jurisdictions to count toward a jurisdiction's procurement target, provided a contract or written agreement is set up between the external party and the jurisdiction. CAA California may explore the opportunities to facilitate matchmaking between jurisdictions, processing facilities, and non-agricultural third-party compost users (e.g., tree nurseries, greenhouses) in order to drive demand for finished compost that is made with compostables.

4.6.1.4 Secondary Sorting of Compostable Plastics at Organics Processing Facilities

Organics processing facility operators typically screen out materials that appear to be plastic as they enter the facility, directing them to disposal. The Needs Assessment¹⁴ estimates that only about 10% of incoming compostable plastic covered materials at Organics Processing Facilities enter the conversion process (the rest are assumed to be screened out and sent for disposal).

Screening is done either manually or mechanically, through the use of depackaging equipment. Such equipment is necessary at AD facilities that process food waste and is also becoming increasingly prevalent at large compost operations that take food waste.

CAA California may conduct research to understand how depackaging units handle compostable packaging. CAA California may also research the feasibility of recovering materials that are rejected both manually and mechanically at organics processing facilities, using advanced sorting technologies such as optical scanners and robotics.

If sortation proves feasible, CAA California will identify operators who are willing to test such secondary sorting and subsequently redirect the compostable plastics recovered from the residue to the composting process.

4.6.2 Reimbursement to Covered Entities

Although CAA California expects most jurisdictions and service providers to apply for an exemption from the requirement to include compostables in their collection programs, it will explore opportunities to expand on the successes of programs currently accepting compostables. Below are three examples that demonstrate that compostables can be successfully processed at facilities in California under certain conditions.

1. San Diego's Petco Park, home of the San Diego Padres Major League Baseball team, has established a partnership for processing of compostable packaging with Republic Services at its Otay composting facility.¹⁵ The facility processes 300 tons of organic waste per day using static aerated piles technology.¹⁶

All of the compostable packaging used by the stadium was previously tested to make sure it worked with Republic Services' process. A dedicated Petco Park sortation team removes all non-compostable materials prior to transportation to the compost facility.¹⁷ Upon arrival, the feedstock bypasses the contamination removal step and goes directly into the composting process.

The San Diego example illustrates the technical feasibility of processing compostables, which is made possible by prior testing to confirm that the compostables break down in the operator's system, and by the contamination control measures that are in place at the venue.

¹⁴ Needs Assessment findings - Current State of End Markets: Page 89-90 (tables 8-1 and 8-2)

¹⁵ The facility processes 300 tons of organic waste per day using static aerated piles technology.

¹⁶ Information obtained from <https://otaylandfill.com/>

¹⁷ Waste and organic waste are collected in the same bin.

2. The Monterey Regional Waste Management District, also known as ReGen Monterey, has a composting operation that handles two very distinct feedstocks: the residential organics stream and the commercial organics stream. These streams are kept separate, which is referred to as bifurcation. Certain certified compostables are accepted in the commercial food scrap collection program, but not in residential organics carts. The compost produced from the residential organics stream is certified organic and used in agriculture where the crop comes into contact with the compost (e.g., leafy greens, strawberries). The compost produced from the commercial food scraps stream is not certified organic and is used with crops where the edible portion does not touch the ground, as well as in landscaping.
3. As reported in a recent news article,¹⁸ in April 2026, the City of Modesto broadened the scope of its municipal organics program to include compostable packaging. The effort was made possible through support from the CLP's Composting Consortium grant program, led in partnership with BPI and with technical guidance from the US Composting Council. A key element of the project is the redesign of organics cart labels across the city's residential and commercial collection system. The new labels feature clear visual icons that show food scraps, yard trimmings, and certified compostable packaging together as accepted materials. The city owns and operates its own windrow composting facility. Facility staff are trained to recognize certified compostable packaging and differentiate it from lookalike plastics so that acceptable materials remain in the composting process while contaminants are removed. The facility further safeguards quality through regular testing, conducting Seal of Testing Assurance (STA) testing within the first five days of each month, pathogen testing around mid-month, and metals testing on a monthly basis. As the City continues to advance its organics program, its leaders see compostable packaging as part of the broader circular system that composting makes possible.

In addition to these three examples, the Needs Assessment found that several organic processing facilities indicated a willingness to accept compostable covered materials if provided with additional support, such as funding for equipment, capital improvements, additional employees, education, operator training and implementation of a bifurcation process.

Reimbursement funding will be available to eligible entities that collect and process compostables upon plan implementation. For more information, see the Reimbursement and Payment Process chapter. Participation by eligible entities in the reimbursement process will offset the cost of the new services pertaining to compostable CMCs. Covered entities eligible for reimbursement include jurisdictions and tribes that accept compostables and organics processing facilities (composting facilities and AD facilities) that successfully process compostables.

CAA California will consider the regulatory certainty pertaining to compostability claims when considering providing capital funding for system improvements. Service providers will have flexibility in how they use the ongoing processing payments, including offsetting both operational and capital costs.

CAA California's process for determining projects with eligible covered costs is built around funding the elements identified in PRC 42051.1(i), 42051.1(j) and 42051.1(l). CAA California refers to these elements as Project Categories. The project categories that apply to compostables are presented in Table 6 below.

¹⁸ <https://www.biocycle.net/how-modesto-is-expanding-its-organics-program-to-include-certified-compostable-packaging>

Table 6: Eligible Covered Cost Project Categories Pertaining to Compostables

Project Categories	Description and Examples
Collection	Costs related to collection of compostable CMCs, such as: - Green bin re-labeling (where re-labeling is required to add new collected compostable CMCs) - Transportation to organics processing facilities that accept compostable CMCs
Processing	Costs to process compostables more efficiently, such as: - Contamination removal equipment - Advanced technology to improve identification of compostable CMCs from contamination - Use of shredders to improve the breakdown of compostables during the composting process - Deployment of a bifurcation process - Ongoing processing costs tied to compostable CMCs
Education and Outreach (E&O) activities	Costs for E&O pertaining to compostables, such as: - Direct engagement with residents and businesses to communicate what compostables are and which bin they belong in - Contamination monitoring effort

Facilities that do not currently accept compostables may be eligible for milestone-based or conditional funding to support transition toward acceptance, subject to an approved implementation plan, contractual milestones and an eligible covered cost determination.

4.6.3 Developments Pertaining to Physical Recycling of Compostable Plastics

CAA California will closely monitor the outcomes of work that is currently underway in Europe to evaluate the feasibility of recycling compostable plastics, as opposed to composting them. Although compostable plastics are designed to decompose into water, carbon dioxide, and nutrient-rich biomass (compost), they can also be recycled.

To recycle compostable plastics, they must first be sorted. The most common existing automated sorting technology relies on near-infrared (NIR) sensors and cameras to automatically identify and separate compostable plastics from other materials. This is a technology commonly used at materials recovery facilities (MRFs) today in California.

Once sorted, compostable plastics can follow two paths: mechanical recycling or non-mechanical recycling.

In mechanical recycling, compostable plastics that have been sorted and cleaned to remove contaminants such as dirt, labels, or food residues are ground into flakes and/or melted to form recycled compostable plastic pellets.

Non-mechanical recycling involves the depolymerization of the compostable plastic back into the monomer unit (lactic acid in the case of PLA) or other processes through which virgin-quality feedstock can be remanufactured. A TotalEnergies Corbion PLA depolymerization plant operating in Thailand, for instance, currently produces 30% and 100% recycled PLA from factory waste and industrial waste.¹⁹

¹⁹ See <https://totalenergies-corbion.com/the-worlds-first-commercially-available-recycled-pla/>

In 2012, the PLA manufacturer NatureWorks conducted trials in California that demonstrated PLA could be successfully sorted using NIR technology commonly used in MRFs. In 2024, the PROSPER Consortium²⁰ was created in the European Union to demonstrate the technical and financial viability of recycling compostable plastics. One of their workstreams tested the sorting of different types of compostable plastics at four MRFs across the EU. CAA California will closely monitor the outcomes of this work and will assess the feasibility of future applications in California.

4.7 Eligibility Requirements for Organics Processing Facilities

To receive payment from CAA California, organics processing facilities will be required to satisfy the following requirements:

1. Prove that it accepts covered compostables and does not intentionally screen them out of their process, or formally commit to accepting compostables within a specified timeframe.
2. For a compost operation, prove that it operates within the defined range of operating conditions (carbon-to-nitrogen ratio, moisture, pH, etc.) that are stated in the recently published ASTM standards for determining the degree of disintegration at composting facilities (adapted from The Composting Handbook).²¹ For AD operators, provide evidence that compostables successfully break down in the process.
3. Provide available baseline material characterization data from the previous year, such as quantity of feedstock processed, the quantity of compost produced, contamination rates, and the estimated quantity of compostable packaging accepted. Ongoing reporting from audits and characterizations may also be required.
4. Compost produced by the facility meets the US Composting Council's Seal of Testing Assurance certification.²² This certification²³ requires manufacturers to regularly test their compost at approved labs for a variety of characteristics and disclose the results through a technical data sheet that includes test results, feedstocks and recommended uses.
5. The facility complies with all applicable federal, state, and local regulations and permitting.²⁴
6. Because organics processing facilities are end markets for compostable CMCs, they will be required to comply with CAA California's REM standard. Although the standard will apply primarily to the recycling of non-organic materials, certain elements of the standards will apply to organics processing facilities.

Requirements 2, 3 and 4 are non-regulatory and as such, CAA California will consider the possibility of allowing organics processing facilities a certain amount of time before they are required to demonstrate compliance to CAA (e.g., one to two years from program launch).

CAA California will provide financial support to those facilities for which meeting the requirements poses a challenge.

²⁰ PROSPER. <https://prosperbioplastics.eu>

²¹ Refer to D8618 – 25: Standard Test Method for Determination of the Degree of Disintegration of Items Under Defined In-Field Composting Conditions Using Article Dosing and D8619 – 25: Standard Test Method for Determination of the Degree of Disintegration of Items Under Defined In-Field Composting Conditions Using Containers

²² Refer to <https://www.compostingcouncil.org/page/CompostManufacturersSTA>

²³ <https://www.compostingcouncil.org/page/CertifiedCompostSTA>

²⁴ California regulations pertaining to composting facilities are summarized on the following CalRecycle web page: <https://calrecycle.ca.gov/SWFacilities/Permitting/FacilityType/Compost/>. Regulations pertaining to In-Vessel Digestion Facilities and Operations, which includes anaerobic digestion facilities, are available on the following CalRecycle web page: <https://calrecycle.ca.gov/SWFacilities/Permitting/FacilityType/InVessel/>.

4.8 Summary of Actions

Table 7 below summarizes the actions (both interventions and reimbursement-related) that CAA California will take to support the management of compostables, by CMC type.

Table 7: CAA California Actions to Support the Management of Compostables, by Compostable Type

	Guidance to Producers on Labeling and Design	Support Field Testing of Compostable	Support Market Development	Evaluate Feasibility of Secondary Sorting of Compostable	Reimburse Eligible Collection Costs	Reimburse Eligible Processing Costs	Reimburse Eligible E&O Costs
Compostable plastics	1	1	1	1	2	2	2
Waxed cardboard	1	3	3	3	2	2	2
Paper and fiber packaging	3	3	3	3	2	2	2
Untreated wood	3	3	3	3	2	2	2
Other organic material	1	1	1	1	2	2	2

Table Legend:

- 1 = Needed to increase access/acceptance
- 2 = Will apply to material if access/acceptance exists
- 3 = May be needed to increase access/acceptance



Chapter 5: Responsible End Markets (REMs)

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Chapter 5: Responsible End Markets (REMs)

5.1 Introduction

This chapter addresses how end markets for covered material categories (CMCs) are first identified and then verified against the Responsible End Markets (REMs) requirements established under SB 54 and the regulations.

Under SB 54, CAA California's program plan must:

- Describe how end markets receiving CMCs will be identified [regulatory Section 18980.4.1(a)]
- Describe the process by which the Producer Responsibility Organization (PRO) or Independent Producer will verify whether each end market meets the REMs requirements specified in Section 18980.4
- To the extent that an end market cannot be confirmed to be responsible without cooperation from the end market or intermediate supply chain entities, describe how such cooperation will be obtained [Section 18980.4.1(a)]
- Include only those non-mechanical recycling technologies that do not produce significant amounts of hazardous waste, as specified in Section 18980.4.1(d)

CAA California also has the following REM related obligations:

- Set average recycling yields that an end market entity shall reach to be qualified as REMs (among other requirements described in Section 18980.4)
- Keep chain of custody and other relevant records from end markets, as described in Section 18980.4(a)(2). Make records available to CalRecycle upon request
- Report to CalRecycle the results of the end markets verification against REMs requirements
- Include only materials sent and reprocessed by REMs in the CMCs' recycling rate calculation

The REMs concept is relatively new in the evolution of Extended Producer Responsibility (EPR) policy. Under SB 54, a REM is defined as "... a market in which the recycling and recovery of materials or the disposal of contaminants is conducted in a way that benefits the environment and minimizes risks to public health and worker health and safety." Oregon, Colorado, and other states with EPR laws have similar definitions in place.

The new regulatory environment around end markets in recycling has raised concerns among different interest holders, especially regarding:

- The potential disclosure of commercially sensitive information
- The legal authority to compel reporting by entities outside California
- The methodology used to verify certain broad requirements, such as those related to minimizing emissions
- The increased administrative burden from compliance with REM requirements when similar measures are already monitored through other means (e.g., environmental emissions monitored through local permit obligations)

CAA California's process for identifying and verifying REMs balances these concerns with the need for more transparency and assurance that entities reprocessing materials into new products are doing so while reducing pollution, reducing waste to landfill and reducing demand for virgin plastic.

This chapter introduces concepts, terminology, and CAA California's REMs guiding principles. It then details the process for identifying and verifying end markets, with special consideration for non-mechanical recycling. It concludes by describing a methodology of measuring CMC recycling rates using data provided by REMs.

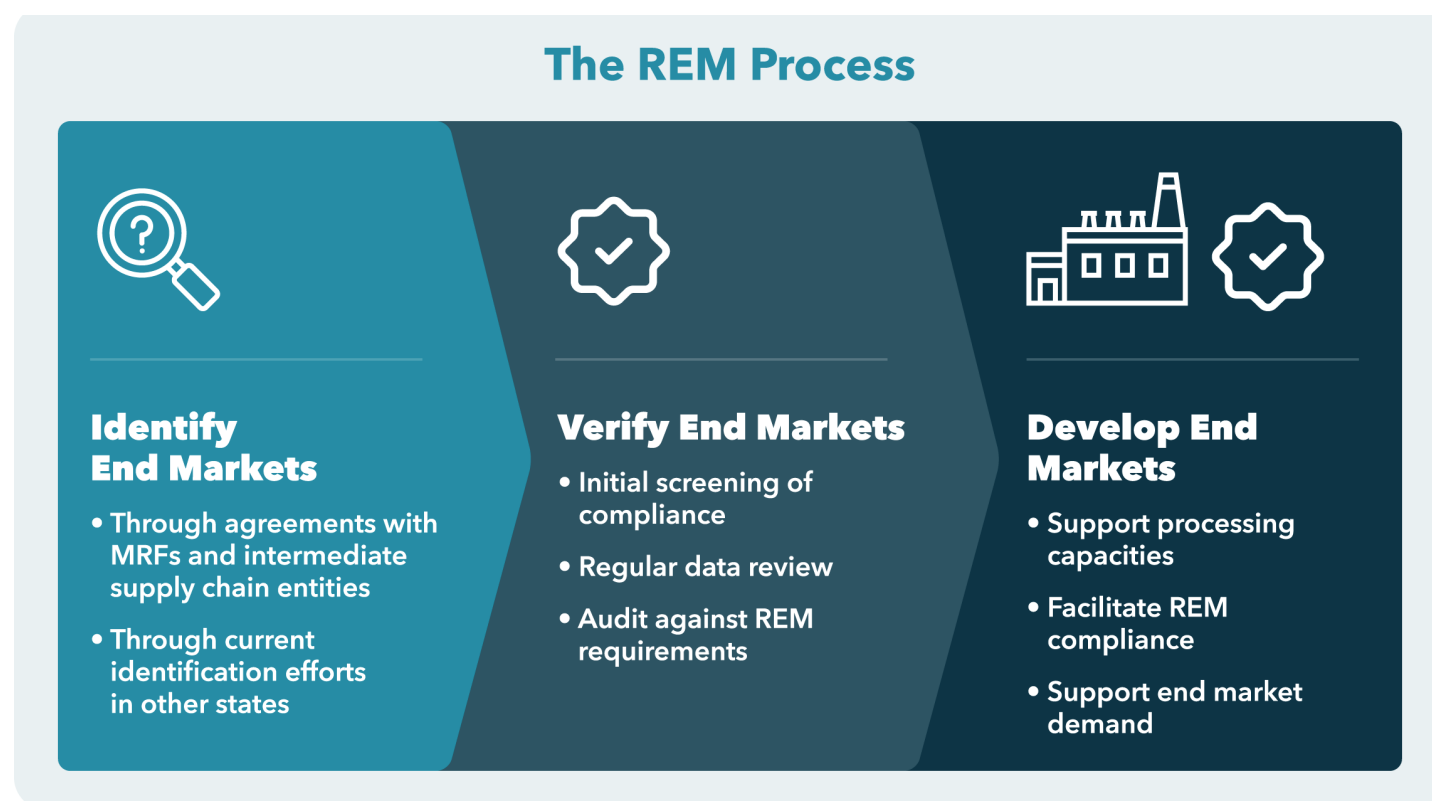
5.2 Terminology and REM Guiding Principles

The overarching REM objective of SB 54 is to provide more transparency on the final disposition of California materials. Applying the REM process in California presents unique challenges:

- California generates a significant volume of recovered materials.
- California is particularly reliant on export markets for some materials (e.g., mixed paper).
- Under SB 54, specific requirements must be met for non-mechanical recycling.

To effectively overcome these challenges and meet REMs compliance, CAA California is developing a REM process focused on three key actions: identify, verify, and develop end markets. The Materials Strategy and Covered Material Category Compliance Plan chapter addresses how CAA California will develop end markets.

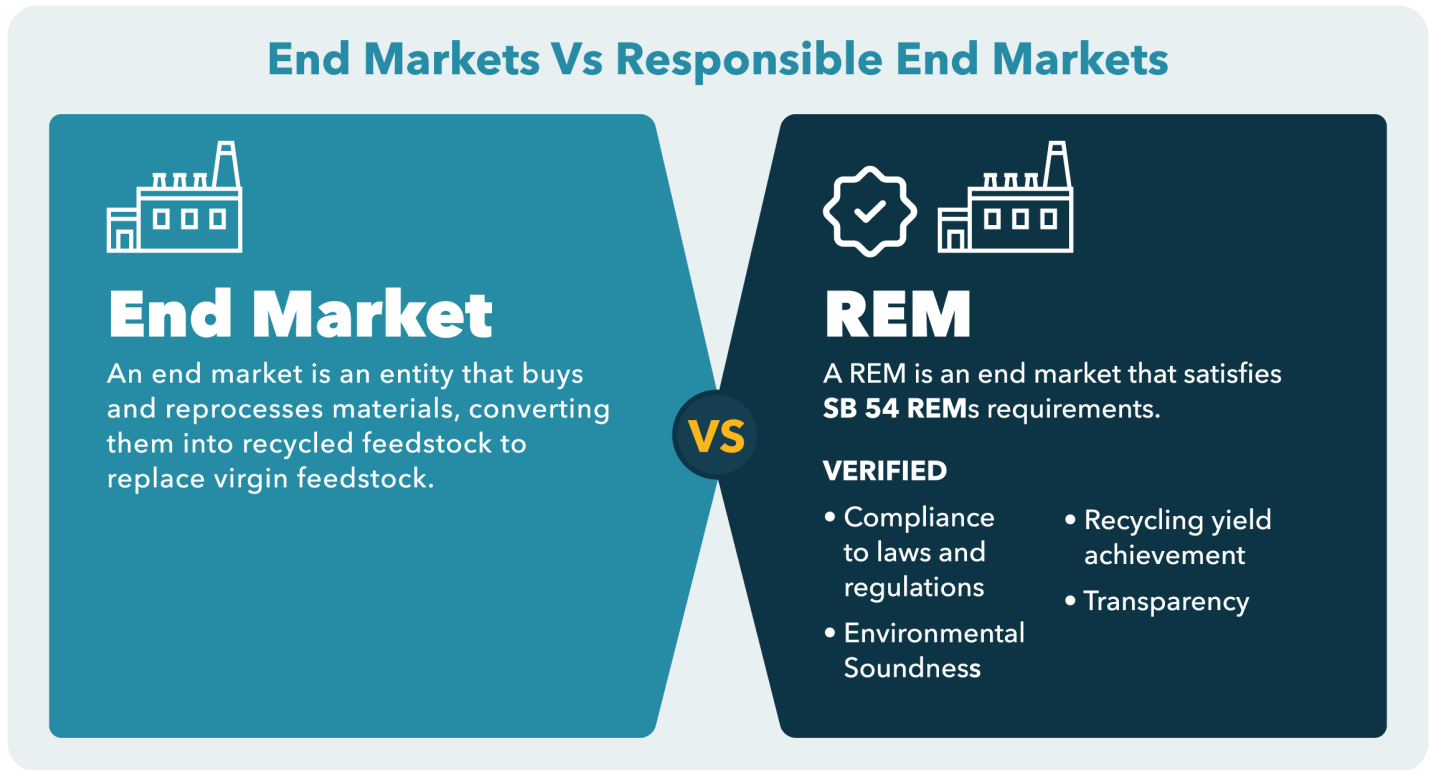
Figure 1: REM Process: Identify, Verify and Develop



End Markets versus Responsible End Markets

This chapter uses the terms “end markets” and “responsible end markets” as follows:

- **An end market** is an entity that buys and reprocesses materials, converting them into recycled feedstock to replace virgin feedstock.
- **A REM** is an end market that satisfies SB 54 REM requirements, detailed in PRC 42041(ad) and Section 18980.4. Details on how CAA California intends to support end markets' viability are presented in the Materials Strategy and Covered Material Category Compliance Plan chapter.

Figure 2: Qualifying as a Responsible End Market

Definition of End Market Entities and Other Entities Along the Supply Chain

For most materials, end markets are defined in SB 54 regulations as the entity that “first produces [the] feedstock that meets the quality standards necessary to be used in lieu of virgin material for the creation of new or reconstituted products.”

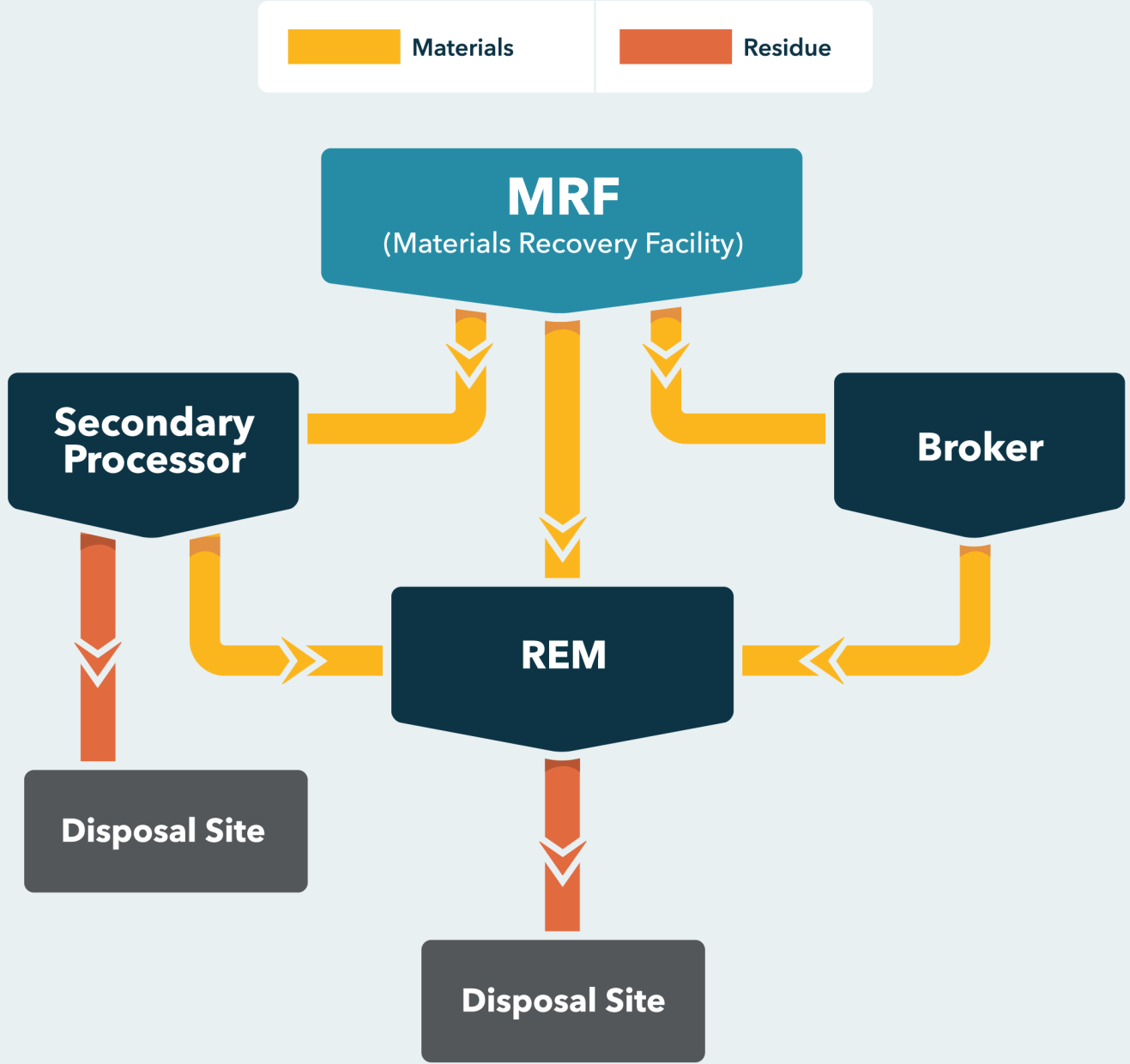
There are several intermediate supply chain entities between MRFs and end markets, all of which are key to ensuring efficient implementation of the REM process and to ensure chain-of-custody tracking. These post-MRF entities are:

- **Secondary processors:** Facilities buying materials from MRFs to upgrade their quality by removing contaminants or sorting them into more granular streams. They typically sell their outputs to end markets. Secondary processing can also occur at an end market entity if such entity is equipped with a front-end inbound cleaning system.
- **Brokers:** Companies buying materials from MRFs to sell them directly to end markets. These businesses generally do not reprocess materials but ensure materials flow to end markets.
- **Disposal sites:** Sites receiving residue generated along the supply chain from entities including MRFs, secondary processors and end markets.

Figure 3: Materials Flow Along the Recycling Supply Chain

End Market Entities and Other Entities Along the Supply Chain

There are several intermediate supply chain entities between MRFs and end markets, all of which are key to ensuring efficient implementation of the REM process and to ensure chain-of-custody tracking.



REMs Guiding Principles

CAA California has built its REMs process for identifying, verifying and developing end markets based on CAA's experience with implementation in Oregon and Colorado, as well as upcoming implementation in Minnesota, Maryland and other emerging states.

CAA California is using the following guiding principles:

1. Balance national and state needs: End markets serve multiple states, so California's REM verification follows CAA's national REMs process to support consistency while meeting specific requirements and addressing regional needs.
2. CAA California employs transparent methods while protecting commercially sensitive information by working with third-party auditors.
3. Overcome market barriers and inefficiencies: CAA California is committed to delivering long-term solutions and overcoming technical and/or economic barriers that prevent REMs' capacity for growth (e.g., low bale quality, competition with virgin feedstock prices).
4. Focus development efforts on local end: CAA California will incentivize local end market capacity while ensuring all REMs are verified.
5. Technology-agnostic: CAA California will not restrict the types of technology that end markets can employ, relying on verification of the REM standards for that determination.
6. Foster collaboration: CAA California prioritizes collaboration with all entities within the supply chain. CAA California will also work with market development-focused organizations (e.g., organizations providing sectoral, regional or national support to end markets).
7. Cost-effectiveness: CAA California will leverage verification and market development work from other organizations to optimize efforts and reduce the financial burden on end markets and other interest holders.

5.3 Identification and Verification of End Markets

This section describes the REM identification and verification actions, as well as the specific actions for non-mechanical recycling. These steps are designed to ensure materials from California will reliably flow to REMs.

5.3.1 Identification of End Markets

CAA California is responsible for identifying all end markets reprocessing CMCs. Identification of end markets will provide transparency on the fate of CMCs once they are sorted and will further allow CAA California to verify that the end markets are responsible.

At a national level, CAA is engaging with end market or intermediate supply chain entities. To continue the process of identifying end markets, CAA California will:

- Contact end market entities already reprocessing materials from other states and/or are self-attested for REM compliance with CAA in other states. CAA California will confirm with these end markets if they are reprocessing CMCs from California.
- Require end markets that are supported by CAA California (as outlined in the Materials Strategy and Covered Material Category Compliance Plan chapter), to keep records and disclose their materials sources to CAA California.
- Establish agreements with MRFs to report end markets and shipment to REMs.
 - CAA California will include REM reporting in reimbursement agreements with MRFs to ensure covered material is being sent to REMs

Unlike Oregon, which requires MRFs to ship materials to a REM and to provide final disposition reporting, the SB 54 regulations do not expressly require MRFs to disclose or report on covered material shipped to REMs. Without a regulatory enforcement mechanism similar to the one in Oregon (where MRFs have a responsibility to sell materials to REMs), CAA California will have limited options to verify end markets use for non-reimbursed tons. Due to this gap in the regulations, CAA California will explore the potential use of incentive-based mechanisms, subject to further program design and regulatory review, to encourage the use of REMs. Any potential incentive mechanisms, if pursued, may consider factors such as end market characteristics, REM capacity, and market conditions, subject to further evaluation.

CAA California will retain any contracts and agreements with end markets, intermediate supply chain entities and MRFs, for five years.

CAA California will use its California service provider portal to gather and organize relevant information from each end market and will automate the process of requesting updated information as needed. The end market entities will receive requests for specific documents for each of their facilities, where they can then upload documents for CAA California’s review.

Once end markets are identified, they will be verified against REM requirements.

CAA will report to CalRecycle on the status of verifying end markets and will assess if the gap in the regulations on MRF responsibilities can be overcome. If CAA encounters significant challenges with identifying the REMs that MRFs are selling materials to, a regulatory amendment will need to be considered to align with Oregon’s approach.

5.3.2 Verification of End Markets

5.3.2.1 REM Verification Methodology

CAA California has developed a three-step process for verifying end markets against SB 54 REMs requirements in Table 1 below.

Table 1: CAA California’s Three-Step Process for Verifying End Markets Against SB 54 REMs Requirements

Method	When	Who	Purpose
Step 1: Initial screening	Immediately for each unassessed end market	CAA California, in collaboration with MRFs and jurisdictions	Pre-approve end markets as REMs through a self-attestation form
Step 2: Data review	Quarterly	CAA California	Detect any reporting anomalies or end markets that have not self-attested but are already buying materials from California
Step 3: Audit	Annually	Third-party verification body contracted by CAA California	Verify compliance with REM requirements established in CAA California’s REMs verification standard

Initial Screening

CAA will request end markets to attest that they are complying with the regulations' REM requirements, as described in Section 18980.4(a), through the completion of a self-attestation form. CAA will also request that end markets submit operating permits (and, in the case of overseas end markets, import permits or authorizations). CAA may also request environmental permits or licenses, or any additional documents to clarify certain information.

CAA will work with a third-party verification body to further verify the information provided by end markets. CAA and the verification body will review the documents, ensure that they are up to date, and list the various requirements they contain (e.g., frequency of emission measurement). The audit preparation process, described below, will use this information as a baseline.

Once the review is completed, end markets will be pre-approved as REMs until the audit is conducted for final determination (see "Audit" section below).

Data Review

CAA will review the shipment data provided by MRFs, brokers and end markets submitted to CAA's Service Provider Portal. The shipment data will identify the originating facility, destination facility, material type, material weight, and other shipment-related identifiers, such as bill of lading numbers and purchase order numbers. CAA will validate data tracking outbound shipments from MRFs through brokers to end markets, checking to ensure that outbound shipment information aligns with inbound shipment reports recorded at the next facility in the chain of custody.

Audit

A third-party verification body will audit the end markets against the criteria established in a REMs verification standard.

CAA is currently developing a national REMs verification standard with an American National Standards Institute (ANSI)-accredited development body. Ultimately, this standard will be used to ensure REMs compliance across all states that include REMs requirements in their EPR laws.

The REMs verification standard's key goals are to:

- Support regulatory compliance and ease the adoption of REMs requirements in other states
- Ensure consistency through harmonization of definition, metrics, and methodologies, so claims can be assessed and compared on a like-for-like basis
- Build trust with interest holders and credibility around the verification methodology's results

This REMs verification standard will provide public transparency into non-compliance with REM requirements. Acknowledging that other verification systems can also demonstrate compliance to at least some of the REM requirements set in SB 54 regulations, the REMs verification standard will allow for interoperability with other third-party standards where appropriate.

The REMs verification standard will define the criteria and the methodology to be used in assessing compliance of end markets against the REM requirements set in SB 54, including:

- Compliance with laws and regulations, including labor and health and safety laws [Section 18980.4(a)(1)]
- Transparency [Section 18980.4(a)(2)]
- Reduced environmental impact, also referred to as environmentally-sound operations [Section 18980.4(a)(3)]
- Recycling yield achievement [Section 18980.4(a)(4)]

The REMs verification standard will also define categories of non-conformities to the standard and their consequences, corrective actions timeline, and control mechanisms.

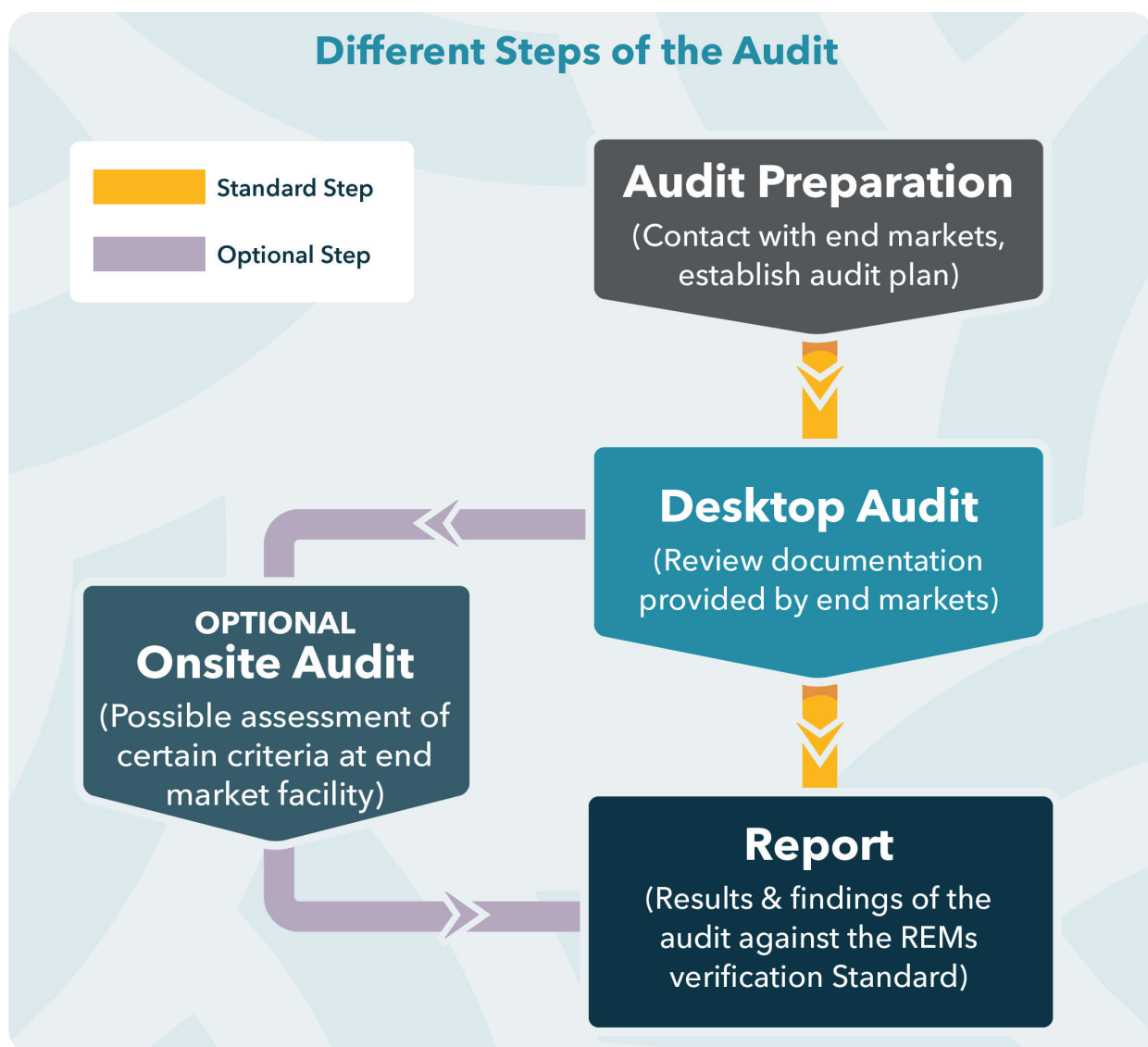
Once the REMs verification standard is finalized, CAA will engage verification bodies to verify end market compliance, while ensuring the confidentiality of the end markets' proprietary information.

The verification bodies engaged will perform a desktop audit (i.e., documentation review and analysis) of each end market on an annual basis. Onsite audits will also be performed, with the frequency determined by the REMs verification standard. A risk-based approach that will consider complaints, incidents and processes will also be used to determine the need for an onsite inspection. Verification bodies will be asked to consider potential environmental and public-health risks, consistent with applicable permits, regulatory findings, and REM requirements.

Once an audit is completed, verification bodies will submit a report to CAA, detailing whether the audited end market has passed or failed the criteria established in the REMs verification standard.

Audit results will inform CAA about potential environmental justice impacts, and whether action is needed to minimize negative environmental or public health impacts. It will also allow CAA to determine whether any support to the end market must be provided.

Figure 4: Different Steps of the Audit: Desktop Audit, Optional Onsite Audit, and Report



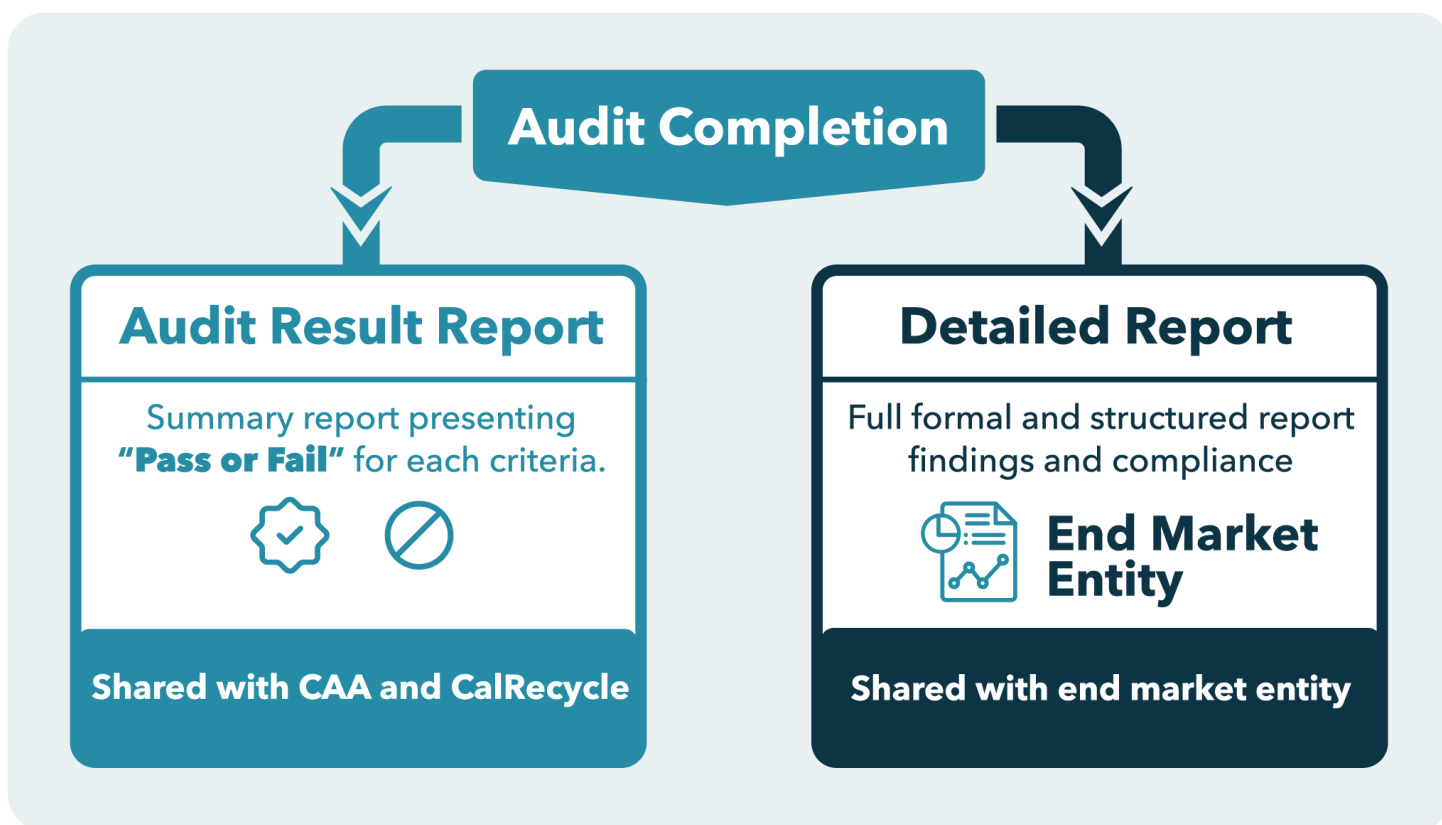
CAA anticipates that the REMs verification standard will be finalized in the latter half of 2027. In the interim, the three-step verification process will commence upon plan implementation, starting with the initial screening and the data-review steps detailed above. During this interim period, CAA also may engage a verification body to initiate the assessment of compliance with laws and regulations.

5.3.2.2 Reporting to CalRecycle

CAA acknowledges that an audit process requires that the end market entity share proprietary information with the verification body. Audit best practices require that this information remain confidential. Therefore, the verification body will make two reports once it has completed the audit: a detailed audit report to be shared with the end market and an audit result report to be shared with both the end market and with CAA. It's important to note that CAA will not have access to the detailed audit report containing confidential information (such as recycling process description).

CAA will make audit result reports available to CalRecycle. This audit result report would indicate whether a facility has successfully met the REMs verification standard criteria. If CalRecycle requires more information to be provided, CAA will ask the end market entity (via the verification body) to provide the substantiating information supplied during the audit. If an end market declines to provide that information, they will be considered as opting out of becoming a designated REM.

Figure 5: Outcomes of REM Verification



CAA California will retain records of audit results for at least three years.

CAA California will provide the following information in its annual report to CalRecycle, in accordance with SB 54 regulations [Section 18980.4.2(c)]:

- Total number of REMs meeting or exceeding the recycling yield threshold established by CAA (see section 5.3.2.6 Recycling Yield Thresholds), including a detailed explanation of how yield was measured and calculated, the amount of material that was accepted, and the amount of covered material that was successfully recycled by REMs

- Summary of audit result report containing identification of end markets failing to satisfy the requirements to be a REM
- Summary description of corrective actions that were taken by REMs
- Description of instances where CAA prohibited sending materials to an end market not deemed responsible
- Summary of complaints made against end markets

5.3.2.3 Addressing Non-Compliance

If an end market is found to have not met any of the REMs verification standard criteria, CAA California may request additional information to be provided and analyzed by the verification body. Such information may include:

- A description of the facility's infrastructure and operations, including inbound and outbound material results and site photographs
- A description of working and environmental conditions

The verification body may conduct an additional onsite inspection to verify the above. An end market choosing to withhold such information may not be deemed responsible.

For end markets that the verification body determines as not meeting REM standards, the verification body will recommend corrective actions that they can take to meet the REM standards. The end markets will have a set timeframe to implement the changes. CAA will share this information with CalRecycle and will also notify any MRFs sending materials to these end markets that they have not been verified as REMs.

CAA California will consider offering support to help end markets become compliant with the REMs verification standard, depending on the severity of the non-compliance and the relative importance of the end market in the overall recycling capacity for California CMCs. CAA California will share audit result reports with CalRecycle for all end markets, both those the verification body has determined to be REMs and those it has determined not to be. Based on these audit result reports, CalRecycle may make a determination that differs from that of the verification body.

5.3.2.4 Selecting Certification Bodies

Certification bodies used to implement the REMs verification standard will be selected based on several criteria, including:

- Compliance with ISO 17065 (Conformity Assessment – Requirements for Bodies Certifying Products, Processes and Services)
- Experience auditing North American and overseas markets
- Local presence in North American and overseas markets (i.e., the verification body has local offices or agents in a targeted overseas market), and use of native-language speakers for overseas audits
- Experience auditing related standards, such as standards focused on environmental performance; workers' rights, health and safety; traceability; chain of custody; or recycled material reprocessing
- Conflict-of-interest policies
- Professional liability insurance

CAA California will train verification bodies on the REMs verification standard and its proper implementation.

5.3.2.5 Developing the REMs Verification Standard

CAA has retained the services of ANSI-accredited contractor SCS Standards and Assurance Systems (SCS) to draft the REMs verification standard. A standard development committee (SDC) is supporting the work. The SDC is composed of industry, government, and NGO representatives as detailed in Table 2 below. The role of the SDC is to facilitate consensus on the content of the REMs verification standard and to review public comments and pilot study results.

Table 2: SDC’s List of Participating Organizations

Organization	Category
1. Aluminum Association	Industry
2. American Chemistry Council	
3. American Forest and Paper Association	
4. Association of Plastic Recyclers	
5. Glass Packaging Institute	
6. National Waste and Recycling Association	
7. Recycled Materials Association	
8. Arizona State University	Government and NGOs
9. Colorado Department of Public Health and Environment	
10. Green Blue	
11. Minnesota Pollution Control Agency	
12. Oregon Department of Environmental Quality	
13. Washington Department of Ecology	
14. World Wildlife Fund	
15. Circular Action Alliance	Standard Owner

Although the REMs verification standard will be developed with a national lens, it will ensure that California-specific REM requirements defined in SB 54 regulations are fully covered. CalRecycle decided to not join the SDC but remains welcome to participate as an observer.

5.3.2.6 Recycling Yield Thresholds

Recycling yield is complex to measure and is highly sensitive information for end markets. Nevertheless, end markets must meet a defined recycling yield to be qualified as REM. The regulations state that:

- For all materials except compostable products, yield “shall be calculated by taking the total weight of material that has been recycled and dividing it by the total weight of material that has been accepted by the end market and not sent to a responsible end market for further processing” [Section 18980.3.2(b)(2)(B)]
- For compostable products, “covered material partially or wholly comprising plastic and intentionally included in the process used to generate a recycled organic product must fully biologically decompose, and the recycled organic product must meet standards necessary to be sold into the marketplace” [Section 18980.4(a)(4)(B)]

CAA California must define and justify recycling yield thresholds, based on the data in the state-wide needs assessment from CalRecycle and other relevant sources.

CAA California has gathered information on end markets’ yields from several sources:

- CAA California-commissioned studies, including:
 - An assessment of CMC Groups conversion rates at end markets.
 - An assessment of materials end markets in California.
 - An assessment of recycled content incorporation in new products.
 - A technical and economic assessment of non-mechanical recycling.
 - Existing and publicly available industry studies, such as:
 - “Recovered Paper Yield Estimate” from the Technical Association of the Pulp and Paper Industry (TAPPI)
 - “Mapping the Annual Flow of Steel in the United States” from Environmental Science & Technology
 - Voluntary Standard for Repulping and Recycling Coated or Treated Corrugated Fiberboard and its Equivalents in the Old Corrugated Containers (OCC) Recycling Stream
- Industry association data

CAA California has drawn two main conclusions from these information sources.

First, the methodology for measuring yield is not standardized, and yield can vary significantly across different recycling processes, even when the same material is being handled. For example, processes creating high-quality output such as packaging-to-packaging recycling must remove more contaminants, which decreases the yield. Conversely, processes creating less technically stringent output such as outdoor furniture will have more tolerance to contaminants such as inks or additives and thus show higher reprocessing yields.

Second, yield varies by material due to inherent material properties and typical contamination levels in end markets’ inbound feedstock. For example, paper and plastics are polymer-based materials whose chemical bonds degrade with each recycling cycle, while the structure of glass and metals remain largely unaffected. Thus, recycling yield for paper and plastic will generally be lower than for glass and metal.

Informed by these studies, CAA California is exploring setting thresholds for end market recycling yield by material category, as follows:

Table 3: Preliminary Thresholds for End Market Recycling Yield by Material Category

Material Category	Preliminary thresholds for end market recycling yield
Glass	60%
Metal	60%
Paper	60%
Plastic	60%

The recycling yield will be calculated by taking the total weight of material (defined for yield as both covered and non-covered materials under Section 18980.4(a)(4)) that has been recycled by the end market (i.e., outbound) and dividing it by the total weight of material that has been accepted by the end market and not sent to a responsible end market for further processing (i.e., inbound). CAA California will consider:

- Materials recycled as the quantity of materials sold or transferred by the responsible end market as feedstock that meets the quality standards necessary to be used in lieu of virgin material for the creation of new or reconstituted products.
- Materials accepted as the quantity of materials received by the end market, minus the quantity of what the end market considers a contaminant and the quantity sold for further processing to another responsible end market.

Yield will be calculated for each recycling process within the end market.

End markets for compostable materials, including wood materials, do not have to meet a defined recycling yield. Instead, as stated above, end markets for compostable materials must ensure that intentionally included compostable products will fully decompose and the recycled organic product must meet standards necessary to sell into the marketplace. CAA California will require end markets processing compostable materials to verify that they operate within the defined range of operating conditions (carbon-to-nitrogen ratio, moisture, pH, etc.) that are stated in recently published ASTM standards (adapted from The Composting Handbook). Alternatively, compost processors can show that compostables successfully disintegrate during their processing. The data provided will determine if the end markets for compostable materials meet the yield requirement set in regulations

When it is finalized, the REMs verification standard will include a detailed recycling yield calculation method. It will include the following:

- Yield will be calculated based on the quantity of material an end market sells to downstream buyers.
- Material sent or used for any processes that do not qualify as recycling under the PRC 42041 “recycling” definition (e.g., energy recovery), will not count toward yield. During the audit step of the verification process, verification bodies will confirm the destination of end market entities’ outputs to ensure yield calculations are adjusted accordingly.

5.3.3 Identification and Verification of Non-Mechanical Recycling

Section 18980.4.1(d) requires the program plan to identify any recycling technology being considered for use that was not a type of mechanical recycling technology in use within California as of the date of the Act.

Non-mechanical recycling end markets must meet the same REM requirements as other end markets. Non-mechanical recycling end markets must also meet additional REM requirements, confirming they:

- Will not produce significant amounts of hazardous waste. Regulations state that non-mechanical recycling operators must demonstrate “the production and management of hazardous waste that is handled and disposed of in compliance with an applicable permit does not present a substantial risk of harm to public health or of contamination of the environment” [18980.4.1(d)]
- Operate in a manner consistent with ISO 59014:2024 (life cycle thinking, circular economy perspective, social responsibility, interest holder priorities, material traceability and resource conservation)

Mechanical recycling may be considered a preferred recycling method due to its lower greenhouse gas emissions footprint and cost structure. However, mechanical recycling alone does not currently have the capacity or technical feasibility to recycle all plastics – particularly films, flexibles, and multilayer packaging – or to recycle certain materials back into food or medical-grade plastics. Non-mechanical recycling technologies convert hard-to-recycle plastics into virgin-quality feedstock, which supports high-demand, sensitive applications such as food and healthcare packaging.

CAA California supports the responsible use of non-mechanical recycling technologies for plastics when these technologies serve in a complementary role. This section describes the REM process for non-mechanical recycling end markets.

5.3.3.1 Non-Mechanical Recycling Technologies Identified by CAA California

CAA California has identified several end markets currently in operation that are using non-mechanical recycling technologies and are capable of reprocessing CMCs from California. These end markets use the following technologies:

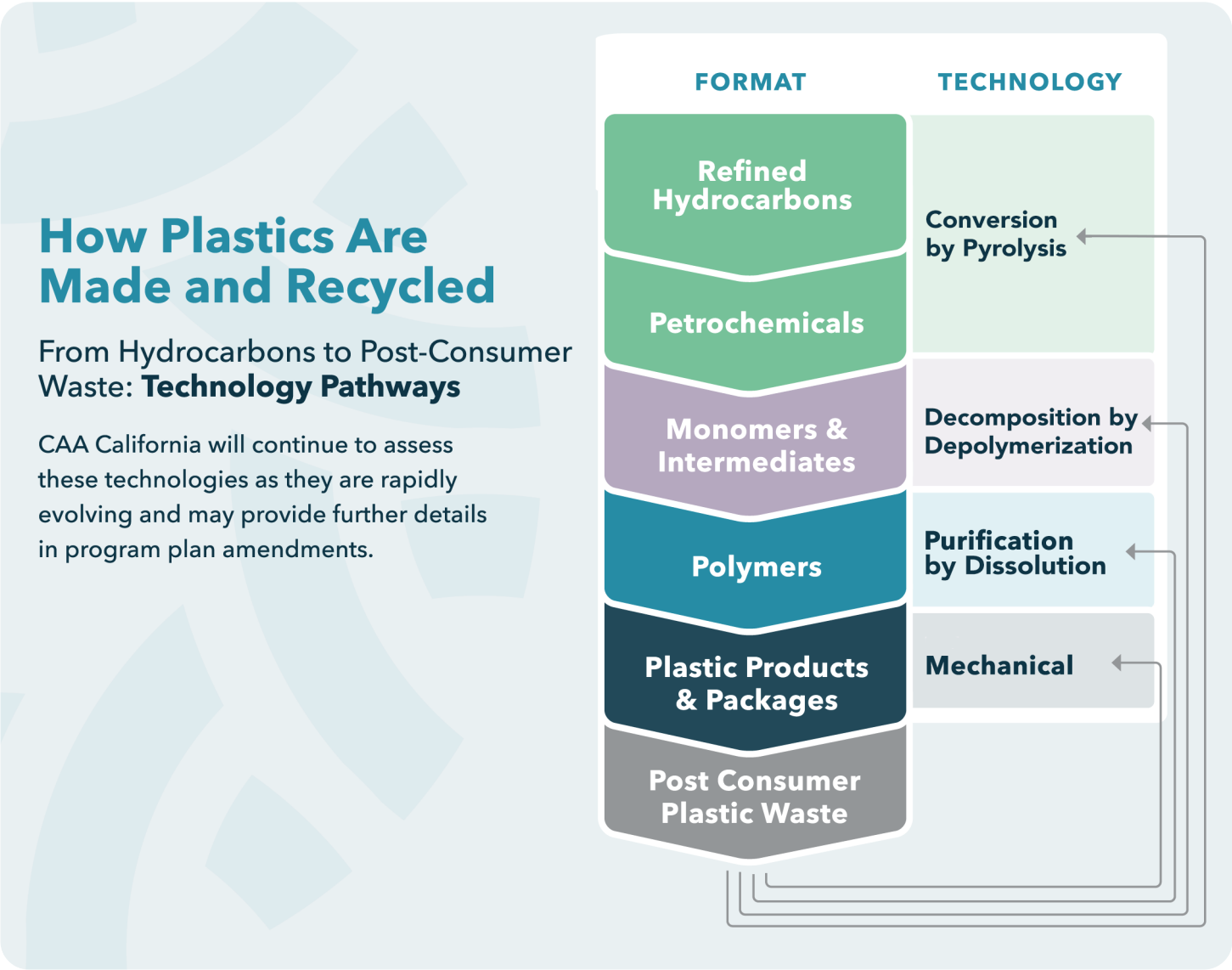
- Pyrolysis
- Depolymerization
- Dissolution

Pyrolysis is a thermal decomposition process where polyolefin plastics (HDPE, LDPE, PP) are heated to high temperatures (350°C - 650°C) in the absence of oxygen. This process breaks down long polymer chains into smaller molecules, producing a mixture of products such as pyrolysis oil, gas, wax and solid residue. While some of the recycling process outputs are typically used in fuel or energy recovery, a portion of the recycling process output can also be used to make new plastic products. For recycling rate calculation purposes, CAA California will account only for the portion of output converted into new plastic, thus ensuring the use of this technology meets the definition of recycling described in PRC 42041(aa).

Depolymerization is the process of separating polymers into their original monomer forms. Specifically, methanolysis uses elevated temperatures (150°C - 250°C) and pressure (20 bar - 50 bar) with a catalyst to depolymerize PET polymers into its original monomers: dimethyl terephthalate (DMT) and monoethylene glycol (MEG). There is no fuel production or other form of energy recovery in the process.

Dissolution is a physical process of dispersing a substance such as polypropylene (PP) or polyethylene (PE) into a solvent without breaking the polymer’s molecular structure. This allows purification by removing contaminants, additives and unwanted materials. There is no fuel production or other form of energy recovery in the process.

Figure 6: Non-Mechanical Recycling Technologies in the Plastic Production Value Chain



CAA California will continue to assess these quickly evolving technologies and may address accordingly in program plan amendments.

5.3.3.2 Non-Mechanical Recycling Eligibility for REM Designation

As with all end markets, a verification body will assess individual non-mechanical recycling end markets as part of the REMs verification standard. To be eligible for REM designation, any facility using non-mechanical recycling technologies must also provide CAA California information as described in Section 18980.4.1(d)(4), including the weight of material reprocessed per calendar month for the last 12 months, the weight of hazardous waste and “acute hazardous waste” generated per calendar month for the last 12 months, and the weight of “acute hazardous waste” as that term is defined in Title 40 of the Code of Federal Regulations Section 261.11(a)(2). All non-mechanical recycling end markets identified by CAA California thus far have provided the above required information.

Information provided by individual operators is considered confidential, so Table 4 provides averaged information obtained from industry surveys and literature reviews, which is consistent with the information provided by identified non-mechanical recycling end markets to CAA California.

Table 4: Average End Market Yield for Non-Mechanical End Markets

Technologies	Materials to be reprocessed	Feedstock produced	Average end market yield
Pyrolysis	Polyolefins (HDPE, LDPE, PP)	Pyrolytic oil, gas, wax	>60%
Depolymerization	PET	Polyester monomers (DMT, MEG)	>60%
Dissolution	Polyolefins (HDPE, LDPE, PP)	Clean virgin-like polymers	>60%

5.3.3.3 No Production of Significant Amount of Hazardous Waste

By design, non-mechanical recycling technologies rely on either solvents or high energy inputs (>150°C - 250°C) to break down plastics. These processes result in the release of chemical byproducts or emissions into the environment.

According to SB 54 regulations, when production of hazardous waste is handled and disposed of in compliance with an applicable permit, it does not present a risk of substantial harm.

CAA checked records of the current operational non-mechanical recycling end markets against the U.S. Environmental Protection Agency Enforcement and Compliance History Online (ECHO) Database and found no evidence of non-compliance with Title 40 of the Code of Federal Regulations Section 261.3 or other hazardous waste management permits. CAA also obtained attestation from the current operational non-mechanical recycling end markets stating that they are compliant with their operating permits related to management of hazardous waste. This preliminary information indicates that current and operational U.S. non-mechanical recycling end markets are not producing significant amounts of hazardous waste.

Verification bodies engaged by CAA will confirm compliance with SB 54 regulatory requirements. Hazardous waste generation and management practices and compliance with permits and regulations will be included in CAA California's REMs verification standard currently under development.

5.3.3.4 Operating in a Manner Consistent with ISO 59014

ISO 59014 is an international standard that provides guidance on measuring and assessing circularity performance within organizations and value chains. It details how companies can track how efficiently materials are recovered and kept in circulation. In relation to non-mechanical recycling of plastics, ISO 59014 supports the evaluation of how effectively plastic waste is converted back into usable raw materials and measurement of circular outcomes.

ISO 59014 is a guidance document, not a standard, so cannot be used as criteria for compliance. Therefore, for any non-mechanical recycling end market reprocessing CMCs from California, CAA California will require the following:

- The facility owner must self-attest they are operating in a manner consistent with ISO 59014.

- The verification body must verify that requirements established in ISO 59014 are implemented during the time of audit. For instance, the verification body will review the monitoring and evaluation plan, the interested parties' engagement process, and the environmental risk assessment.

Non-mechanical recyclers will be required to support their claim by providing documentation, such as:

- Traceability verifications complied with (e.g., International Sustainability and Carbon Certification, Recycled Material Standard)
- Life Cycle Assessments (LCA) performed
- Other verifications earned (e.g., SCS Responsible ACM, ISO 14001)

5.4 Recycling Rate Calculation

Identifying and verifying REMs is a critical step for recycling rate calculation. SB 54 regulations allow for only CMCs reprocessed and sold by REMs to be counted toward SB 54's recycling rate targets. Pursuant to Section 18980.3.2(b), "Recycling rate shall be calculated as the weight of covered material that is recycled divided by the sum of the total weight of covered material disposed of, as described in paragraph [...], and the weight of covered material recycled, as described in paragraph [...]."

The weight of materials recycled "shall be calculated at the point that the material is sold or transferred by a responsible end market as recycled content feedstock that meets the quality standards necessary to be used in lieu of virgin material for the creation of new or reconstituted products."

The weight of covered material disposed "is the sum of the weight of covered material that is sent to an end market that does not qualify as a REM [and the] weight of covered material disposed of."

CAA California identifies several limitations to measuring recycling rates as proposed in the regulations. Thus, CAA California is proposing an alternative methodology, pursuant to Section 18980.3.2(g).

5.4.1 Current Methodology Limitations

CAA California identified three main limitations in the recycling rate calculation methodology provided in SB 54 regulations.

1. Complexity of tracking data

End markets do not track inbound and outbound data on a jurisdiction basis or on a CMC basis. The recycling rate calculation methodology put forth in regulations would require this level of granularity.

2. Limited authority to obtain data

During CAA's first REM process implementation in Oregon, end markets indicated they consider detailed information on the weight or composition of outbound flows to be confidential and proprietary information. CAA California has limited authority to require the disclosure of such information, so it may lack access to end market outbound information.

3. Methodology gaps

The recycling rate calculation methodology in SB 54's regulations relies mainly on materials characterization studies, especially for measuring covered materials disposed. A methodology based on characterization cannot efficiently account for covered material exclusions and exemptions. Such a methodology also often overestimates quantities, especially in the disposal stream, as residue and liquids often are not discarded.

5.4.2 Proposed Alternative Methodology

To address the above limitations, CAA California proposes an alternative methodology, one which ensures material tracking and confirms materials sent to disposal or to non-recycling processes, as defined in PRC 42041(aa), are not counted as recycling. The proposed alternative methodology also minimizes administrative burden and overcomes data-access complexity.

The alternative methodology relies on multiple data points to track materials from MRF outbound flows through to end-market inbound flows, enabled by data-sharing agreements with MRFs, intermediate supply-chain entities, and end market entities.

The alternative methodology also groups CMCs by category based on the likely commodities they will be sorted into. Finally, the alternative methodology applies conversion factors by recycling process type to derive the numerator (e.g., the quantity of material sold by a REM). CMC Groups are presented in the following table.

Table 5: CMC Groupings

Technologies
Glass Bottles & Jars
Other Glass Ceramic
Non-UBC Aluminum UBC Aluminum
Aluminum Aerosols Ferrous Metal Packaging
Other metal Steel Aerosols
Small Format Mixed Paper
Polycoated Paper Cartons
Waxed Cardboard Cardboard (OCC) PET Bottles, Jugs & Jars (Clear/Natural) PET Bottles, Jugs & Jars (Pigmented/Colored)
PET Thermoforms HDPE Bottles, Jugs and Jars (Clear/Natural)
HDPE Bottles, Jugs and Jars (Pigmented/Colored) HDPE Pails & Buckets
Other HDPE Rigid PVC
Rigid LDPE Rigid Polypropylene
Utensils Expanded Polystyrene
Rigid Polystyrene Compostable Plastic
Other Rigid Plastic Non-Polyolefin Monomaterial Plastic Film
PE Plastic Film/Flex PET Plastic Film/Flex
PP Plastic Film Multi-Material Plastic Film
Textiles Compostable Wood/Organics
Non-Compostable Wood/Organics

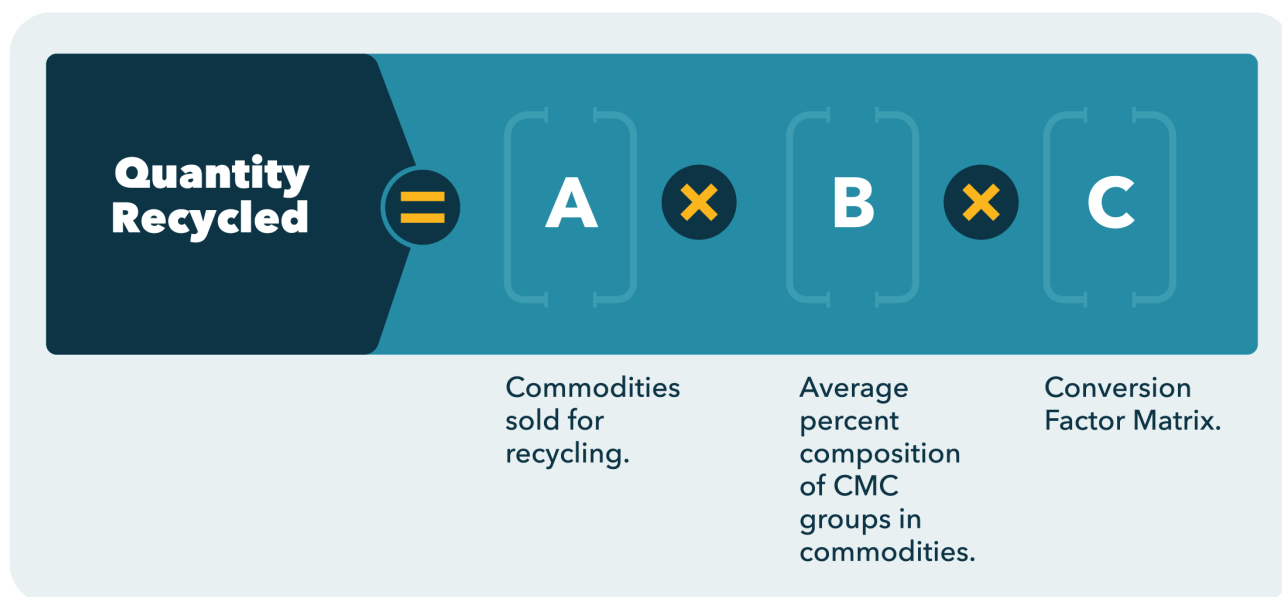
5.4.2.1 Methodology to Measure the Quantity of CMCs Recycled

The following sources of information will be used to calculate quantities recycled by CMC groups:

- A. Quantity, by commodities, sent to REMs by MRFs and intermediate supply chain entities and/or quantity, by commodities, received by REMs from California service providers.** Information will be provided by service providers (through the reimbursement or data sharing agreement) or the end markets and intermediate supply chain entities (through data sharing agreements or conditions for investment).
- B. Average percent composition of CMC groups in commodities.** Information will be provided by bale characterization studies undertaken by CAA California.
- C. Conversion Factor (average proportion of CMC group reprocessed in end products by recycling process type).** Information has been provided by external expertise studies and is available upon request.

Although the quantity measured in (A) largely relies on MRF participation, MRFs have no regulatory obligation to report this information to CAA California. As such, CAA California will implement measures to facilitate this reporting and will support regulatory changes to strengthen MRF reporting requirements. For each CMC group, the calculation will be as follows:

Figure 7: Measuring the Quantity of CMCs Recycled



For CMC groups accepted in multiple commodities, the calculation would be made for each commodity, and results are then added together.

Note that the following would not be counted in (A) above:

- Quantity reprocessed at non-REMs
- Quantity reprocessed using the following processes:
 - Combustion
 - Incineration
 - Energy generation
 - Fuel production, except for anaerobic digestion of source-separated organic materials
 - Other forms of disposal

- Quantity of mixed plastics commodities exported overseas that do not meet the requirements in PRC 42041(aa)(4)(B)

The process of auditing end markets against the REMs verification standard will allow CAA California to certify the quantities reported in step (A).

5.4.2.2 Methodology to Measuring the Denominator

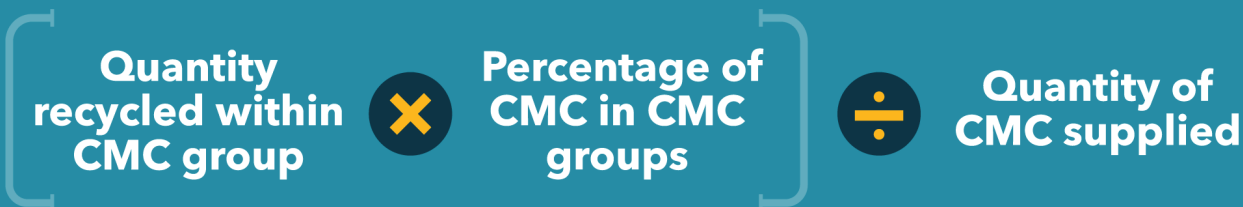
CAA California will use producers' supplied data as the denominator, instead of the sum of recycled and disposed data. This proposal is made for the following reasons:

- Easier to track with accuracy and to audit reporting
- Aligned with the methodology used in other states
- Allows CAA California to account for approved exclusions and exemptions
- The use of disposed data generally overestimates generation because of moisture and residue that are not removed during characterization

5.4.2.3 Proposed Alternative Calculation Method

CAA California proposes the following method to measure the recycling rate of each CMC:

Figure 8: Alternative Recycling Rate Calculation Method



Example: PET Thermoforms CMC Group

Note: All data in this example is for illustrative purposes only and is not based on actual data.

CMCs contained in the CMC Group:

- 25_P38P - PET (#1) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs
- 25_P39P - PET (#1) - Other Rigid Items

(A) Quantity sold to end markets (based on data coming from MRFs and/or reclaimers)

- Commodity #1: PET bottle and container bale
 - 15,000 tons to mechanical recycling - High grade
 - 5,000 tons to mechanical recycling - Low grade
- Commodity #2: PET thermoform bale
 - 10,000 tons to depolymerization

(B) Average composition

- Commodity #1 (PET bottle and container bale): 15%
- Commodity #2 (PET thermoform bale): 85%

(C) Conversion factor

- Mechanical recycling - High grade: 60%
- Mechanical recycling - Low grade: 90%
- Depolymerization: 70%

Quantity recycled

15,000 tons x 15% x 60% = 1,350 tons

+

5,000 tons x 15% x 90% = 675 tons

+

10,000 tons x 85% x 70% = 5,950 tons

=

7,975 tons

Quantity supplied: 12,000 tons

Recycling rate: 7,975 tons / 12,000 tons = 66% recycling rate



Chapter 6: Source Reduction

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Chapter 6: Source Reduction

6.1 Introduction

This chapter sets out the actions that CAA California will take to meet SB 54's plastic source reduction requirements. Achieving these targets will require reversing decades-long trends in packaging design, product distribution, and merchandizing. Small changes to select product categories will not suffice. A 25% reduction in plastic packaging while still growing sales means producers cannot tinker at the edges – they will need to transform the customer experience both in-store and at home.

The process of redesigning consumer packaging can extend over many years and requires substantial capital investment. Producers typically redesign packaging for only a few products each year and tend to focus on those in need of redesign. To meet SB 54's targets, producers will need to redesign entire categories of products – if not their entire portfolio – at a pace they have never before contemplated.

Accordingly, CAA California has developed a variety of measures that are designed to ensure that producers are motivated to undertake source reduction by:

- Providing financial rewards to producers that are the most successful at reducing their reliance on plastic
- Making it more expensive for producers that do not implement source reduction
- Helping to develop the infrastructure and support that producers require to succeed

This chapter is laid out in four sections that detail:

1. SB 54's targets and information about how CAA California will be held to account for achieving the targets
2. CAA California's planned incentive program to motivate producers to reduce plastic use and ensure that all producers contribute equitably to the pursuit of SB 54 targets
3. CAA California's intended investments to make it easier for producers and consumers to adopt reuse and refill, or durable packaging alternatives
4. The steps CAA California intends to take to ensure compliance, including producers Individual Source Reduction Plans (ISR Plans), Individual Source Reduction Agreements (ISR Agreements), measurement protocols, producer reporting requirements, and ways in which CAA California plans to assist producers to achieve source reduction.

6.2 Targets for Source Reduction, Reuse and Refill, and Elimination

6.2.1 Reduction Targets

SB 54 addresses producer packaging in two forms: by weight (pounds of plastic used to form the packaging) and by plastic component (a plastic item that forms a part of packaging, such as a cap, a lid, a tag or a label). SB 54 specifies the weight of packaging that needs to be reduced by shifting products to reusable or refillable formats, or by eliminating a packaging component in its entirety.

The reduction targets for these three areas are in Table 1 below.

Table 1: SB 54 Source Reduction Targets

	2027	2030	2032
Reduction by weight versus 2023	10%	20%	25%
Reduction in the number of components versus 2023	10%	20%	25%
Reuse, Refill and Elimination versus 2023	2%	4%	10%

6.2.1.1 Source Reduction Target Challenges

CAA California will invest in strategies to achieve SB 54’s source reduction targets and is, therefore, launching a novel system of strong incentives and investments supported by proactive supply chain engagement strategies to catalyze progress.

Unfortunately, CAA California has determined unique challenges and related circumstances, especially the rulemaking delay of more than a year, have significantly impeded progress to date. Therefore, CAA California is considering submitting a unique challenges exemption application seeking a three-year exemption from CAA California’s PRO-level requirement to achieve the 10% source reduction target with at least 2% through reuse and refill.

The justification for this exemption will be detailed in the application, but will focus in part on the critical delay in rulemaking, which had a cascading effect on the actions required to drive early progress, including producer registration and engagement with CAA California, reporting of 2023 baseline data and 2025 supply data, announcement of specific CAA fee schedules and source reduction incentives, and regulatory clarity on requirements including for unprecedented reuse and refill and the PCR alternative credit provisions, all of which were needed for producers to develop individual source reduction plans and justify any early pre-investments.

CAA California will revisit this approach after receiving producers’ ISR Plans in August 2026. If those plans suggest the 2027 source reduction target is within reach, CAA California will adjust its approach accordingly. If the plans suggest CAA California will miss the 2027 source reduction target, CAA California will proceed with a unique challenges exemption application covering 2027 source reduction targets for all applicable CMCs.

6.2.2 Year of Application

According to CalRecycle, the years listed in Table 1 are when CAA California must submit its progress report on the targets, based on annual producer supply data reflecting the previous year’s supply. Accordingly, CAA California’s progress towards targets will be tied to reports that reflect producers’ supply in 2026, 2029 and 2031, compared to the 2023 baseline.

6.2.3 Requirements Specific to Reducing Weight and Components

6.2.3.1 No Allowance for Growth

SB 54 does not allow CAA California to account for increases in packaging usage that may result from increases in consumer sales between 2023 and the target years (due to, for example, population or economic growth). This means that the total amount of plastic supply to market during the program plan years must have a net reduction relative to the baseline year of 2023. That year’s plastic supply to market consisted of X tons of plastic by weight and Y components. Therefore, the targets in SB 54 limit the total amount of plastic that producers may supply as defined by Table 2.

Table 2: Limit on Total Plastic Supply

	2027	2030	2032
Based on 2023 supply of x tons by weight	X*0.9 tons	X*0.8 tons	X*0.75 tons
Based on 2023 supply of y components by unit	Y*0.9 units	Y*0.8 units	Y*0.75 units

For example, to meet the 2027 source reduction requirement by weight in comparison to the 2023 baseline, producers’ total supply of plastic in 2026 is limited to 90% of the 2023 total supply by weight, regardless of how many new items are sold due to growth in consumer demand.

6.2.3.2 Eligible Source Reduction

SB 54 does not recognize source reduction that relies on a material or package format that is less recyclable than the packaging it replaced, as per PRC 42041(aj). For example, a change from a material or package format that is deemed recyclable (e.g., rigid plastic bottle) to one that uses less plastic but is deemed non-recyclable (e.g., currently a multi-laminate plastic pouch) cannot be counted toward the source reduction targets. Similarly, reductions in plastic use resulting from changing to a packaging that is less recyclable than the original cannot be counted toward the source reduction target.

6.2.3.3 Alternative Compliance

SB 54 recognizes one path to meeting the source reduction targets that does not result in a reduction to a producer’s plastic supply: the use of plastic post-consumer recycled (PCR) content in plastic packaging. As plastic PCR replaces virgin plastic feedstock with recovered plastic feedstock, SB 54 denotes the use of PCR as Alternative Compliance with SB 54 targets.

Up to 8% of the 25% source reduction target can be achieved through Alternative Compliance. Utilizing Alternative Compliance to its full potential would increase the total amount of plastic that producers may supply to the market, as outlined in Table 3.

CAA and producers collectively can count plastic PCR use toward source reduction targets, up to a maximum of 8%. PRC 42057(a)(2)(B) mandates that CAA develop an “alternative compliance formula” that offers source reduction credit on a sliding scale based on the ratio of virgin plastic to PCR. CAA’s plan regarding PCR use is set out in detail in 6.3 Incentives Program for Packaging Innovation.

Table 3: Adjusted Limit on Plastic Supply

Year of Application	2027	2030	2032
Based on 2023 supply of x tons by weight	X*0.98 tons	X*0.88 tons	X*0.83 tons

CAA and producers collectively can count plastic PCR use toward source reduction targets, up to a maximum of 8%. PRC 42057(a)(2)(B) mandates that CAA develop an “alternative compliance formula” that offers source reduction credit on a sliding scale based on the ratio of virgin plastic to PCR. CAA’s plan regarding PCR use is set out in detail in 6.3 Incentives Program for Packaging Innovation.

6.2.4 Requirements Specific to Reuse, Refill and Elimination

6.2.4.1 Qualifying for Reuse and Refill

Reuse and refill refer to methods of receiving and using products that rely on containers or other materials that can be used multiple times in place of single-use packaging. Examples include ceramic plates and metal cutlery that replace single-use plastic food serviceware, or returnable glass milk bottles that replace plastic milk jugs.

SB 54 defines what qualifies as reusable and refillable packaging and food serviceware as follows, per PRC 42041(af):

Items intended for reuse and refill by a producer must be:

- Designed and marketed to be used multiple times for the same product, or for another purposeful packaging use in a supply chain
- Designed for durability to function properly in its original condition for multiple uses
- Supported by adequate infrastructure to ensure it can be conveniently and safely reused or refilled multiple times
- Repeatedly recovered, inspected, and repaired, if necessary, and reissued into the supply chain for reuse or refill for multiple cycles

Items intended for reuse and refill by a consumer must be:

- Designed and marketed to be used multiple times for the same product
- Designed for durability to function properly in its original condition for multiple uses
- Supported by adequate and convenient availability of retail infrastructure for bulk or large format packaging that may be refilled to ensure it can be conveniently and safely reused or refilled by the consumer multiple times

Ensuring compliance with the requirements for various reuse and refill models are addressed in section 6.5 Compliance.

6.2.4.2 *Qualifying for Elimination*

Elimination means eliminating a plastic packaging component in its entirety from the supply of covered material to the market. It does not include a packaging component that has been replaced with non-plastic material (PRC 42041(j)). There are three routes to elimination:

1. Design-related: A plastic component of packaging eliminated without replacement with another material
2. Sales-related: A product with plastic packaging that is removed from sale in California
3. Use-related: Sales without any packaging, such as the Bring Your Own Container (BYOC) model

6.2.5 Other Requirements

6.2.5.1 *Accounting for New Market Entries and Exits*

CAA California designed its 2023 baseline reporting process to capture, to the extent possible, all obligated material supplied by all companies that were in operation in 2023 (i.e., not just producers that were active in 2025). Achievement of the targets set out in Table 2 will be measured by aggregating the supply of plastic from all producers in operation in each of the target years, including material supplied by producers that did not exist in 2023 and were not included in the 2023 baseline.

To ensure that all new products introduced after 2023 contribute fairly to the achievement of the source reduction targets, CAA California will require all companies that entered the California market after 2023 (whose products are not included in the 2023 baseline) to participate in the incentive program described in this chapter. Due to their participation in the incentive program, and their obligations to prepare an ISR Plan and commit to all other new obligations accepted by producers that existed in 2023, CAA California will expect these producers to utilize packaging that is at least as efficient as packaging already in the market, thus satisfying the requirement in PRC 42057(g).

6.2.5.2 *Recognizing Prior Effort*

CAA recognizes some producers may have already engaged in source reduction prior to the 2023 baseline, and SB 54 indicates CAA should give producers credit for source reduction achieved from the 2013 calendar year through the end of the 2022 calendar year.

Producers that source reduced prior to 2023 will benefit significantly in CAA's Source Reduction Plan. For every pound of plastic a producer removed from its packaging, it will not pay the base fee, the Reuse Investment Fee or the PPMF fees. Further, because the malus is applied to all plastic uniformly, the producer will also not pay the malus for the weight of plastic it reduced from 2013 through the end of 2022. Producers automatically realize this financial impact by submitting their supply reports, without any additional action. CAA is considering additional bonuses that would further recognize prior reduction and will publish more details in the future.

6.3 Incentives Program for Packaging Innovation

6.3.1 Research and Development

The source reduction targets set out in SB 54 are uniquely broad and ambitious in comparison to any other EPR program worldwide. Accordingly, throughout 2025-26, CAA California examined a wide variety of options for incentivizing environmental outcomes beyond EPR programs to determine which approach or approaches would have the best chance of achieving SB 54 targets.

Three key tools emerged from this research:

1. A bonus/malus approach in which producers would receive a financial bonus for success in source reduction, financed from malus payments from producers that were less successful
2. An Administered Exchange approach, in which producers may buy and sell allowances while remaining within a supply limit set by CAA California
3. Direct investments by CAA California to establish common infrastructure for use by multiple producers and to support conversion activities to reuse and refill

The remainder of this section will set out how CAA California plans to deploy the bonus/malus and administered exchange approaches to promote source reduction in three key areas:

1. Producers' use of PCR
2. Use of reuse and refill
3. Other source reduction pathways such as lightweighting (reducing packaging weight), substitution (switching from a plastic covered material to a non-plastic covered material), and right-sizing (reducing the amount of packaging through eliminating unnecessary components or reducing unnecessary space in the packaging)

CAA California's reuse, refill and elimination investment plan is set out in section 6.4 Reuse, Refill and Elimination Investment Plan.

6.3.2 Promoting Collective Effort and Shared Costs

The capital costs, operational costs, and technical challenges to reducing plastic use in packaging vary considerably among producers, even for the same materials, packaging types, and products. Many factors contribute to this variation. One significant factor is the method of source reduction pursued, whether it be reuse and refill, lightweighting, shifting to a non-plastic material, or right-sizing. In some cases, health and safety, shelf-life, performance and other technical requirements mean that reducing plastic in packaging could make the product unviable in the market.

Because of these variables, if every producer were to achieve the same amount of source reduction, some producers would incur higher costs than others, increasing the collective cost of compliance. To mitigate this disparity, CAA's plan encourages producers to target packaging that can be most efficiently source-reduced.

The plan promotes collective action. Every producer should review and make changes to its packaging portfolio. Meeting SB 54's ambitious targets will require all producers to reduce their reliance on plastic.

CAA has developed an incentive mechanism that provides a bonus to producers that achieve source reduction, financed through malus fees that are spread across all plastic producers as a disincentive for not achieving source reduction.

6.3.3 Four-Pronged Approach

CAA's incentive mechanism is divided into four major components:

1. A two-tiered bonus program to reward producers for achieving reductions in the amount of plastic supplied
2. Bonuses to reward the use of post-consumer recycled (PCR) content
3. Bonuses aligned with CAA's reuse direct investment strategy
4. Maluses to discourage plastic use and raise the funds needed to finance the bonuses

CAA will finalize bonus rates after it receives key information from all producers, including their 2023 Baseline Producer Reports, 2026 Annual Supply Reports (2025 Supply Data), 2026 Annual

Source Reduction Reports (2025 Supply Data), ISR Plans, and an upcoming survey of producers. CAA will combine this information to arrive at a schedule of incentives for the 2027 program year, for publication alongside the fee schedule in October 2026.

The level of maluses is directly proportional to the number of bonuses CAA provides to producers for their source reduction. CAA will publish actual incentives (bonuses earned and the required maluses) alongside the fee schedule in October of each year, invoiced in January the following year.

The typical timing of the rate announcement, reporting and invoicing cycle is shown below in Table 4.

Table 4: Bonus and Malus Announcement Timing

Year	Program year designation	Incentive mechanism activities and timing
1		CAA announces bonus rates for the coming year in October of this year.
2	Data year	Source reduction occurs during this calendar year.
3	Reporting year	- Producer reports source reduction in Annual Source Reduction Report, due to CAA on May 31 - CAA revises bonus rates using performance data from Annual Source Reduction Reports. - CAA publishes bonus and malus rates in October of this year.
4	Invoice year	CAA calculates and issues producer invoices in January of this year.

6.3.3.1 Two-Tiered Bonus for Achieving Reductions in Supply

The primary element of CAA’s incentive mechanism is to provide a bonus to producers for reducing the amount of plastic they supply to the market, whether it is achieved through reuse and refill, elimination, switching to a non-plastic material, rightsizing or other activities.

As noted in the 6.2.1 Reduction Targets section, progress toward the SB 54 targets will be tracked according to the amount of plastic supplied to market below the 2023 baseline. CAA recognizes producer sales overall may have increased since 2023 due to economic growth, effectively increasing the amount of source reduction that needs to be achieved to meet the SB 54 targets.

Accordingly, CAA has developed a tiered bonus structure that will reward source reduction that offsets a producer’s growth between 2023 and 2026 and source reduction that reduces a producer’s supply below the 2023 baseline, as follows:

- Tier 1 bonus**, to be paid on any demonstrated reduction in plastic supply between a producer’s 2026 supply and its supply for the relevant report year (i.e., for the 2028 report year, a producer’s reported 2026 supply minus its 2027 supply). 2026 will remain the year of comparison for this bonus throughout the program plan.
- Tier 2 bonus**, to be paid on any demonstrated reduction in plastic supply between a producer’s 2023 baseline supply and its supply in the relevant report year (i.e., for the 2028 report year, a producer’s reported 2023 supply minus its 2027 supply).

CAA will set the Tier 2 bonus higher than the Tier 1 bonus to motivate producers to reduce their supply below the 2023 baseline and ultimately toward the SB 54 targets. This also recognizes that some producers may begin with source reduction efforts that are less expensive and faster to market, and that achieving net source reduction will likely require more expensive source reduction pathways.

Table 5: Tiered Bonus Overview

Tiered Bonus
• Applies equally to all methods of source reduction • Establishes two tiers to reward producers for source reduction achieved against: ◦ The 2026 baseline (i.e., before the first program year) ◦ The 2023 baseline (i.e., net source reduction) • Tiered system provides a greater incentive to source reduce against the 2023 baseline

CAA’s bonuses will be the same across all source reduction activities. Although different source reduction activities carry different costs, differentiating bonuses by activity would require stock keeping unit (SKU)-level reporting, which would significantly increase the administrative burden on producers. CAA’s bonus approach encourages producers to collectively direct their efforts to the methods of source reduction that are the least costly, while still pursuing the maximum source reduction over the long term in alignment with their corporate strategies. CAA’s approach also recognizes that each producer has the greatest insight into which source reduction strategies make the most sense for its business.

Producers will earn the tiered bonus for the data year in which the producer achieved the source reduction. The bonus will be calculated after the producer reports that data in the report year, and it will be applied to the producer’s fee invoice in the following program year. For example, source reduction achieved in the 2027 data year would be reported to CAA in the 2028 report year, and the bonus would be paid out in the 2029 program year.

6.3.3.2 Bonus to Promote Plastic PCR

Plastic PCR has been a technically viable feedstock source for packaging and food serviceware for many years. Its adoption has been limited, in part because virgin plastic is often less expensive and more readily available, but also due to considerations for product protection, safety, performance, branding, and operational constraints, not solely cost.

CAA and producers collectively can count plastic PCR use toward source reduction targets, up to a maximum of 8%. PRC 42057(a)(2)(B) mandates that CAA develop an “alternative compliance formula” that offers source reduction credit on a sliding scale based on the ratio of virgin plastic to PCR. However, in addition to source reduction targets, CAA and its producers must also meet high recycling rates for plastic packaging, beginning with a 30% target in 2028.

CAA recognizes that a strong market for plastic PCR can also promote plastic collection and sorting and improve the efficiency of the recycling value chain, leading to better recycling rates. Further, increased use of plastic PCR in packaging strengthens the PCR market, making it more attractive for the recycling industry to process more types of plastic.

Accordingly, CAA plans to further encourage the development of a strong and stable market for plastic PCR by providing producers with a bonus for each pound of plastic PCR used in packaging (above the 2023 baseline), in each year that it is used. Although CAA will still only be able to claim 8% alternative compliance to meet the 2027, 2030 and 2032 targets, CAA will not initially limit the

amount of plastic PCR use that individual producers may claim for the bonus, as its use supports CAA’s efforts to meet recycling targets. If CAA meets the 8% alternative compliance on behalf of producers, it will re-evaluate the bonus levels.

Table 6: PCR Bonus Overview

PCR Bonus
• A per-pound bonus on APR-certified PCR used in packaging • Applicable to quantities above the 2023 baseline • Bonus is credited in each year the PCR is used • Bonus amount varies by type of plastic PCR used

Due to variations in the market price and demand for different types of plastic PCR, bonus rates will vary depending on the type of plastic PCR used.

Section 18980.3.4(b)(4) of the final regulations mandates that any PCR used in the alternative compliance formula must be certified to a third-party certification standard, which CalRecycle has designated as the Association of Plastic Recyclers (APR) PCR Certification Program. CAA requires producers to attest that any reported PCR volume meets this requirement in their Annual Source Reduction Reports. CAA will also require that the amount of plastic PCR eligible for the bonus be verified through the APR PCR Certification Program.

Producers will earn the PCR bonus for the data year in which the producer used the PCR. The bonus will be calculated after the producer reports that data in the report year, and it will be applied to the producer’s fee invoice in the following program year. For example, PCR used in the 2027 data year would be reported to CAA in the 2028 report year, and the bonus would be paid out in the 2029 program year.

6.3.3.3 Bonus Aligned with CAA Reuse Direct Investment Strategy

Because packaging used for reuse and refill is not covered material under SB 54, producers that convert to reuse and refill will avoid paying fees on the single-use materials that they would otherwise supply. This includes base fees, the PPMF fee, the reuse investment fee and any maluses distributed across the plastic supply for the materials they have converted. Producers that reduce their supply of single-use plastic through the adoption of reuse and refill will also receive bonuses under the tiered bonus structure outlined above.

Together, these represent a significant incentive to convert packaging to reuse and refill formats. However, CAA recognizes that avoiding covered material fees and the tiered bonus may not be sufficient motivation to achieve the amount of reuse and refill required under SB 54.

PRC 42051.1 (c)(B)(7) and PRC 42057 (h)(1)(C) also mandate that CAA establish and fund reuse and refill infrastructure. Further details on CAA’s investment plan are set out in Section 6.4 of this chapter.

In addition to these investments, CAA will establish a reuse bonus, that will be available for:

- B2B transport packaging, such as reusable pallet wrap
- B2B prefill, such as buckets for food delivered to food service establishments
- Business-to-consumer prefill (in-store or home delivery) initiated by individual producers

The reuse bonus will be payable for each pound of single-use plastic that producers can demonstrate was avoided because of their participation in an eligible reuse and refill program.

The reuse bonus will not be available for “refill-at-home” formats, because reusable packaging is

not covered material and therefore has no fees, but still has the opportunity earn the tiered bonus. Together, these provide sufficient incentive for producers to pursue this form of reuse.

As part of its reuse investment strategy, CAA will focus heavily on converting closed loop single-use food serviceware to reusable formats in densely populated areas. This strategy will develop reuse systems at a scale that can drive down the per unit costs of managing reusable food serviceware. Producers outside of these areas can apply to CAA’s Innovation Fund to assist with their conversion to reusable food serviceware. As a result, the reuse bonus will not be available for reusable food serviceware.

Table 7: Reuse Bonus Overview

Reuse Bonus
• Payable for each pound of single-use plastic the producer avoided because of participation in a reuse and refill program • Available for business-to-business transport packaging, business-to-business prefill, and business-to-consumer prefill

Producers will earn the reuse bonus for the data year in which the producer achieved the reduction in single-use plastic. The bonus will be calculated after the producer reports that data in the report year, and it will be applied to the producer’s fee invoice in the following program year. For example, a reduction achieved in the 2027 data year would be reported to CAA in the 2028 report year, and the bonus would be paid out in the 2029 program year.

6.3.4 Administered Exchange for General Source Reduction

Another way to encourage more effort from producers for whom the cost of source reduction is lower is to provide them (and those for whom the cost is higher) with an opportunity to share the burden through a market-based mechanism (i.e., a plastic source reduction exchange). Accordingly, CAA California will consider a CAA-administered cap/exchange system for the 2032 target year. CAA will begin reviewing the feasibility of such an exchange mechanism beginning in 2027 and decide when and if conditions for such a system exist after reviewing the results of the incentive mechanism.

6.3.5 Motivating Reductions in the Number of Components

CAA California believes that producers will be motivated by the fact that they will, for the first time in any EPR program, be required to pay a fee for each component of plastic supplied. Producers are also likely to reduce the number of plastic components as part of the process of reducing plastic weight, as motivated by the incentive program set out in this chapter.

Accordingly, at this time, CAA California is not planning any additional measures to motivate producers to reduce the number of plastic components supplied. CAA California will monitor reductions in plastic components and will consider other measures if the two factors noted above are not sufficient to motivate the required reductions in the number of plastic components.

6.4 Reuse, Refill and Elimination Investment Plan

Earlier in this chapter, CAA California described its plan to incentivize packaging innovation through the implementation of CAA California’s Incentive Program (see section 6.3 Incentives Program for Packaging Innovation). As discussed, this program will encourage producers to maximize opportunities to source-reduce single-use plastic, including reuse and refill opportunities.

In addition to implementing the incentive mechanisms in the previous section to encourage producer action, CAA California will also support producers' shift to reusable and refillable packaging and food serviceware by making strategic investments to establish infrastructure and support conversion activities.

This section provides an overview of CAA California's reuse and refill investment plan and is divided into six parts:

1. Integrated Incentives
2. Investment Plan Requirements
3. CalRecycle's Needs Assessment Considerations
4. Leveraging Data and Expertise
5. CAA California's Reuse and Refill Investment Plan
6. Potential Risks

6.4.1 Integrated Incentives

CAA California's approach to incentivizing producer action relies on a combination of targeted bonuses to reward positive action by producers financed by maluses that also serve to discourage plastic use.

The total amount of source reduction achieved will therefore be a function of:

- Lightweighting, substitution, rightsizing, and other source reduction incentivized through a bonus/malus applied in relation to each producer's supply relative to their 2023 baseline
- Lightweighting, substitution rightsizing, and other methods of source reduction, incentivized through a market mechanism (if implemented)
- Alternative compliance through the use of PCR
- Reuse and refill made possible through CAA California's Investment Plan
- Reuse and refill implemented by producers and supported, if necessary and practicable, through a bonus/malus or market mechanism

6.4.2 Investment Plan Requirements

SB 54 requires CAA California to make investments in infrastructure that support producers' transition to reusable or refillable packaging, as per PRC 42051.1 (c)(7). CAA California's reuse and refill investment plan must address the findings of the Needs Assessment and facilitate achievement of SB 54's reuse, refill and elimination targets, as per PRC 42051.1 (b)(1). Please also see section 6.2 Targets for Source Reduction, Reuse and Refill, and Elimination.

The qualifying activities that producers may employ to achieve the targets shift over time, and consequently the types of activities CAA California invest in may shift over time:

- For the 2027-2030 targets, CAA California and its producers must meet the targets by shifting single-use plastic covered materials to reusable and refillable alternatives.
- In 2032, CAA California and its producers can meet the targets by shifting single-use plastic covered material to reusable and refillable alternatives or through elimination activities.

6.4.3 CalRecycle's Needs Assessment Considerations

The Needs Assessment modeled two pathways:

- **Pathway A:** slightly prioritized material substitution while still meeting reuse targets.
- **Pathway B:** prioritized reuse strategies.

The same two reuse and refill strategies were recommended for both pathways, as both of these represent reusables in controlled environments:

- Closed Loop Reusable Food Serviceware
- Business to Business (B2B) Prefills

Consistent with the Needs Assessment, CAA California plans to prioritize investments in controlled environments (e.g., B2C onsite reusable food serviceware, B2B transport packaging, B2B prefill returnables) as these benefit from high return rates, relatively faster conversion to reuse and less change for consumers.

However, the Needs Assessment takes a requirements-driven approach to reach SB 54 targets, based on the market shares necessary to meet 2027, 2030 and 2032 source reduction and reuse and refill targets. In contrast, CAA California will take a practicability-driven approach, based on what is feasible to implement within the program plan period. Specifically:

- The Needs Assessment suggests a rapid standup of infrastructure to meet targets, including significant investment prior to 2027. CAA California, cannot make such investments until the program plan is approved, and producer fees are collected.
- The Needs Assessment suggests that food service establishments will convert on unrealistic timelines (e.g., contacting 46,000-89,000 businesses per year, with a 25% conversion rate after 4 hours of engagement).
- For reusable food serviceware, research conducted by CAA suggests a single large Closed Loop Reusable Food Serviceware venue may take 5-14+ months to convert. While the on-the-ground conversion of an individual small business to reusable food serviceware can happen relatively quickly once engagement begins, the overall program timeline is much longer. Many upfront steps must occur before conversions can begin at scale. These include: issuing RFPs; executing contracts; hiring and training staff or consultants to provide technical or financial assistance programs; purchasing food serviceware items ahead of outreach; and conducting outreach to reach businesses. Coordinated efforts to aggregate sufficient venues in a single region to achieve scale and drive efficiency through packaging throughput, will take longer.
- For reusable packaging, the Needs Assessment suggests that other source reduction – such as lightweighting and shifting to another material – will take between six months and three years. Conversion to reusable packaging is even more complex, involving new packaging material, design considerations, consumer behavior change and acceptance, and supply chain processes. CAA California's research suggests coordinated, alliance-driven work across many producers may take three to six years from the inception of convening interest holders to the development of packaging solutions and reverse logistics to launch.

As such, CAA California's approach focuses on operational realities based on the following principles:

- **Reduce Risk:** Prioritize controlled environments that can convert more easily; reduce packaging loss and build scale to drive throughput in infrastructure.
- **Scale Responsibly:** Create conditions to justify high efficiency infrastructure; match infrastructure supply with reusable packaging demand by incenting producers to convert.
- **Invest Strategically:** Make practical, strategic investments to pursue early results while also fostering future demand through proactive collaboration with producers.

6.4.4 Leveraging Data and Expertise

CAA California's reuse and refill investment plan leverages the findings of the Needs Assessment and is further informed by modeling of required infrastructure investments, conducted by consulting companies Eunomia and Perpetual. CAA California also assessed data collected from a January 2026 survey of food serviceware reuse service providers.

The Eunomia/Perpetual analysis assessed the landscape of current reuse and refill activity in California and opportunities to shift packaging to reuse and refill systems. CAA California strived to capitalize on global best practices and opportunities through research and meetings with global leaders in reusable and refillable packaging and food serviceware systems, such as CITEO (France), Upstream Solutions (U.S.), WRAP - The Global Environmental Action NGO (United Kingdom, U.S.), Circular Innovation Council (Canada), KIDV (The Netherlands), Consumer Goods Forum (U.S.), Valipac and Fost Plus (Belgium).

The survey of food serviceware reuse service providers received 29 responses which helped shape CAA's understanding in the area of conversion timing and costs, the difference between the cost of reusable food serviceware vs the cost of single use serviceware as well as the currently existing reuse infrastructure capacity and utilization in the state of California.

This additional research has enabled CAA California to chart a strategic investment plan that capitalizes on lessons learned in California and leading reuse and refill jurisdictions to efficiently build an effective, statewide, made-in-California reusable and refillable packaging and food serviceware ecosystem.

6.4.4.1 Lessons Learned from Other Jurisdictions

California is seeking to achieve progress at a pace and scale never before attempted, while also creating uniquely challenging circumstances for achieving reuse and refill targets compared to other jurisdictions:

- **California has set a target for the PRO to achieve before the first day of the program plan's implementation:** By Jan 1, 2027, CAA California must source-reduce 10% of plastic, including converting 2% to reuse and refill (based on a 2023 baseline). This target is based on producers' supply in 2026.
- **California is focused on source reduction of single-use plastic while other jurisdictions are focused on reducing all single-use packaging:** In other jurisdictions, performance against reuse and refill targets is measured as a switch of any type of single-use packaging to reusable or refillable alternatives. The plastics-only focus makes it more difficult to achieve the reuse and refill targets. For example:
 - Leading jurisdictions, like Belgium and the wider European Union, are prioritizing switching transport packaging such as single-use wooden pallets and cardboard boxes to reusable alternatives.^{1,2} This enables producers to reach weight-based targets by switching the heaviest types of single-use packaging to reusable and refillable alternatives.
 - CITEO (France) is leading the world's largest business-to-consumer pilot for prefilled returnable packaging that focuses on transitioning from single-use glass to reusable glass.³ For producers to voluntarily participate in CITEO's pilot, it must make financial sense for them to do so. It is financially easier for producers to justify voluntarily switching from single-use glass to reusable and refillable glass than from single-use plastic to any other reusable and refillable alternative. This is because there is a smaller financial difference between swapping

¹ Valipac, [2024 Activity Report](#) (2025).

² European Union, [Packaging and Packaging Waste Regulation \(PPWR\)](#) (2024).

³ CITEO, [Reuse is being implemented in 4 French Regions](#) (2025).

single-use glass for reusable and refillable glass compared to swapping single-use plastic for a reusable and refillable alternative of any material. This means that it will take fewer reuse cycles for that difference to be closed with single-use glass than for single-use plastic.

- **California measures its reusable and refillable packaging and food serviceware targets through only net new performance (i.e., the switch to reusable and refillable alternatives after 2023):** All other jurisdictions that CAA California surveyed are measuring performance as a ratio of all reusable and refillable units supplied to single-use units supplied regardless of when that switch was made (e.g., Valipac in Belgium⁴ and the European Union⁵). The approach taken in European countries rewards early efforts to enable reuse and refill systems by counting those efforts towards the targets, whereas in California, only measures taken by producers to switch to reuse and refill after 2023 will count forward SB 54 targets.
- **Several European jurisdictions implemented enabling legislation to support conversion to reusable and refillable packaging:** For example, Germany passed a law requiring food service establishments to offer reusable packaging alongside single-use options and then take them back at end-of-use.⁶ In France, retail establishments with a sales area of more than 4,305 square feet are required to stock items in reusable packaging, communicate how the reuse system works to their consumers, and take back the packaging after consumers have used it.⁷

6.4.4.2 Lessons Learned: Reuse and Refill Models

CAA California's research also uncovered other key lessons to consider:

1. Reusable and refillable systems, beyond beverage containers and dine-in food serviceware at full-service restaurants, are in their infancy.

LIFE magazine published an article titled "Throwaway Living" in August 1955, acknowledging and ushering in the seven-decade ascendancy of single-use packaging over reusable packaging. The COVID pandemic further sparked a surge in single-use packaging – driven by health and hygiene concerns – that continues to persist. As such, reuse and refill systems globally are in their infancy. Well-established reuse and refill systems exist for beverage containers (especially beer) and dine-in food serviceware (at full-service restaurants). However, reusable and refillable systems for other types of packaging and at quick-service restaurants (e.g., fast-food, cafes) are relatively new and mostly in their pilot phases.

2. Success takes time and collaboration across the supply chain

The shift to reusable packaging from single use is not immediate. Companies have been relying upon single-use packaging for decades, often making lightweighting decisions that drove down costs as well as reducing greenhouse gas emissions. Under this system, companies have extensively optimized their production, supply chain, and pricing of their products. Requiring a change to this packaging is a significant endeavor that can take several years for major changes. Converting to reusable packaging requires collaboration across the supply chain to align on standardized dimensions or packaging choices that are best suited for a reusable packaging collection, washing and redistribution system. Even for items that do not pass through consumers' hands (like the transport trays that might carry a product to a store), the timing of such collaboration and alignment is lengthy.

Based on input from other PROs such as CITEO, industry coalitions such as Consumer Goods Forum and their reuse and refill contractor Reposit, and advocacy groups such as US Plastics Pact, reusable packaging pilots involving grower/producer, wholesaler, and retailer require four

⁴ Valipac, [2024 Activity Report](#) (2025).

⁵ European Union, [Packaging and Packaging Waste Regulation \(PPWR\)](#) (2024).

⁶ Germany. Packaging Act (VerpackG) (2021).

⁷ France, Anti-Waste Law for a Circular Economy (AGEC), Article L112-9 and L541-10-18 (2020).

or more years of scoping, designing, and testing before launch.

For example, Euro Plant Tray (a group that focused on the transportation packaging of nursery plant trays between growers and supermarkets and home improvement retailers) required six years of convening, designing, and testing to launch four standard formats of nursery plant trays. One year after launch, reusable trays from Euro Plant Tray have achieved 1% of the nursery plant tray market (CAA California is told this number is continuing to trend up).

3. The successful transition to reuse systems will require coordination beyond the traditional packaging supply chain.

In practice, reusable food serviceware programs interact with a range of adjacent systems and decision-makers that shape feasibility and timelines. These systems include local and state departments of health, health and sanitation codes, departments of environmental health, janitorial and facilities services, labor unions, school boards, and other public and private interest holders. These actors influence food safety requirements, cleaning and handling standards, labor practices, procurement processes, and day-to-day operations. Engaging this broader set of stakeholders introduces additional complexity and slows implementation relative to single-use systems that are already embedded in existing rules and workflows. Therefore, alignment with these systems is essential to ensure that reuse programs are implemented with velocity.

4. Reuse must cost less than single use over the long run for the system to be economically self-sustaining.

Today, it is cost-prohibitive for CAA California's producers to purchase, fill, collect, clean, and resupply reusable packaging – with total reuse costs potentially 200-500% more than single-use costs. To enable producers to preferentially select reusable and refillable packaging over single-use packaging, it is critical to reach long-term cost parity between reusables and their single-use equivalents.

It is the same for institutional entities, such as cafeterias at K-12 schools, retirement homes, and hospitals. If it costs 10-15 cents to serve a meal with single-use utensils and plates, it would potentially cost 30-50 cents to serve a meal and clean reusable utensils and trays – and this is before accounting for the cost of the reusable packaging, collection bins, training, signage, additional labor and more. This means a K-12 school will be hard-pressed to move to reusables, even if the initial inventory was provided for free.

Every participant in the supply chain – from producers, wholesalers, distributors, retailers, food service establishments, and the reuse service providers providing washing and transport – needs to see an economically viable business model for successful and sustained adoption.

5. CAA California and its producer partners need to overcome an intention-action gap before consumers will effectively participate in reuse and refill systems.⁸

While many consumers express a desire for sustainability, behavior change is strongly influenced by familiarity, convenience and incentivization. For example, during the Reuse Ottawa pilot of reusable takeout containers in supermarkets and cafes, consumers selected reusable containers approximately 5-10% of the time, single use containers 90-95% of the time.⁹

The Petaluma Cup Project ran a 12-week city-wide reuse initiative, which achieved a 51% packaging return rate without a deposit or incentive system.¹⁰ The Reuse Ottawa program achieved

⁸ Closed Loop Partners and US Plastics Pact, 2023 Unpacking Customer Perspectives on Reusable Packaging. An in-depth look at how customers engage with reusable packaging in the U.S. Available at: https://www.closedlooppartners.com/wp-content/uploads/2024/01/Unpacking_Customer_Perspectives_On_Reusable_Packaging.pdf

⁹ Circular Innovation Council, Reuse Ottawa Pilot (Ottawa, Ontario, Canada), 2024-2026.

¹⁰ Packaging Europe, February 2025. Starbucks, PepsiCo and Coca-Cola see 51% return rate with default reusable cups. <https://packagingeurope.com/news/starbucks-pepsico-and-coca-cola-see-51-return-rate-with-default-reusable-cups/12533.article>

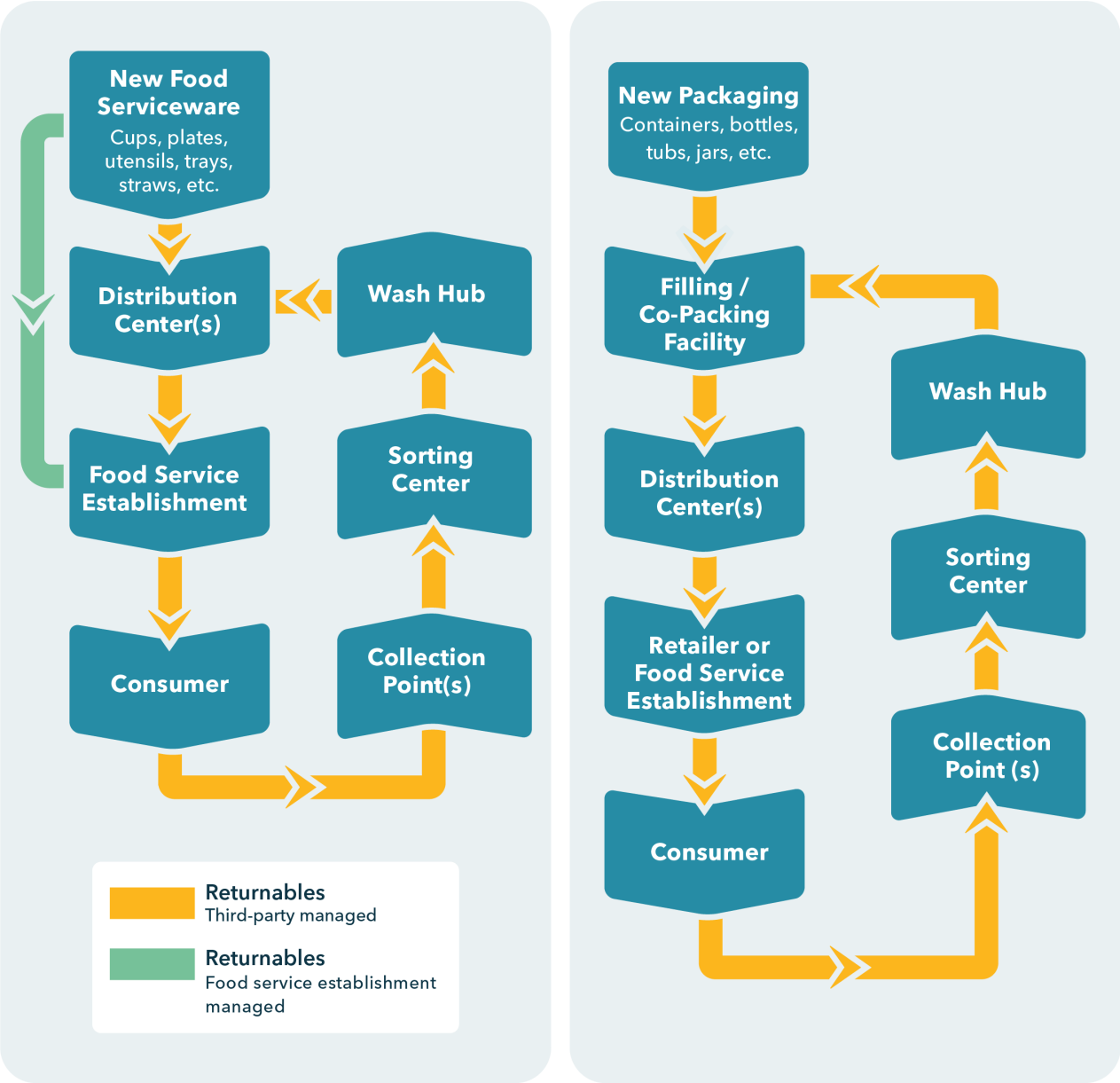
a 95% return rate, operating on a no-initial-cost to consumers, library system model, with a CAD \$10 refundable fee if the containers were not returned within 14 days.

Facilitating the adoption of reusables and refillables in California will require a thoughtful approach that incentivizes change while reducing risk for every participant in and adjacent to the supply chain.

6.4.5 CAA California’s Reuse and Refill Investment Plan

CAA California and its producers cannot implement reuse and refill systems in a vacuum. Products and their packaging may begin with producers, but they often travel thousands of miles across supply chains, and through many hands before they ultimately reach consumers. Post-use, consumers must be willing to return that packaging to the supply chain. Reuse and refill systems will also need to ensure the continued protection of consumer health and safety, and where possible make use of distribution and recovery systems that may already exist. CAA California is committed to working with and learning from interest holders along the reusable and refillable system value chain in Figure 1 below.

Figure 1: Reuse and Refill Value Chain for Returnable Dine-In or Takeout Food Serviceware (left) and Returnable Packaging (right)



6.4.5.1 Approach

CAA California's investment plan seeks to leverage the knowledge of the industry while iterating to enable cost-efficient course correction. CAA California's approach is to:

1. Convene and collaborate with key interest holders
2. Design options
3. Pilot solutions, identifying gaps and issues
4. Expand to scale
5. Continually improve

6.4.5.2 Core Principles

Across food serviceware and packaging types, CAA California's core principles and approach to reuse will be as follows:

- **Focus on shared infrastructure:** CAA California plans to identify and fund infrastructure that is best positioned to support as many producers as possible to convert single-use packaging to reusable. Potential investments could include reusable packaging or food serviceware, collection bins, reverse vending machines,¹¹ sorting lines,¹² washing lines,¹³ transport fleet, and digital tracking.¹⁴
- **Prioritize controlled environments:** To minimize the loss of reusable items and build necessary scale for infrastructure investments, CAA California expects to focus early attention on controlled environments such as B2C dine-in reusable food serviceware and B2B transport packaging. Packaging in these settings remains within a defined boundary, where it's easiest for consumers to build the habit of returning containers because they are returned on the spot. Building this return habit is critical before expanding into more open environments, such as B2C takeout reusable food serviceware and B2C prefill returnables, where consumers return items to a collection point after use at home.
- **Create the conditions to justify investment in high-efficiency infrastructure.** CAA California can lower the overall cost of reusables by maximizing the number of reusables serviced by high efficiency infrastructure in a specific geographic area. This means minimizing the number of stops a truck must make on a collection route to collect the available reusables, ensuring each truck is as full as possible (e.g., using stackable packaging that minimizes air space), running wash lines at the highest speeds, and enabling wash lines to process a wide array of reusables). These actions, taken collectively, can enable CAA California to reduce the per-use cost of using reusables, which then increases the overall economic viability of investments in high-efficiency infrastructure.

¹¹ Reverse Vending Machine (RVM): A stationary reverse vending machine that pays customers for beverage containers placed in the machine at time of deposit. See CalRecycle, [An Analysis of Actions and Investments Needed to Achieve Source Reduction Report](#) (2026).

¹² Sorting line: A place where packaging and food serviceware is sorted into categories to ensure that it is returned into the correct system and back to the correct user, to remove any contamination (i.e., food and other waste), and to remove packaging and food serviceware that is no longer safely reusable. See CalRecycle, [An Analysis of Actions and Investments Needed to Achieve Source Reduction Report](#), page 132 (2026).

¹³ Washing line: A place where packaging and food serviceware is cleaned. See CalRecycle, [An Analysis of Actions and Investments Needed to Achieve Source Reduction Report](#), page 149 (2026).

¹⁴ Digital tracking: A method of tracking individual packages or food serviceware items from point-of-sale through collection and processing using an electronic tag. See CalRecycle, [An Analysis of Actions and Investments Needed to Achieve Source Reduction Report](#), page 36 (2026).

- **Prioritize items with faster consumption cycles:** Focusing on frequently purchased consumer products has several benefits including pushing more volume through reuse infrastructure (to quickly bring down the cycle cost of reuse) and building the consumer habit to return packaging (it is more top of mind to return faster-cycling items). However, frequently purchased items are often B2C products, which require more advanced returning habits as it involves packages going home with consumers.
- **Mitigate risk:** CAA California must consider the risks associated with investments. A major risk facing CAA California is that of stranded assets, wherein the PRO could invest heavily in infrastructure and producers could invest to change their packaging without sufficient consumer uptake. Given the nascent status of reusable packaging globally and in California, it is imperative for CAA California to take a considered approach when pursuing models that are not yet economically sustainable. For example, CAA California will work within specific geographic areas to learn how to drive consumer preference for reusables, and how to drive a new habit to return packaging to collection points after use. Subsequent expansion to other geographies will mitigate both financial and environmental risks associated with unreturned packaging.

6.4.5.3 Operational Focus

CAA California expects to prioritize investments in seven investment areas to achieve SB 54's reuse, refill and elimination targets:

1. B2C Refill via single-use packaging
2. Elimination via BYOC
3. B2C onsite food service establishments to reusable food serviceware
4. B2B transport packaging to returnable options
5. B2B primary packaging to prefilled returnable packaging
6. B2C takeout food service establishments to reusable food serviceware
7. B2C retail packaging to retail prefilled returnable packaging

Within each investment area, CAA California will encourage producers and consumers to undertake new activities (Table 4). For some investment areas, CAA California will encourage producers to invest in their own solutions, including Areas 1, 2, 4, and 5. For other investment areas, CAA California will make direct investments to enable activities (Areas 2, 3, 6, and 7). Producers will be incentivized to support (as appropriate) the anticipated activities under each investment area through the incentive mechanism (see section 6.3 Incentives Program for Packaging Innovation).

Table 8 summarizes the role of each of the seven investment areas in achieving reuse and refill and elimination targets, as well as its role in building supportive consumer behavior.

Table 8: Overview of CAA California's Seven Investment Areas

Investment Area in Priority Order and Examples of Activities	Role of Investment in Achieving Targets	Role of Investment in Building New Consumer Behaviors	Expansion Criteria: Moving from Pilots to Scale	Expected Tonnage
1. Refill via single-use packaging Example activity: consumers using large format containers of soap are sold to refill a countertop soap dispenser at home or an in-shower soap dispenser at hotel.	CAA California encourages producers to independently invest: A relatively inexpensive and early pathway for producers to make progress toward reuse and refill and elimination targets, but likely more accessible for liquids and soaps.	Already under-way in some households, and likely the easiest and least intrusive way to begin building a consumer refill habit.	CAA California will review ISR Plans to assess the level that Producers will pursue	*
2. Elimination via Bring Your Own Container Example activity: consumers using BYOC opportunities such as filling their own containers in bulk aisles or refilling their travel mugs at coffee shops.	CAA California encourages producers to independently invest: Another relatively inexpensive and early pathway for producers to make progress toward reuse and refill and elimination targets. Likely more accessible for food service establishments.	Already under-way in some producer establishments, and a way to begin building the consumer habit of carrying their own containers to the filling point.	CAA California will review ISR Plans to assess the level that Producers will pursue	*
3. B2C onsite reusable food serviceware (i.e., closed loop) Example activity: consumers using reusable cups and bowls used onsite at colleges and universities, schools, large workplaces, restaurants, etc.	CAA California investment: CAA California will make an early and concerted effort in this area by providing funding to incentive onsite and dine-in spaces to shift from single-use food serviceware returnable alternatives. CAA California will prioritize investing in converting large venues to reuse to drive the cost of reuse down quickly.	Likely the easiest and least intrusive way to begin building the habit of returning used packaging to a collection point within a venue. This could also provide long-term benefits by building the habit among youth in K-12 schools and colleges / universities.	Sufficient commitment of volume to unlock procurement of high efficiency infrastructure Decreasing costs per cycle as % saturation within a region increases High return rates	****

Investment Area in Priority Order and Examples of Activities	Role of Investment in Achieving Targets	Role of Investment in Building New Consumer Behaviors	Expansion Criteria: Moving from Pilots to Scale	Expected Tonnage
4. B2B transport packaging Example activity: producers using reusable pallet wrap, reusable nursery plant trays, reusable bread trays, reusable milk crates.	CAA California encourages producers to independently invest: Producers are encouraged to identify use cases where reusable transport packaging is economically viable and can achieve high rates of capture and return (e.g., a closed loop setting for a single retailer - between a retailer's distribution center and its retail stores).	Already underway in some producer establishments. Not consumer-facing, but this can start building the workplace habit of collecting, setting aside and reusing in non-consumer facing areas of distribution centers, retailers and food service establishments.	Leverage pilots to determine viability of reusable transport packaging in specific use cases, and assess whether EPR fees and incentive mechanism can help accelerate conversion	* *
5. B2B prefill returnables Example activity: producers using large format packaging such as pails for frozen fruit and vegetables, drums for oils and sauces, jugs for soaps and detergents, etc.	CAA California investment: CAA California will initiate the work but sn't expecting to drive sizeable volume until the latter parts of the program plan. CAA California may provide funding for willing groups of interest holders across a supply chain to convene, develop, test and prototype reusable and returnable alternatives.	Not consumer-facing, but this can start building the workplace habit of collecting, setting aside and reusing in distribution centers, retailers and food service establishments.	Sufficient interested parties come together to form a working group and continued interest and progress towards developing common approaches that align with infrastructure	* * *
6. B2C takeout reusable food serviceware (i.e., open loop) Example activity: consumers using takeout reusable cups and bowls from restaurants that go back to consumer homes and after use, are returned to collection points.	CAA California investment: CAA California may provide grants and/or funding for willing groups of interest holders to undertake a pilot project over the mid-term in a small geography before expanding, as B2C open-loop returnable systems are relatively unproven.	Begin building the more advanced consumer habit of carrying used packaging (in this case, with a short consumption cycle) to a collection point.	Return rates need to be optimized before expansion to a second geography	Negligible during program plan period

Investment Area in Priority Order and Examples of Activities	Role of Investment in Achieving Targets	Role of Investment in Building New Consumer Behaviors	Expansion Criteria: Moving from Pilots to Scale	Expected Tonnage
7.. B2C prefill returnables (i.e., open loop) Example activity: consumers using prefilled reusable shampoo bottles, prefilled reusable ice cream packages, prefilled reusable packages of pens. These items are purchased from retailers, are used by consumers, and must be returned to collection points.	CAA California Investment: CAA California may provide grants and/or funding for willing groups of interest holders across a supply chain or sector to prototype reusable and returnable alternatives. Because B2C open-loop returnable systems are relatively unproven, CAA California would advise assessing a pilot project in a small geography before expanding.	Continue to build the more advanced consumer habit of remembering and carrying used packaging (in this case, often with a longer consumption cycle than takeout containers) to a collection point.	Sufficient interested parties come together to form a working group; continued interest and progress towards developing common approaches that align with infrastructure	Negligible during program plan period

Figure 2 shows CAA California's seven investment areas by relative infrastructure intensity, which is the relative amount of shared (or cross-producer) infrastructure needed to enable the activity outlined in Table 4. Each of the seven CAA California investment areas will focus on enabling a different type of intervention:

- Packaging-enabled activities (no CAA California investment) that encourage producers to invest in new packaging
- Infrastructure-enabled activities (target of CAA California investment) that encourage producers to invest in infrastructure enabling retail BYOC solutions, and CAA California investing in infrastructure to enable dine-in food serviceware solutions
- B2B system-enabled activities (no CAA California investment) that encourage producers to invest in new B2B packaging and packaging management systems
- B2C system-enabled solutions (target of CAA California investment) where CAA California invests in new B2C packaging and packaging management systems

Each investment area, including CAA California's plans and priorities, are discussed in more detail in Table 8.

Figure 2: Reuse and Refill Investment Solutions by Infrastructure Intensity



All seven investment areas listed above have roles to play in enabling CAA California to achieve the reuse, refill and elimination targets. However, Investment Area 3 (switching onsite food service establishments to reusables) is the most critical area of early focus because:

- Proven success: It will enable CAA California to leverage existing policies, grants, case studies, toolkits, and organizations to convert small venues like restaurants and schools, helping develop CAA California's roadmap for conversion
- Speed to market: It will enable individual venues to initiate shifts to reusables independently, resulting in faster implementation
- High volume: It will generate a sizeable amount of single-use plastic waste reduction, making it a high impact starting point

Specifically, CAA California will prioritize its early investments on switching onsite food service establishments at large venues, such as K-12 schools, public colleges and stadiums, to reusables.

These anchor institutions are anticipated to increase volumes of reusables being managed overall and decrease per-use costs. These savings and system improvements are anticipated to bring down the costs for other types of reusables, which will help encourage producers of other types of B2B and B2C packaging to switch to reuse.

Producers that switch to reusables will not only benefit from the lower per-use costs of reusables, but they will also financially benefit from ceasing to pay producer fees on their packaging and food serviceware (fees are paid only on covered materials and qualifying reusables are not a covered material in California), ceasing to incur PPMF costs, as well as ceasing to incur the costs of any incentive mechanism penalties for not meeting targets (see section 6.3 Incentives Program for Packaging Innovation).

6.4.5.4 *Building the Consumer Behavioral Ladder*

Consumers adopt new behaviors through exposure and practice. The easier the behavior, the easier it is to practice. The more difficult or complicated the behavior is, the less likely the consumer will willingly undertake the practice. Successful campaigns aimed at changing consumer behaviors often build small behaviors first that are expanded to add more complicated behaviors over time.

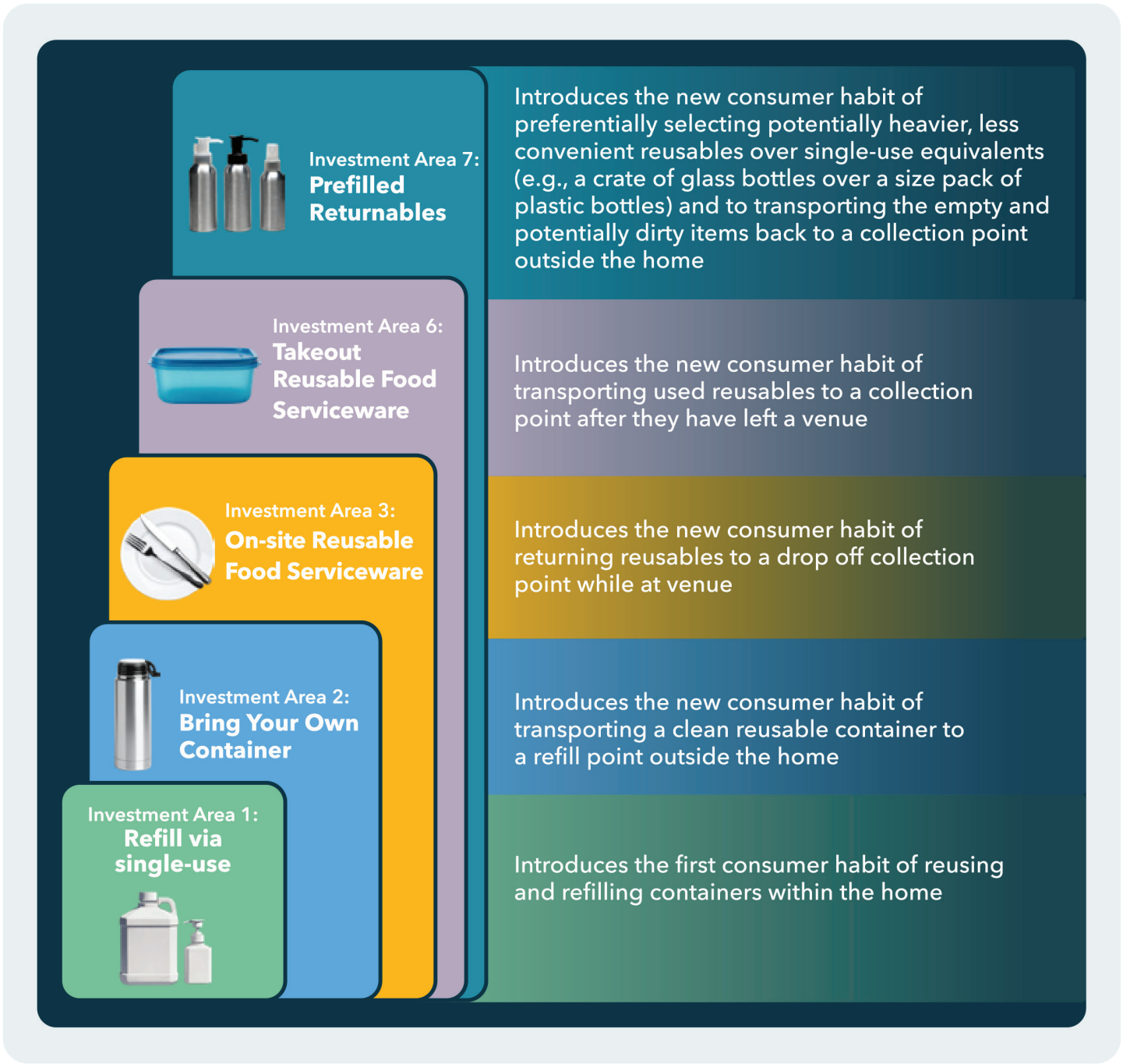
Consumers have a long history of interacting with single-use packaging and food serviceware, and CAA California must help consumers understand how to interact with reusable items successfully (i.e., in a way that ensures that reusable is collected in a way that enables its reuse). Each time a consumer successfully interacts with a reusable item, it will build understanding about how the system works. This understanding can be gradually expanded over time as new behaviors are added.

CAA California has established seven targeted investment areas, the success of which will largely depend on consumers successfully participating in the systems each investment area will establish. Each investment area will require different consumer behaviors. As a result, CAA California will phase its investments to begin with those requiring the least change in consumer behavior, gradually expanding to those that require the most change. By starting with more convenient and lower-barrier actions, California's consumers can gradually be transitioned to more complex behaviors in B2C reusables systems.

Figure 3 shows the consumer behavioral ladder that CAA California will seek to enable through its investment plan. At the bottom of the ladder is Investment Area 1, which requires consumers to adopt the simplest new behavior. Each rung of the ladder adds a new and more complicated consumer behavior that must be nurtured. The final rung, which will be supported by Investment Area 7, is the most complicated consumer behavior that CAA California will seek: consumers taking their empty reusables to a drop-off collection point, regardless of where they consumed the product.

Investment Areas 4 and 5 will develop B2B reusables systems. As a result, they are not included on the consumer behavioral ladder.

Figure 3: The Consumer Behavioral Ladder and the Associated CAA Investment Areas



6.4.6 Potential Risks

Since reuse and refill activities are in their infancy globally, CAA California will work closely with global leaders and interest holders along supply chains to design, test, scale, and continually improve reuse and refill systems to achieve the desired outcomes.

CAA California sees several risks that it must manage to successfully implement this plan:

- CAA California expects early efforts to implement reuse and refill in California to be marked by higher costs and lower return rates as producers and consumers become more familiar with a new habit. CAA California and interest holders will need to be able to weather the bumps and criticism that will come with a system that may cost more than single-use and may initially result in more plastic being disposed of in landfill for some time.
- Long lead times are expected. While CAA California may want to initiate conversion quickly, it will be working with interest holders that operate on their own timelines. CAA California's research shows that finalizing plans with even a single large venue such as a college, university, or stadium can take 6-24 months. With these examples in mind, CAA California must consider academic calendars or sports seasons, terms of existing contracts to supply single-use packaging, and retrofits and infrastructure investments. CAA California's research also shows that such interest holders are unlikely to fully transition to reusable packaging or food serviceware from the outset. Almost without exception, interest holders will want to pilot only one type of reusable item and convert only one portion of their facility to reusables, allowing them to test the viability before expansion. In a university, this might mean piloting reusables in just one cafeteria. In a stadium, it may mean introducing reusables to the club level before expanding it to the larger concourse. Interest holders will want to assess any negative impacts on their operations and facilities management before expanding in the following academic year or sports season.
- Key decision makers in the packaging value chain must be willing to participate in the system's rollout even if they are not participant producers in CAA California's program plan. For example, K-12 schools and stadiums are themselves not producers, while retailers are producers for their own packaging but also must be willing to stock products with other producers' reusable and refillable packaging.
- Producers must be able and willing to either design custom (also known as iconic) reusable and refillable packaging that meets the requirements of washing and logistics infrastructure, or work with other producers to develop standardized packaging that meets their needs, knowing that standardized packaging may compromise their brand's uniqueness.
- Consumers must be willing to shift their preferences from the convenience of single-use packaging to heavier reusable packaging that requires returning it to a collection point.

CAA California will take every reasonable step to mitigate these risks, work with other interest holders on mitigation options, and educate consumers on the benefits and value of reuse and refill.

CAA California is committed to learning and improving throughout the five years of this program plan.

While appreciating the significance of these risks, CAA California believes the approach it has detailed – with a focus on piloting solutions and identifying gaps and issues before scaling – will insulate producers from the significant risk of investments in underused assets while allowing CAA California to continually improve and refine its approach in pursuit of the targets.

With these targets, CAA California is seeking to reverse a seven-decade trend toward greater convenience through single-use packaging. CAA California recognizes the challenges and opportunities that lie ahead. It will be mobilizing resources and interest holders to tackle this transition to reusable packaging on a massive scale. To maintain producer and public trust, CAA California

must ensure that every investment is carefully considered, piloted, measured, and analyzed before expanding its reach.

CAA California’s early focus on controlled environments aims to reduce the potential negative impacts of unreturned packaging, while generating necessary throughput to support further investments in infrastructure as scale is achieved. Meanwhile, the deliberate focus on specific geographies will further support scale and mitigate any potential for underused assets.

The single biggest variable is the behavior of California consumers. As CAA California implements this investment strategy, it will be working in parallel to build support for reusable packaging, from B2B transactions to B2C sales, leading not only to uptake, but an efficient system with high return rates for packaging.

6.5 Compliance

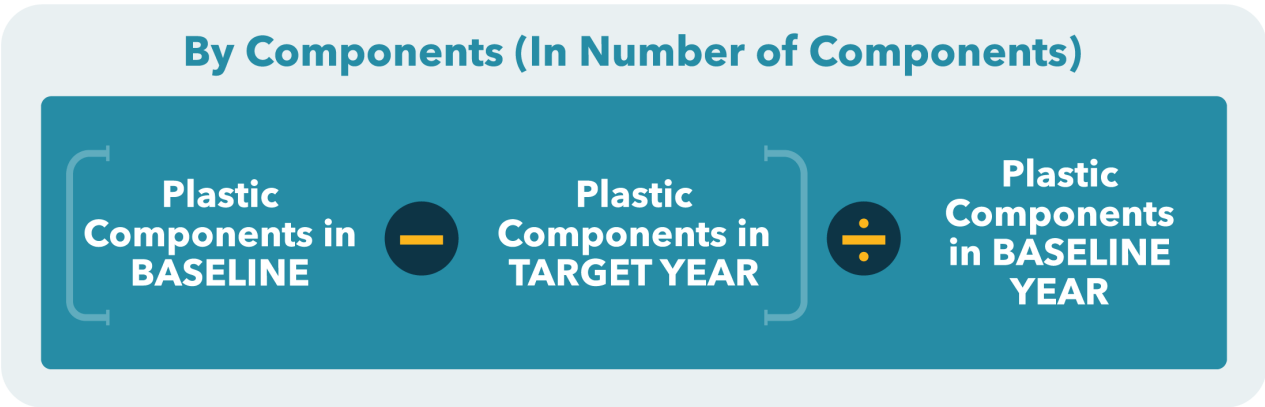
6.5.1 Source Reduction Measurement

The amount of source reduction achieved under this plan will be measured by compiling supply data reported by individual producers as follows below.

Figure 4: The Amount of Source Reduction Achieved by Weight



Figure 5: The Amount of Source Reduction Achieved by Components



Progress towards the source reduction targets for 2027, 2030, and 2032 will be determined from annual supply reports submitted by producers, representing the amount of plastic supplied in 2026, 2029, and 2031, respectively.

6.5.2 Source Reduction Baseline Report

Each producer will be required to submit a report detailing the amount of plastic packaging supplied in 2023. This source reduction baseline report will form the baseline against which their individual source reduction will be measured, and collectively, the baseline against which progress towards the SB 54 source reduction targets will be measured.

6.5.3 Individual Source Reduction Plans (ISR Plans)

Producers will also be required to submit a specific ISR Plan setting out how they intend to reduce the amount of plastic packaging they supply to the market.

In their ISR Plans, producers will be required to forecast how much plastic (by weight and components) they plan to reduce for each target year and attribute their source reduction activity (by weight and components) toward each of the five source reduction pathways set out in PRC 42057(a)(2):

1. Shifting from single use to refillable and reusable packaging or food serviceware
2. Eliminating a plastic component altogether
3. Shifting from plastic to non-plastic covered material
4. Concentrating, lightweighting and shifting to bulk and/or large format (shortened below to rightsizing, etc.)
5. Switching from virgin plastic to PCR

CAA California guidance to producers on the preparation of ISR Plans is posted on CAA's Producer Portal.

6.5.4 Individual Source Reduction Agreements

ISR Agreements will also be established with each producer, requiring that they agree to participate in CAA California's plan to incentivize packaging innovation, provide the reports required by statute, and provide the producer attestations as set out below.

6.5.5 Annual Producer Reporting on Source Reduction Pathways

Producers will also report annually on the amount of source reduction achieved in the previous year, according to the source reduction pathways detailed for the ISR Plans. CAA California will compile the results from these annual reports to determine the amount of source reduction achieved collectively by all producers.

CAA California guidance to producers for annual reporting is posted on CAA's Producer Portal.¹⁵

6.5.6 Producer Attestations

6.5.6.1 Attestations for Net Source Reduction

Producers will be required to provide attestations that the source reduction achieved relative to their 2023 baseline did not result from shifting from a recyclable package to a non-recyclable package or from a non-recyclable package to a less-recyclable package, as would be determined by a reasonable person reviewing the producer's unique circumstances, in consideration of generally-accepted recyclability standards.

¹⁵ Guidance has not yet been posted but will be prior to the June 15, 2026 submission to the Producer Responsibility Advisory Board.

6.5.6.2 Attestations for Reuse and Refill

SB 54 requires CAA California to explain how it will confirm that the reusable and refillable packaging and food serviceware that displace single-use plastic and count towards the reuse, refill and elimination targets, are:

- Designed for durability
- Managed in a system that is convenient for the consumer
- Managed in a manner that meets all necessary safety and environmental requirements

SB 54 also requires CAA California to have a process to determine the average number of uses of reusable and refillable packaging and food serviceware managed by the producer, which are commonly called returnables.

To meet producer-led reuse and refill strategies requirements, which begin in year 1 of the program plan, CAA California will obtain producer attestations that all requirements are met, after which CAA California will verify producer attestations with spot auditing. For producer-led initiatives, producers are best positioned to understand and test that their reusables and refillables meet durability, health, safety, and environmental requirements, and to report on the average number of uses of their specific reusable and refillable items. This is because the health, safety environmental requirements, and management systems for items vary widely and can require vastly different methods of testing and measurement.

For example:

- Reusable food serviceware that is collected, cleaned, and redeployed on site
- Refill via single-use packaging that consumers decant into refillable units at home
- Retail prefilled returnables where dirty empties are returned to a collection point for washing, cleaning, repair, and re-entry into the supply chain
- B2B reusable transport packaging (e.g., pallet wrap covers, industry bulk containers, crates, totes, dunnage) that may only require a hose down and more

For an overview of these producer attestations, including examples of the suggested evidence CAA California will request producers to collect as a record of their compliance activities, please see section 6.7 Reuse and Refill Attestation Details.

For CAA California-driven reuse and refill strategies (Areas 3-7, Table 8), CAA California will ensure that its funding recipients and service providers report on reusable and refillable items durability, health, safety and environmental requirements, as well as the average number of uses of each item. The specific methodology for calculating the average number of uses would be developed with interest holders in the targeted sectors to be appropriate to the type of packaging or food serviceware targeted. For example:

- For food serviceware, cafeterias may be asked to estimate uses based on the number of drinks and food items sold (Area 3).
- For B2B packaging (e.g., pallet covers, industry bulk containers, buckets, and milk crates), which could be durable enough to last for years or decades, durability may need to be estimated based on historic replacement rates.

CAA California will work with interest holders in each of the targeted supply chains to understand which tools already exist and which might need to be developed to enable reporting on the durability, safety, and number of uses of each type of targeted packaging or food serviceware. CAA California will also explore the use of labeling and marketing strategies, the applicability of any new and relevant durability standards, as well as the opportunity to use tracking systems.

6.6 Guidance for Producers

6.6.1 Source Reduction Plans

CAA California issued guidance to producers detailing requirements for the completion of ISR Plans and associated calculations, as well as guidance on annual reporting. Both guidance documents are posted on CAA's Producer Portal.¹⁶

6.7 Reuse and Refill Attestation Details

SB 54 requires CAA California to outline a process for confirming that reusable and refillable packaging and food serviceware displacing single-use plastic that count towards the reuse, refill and elimination targets are:

- Designed for durability
- Managed in a system that is convenient for the consumer
- Managed in a manner that meets all necessary safety and environmental requirements

CAA California developed an attestation framework that enables it to collect the needed information to meet this requirement, while also enabling producers to test their packaging and food serviceware using processes that meet their needs. The following provides a list of required attestations by product type along with suggested evidence that producers could provide, if audited by CAA California. Producers may choose to provide alternative evidence, as outlined below.

¹⁶ The annual reporting guidance has not yet been published but will be prior to the June 15, 2026 submission to the Producer Responsibility Advisory Board.

For returnables (i.e., reusable and refillable containers managed by a producer) that are not food serviceware provided for onsite dining a food service establishment:

Attestation: Yes / No:

I attest that the returnable packaging / takeout food serviceware provided meet all the requirements listed in Table 9 and that I have evidence to support these claims. Alternatively, I attest that they were managed through a CAA California-arranged returnables system where CAA California will acquire and keep this evidence.

Table 9: Requirements for Packaging and Takeout Food Serviceware Reused or Refilled by the Producer (i.e., Returnables Other Than Dine-in Food Serviceware)

	Requirement for returnables	Suggested evidence to be kept by producers
1	Returnables have been explicitly designed and marketed to be utilized multiple times for the same product, or for another purposeful packaging use in a supply chain.	A photo of item's labeling as returnable and copy of onsite or online education and outreach materials communicating that the item is returnable and how consumers should participate in the returnables collection system (e.g., how to find location to return the item)
2	Returnables have been designed for durability to function properly for multiple uses.	Testing or other assessment of durability that enables the item to be used more than once. Provide details of the test (e.g., completed by whom, testing criteria used)
3	Returnables collections are supported by adequate infrastructure to ensure the packaging or food serviceware can be conveniently and safely reused or refilled for multiple cycles. This requirement does not apply to food serviceware provided directly to consumers by food service establishments and reused and/or refilled at the same location where it is first used.	- For a collection system at point-of-sale, evidence of the collection system - For a remote collection system, provide a directory or database that shows the address of the returnables collection point, and the hours of operation of each - For a collection system to collect remotely supplied goods, evidence that the item is collected in the same way it was sold
4	Returnables are repeatedly recovered, inspected, and repaired, if necessary, and reissued into the supply chain for reuse or refill for multiple cycles, including meeting all health, safety and environmental standards.	The average reuse rate of the returnables achieved (i.e., of those returned, rate of refill and supply to market) as calculated using a defensible methodology, as well as evidence to confirm the reuse of returnables meets all applicable health, safety, and environmental standards (e.g., California Retail Food Code)
5	Returnables are tracked in a manner that enables the reporting of the average reuse and refill return rates.	The average return rate as calculated using a defensible methodology

For returnable dine-in food serviceware managed at a food service establishment:

Attestation: Yes / No:

I attest that the returnable packaging is intended for onsite dining at the food service establishment, meets all the requirements listed in Table 10 and that I have evidence to support these claims. Alternatively, I attest that they were managed through a CAA California-arranged returnables system where CAA California will acquire and keep this evidence.

Table 10: Requirements for Dine-in Food Serviceware Reused or Refilled by the Producer (i.e., Returnable Dine-in Food Serviceware)

	Requirement for returnables	Suggested evidence to be kept by producers
1	Returnables have been explicitly designed and marketed to be utilized multiple times for the same product, or for another purposeful packaging use in a supply chain.	For food serviceware used for onsite dining and managed directly by food service establishment staff: - No further evidence is required for reusable and refillable food serviceware provided directly to consumers for onsite dining at a food service establishment and collected from consumers at their tables by food service establishment staff (e.g., waiter) For food serviceware used for onsite dining and where consumers are requested to deliver their used returnable food serviceware to a particular location: - Provide a copy of onsite education and outreach materials communicating that the item is returnable and how consumers should participate in the returnables collection system (e.g., where to return the item)
2	Returnables have been designed for durability to function properly in its original condition for multiple uses.	For reusable and refillable food serviceware made of ceramic, porcelain, glass, and non-foil metal: - No further evidence is required to be considered sustainable congruent with the requirements of SB 1335 For all other returnable food serviceware: - Testing or other assessment of durability that enables the item to be used more than once. Provide details of the test (e.g., completed by whom, testing criteria used)
3	Returnables collections are supported by adequate infrastructure to ensure the packaging or food service ware can be conveniently and safely reused or refilled for multiple cycles.	No further evidence is required for returnables that are provided to the consumer for dine-in purposes only, are reused and/or refilled only at the same location where the items are first used, and where the food service establishment is required to meet California health and safety standards

	Requirement for returnables	Suggested evidence to be kept by producers
4	Returnables are repeatedly recovered, inspected, and repaired, if necessary, and reissued into the supply chain for reuse or refill for multiple cycles, including meeting all health, safety and environmental standards.	The average reuse rate of the returnables achieved (i.e., of those returned, rate of refill and supply to market) as calculated using a defensible methodology, as well as evidence to confirm the reuse of returnables meets all applicable health, safety, and environmental standards (e.g., California Retail Food Code)
5	Returnables are tracked in a manner that the average reuse and refill return rates may be reported.	The average return rate as calculated using a defensible methodology

For packaging/food serviceware reused and/or refilled by the consumer:

Attestation: Yes / No:

I attest that the packaging / food serviceware that is refillable and/or reusable by the consumer meet all the criteria listed in Table 11.

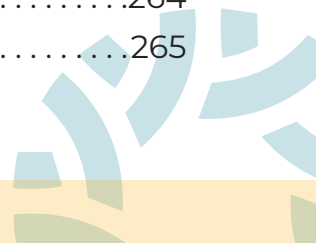
Table 11: Requirements for Packaging and Food Serviceware Reused or Refilled by the Consumer

	Requirement for items refillable/reusable by the consumer	Suggested evidence to be kept by producers
1	Refillables / reusables have been explicitly designed and marketed to be utilized multiple times for the same product.	A picture of item's labeling as refillable and copy of onsite or online education and outreach materials communicating that the item is refillable and how consumers should participate in the refill system (e.g., how to acquire child packaging refills or BYOC refills)
2	Refillables / reusables have been designed for durability to function properly in its original condition for multiple uses.	Testing or other assessment of durability that enables the item to be used more than once. Provide details of the test (e.g., completed by whom, criteria tested, standard the item was tested against)
3	Refillables / reusables collection is supported by adequate infrastructure to ensure the packaging or food serviceware can be conveniently and safely reused or refilled for multiple cycles.	- Evidence that child packaging (i.e., bulk fill, large format packaging) is sold, or BYOC opportunity exists at the same point-of-sale as the parent packaging (e.g., physical location or online location) - Evidence that child packaging / BYOC opportunity is regularly in stock - Evidence that any applicable health and safety standards (e.g., California Retail Food Code) that apply to consumer reuse and refill of the packaging / food serviceware are met

Chapter 7: Education and Outreach

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Chapter 7: Education and Outreach

7.1 Introduction

This chapter outlines CAA California's Education and Outreach (E&O) plan to support the successful implementation of SB 54. This plan is designed to address the following goals, per PRC 42051.1(e) and Section 18980.8:

- Increase public participation in the recycling and composting of covered packaging, and participation in reuse and refill systems
- Educate and engage the public and other interest holders on proper recycling, composting and reuse and refill behaviors
- Reduce contamination of covered materials in the recycling process and improve the proper preparation and sorting of covered materials
- Provide consistent, statewide messaging that supports local implementation of SB 54 and reflects ongoing changes to the program plan
- Coordinate E&O activities with local jurisdictions, service providers, alternative collection programs and other interest holders
- Ensure E&O materials are accessible in languages suited to local demographics, consistent with Section 7295 of the California Government Code
- Measure, evaluate and report on the effectiveness of E&O activities to inform continuous improvement

This chapter also reflects considerations from CalRecycle's Needs Assessment and the SB 54 Advisory Board Report on Barriers and Solutions to Creating a Circular Economy.

SB 54 creates an opportunity to establish clearer and more consistent guidance, strengthen public trust and improve recycling system performance across California.

This chapter outlines the E&O plan as follows:

- Section 7.2 Definition of E&O
- Section 7.3 E&O Framework and Guiding Principles
- Section 7.4 Audience: Who is Engaged
- Section 7.5 E&O Components: What is Delivered
- Section 7.6 How E&O is Delivered
- Section 7.7 Measuring Success and Continuous Improvement
- Section 7.8 Coordination Roles and Responsibilities
- Section 7.9 Reimbursement and Governance

7.2 Definition of E&O

This chapter begins by establishing a clear definition of E&O to secure a common understanding of the term as a core component of the CAA California's program plan. CAA California defines E&O as a strategic, comprehensive program function that informs, engages, equips and encourages Californians to participate in recycling, composting and reuse and refill programs. E&O provides clear, accessible and culturally responsive guidance, which is defined as outreach that reflects the diverse languages, cultural contexts and lived experiences of California's communities. It adapts messages and methods to increase meaningful participation, public knowledge, and motivation to act. E&O builds awareness, establishes trust, and inspires changes in public and other interest holder behavior. These efforts are essential to achieving SB 54 objectives.

Within this program plan, composting refers specifically to compostable packaging as defined under SB 54, rather than the broader organics composting sector.

7.3 E&O Framework and Guiding Principles

The following framework defines how CAA California designs and delivers E&O to support effective participation and performance under SB 54. It establishes a consistent structure for translating policy into public action while allowing flexibility to respond to local conditions.

CAA California's E&O approach is informed by established behavior change research, recognizing that sustained participation requires more than awareness alone. Tools such as Community-Based Social Marketing (CBSM) may inform program design where appropriate, alongside other evidence-based models, allowing strategies to be tailored to different audiences, barriers and implementation contexts.

CAA California's E&O efforts are structured around three core questions.

- 1. What is changing?** SB 54 introduces changes to recycling, composting, and reuse and refill systems statewide that are intended to improve consistency in messaging and reduce confusion on where and how to properly dispose of covered materials across California. E&O will clearly communicate what is new, how recycling and composting programs are evolving, and how these changes affect Californians.
- 2. Why does it matter?** SB 54 supports California's goals to reduce packaging, increase recycling and composting, and expand reuse and refill systems. E&O will connect the actions of individual Californians to these statewide outcomes, reinforcing trust and demonstrating that public participation contributes to measurable improvements in reducing plastic pollution and increasing recycling.
- 3. How can people participate?** As recycling, composting and reuse and refill systems become more aligned across the state, Californians will receive clear, consistent, plain-language instructions on how to prepare materials for recycling, composting, and reuse and refill, avoid contamination, and correctly use these systems.

This guidance is essential to ensuring materials are correctly managed and that SB 54 goals are achieved.

7.3.1 Translating Policy into Action

CAA California's approach to E&O focuses on translating state recycling policy into action for the public and other audiences. This approach includes the following building blocks:

Figure 1: California's Approach to E&O



- Bridging policy changes and everyday behaviors by explaining what new recycling requirements mean in practice and by delivering clear, relatable messages that help the public understand how their actions align with statewide recycling, composting and reuse and refill goals.
- Building and maintaining public trust in recycling, composting, and reuse and refill systems by providing consistent and transparent guidance to the public. This includes setting realistic expectations about what happens to materials after collection and reinforcing that public participation directly supports recycling system performance and positive environmental outcomes.
- Activating existing and new infrastructure by guiding the public on the correct use of carts, bins, depots and other collection or drop-off options, and helping the public navigate changes in accepted materials, collection methods and service availability across California.
- Driving measurable outcomes by increasing participation in recycling programs, improving the amount of recyclable and compostable materials collected, and reducing contamination – actions that support more efficient collection, processing and end market outcomes.
- Sustaining long-term behavior change by meeting Californians where they are in their recycling, composting and reuse and refill journeys. This includes offering guidance that reflects different levels of familiarity, access, and readiness

7.3.2 E&O Guiding Principles

CAA California applies the following guiding principles to ensure E&O efforts are consistent, effective and aligned with SB 54 requirements:

➤ **Engaging Implementation Partners**

Effective E&O requires coordination with implementation partners, including regulators, local jurisdictions, tribes, service providers, businesses, community-based organizations (CBOs), environmental justice organizations and other interest holders. Partner engagement strengthens relevance, reinforces consistent messaging, and ensures guidance is consistent across the state and delivered through trusted channels.

➤ **Environmental Justice**

Environmental justice principles are integrated throughout CAA California's E&O approach. This includes early and ongoing community engagement, equitable allocation of resources based on need and impact, consideration of social, environmental, and economic conditions, avoidance of unintended or harmful outcomes, and accountability mechanisms to monitor progress and make corrections as needed.

➤ **Research-Driven Decision Making**

CAA California grounds E&O strategies in evidence, including CalRecycle's Needs Assessment, CAA California's primary and secondary research, and insights from implementation partners. Research is used to understand barriers to public participation in recycling and to test E&O interventions, such as targeted messaging, labeling guidance, visuals, prompts, campaigns, training, program design changes, or other identified activities, that help people recycle, compost or participate in reuse and refill systems correctly. This supports continuous improvement and ensures E&O investments drive meaningful, sustained behavior change.

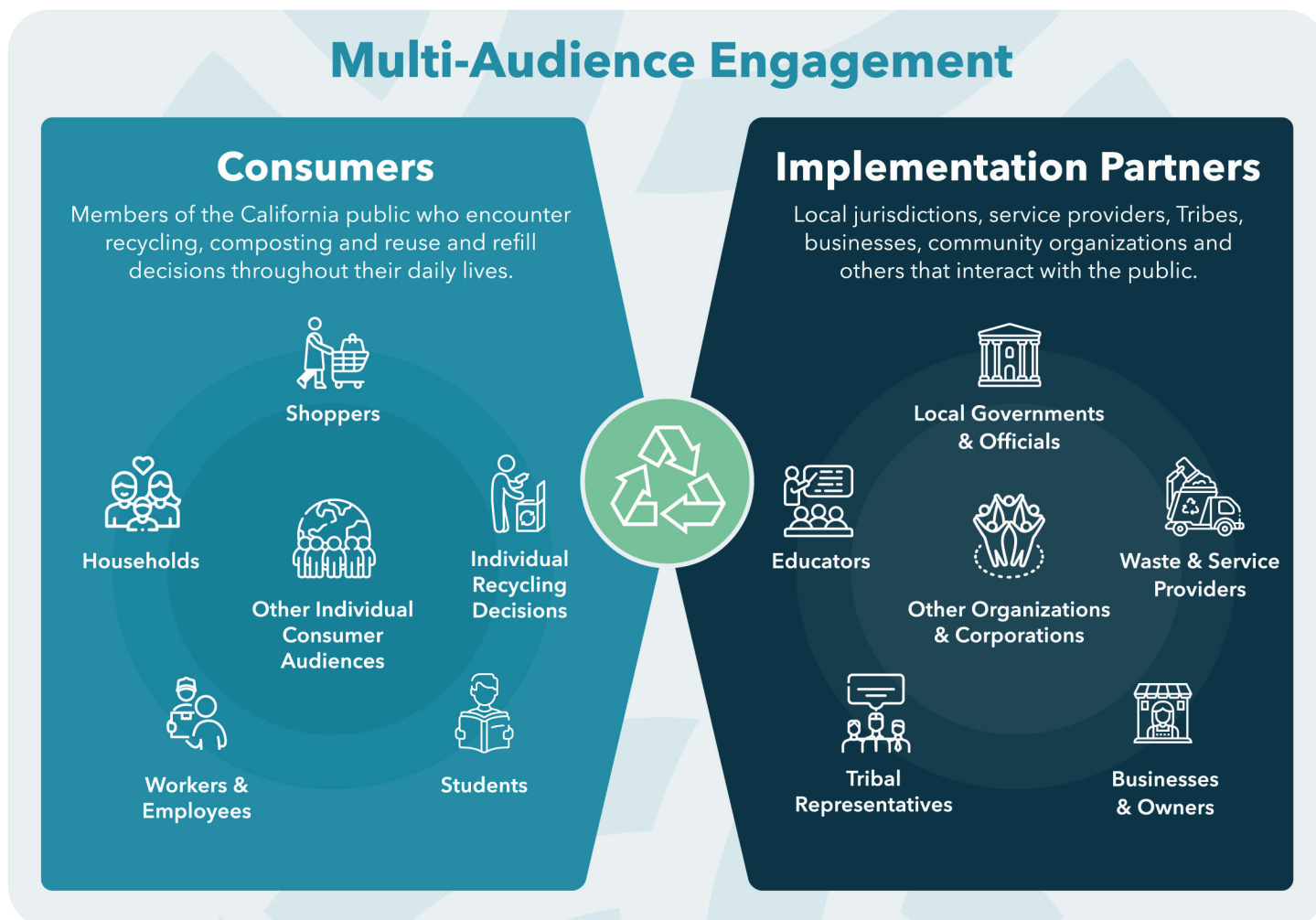
➤ **Statewide Consistency with Local Flexibility**

CAA California's E&O approach is built to provide clarity and reduce confusion about recycling programs across the state. CAA California recognizes the many entities that have been delivering recycling and waste reduction E&O programs for years, and plans to partner with them and build upon their expertise to identify, refine and scale proven E&O practices that can be harmonized across California.

7.4 Audience: Who is Engaged?

It's critical to identify the audiences E&O activities must reach and how their needs differ. CAA California will engage with multiple audiences across the state, grouped in two primary categories:

1. Consumer audiences
2. Implementation partner audiences

Figure 2: Multi-Audience Engagement

7.4.1 Consumer Audiences

Consumer audiences are defined as members of the California public. CAA California recognizes that individuals encounter recycling, composting, and reuse and refill decisions throughout their daily lives and that they engage with these systems in different ways based on their attitudes, beliefs, experiences and access to services.

CAA California's consumer E&O strategy is grounded in behavioral segmentation, and not solely in demographic characteristics. This means focusing on understanding consumer interests, attitudes and behaviors related to recycling, composting, and reuse and refill practices, including the motivations that encourage participation and the barriers that limit it. To inform this work, CAA California draws from established behavior-change approaches, such as CBSM, alongside other evidence-based frameworks. These approaches help identify practical barriers and motivators and guide the selection of outreach strategies that support sustained correct participation across different consumer segments. Behavioral segmentation reflects California's demographic diversity, including age, income, geography, language, and cultural background.

Using these insights, CAA California will segment Californians across categories such as those individuals who are currently disengaged, those who are willing to participate but face limited access or resources, and those who participate consistently.

E&O approaches will be designed to build trust, reduce confusion and support progress toward sustained participation across all consumer segments. Specific attention will be given to reaching Environmental Justice (EJ) Communities – those historically underserved and disadvantaged communities, including those with limited access to recycling, composting, or reuse and refill infrastructure. Examples include communities with fewer collection options, outdated or inconsistent services, or limited access to clear recycling signage and information. This also may include communities with language barriers or economic constraints that can affect participation.

To effectively influence consumer choices, CAA California will reach consumers in the places that matter most – where they consume and interact with packaging. In other words, where consumers live, work, play, and learn.

Figure 3: Where Consumer E&O is Targeted



- **Where they live:** their primary residence, whether a single or multifamily residence
- **Where they work:** their offices, job sites and professional environments
- **Where they play:** the restaurants, retail stores, shopping centers, sporting venues, entertainment destinations and other spaces where products are purchased, used and discarded
- **Where they learn:** educational institutions, primarily K-12 schools and colleges/universities

Figure 4: The Consumer Journey

The consumer journey describes the typical stages consumers move through over time. Approaches such as CBSM help identify the specific barriers, motivators, and intervention tools most likely to support progress at each stage.

CAA California recognizes that behavior change in the recycling, composting, and reuse and refill systems takes time and may look different for different people. To guide E&O design and measurement, CAA California utilizes a behavior-change journey that reflects the typical stages consumers move through as they adopt and sustain new behaviors. The following six-step journey reflects one which may be used to guide audience engagement.

1. **Awareness:** Individuals are not yet recycling, or are unaware of available recycling services (pre-contemplation)
2. **Consideration:** Individuals are thinking about recycling and weighing whether they should participate ("Should I?")
3. **Access/Enablement:** Individuals are preparing to recycle and determining whether they can participate ("Can I?"), including having access to services, information and tools
4. **Early Participation:** Individuals begin recycling but may do so inconsistently or with errors (action)
5. **Sustained Participation:** Individuals recycle regularly and correctly over time (maintenance)
6. **Advocacy:** Individuals actively encourage others to recycle and help normalize desired recycling behaviors (ambassadorship)

E&O approaches will differ based on which step audiences are in along the behavior-change journey. For audiences with low awareness (Step 1), E&O efforts focus on introducing change and building personal relevance. For those considering action (Step 2), E&O aims to deepen understanding and build trust. For audiences preparing to act (Step 3), CAA California emphasizes clear instructions and enablement. For those already participating (Steps 4 and 5), E&O actions reinforce correct behaviors and support habit formation. For highly engaged audiences (Step 6), E&O encourages peer-to-peer influence and advocacy.

7.4.2 Implementation Partner Audiences

For the purposes of this program plan, implementation partners are entities that play a direct role in delivering, reinforcing, or supporting SB 54-related E&O activities. This audience includes local jurisdictions, recycling service providers, public agencies, school districts, community-based organizations, tribes, environmental justice organizations, and other entities who help deliver, reinforce and operationalize E&O activities through their own services, programs and trusted relationships with the public. These partners play a critical role in extending the reach of CAA California's E&O efforts.

CAA California recognizes that implementation partners are not a single, uniform group. Partners vary in their roles, responsibilities, influence, and points of interaction with consumers. CAA California will work with consumer and implementation partner audiences in different ways to reach and educate the public across the state. CAA California may include other emerging audiences in E&O strategies, ensuring CAA California's approach adapts to the full range of consumer behaviors and needs.

Through this combined audience approach, CAA California will translate the requirements of SB 54 into clear, actionable E&O activities that support consistent participation, reduce public confusion and material contamination, and help Californians effectively use recycling, composting, and reuse and refill systems.

7.5 E&O Components: What Is Delivered

7.5.1 E&O Consumer-Facing Brand

CAA California will develop and maintain a recognizable consumer-facing brand to unify statewide messaging and help Californians understand how SB 54 is transforming recycling, composting, and reuse and refill systems. The brand will represent more than a visual identity; it will serve as a trusted, consistent way to communicate what is changing, why it matters, and how to participate across all program areas. By clearly signaling that these updates are part of a coordinated statewide effort, the brand will build recognition and trust over time. All statewide media and advertising assets will use this shared brand to ensure clarity, consistency and long-term recognition as programs evolve.

CAA California recognizes that there are a variety of brands that promote recycling, composting, or reuse and refill across the state. This new brand is not intended to replace existing brands, rather amplify and strengthen them through harmonized tools and materials.

7.5.2 E&O Tools and Materials

CAA California's E&O plan provides standardized and customizable educational and communications tools and materials that help implementation partners engage Californians in a consistent manner while allowing for local customization. Examples of these tools and materials may include:

- **Baseline Recycling Material Lists:** CAA California will publish and promote the baseline Covered Material Category (CMC) list. This list reflects the material categories designated as recyclable or compostable, that are required to be collected by local jurisdictions, unless they have received an exemption.
- **Branding and Messaging Tools:** e.g., Brand guidelines, standard iconography and color systems.
- **General Outreach and Campaign-Specific Templates:** e.g. Social media templates, flyers and posters, as well as digital ads, web banners and community event kits.
- **Audience-Specific Toolkits:** e.g.,
 - Multifamily residences: move-in or welcome packets, bin room signage
 - Schools: curriculum, posters, cafeteria signage
 - Commercial or business audiences: non-consumer and consumer facing signage, staff training materials
 - Food service and retail: reuse and refill and compostable packaging guidance.
- **Community Engagement Tools:** e.g., Toolkits to deploy for farmers markets, cart tags, direct mailers.
- **Additional materials** will be designed as needs arise to provide clear, actionable guidance to help educate identified audiences.

CAA California understands that some of these tools and materials must be flexible for local adaptation. Some communities may need to use additional materials beyond the CMC list or may want to co-brand materials. CAA California will therefore provide customizable assets that allow partners to incorporate local requirements while maintaining statewide consistency.

7.5.3 E&O Updates to the Baseline CMC List

CalRecycle will periodically update the CMC list based on market conditions, system performance, and statutory requirements. Because these updates have significant implications for local programs and public communication, CAA California will implement a structured process to support state-wide alignment when changes occur. This process will include:

- **Updating and refreshing statewide materials:** CAA California will integrate CalRecycle's updated material lists into all statewide educational materials and toolkits. Updates will still allow for local customization.
- **Providing clear guidance:** CAA California will provide clear, timely guidance to implementation partners on ways to communicate changes to the CMC list. This may include recommended messaging, timelines and instructions for updating local materials, ensuring partners are aware of what changed and have guidance on when to communicate with residents.
- **Coordinating statewide outreach timing:** CAA California will coordinate the timing of statewide outreach to help minimize confusion for Californians. This may include aligning paid statewide media campaigns which can be amplified by implementation partners.

7.5.4 E&O for Material-Specific Strategies

While statewide messaging provides a consistent foundation for recycling, compostable packaging, and reuse and refill systems, some materials within these streams present distinct challenges that require more targeted education and outreach. Differences in how materials are collected – whether they are accepted curbside or via alternative methods – can create confusion and contamination if not addressed through material-specific guidance.

To address these challenges, CAA California will develop targeted E&O strategies for material streams that require specialized education or outreach approaches, including materials not included on the CMC list.

These strategies are designed to clearly explain where materials belong, how systems differ from traditional curbside recycling, and what actions Californians can take to participate correctly as new programs emerge.

Material-specific E&O efforts will leverage local input, align with available infrastructure, and provide clear, actionable guidance for both consumers and implementation partners. The Materials Strategy and Covered Material Category Compliance Plan chapter contains a table of CMCs indicating which will receive targeted E&O efforts. Detailed approaches for key material streams are described in the sections below.

7.5.5 Alternative Collection Programs

Some materials require collection approaches beyond traditional curbside recycling due to current processing, contamination, or infrastructure limitations. CAA California will assess opportunities to expand E&O related to alternative collection programs such as retail take-back or other drop-off options that may exist or are emerging as complements to curbside systems.

For example, film and flexible packaging are often not accepted in curbside recycling programs today and can contaminate recycling streams if placed in the cart. In these cases, E&O will focus on clearly communicating when film and flexible packaging should be managed through alternative collection pathways, such as retail take-back programs, rather than curbside recycling. Messaging will explain what materials are accepted through take-back, where locations are available, and how these programs fit within the broader recycling system.

Education and outreach will also clarify that collection approaches may evolve over time as infrastructure, processing capacity and end-market pathways develop. E&O for alternative collection programs will emphasize how and when residents should use non-curb-side options, how these programs complement existing services, and what actions are needed to participate correctly based on current local guidance. These efforts are intended to reduce confusion, prevent contamination, and support effective participation as collection systems adapt and expand.

7.5.6 E&O for Compostables

E&O for compostable packaging will emphasize alignment with local infrastructure by clearly explaining where and how compostable packaging should be disposed of in each community. Because acceptance of compostable materials varies across local jurisdictions, CAA California will provide messaging and materials that help residents understand what is and is not accepted locally. Materials will highlight proper preparation, contamination reduction, and the importance of following local guidance. By coordinating with compost facilities and local jurisdictions, outreach will ensure that communications are accurate, consistent, and actionable. For additional context on compostable packaging, refer to the Strategy for Compostable Covered Materials chapter.

7.5.7 E&O for Reuse and Refill Systems

E&O for reuse and refill systems will focus on building understanding, visibility and trust as these systems expand across California. Unlike recycling and composting, where residents must take specific actions, many reuse and refill systems may operate in closed environments such as schools, stadiums, healthcare facilities, corporate campuses, and quick-serve dine-in restaurants. In these settings, residents may not need to significantly change their habits; instead, they will encounter reusable food serviceware or refill options as part of the standard experience.

Because much of the reuse and refill system may be implemented through institutional, commercial and business-to-business decisions, E&O will prioritize explaining why reuse is being adopted, how it works operationally and what benefits it delivers. Messaging will highlight environmental and community impacts, system performance, and the role of reuse and refill programs in reducing waste and supporting California's circular economy. These efforts help normalize reuse, build public confidence, and ensure residents understand the purpose and value of the systems they encounter.

CAA California will support consumer-facing reuse and refill initiatives such as community refill stations, reusable cup programs or pilot projects in retail settings where direct public participation is required. For these efforts, E&O tools will be developed to provide clear instructions on how to participate and encourage adoption of new behaviors.

For additional details on material-specific strategies and reuse and refill systems, refer to the Materials Strategy and Covered Material Category Compliance Plan chapter and the Source Reduction chapter.

7.6 How E&O is Delivered

This section describes how the E&O components described in the previous section are delivered. CAA California will deliver clear, coordinated messaging that explains recycling program changes and details required actions on recycling, compostable packaging, and reuse and refill systems. Messaging will specify what actions residents can take to improve outcomes, such as correctly sorting materials, properly preparing materials for recycling, or participating in reuse and refill programs.

Messaging is designed to be consistent throughout the state while being adaptive to local conditions. CAA recognizes that the public experiences waste and recycling systems differently, and that some people face greater barriers to participating such as limited access to services, language barriers or access to technology. Messaging will be accessible, culturally relevant and available across multiple languages and formats, making it effective in communities that have been historically underserved by recycling services or disproportionately impacted by plastic pollution.

Consistent with recommendations from the CalRecycle Advisory Board Report on Barriers and Solutions, CAA will also evaluate opportunities to improve public education on where and how to recycle through labeling and visual cues.

7.6.1 E&O Messaging Principles

To ensure messaging effectively communicates what is changing, why it matters and how to participate across California's diverse communities, CAA California applies the following principles to guide how content is developed, tested and delivered:

1. **Clarity:** Use simple, direct and actionable language that avoids jargon and removes common points of confusion, such as uncertainty about what material goes where or how to prepare materials for recycling or composting.
2. **Consistency:** Reinforce key themes and instructions across channels to build recognition, familiarity, and trust.
3. **Credibility:** Ground messaging in accurate information, be transparent about intent and leverage trusted community voices to strengthen confidence in the system.
4. **Relevance:** Tailor content to reflect the cultural contexts, languages, and lived experiences of specific audience segments.
5. **Positive Framing:** Highlight the tangible benefits of the program, such as reducing waste and pollution, conserving resources, improving community health, and supporting a more sustainable future, to motivate participation and reinforce shared progress.
6. **Storytelling:** Use relatable narratives and real-world examples to connect recycling, composting, and reuse and refill behaviors to everyday life.
7. **Action-Oriented:** Incorporate clear, specific calls to action that help Californians know what they can do, reducing friction and making correct participation easy.
8. **Test and Validate:** Continuously refine messaging and delivery channels through research, community feedback, and performance metrics.

To support effective engagement across California's diverse communities, CAA California distinguishes between translation and transcreation. Translation involves converting text from one language to another, while transcreation adapts messaging to reflect cultural context, local norms, imagery, and meaning, thus making guidance clear and actionable. Where appropriate, CAA California will prioritize transcreation over direct translation to ensure E&O materials are culturally relevant, accessible and effective. The level of adaptation will be informed by audience needs, material complexity, and equity considerations.

7.6.2 E&O Delivery Elements

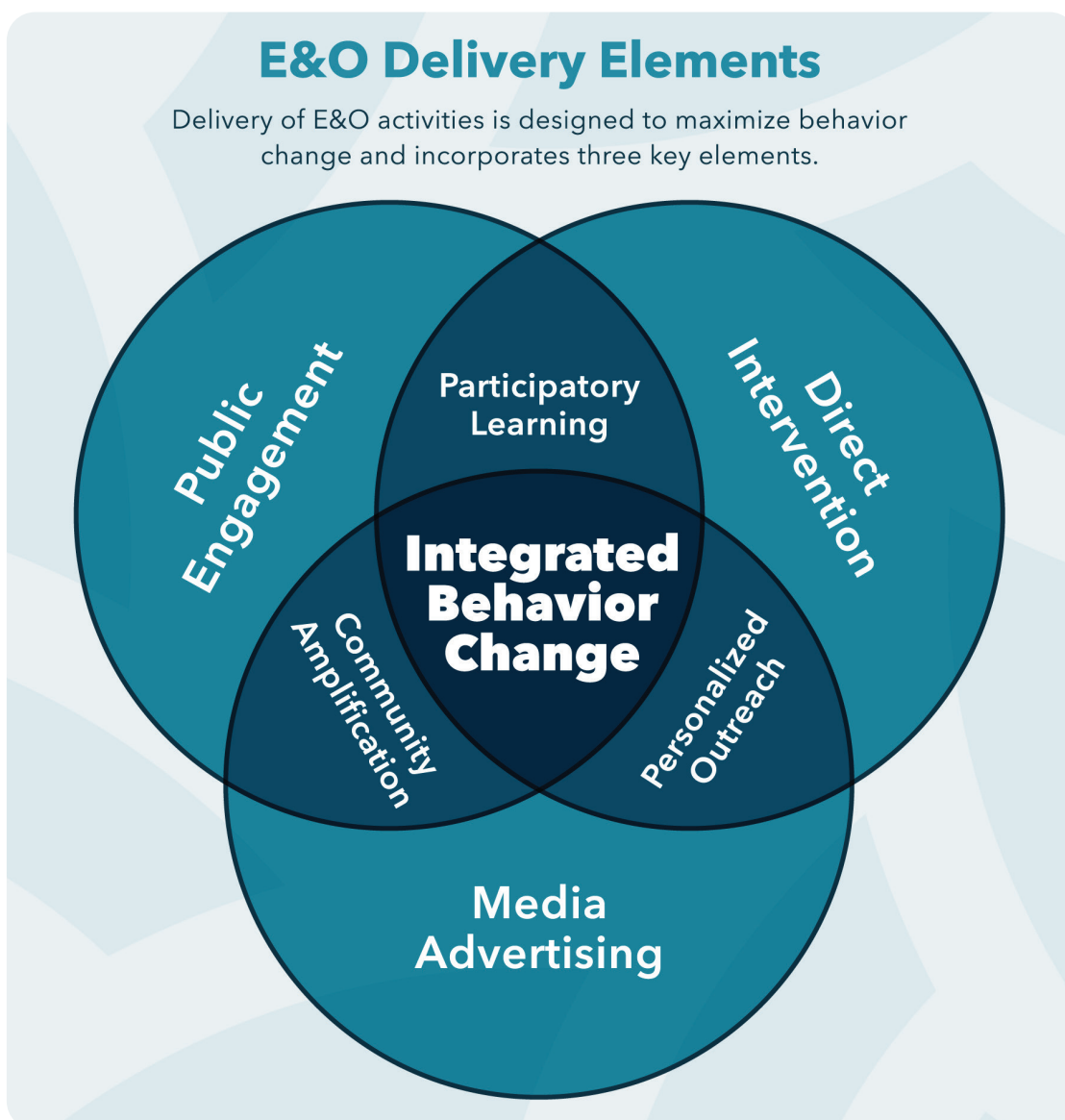
Delivery of E&O activities is designed to maximize behavior change and incorporates three key elements:

1. Media and advertising
2. Public engagement
3. Direct intervention

Together, these three elements are designed to operate at different but complementary levels. Media and advertising provide broad, statewide reach to build awareness at scale; public engagement operates at the community level to reinforce messages through trusted local relationships; and direct interventions focus on individual-level, point-of-action support where people make real-time decisions.

When integrated, these elements ensure Californians receive consistent messages across channels, encounter guidance repeatedly in trusted settings, and are supported with practical tools that enable action improving clarity, building trust, and increasing the likelihood that awareness translates into sustained behavior change.

Figure 5: Integrated Behavior Change



Outreach efforts will be coordinated with local jurisdictions, service providers and other implementation partners to maximize reach, reduce duplication, and ensure messaging is relevant to local conditions.

Outreach strategies are designed to reach audiences based on where they are along the engagement journey described in section 7.4. Some Californians may be encountering SB 54 changes for the first time, while others may already be participating or actively supporting recycling, composting, or reuse and refill systems. Different stages along this journey require different approaches to be effective. For audiences with low awareness, outreach may focus on introducing change, building relevance, and clarifying what is new. For those in consideration stages, outreach may focus on deepening understanding, addressing common questions, and building trust in the system. For audiences preparing to act, outreach may emphasize clear instructions, and access to tools and practical guidance that enable participation. For those already participating, outreach may reinforce positive behaviors, reduce confusion or friction, and support habit formation over time. For highly engaged audiences, outreach may encourage peer-to-peer influence to help normalize desired behaviors within communities. This stage-based approach helps ensure that outreach efforts are targeted, efficient, and responsive to real world barriers to participation.

CAA California will employ both direct and indirect outreach strategies to drive behavior change in recycling, composting, and reuse and refill behaviors.

- **Directly** reaching the public through CAA California-led activities like advertising and promotional campaigns that deliver clear, consistent and compelling messages across media channels.
- **Indirectly** reaching the public through collaboration with implementation partners who can amplify and distribute messaging within their networks and communities.

7.6.3.1 Media and Advertising

Statewide media and advertising campaigns serve as a foundational E&O delivery mechanism. These campaigns may introduce program changes, reinforce core behaviors, and provide ongoing guidance as recycling, compostable packaging, and reuse and refill systems evolve over time. These statewide campaigns will be developed to ensure broad, equitable reach across California. Campaigns may leverage a mix of advertising channels, CAA California's own website, and other communications platforms, and media coverage. Advertising refers to paid placements such as television, radio, digital, print or outdoor advertising that CAA California uses to reach broad audiences with consistent, statewide messages. CAA California's website and other communications platforms are owned channels that can provide a trusted, centralized source of detailed, up-to-date information, including explanations of program changes, how-to guidance and links to local resources. Media coverage refers to earned exposure through news outlets and other third-party sources, which can amplify messages, provide context, and reinforce credibility by reaching audiences through independent and trusted voices.

To extend reach and reinforce trust, CAA California will also encourage partner amplification of these statewide E&O campaigns. Statewide campaigns will be designed to allow local jurisdictions, service providers, and community organizations to amplify messaging through their own channels. CAA California will provide campaign toolkits, customizable assets, and guidance to support local adaptation while maintaining statewide consistency.

E&O campaigns will be implemented through a phased approach aligned with the overall program plan period. Initial efforts will focus on startup activities, including development of core messaging, implementation partner consultation and foundational education materials.

Subsequent phases will emphasize statewide deployment, partner support, and ongoing refinement of materials and tactics based on program plan performance and interest holder feedback. E&O efforts will continue throughout the program plan period, with timing and focus adjusted as needed to support program milestones and SB 54 requirements. Detailed, specific timelines and deliverables will be maintained through separate E&O action plans and implementation documents.

Launch Campaign

CAA California plans to deploy a statewide awareness campaign during the launch period to help Californians understand the upcoming changes to recycling, compostable packaging, and reuse and refill systems. The campaign may include messaging that explains why these shifts are happening and prepares residents for what to expect as new requirements roll out. It will introduce the consumer-facing brand and build a shared baseline awareness of the transition ahead, laying the groundwork for future, more targeted outreach.

Ongoing Campaigns

Following the launch campaign, CAA California will implement ongoing statewide campaigns, delivered in pulses throughout the five-year program plan. These campaigns will reinforce key behaviors and respond to emerging needs and support system updates over time. Campaign themes may include:

- Updates to accepted materials or system requirements
- Reducing contamination
- Supporting reuse and refill adoption as programs expand
- Building trust through transparency and accountability
- How and where to participate, including changes in access or service
- Improving preparation and sorting of materials

Campaign Development and Asset Creation

CAA California will be responsible for creating statewide media and advertising assets, including campaign concepts, messaging frameworks, creative materials, and brand guidelines. Assets will be designed for use across multiple channels and formats, including television, radio, digital, print, and outdoor media.

Content and creative development will be informed by research, interest holder input and recycling performance data gathered as the program plan evolves. It will also reflect California's cultural and linguistic diversity. Before broad deployment, messaging concepts and creative assets will be tested and validated using industry-recognized research methods to assess metrics like comprehension, recall and intent to engage.

Funding and oversight

Media and advertising efforts will be funded by CAA California, which will also be responsible for budgeting, procurement, and oversight. This centralized approach ensures efficient use of funds and alignment with program goals, while reducing duplication of effort across jurisdictions.

7.6.3.2 Public Engagement

Public engagement is the component of education and outreach that focuses on direct, community-level interaction with residents, complementing statewide media and advertising. While media and advertising are designed to raise broad awareness and deliver consistent messages at scale, public engagement emphasizes relationship-based, two-way communication delivered through trusted local channels and in settings where people live, work, play and learn.

In the context of E&O, public engagement is not a separate program from education and outreach; rather, it is a delivery approach used to reinforce statewide messages, respond to local conditions and support behavior change through dialogue, trust-building and community participation.

Public engagement supports correct participation and sustained behavior change by:

- Delivering information through familiar, community-based messengers
- Providing opportunities for two-way communication, questions and feedback
- Reaching audiences who may not be fully served by statewide media campaigns
- Adapting guidance to local cultural, linguistic and operational contexts

These efforts are especially important in communities facing barriers such as limited access to recycling services, language differences or disproportionate environmental burdens, where trusted local engagement can help ensure information is accessible, relevant, and actionable.

CAA California will implement public engagement strategies in collaboration with local jurisdictions, service providers and community-based organizations to bring recycling, compostable packaging, and reuse and refill information directly to residents. These strategies focus on building relationships, fostering community involvement and encouraging peer-to-peer influence.

Examples of public engagement activities may include:

- Community events and festivals
- Workshops, presentations and school-based programs
- Partnerships with community-based organizations and trusted local leaders
- Train-the-trainer programs that equip local messengers to share accurate guidance
- Public forums, town halls and listening sessions
- Volunteer programs and community challenges
- Interactive and online platforms that allow residents to ask questions and receive responses

Public engagement activities will be tailored to different audience segments—ranging from unengaged residents to highly engaged advocates—with strategies designed to move audiences forward along their recycling, composting, and reuse and refill journey.

7.6.3.3 Direct Intervention

Direct intervention is the component of education and outreach that focuses on individual-level, point-of-action support. Direct interventions provide targeted, data-driven outreach where additional support is needed to achieve better participation or other defined outcomes. These efforts complement statewide campaigns and public engagement by addressing specific barriers, operational challenges, or behavior patterns identified through program data or partner feedback. They also support the requirements outlined in PRC 42040(e)(1) and 42040(e)(2).

Direct interventions may include:

- Bin labeling and signage that provides clear, immediate sorting guidance
- Cart tagging programs that offer real-time feedback on how and whether carts are placed out for collection and whether materials are sorted and prepared correctly
- Route-level audits to identify contamination patterns and inform targeted outreach
- Door-to-door or on-site engagement in multifamily housing, commercial or institutional settings
- Localized information materials and instructions tailored to specific communities or service configuration
- Supporting communities with limited access to recycling information or recycling services

Addressing recycling or composting operational issues identified by service providers. For E&O directed at businesses, direct interventions may also include technical assistance and operational support to help businesses implement correct recycling practices. This may include onsite guidance, staff training resources or infrastructure support such as providing or recommending appropriate containers, signage or collection setups.

Interventions will be delivered in close coordination with implementation partners including haulers, local jurisdictions, tribes and community-based organizations, to ensure consistent application, operational alignment and equitable coverage across communities. By pairing statewide messaging with localized, hands-on support, direct interventions help ensure that Californians receive the clear, actionable guidance needed to participate effectively in recycling, composting, and reuse and refill systems.

7.7 Measuring Success and Continuous Improvement

CAA California's E&O is designed to drive measurable improvements in participation, material capture and contamination reduction. E&O activities are designed to support program plan objectives and will be evaluated using a variety of metrics across the behavior change journey. This section describes how CAA California measures and evaluates the effectiveness of E&O activities.

7.7.1 Measurement Strategy

CAA California's measurement strategy provides a structured approach for evaluating effectiveness. The strategy is grounded in a framework that creates a consistent foundation for how measurement is planned, executed, and analyzed. This consistency enables comparable results across local jurisdictions, supports strong data analytics, and ensures that insights can be used to strengthen future E&O activities.

CAA California's measurement framework is applied across all statewide E&O efforts to ensure that measurement remains targeted, actionable, and aligned with program goals.

- 1. Define Audiences and Outcomes:** Identify the audiences and specific behavior-based outcomes that will be measured for each audience group. Outcomes differ by stage of the behavior change journey and intervention type, but generally include improvements in knowledge, confidence and participation.
- 2. Establish Baselines:** Use standardized tools and protocols to measure current conditions. Baselines provide the reference point for tracking change over time and comparing performance across local jurisdictions.
- 3. Design and Implement Interventions:** Use audience insights and baseline data to design and deploy interventions as described in the preceding sections of this chapter.
- 4. Measure and Learn:** Use standardized measurement tools to track performance across the core outcome dimensions described below - knowledge, attitudes and behaviors - and the key indicators tied to each (e.g., awareness and understanding; confidence, trust, and intent; participation, capture, and contamination). Results are analyzed to understand what is working, for whom, and under what conditions, and to identify where additional support or refinements are needed.
- 5. Improve and Iterate:** Apply insights to refine messaging, adjust interventions, strengthen guidance, and improve future E&O efforts. Feedback from implementation partners will be used to ensure strategies remain responsive and effective. Measurement is used to understand not only whether audiences take action, but also whether participation is sustained over time.

7.7.2 What We Measure

CAA California evaluates the success of its E&O across three outcome dimensions – knowledge, attitudes and behaviors – which together reflect progress toward sustained, optimized participation in recycling, composting, and reuse and refill systems under SB 54.

These dimensions represent a progression along the behavior change journey: knowledge and attitudes serve as early indicators of whether Californians understand available programs and feel confident and motivated to participate, while behaviors reflect whether correct participation is actually occurring. Table 1 summarizes how each dimension is defined, the desired outcomes CAA California seeks to influence, the core indicators used to assess change, and the measurement approaches applied.

Table 1: Dimensions to Measure E&O Success

Dimension	Description	Desired Outcome	Key Performance Indicators	Measurement Approach
Knowledge	The extent to which Californians understand that recycling, composting, and reuse and refill programs exist and know how to use them. Knowledge functions as an early indicator of the behaviors CAA California ultimately aims to influence later in the behavior change journey.	Increase awareness, familiarity and understanding of available recycling composting and reuse and refill programs, accepted materials, and respective preparation requirements.	Awareness of recycling and composting services, correct identification of accepted materials from the CMC list, understanding of recycling, composting, and reuse and refill preparation requirements.	Surveys or other research-based methods.
Attitudes	The beliefs, perceptions and motivations that shape whether Californians are willing and confident to participate in recycling, composting, and reuse and refill systems. Like knowledge, attitudes serve as early indicators of future behavior.	Improve confidence, trust and motivation to participate in recycling, composting, and reuse and refill programs.	Trust and sentiment in the recycling, composting, and reuse and refill programs, confidence that actions matter, intent to participate.	Surveys or other research-based methods.
Behaviors	The observable actions Californians take within the recycling, composting, and reuse and refill systems. Unlike knowledge and attitudes – which signal readiness—behaviors show whether change has actually occurred.	Increase correct participation like set-out frequency and consistency, improve material capture, reduce contamination	Participation rates, capture rates, contamination rates.	Audits, service providers' data, and other direct measurement methods.

In addition to tracking initial changes in knowledge, attitudes and behaviors, CAA California monitors patterns of repeat and consistent behavior to assess habit formation. This includes evaluating whether improvements in participation, capture, and contamination persist beyond initial outreach efforts. These insights are used to refine messaging, adjust interventions, and reinforce behaviors that lead to system performance improvements. By focusing on sustained participation rather than one-time actions, CAA California ensures E&O campaigns support long-term outcomes aligned with SB 54 goals.

These represent the primary outcomes and indicators for E&O; specific metrics and methods may be refined over time consistent with program maturity, data availability, and regulatory guidance.

7.7.3 How CAA California Will Measure

CAA California's measurement approach uses standardized methods to ensure that data is collected consistently across the state and can be compared over time. This structure enables CAA California and its partners to evaluate whether E&O efforts are influencing knowledge, attitudes and behaviors in ways that move Californians through the behavior change journey.

7.7.3.1 Provide Standardized Measurement Tools and Protocols

CAA California will provide measurement toolkits to support implementation partners in their efforts to measure behavior change consistently across the state.

These toolkits may include:

- Best practices for conducting surveys to assess knowledge and attitudes
- Audit protocols for measuring participation, capture and contamination
- Guidance on sampling, representation and accessibility

These tools will help ensure that data collected in one jurisdiction can be meaningfully compared to data collected elsewhere.

7.7.3.2 Build Measurement Partnerships

CAA California will collaborate with implementation partners like local governments, haulers, NGOs and other interest holders, as well as market research providers, to ensure CAA California has access to high-quality data without needing to design every novel measurement system on its own. This may include:

- Offering training and technical assistance to support consistent data collection and reporting
- Ensuring that measurement activities are eligible for reimbursement when they follow standardized methods, including reporting on how language accessibility is being measured

7.7.3.3 Analyze and Learn Through Testing and Piloting

Testing and piloting E&O is a core component of CAA California's measurement strategy and is embedded throughout campaign design, message development and intervention deployment. Because behavior change varies by audience and context, CAA California uses a structured, evidence-based testing approach that includes both testing messaging and piloting interventions.

7.7.3.4 Message Testing

CAA California will apply a range of testing methods to refine statewide messaging and campaigns to resonate across California's diverse audiences. These may include:

- A/B testing to compare different versions of messages, visuals, calls to action and delivery formats
- Multivariate testing to evaluate combinations of message elements and identify the most effective mix
- Audience-specific testing to tailor messages for priority populations, language groups and communities with unique needs

7.7.3.5 *Piloting Interventions*

CAA California will test and pilot specific outreach interventions to determine which activities produce the greatest improvements in participation, capture and contamination reduction. Interventions may include targeted mailers, bin top labels, community-based outreach, or digital prompts. Piloting may also include evaluating the effectiveness of positive reinforcement approaches such as feedback, recognition, or other engagement strategies.

Digital prompts are timely, technology-enabled reminders or nudges delivered through channels such as websites, email, text messages, apps or digital signage that prompt people to take a specific action or reinforce correct behavior (for example, reminders about proper preparation, what goes where, or when to set out materials).

Piloting may also include evaluating the effectiveness of positive reinforcement approaches, which focus on encouraging and sustaining correct behaviors through feedback, recognition, or other affirming signals rather than penalties. Examples may include thank you messages, confirmation that materials were sorted correctly, recognition of high performing buildings or neighborhoods, or messages that reinforce that participation is making a difference.

These pilot interventions will be grounded in best practices such as:

- Incorporating test and control groups to isolate the impact of an intervention
- Piloting programs in select jurisdictions or communities before scaling statewide
- Measuring short-term and long-term effects to determine whether behavior change is sustained

Message testing and pilot interventions will be catalogued and shared as best practices and help inform:

- Which outreach activities are prioritized for driving behavior change
- Which interventions are recommended for specific audiences
- How statewide campaigns evolve over time
- How CAA California allocates resources toward the most cost-effective, high-impact E&O strategies
- Additionally, all testing activities will follow standardized protocols to facilitate:
 - Consistency across jurisdictions in how pilot interventions are defined, collected and reported
 - Data integrity and comparability
 - Representation of California's diverse demographics
 - Alignment with statewide messaging and accessibility standards

7.7.3.6 *Establish a Continuous Feedback Loop*

CAA California will create and maintain regular feedback loops with implementation partners to ensure strategies remain responsive and effective. These may be communicated in a variety of ways, such as email, webinars, or updated toolkits.

7.8 Coordination Roles and Responsibilities

Achieving the education and outreach outcomes described throughout this chapter, including increasing correct participation, improving material capture, reducing contamination, and supporting effective implementation of SB 54 statewide, requires coordinated implementation across a diverse set of partners. This section outlines how E&O responsibilities are defined, how expectations are set and how CAA California supports coordination and accountability with its implementation partners.

CAA California's coordination with implementation partners is a structured, ongoing process that informs how E&O activities are designed, refined and deployed. This approach emphasizes clearly identified points of contact, defined roles and responsibilities, and continuous feedback, enabling CAA California and its partners to align efforts, respond to emerging needs and strengthen outcomes over time.

CAA California's coordination process includes the following core activities:

1. Assess and map the implementation partner landscape to understand the range of entities involved in E&O and their roles, capacities and points of interaction with the public. This internal CAA California assessment helps establish context for coordination and identifies where E&O coordination can have the greatest impact.
2. Establish dedicated E&O points of contact with local jurisdictions, recycling service providers, alternative collection programs and other E&O implementation partners.
3. Engage implementation partners to understand needs, barriers and operational challenges, as well as what approaches are working or not working in different contexts. This engagement may include relationship building and collaboration through meetings, webinars, surveys, focus groups and workshops.
4. Use partner insights to inform the development of shared E&O strategies and assets that can be incorporated into the statewide approach. These assets may include guidance documents, toolkits, signage concepts, training resources, campaign elements or other practical materials.
5. Provide core and customizable E&O materials that implementation partners can adapt for local use, enabling consistent messaging while allowing flexibility to reflect local context and needs.
6. Maintain ongoing feedback loops so implementation partners can provide input on planned E&O strategies, such as campaign development, or new materials that can help refine approaches prior to and during execution of E&O activities.
7. Support deployment and amplification of E&O campaigns by coordinating outreach timing, leveraging local channels such as municipal newsletters, school programs and community events.
8. Measure the effectiveness of E&O processes and tools through feedback loops, such as periodic implementation of partner satisfaction and usage surveys. The table below provides examples of key implementation partner types, their primary roles in delivering E&O, and the expectations used to assess whether those roles are being fulfilled, such as engaging with CAA California, using shared materials, and reinforcing statewide guidance through their own channels.

The table below provides examples of key implementation partner types, their primary roles in delivering E&O, and the expectations used to assess whether those roles are being fulfilled, such as engaging with CAA California, using shared materials, and reinforcing statewide guidance through their own channels.

Table 2: Key Implementation Partner Types, Roles and Expectations

Partner Type	Primary Dissemination Role	Example Fulfillment Indicators
Local jurisdictions and tribes	Share and reinforce localized statewide E&O materials through local channels	Use of standardized assets; timely updates when materials change and participation in feedback loops
Service providers (haulers, operators)	Provide clear, consistent guidance to customers at the time of collection, such as through carts, bins, trucks or other collection	Use of approved signage; coordination with local messaging and participation in feedback loops
CBOs	Deliver culturally relevant outreach to priority communities touchpoints, to support correct sorting and preparation of materials	Distribution of materials; coordination of messaging and participation in feedback loops
Businesses and institutions	Implement onsite guidance for customers, tenants, or staff	Use of site appropriate signage or training materials, and participation in feedback loops

CAA California will apply a structured, relationship-based approach to address implementation questions or coordination issues that arise during delivery of E&O activities. These may include partner questions about how to use materials, requests for clarification on messaging, timing or distribution considerations, or the need for additional guidance or support.

Through designated E&O points of contact, CAA California will work directly with implementation partners to understand their needs, answer questions, resolve issues and provide timely support. This may include reviewing feedback, clarifying expectations, offering revised guidance or materials and confirming alignment before and during implementation. This approach supports accountability while prioritizing collaboration, responsiveness and continuous improvement.

7.8.1 Integration with Existing Agreements

CAA California recognizes that many implementation partners already have recycling or similar E&O programs in place. CAA California’s goal is to integrate and align these existing efforts with statewide SB 54 requirements – not to replace them.

As described earlier in this chapter, CAA California will develop and maintain a suite of core California E&O materials to support consistent statewide messaging.

For E&O activities to be eligible for reimbursement under SB 54, local materials must align with statewide messaging, accessibility standards and applicable SB 54 requirements, as described in the Reimbursement and Payment Process chapter.

7.8.2 Support for Opt-Out Jurisdictions

For local jurisdictions that choose not to directly plan or implement SB 54-related education and outreach activities, CAA California will provide centralized E&O support to ensure consistent coverage and alignment with program requirements. This option is intended to support jurisdictions that may have limited capacity, resources or interest in managing SB 54-specific E&O activities, while ensuring residents still receive clear and accurate guidance.

Centralized support for opt-out jurisdictions may include activities discussed throughout this chapter such as deployment of statewide E&O campaigns tailored to local service conditions, such as whether materials are collected curbside, through drop-off or via alternative collection programs. CAA California will ensure that centralized support does not impact local education and outreach efforts outside the scope of SB 54.

7.9 Reimbursement and Governance

This section describes how E&O activities will be reimbursed under the program plan. It explains the eligibility of E&O as a covered cost, defines what constitutes reimbursable costs, outlines the principles and standards that govern reimbursement, and describes how CAA California will prioritize reimbursement based on impact, equity, and cost effectiveness. Together, these elements ensure that producer funds are used transparently and equitably to achieve SB 54 objectives.

7.9.1 Eligibility and Access

E&O activities are recognized under SB 54 as eligible covered costs and will be supported through CAA California's reimbursement process pursuant to PRC 42051.1(j)(1)(B) and 42060(a)(1). Implementation partners may apply for reimbursement of covered E&O costs through CAA California's online Service Provider Portal. Submitted costs will be reviewed against standardized criteria to ensure consistency, transparency, and alignment with SB 54 requirements. E&O activities may be eligible for reimbursement of up to 100% of qualifying costs. Eligibility does not guarantee full reimbursement; reimbursement levels will be based on pre-established, objective criteria described in the Reimbursement and Payment Process chapter, including documented scope of work, eligible cost categories, cost allocation methods and verification of completed activities.

Reimbursement is not contingent on discretionary evaluations of effectiveness, but on compliance with SB 54 requirements and approved project terms. Reimbursement for covered costs will be issued on a per-capita or project-based basis and tied to documented performance.

Equity considerations are integral to the reimbursement process. CAA California will ensure that EJ Communities and organizations have equitable access to funding, resources and technical assistance. As implementation partners, these organizations are eligible for reimbursement of covered E&O costs.

Additionally, California's K-12 public school districts are eligible for reimbursement of covered costs for SB 54-related E&O activities.

7.9.2 New and Additional Activities

Existing E&O activities are considered baseline and are not reimbursable. For reimbursement purposes, new and additional E&O activities refer to those new or supplementary E&O activities that go beyond existing E&O activities and that are required to meet SB 54 obligations. Eligible new and additional E&O activities include:

- Efforts to increase public participation in recycling and material capture for all recyclables, which may include items not on the CMC list if they are found to be a contaminant.
- Efforts required to communicate newly added materials on the CMC list (e.g., film or flexible packaging).
- Targeted campaigns to increase capture or reduce contamination for materials already collected, in support of recycling rate requirements.
- New messaging or materials developed in response to guidance, updates, or SB 54 requirements from CalRecycle.

Reimbursement is also limited to incremental E&O activities that complement rather than duplicate CAA California's E&O campaigns. Existing E&O activities funded through CAA California's media, advertising and public engagement efforts are not eligible for reimbursement.

Accordingly, reimbursement requests should focus on locally tailored activities that extend state-wide messaging, address local needs, or drive measurable improvements in public participation in recycling and material capture. This approach ensures that funding is directed toward the highest-impact activities and avoids duplicative spending.

7.9.3 Reimbursement Principles

To qualify for reimbursement, E&O activities must adhere to the following principles:

- Alignment with the CMC List: E&O materials must align with the CMC list.
- Use of Standardized or Approved Material Descriptions: E&O materials must use CAA California-standardized or CAA California-approved material descriptions, definitions and terminology to ensure consistency across jurisdictions.
- Adherence to Statewide Accessibility Standards: All E&O materials must meet statewide accessibility requirements, including language access, readability and ADA-compliant formats.
- New and Additional Efforts: E&O materials must be new and additional, or from existing E&O activities that are newly aligned with statewide messaging.
- Local Branding Flexibility: CAA California will provide customizable artwork, graphics and templates. Use of these templates is recommended but not required for reimbursement, provided content meets CAA California standards.
- Co-Branding Encouraged: Co-branding with CAA California-provided logos is encouraged to reinforce a consistent statewide brand while allowing local branding to remain visible.

7.9.4 Impact and Cost Effectiveness

Because E&O activities are eligible for up to full reimbursement, reimbursement determinations will be based on an evaluation of demonstrated impact, cost effectiveness and alignment with SB 54 goals. To support consistent evaluation across local jurisdictions and efficient use of producer funds, CAA California may reference standardized categories of E&O activities, each associated with typical cost ranges and expected performance outcomes.

7.9.5 Performance Indicators

CAA California will apply a set of performance indicators which may be expressed as ranges or qualitative thresholds to assess whether reimbursable E&O activities demonstrate meaningful impact and alignment with program goals. Indicators include:

- Reach and frequency of E&O activities
- Use of standardized or approved messaging
- Evidence of targeted outreach to priority populations
- Demonstrated behavior changes measured by improvements in recycling participation, contamination reduction or material capture

These performance indicators provide flexibility while ensuring accountability and comparability across jurisdictions. For complete details, refer to the Reimbursement and Payment Process chapter.

7.9.6 Messaging Governance and Decision-Making

CAA California will apply a defined governance approach to E&O messaging to ensure clarity, consistency and accountability. CAA California is responsible for the development and approval of statewide E&O strategies, messaging and shared educational resources intended to support SB 54 implementation.

Local jurisdictions, service providers and other implementation partners may adapt or supplement E&O materials to reflect local conditions, provided those adaptations remain aligned with statewide messaging and SB 54 requirements.

Where questions or conflicts arise between statewide and localized messaging, CAA California will work collaboratively with affected parties to resolve issues and maintain clarity for the public.

As appropriate, CAA California will coordinate with CalRecycle to address issues that have broader programmatic, regulatory or compliance implications.



Chapter 8: Budget Development for SB 54 Implementation

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Chapter 8: Budget Development for SB 54 Implementation

8.1 Introduction

SB 54 establishes an Extended Producer Responsibility (EPR) framework that includes funding and investment obligations that are unique to California. SB 54 requires CAA California to develop an investment strategy that enables plastic packaging producers to achieve source reduction, including transitioning packaging toward reuse and refill systems. SB 54 further directs CAA California to assess, collect, and remit the environmental mitigation surcharge into the Plastic Pollution Mitigation Fund (PPMF) and to maintain a trust fund for the Closure and Transfer Plan Fund. These obligations must be incorporated into CAA California's overall program plan budget in addition to the general expenditures necessary to fulfill all EPR program plan requirements.

This chapter presents the program plan budget that CAA California will implement to achieve SB 54 requirements. CAA California has prepared a five-year budget, fully financed through annual producer fees for covered materials. The budget projections reflect the findings of CalRecycle's Needs Assessment, as well as CAA California's internal forecasts of future funding requirements and systemwide investment needs. The budget will fund actions to increase recycling, achieve source reduction and support producers with meeting recyclability and compostability determinations for their packaging and food serviceware. The budget includes estimated reimbursement requests from local jurisdictions and service providers for new and incremental costs. In addition, the budget allocates sufficient resources to support environmental justice commitments, develop and sustain Responsible End Markets (REMs), and address environmental and human health impacts associated with covered materials.

CAA California will refine this preliminary budget based on ongoing engagement with interested parties and future updates to program plan activities. Packaging and recycling are dynamic systems that require iterative changes based on early outcomes and analysis. These changes will result in changes in the projected budget for future years.

CAA California applies standardized forecasting methodologies, incorporates appropriate risk contingencies, and ensures alignment with all SB 54 requirements.

8.1.1 Budget Coverage

The program plan budget supports all elements of implementation of SB 54, including covering the following costs:

- Reimbursements to local jurisdictions and service providers – including pre-program reimbursement covering 2023-2026 – for new and additional costs associated with collection, transportation, sorting, processing and composting of covered materials, as well as education and outreach (E&O)
- Administrative and regulatory expenditures, including Producer Responsibility Organization (PRO) operations and required reimbursements to CalRecycle
- Mandatory contributions to the PPMF, pursuant to PRC 42064
- Funding the Closure and Transfer Fund, pursuant to Section 18980.8.2(a)(3)(A)
- Investments to develop and sustain viable REMs for Covered Material Categories (CMCs)

- Infrastructure and innovation funding, which may include investments in curbside and drop-off service expansion, public space collection, advanced sorting technologies, reuse and refill systems, composting facilities, and other system-enhancing initiatives
- Measures to ensure that program plan implementation reduces impacts on disadvantaged or low-income communities or rural areas
- Materials-specific investments, providing targeted funding and interventions to improve recycling performance and end-of-life management for individual material categories
- Any additional investment strategies necessary to support the development of collection, transportation, and processing infrastructure consistent with SB 54 requirements

8.2 CAA California's Budget Development Process and Principles

8.2.1 Principles

SB 54 requires CAA California to submit a preliminary five-year program plan budget for regulatory approval. In developing this budget, CAA California has applied an objective and fair approach to ensure that producer cost obligations are prudent, balanced, and aligned with SB 54 requirements. The budget is designed to reflect the practical realities of program plan implementation while ensuring financial responsibility on behalf of producers.

CAA California's approach ensures that producer fees are based on an assessment of anticipated program plan costs and are sufficient to fund the implementation plan. The resulting budget is CAA California's current best estimate of costs to implement SB 54 obligations.

8.2.2 Approach

CAA developed the budget using a variety of information sources, including the Needs Assessment and CAA California's internal research. CAA California consulted with service providers, gathered state-level data, and analyzed other EPR programs. CAA California presents its budget estimates as ranges, to account for uncertainty in needed reimbursement levels, and which interventions will be successful. Updates to budgets and fees will be provided in future CAA California Annual Reports as per statutory requirements.

CAA California has launched the California Recycling and Reuse System Optimization Project (CARRSOP), an initiative to gather information from local jurisdictions and recycling service providers that will support updating the program budget for the submission to CalRecycle in October. The Materials Strategy and Covered Material Compliance Plan chapter provides further details on this project.

CAA California addresses uncertainty with two cost scenarios for the five-year program plan time-frame: a baseline case and a higher cost case. The different cost scenarios reflect different assumptions about reimbursement levels, system performance, and investment requirements, as outlined below.

8.2.3 Managing Risks and Uncertainties

CAA California's budget development process explicitly incorporates risk management. That is especially important in California, given SB 54's unique components, such as reuse and refill targets and requirements for recyclability. CAA California's risk management strategies include:

- Presenting budget ranges rather than fixed figures to reflect uncertainty
- Drawing on CAA's national experience working with other state program plans, where CAA developed pre-program budgets before important operational data was available
- Building flexibility into the budget to allow adjustments as new data emerges from interest holder input, as the scope of exclusions and any approved exemptions become evident, and as CAA California begins implementing the program plan
- Assessing a range of intervention and investment pathways to improve recycling performance, in consideration of costs, risks, and prudent use of producer funds to support the achievement of program targets

This approach structures the program plan budget with sufficient working capital to respond to unexpected changes to the regulatory environment, evolving program plan demands, and operational risks. CAA California's budget builds operating reserves to mitigate requiring additional producer contributions beyond what is already outlined, while still maintaining the flexibility to meet SB 54's requirements under a wide range of scenarios.

8.2.4 Budget Restrictions

The program plan budget must comply with statutory requirements and will not fund activities prohibited under PRC 40004 or 40059. A clear mechanism will be established to disburse funds only for approved activities.

Revenue collected for implementation of the plan will not be used for:

- Paying administrative civil penalties or litigation costs against the state
- Lobbying, legislative advocacy, or related advertising
- Supporting waste disposal activities such as incineration, engineered waste conversion, and energy or fuel production (except fuels from anaerobic digestion of source separated organics)

These restrictions ensure all program plan funds are directed toward achieving SB 54 objectives and not diverted to unrelated or prohibited uses.

As a nonprofit 501(c)(3) organization with no independent revenue source beyond participant producers, and consistent with the statutory distinction between revenues collected for implementation of the program plan and other PRO operating costs, CAA will maintain a separate fee mechanism to fund administrative, legal, and other organizational operating costs that are not funded through plan implementation revenues. CAA will ensure its participant agreements and related fee structure provide a mechanism to fund such costs separately from amounts collected for implementation of the plan.

8.3 Preliminary Program Budget

8.3.1 Five-Year Program Budget

Good-faith, non-binding fee rate estimates, referred to as "illustrative fees," were published in May 2026 and are also presented in the Fee-Setting chapter. Five-year program budget ranges are presented in the table below with each cost category below. CAA expects that fee revenues generated in each program year will cover the program budget for that year.

Table 1: Preliminary Five-Year Program Plan Budget by Cost Category

Budget Item \$M	2027	2028	2029	2030	2031	TOTAL
Collection Capital & Operating	\$49 to \$72	\$108 to \$212	\$132 to \$351	\$180 to \$539	\$229 to \$727	\$721 to \$1878
Processing Capital & Operating	\$57 to \$189	\$131 to \$505	\$162 to \$614	\$260 to \$1099	\$321 to \$1355	\$931 to \$3762
Transfer Facilities and Transportation	\$6 to \$19	\$16 to \$61	\$20 to \$85	\$35 to \$144	\$51 to \$202	\$128 to \$511
Compost Capital & Operating	\$43	\$66	\$100	\$133	\$166	\$508
Material Characterization Studies	\$10 to \$15	\$20 to \$31	\$21 to \$47	\$22 to \$62	\$23 to \$78	\$96 to \$233
Material Specific Investments and Operations	\$208 to \$336	\$290 to \$517	\$355 to \$705	\$424 to \$847	\$653 to \$1073	\$1930 to \$3478
REM Verification & Support	\$3	\$3	\$3	\$3	\$3	\$15
Source Reduction	\$2 to \$4	\$2 to \$3	\$2 to \$3	\$2 to \$3	\$2 to \$3	\$10 to \$16
Reuse & Refill	\$70	\$170 to \$335	\$220 to \$490	\$275 to \$635	\$350 to \$800	\$1085 to \$2330
Education and Outreach	\$46 to \$117	\$101 to \$170	\$166 to \$251	\$166 to \$251	\$166 to \$251	\$646 to \$1038
Regulatory	\$50 to \$75	\$10 to \$20	\$10 to \$20	\$10 to \$20	\$10 to \$20	\$90 to \$155
Program Start-up	\$10 to \$20					
PRO Operations and Support	\$41 to \$55	\$49 to \$63	\$53 to \$62	\$57 to \$59	\$61 to \$64	\$260 to \$303
Program Reserves	\$112 to \$228	\$120 to \$253	\$127 to \$272	\$135 to \$298	\$147 to \$322	\$641 to \$1373
Closure and Transfer Plan	\$100 to \$200	\$100 to \$200	\$100 to \$200	\$100 to \$200	\$100 to \$200	\$500 to \$1000
Plastic Pollution Mitigation Fund	\$500	\$500	\$500	\$500	\$500	\$2500
TOTAL*	\$1257 to \$1874	\$1579 to \$2726	\$1839 to \$3351	\$2122 to \$4255	\$2553 to \$5037	\$9350 to \$17243

*Program year budget totals may not precisely equal to the sum of budget line items due to rounding and reconciliation measures.

8.4 Description of Budget Cost Categories

This section presents the expected budget cost categories, a brief description of each, and an explanation of how expenditures are projected to change over the five-year program plan period.

8.4.1 Collection Capital and Operating

This budget cost category reflects estimated payments to local jurisdictions and collection service providers. These reimbursement payments will fund activities that expand and improve local jurisdiction recycling services. They may also include payments to expand collection service to areas that do not currently have it, add materials to existing programs, add material drop-offs or upgrade and expand existing ones.

Table 2: Collection Capital and Operating Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$49 to \$72	\$108 to \$212	\$132 to \$351	\$180 to \$539	\$229 to \$727	\$721 to \$1878

8.4.2 Processing Capital and Operating

Processing capital and operating costs include payments to materials recovery facility (MRF) operators for new and additional processing and operating costs. These may include costs associated with receiving and sorting covered materials, disposing of contaminants and residue, managing material cost fluctuations, and implementing facility improvements that are needed to meet SB 54 standards. These payments may also be available for reimbursements and investments in secondary sorting facilities and, potentially, targeted mixed waste processing facilities.

Table 3: Processing Capital and Operating

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$57 to \$189	\$131 to \$505	\$162 to \$614	\$260 to \$1099	\$321 to \$1355	\$931 to \$3762

8.4.3 Transfer Facilities and Transportation

These include estimated payments to transfer facility operators, to fund new and additional costs of adding covered materials or equipment to support SB 54 objectives.

CAA California will also make payments to transportation service providers to cover the actual new and additional costs associated with managing and transporting covered materials. This payment mechanism is outlined further in the Reimbursement and Payment Process chapter.

Table 4: Transfer Facilities and Transportation Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$6 to \$19	\$16 to \$61	\$20 to \$85	\$35 to \$144	\$51 to \$202	\$128 to \$511

8.4.4 Compost Capital and Operating

These costs include payments to organics facility operators for the new and additional costs associated with accepting compostable packaging at scale and reducing contamination in incoming and processed material streams. These processing reimbursements will support the management of compostable covered materials and will include expenditures for acceptance payments, processing fees, design and labeling guidance, and any required research or studies to inform effective implementation of SB 54 requirements.

Table 5: Compost Capital and Operating Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$43	\$66	\$100	\$133	\$166	\$508

8.4.5 Material Characterization Studies

CAA California will conduct material characterization studies to better understand the composition of material that is inbound to MRFs, outbound from MRFs, and going to disposal.

Table 6: Material Characterization Studies

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$10 to \$15	\$20 to \$31	\$21 to \$47	\$22 to \$62	\$23 to \$78	\$96 to \$233

8.4.6 Material-Specific Investments and Operations

CAA California will make targeted investments to improve collection and processing of specific CMCs. Some of these investments may be led by CAA California, while others will come through the applicant-driven reimbursement process. This budget line item includes studies to determine investments on specific CMCs. Investments in end markets to improve their viability and ability to handle the material, along with separate collections for specific materials are also included in this line item. More information is available in the REMs and Materials Strategy and Covered Material Compliance Plan chapters.

Table 7: Material-Specific Investment Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$208 to \$336	\$290 to \$517	\$355 to \$705	\$424 to \$847	\$653 to \$1073	\$1930 to \$3478

8.4.7 REM Verification and Support

CAA California's budget for REMs development and verification reflects the projected number of REM audits required over the life of the program plan, and any required compliance actions CAA California may undertake. The budget provides for REM audit and verification activities, and specific material characterization studies.

Table 8: REM Verification and Support Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$3	\$3	\$3	\$3	\$3	\$15

8.4.8 Source Reduction

SB 54 requires producers to take ambitious steps to reduce the amount of plastic in their packaging. Source reduction will include an incentive mechanism that grants a bonus to producers for source reduction below their baseline and funds the bonus by charging an extra fee on all virgin plastic material. Most of the source reduction costs will be born directly by producers and have no impact on the net program budget. This budget line item for source reduction is for administration of the incentive system and to support producers in making packaging transitions.

Table 9: Source Reduction Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$2 to \$3	\$2 to \$3	\$2 to \$3	\$2 to \$3	\$2 to \$3	\$10 to \$16

8.4.9 Reuse and Refill

CAA California will allocate funding for both capital and operating expenditures. Capital expenditures (CapEx) may include reusable package inventory, collection points, wash hubs, and transport fleets. Operating expenditures (OpEx) may include new and additional system-operating costs, outreach and marketing costs, subsidies for reusable options, change management and technical support. CAA California plans to adjust these estimates as new information becomes available.

Table 10: Reuse and Refill Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$70	\$170 to \$335	\$220 to \$490	\$275 to \$635	\$350 to \$800	\$1085 to \$2330

8.4.10 Education and Outreach

The budget covers the costs of delivering statewide and community-level E&O campaigns. This includes an estimated \$2 per capita in spending to reimburse local jurisdictions for new and additional E&O costs, such as research, creative development, distribution of materials, and multilingual translations.

The budget supports implementation of the program plan's E&O Plan, as detailed in the Education and Outreach chapter.

Table 11: Education and Outreach Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$46 to \$117	\$101 to \$170	\$166 to \$251	\$166 to \$251	\$166 to \$251	\$646 to \$1038

8.4.11 Regulatory

Under PRC 42053(c), CAA California must include specific regulatory costs within the budget. Regulatory costs include all expenditures required to pay the California circular economy administrative fee, which will be used to reimburse CalRecycle and other relevant state agencies for the full personnel and operational expenses associated with administering, implementing, and enforcing the program plan. Additional costs include reimbursements to CalRecycle for its administration of the Producer Responsibility Advisory Board, as well as reimbursement for the development of the Needs Assessment and any subsequent updates to that document.

Table 12: Regulatory Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$50 to \$75	\$10 to \$20	\$10 to \$20	\$10 to \$20	\$10 to \$20	\$90 to \$155

8.4.12 Program Start-Up

Program start-up costs are those incurred by CAA California for pre-launch program plan development. These are costs incurred over multiple years leading up to the launch of the program. These costs include those tied to engaging in the rule-making process, hiring staff in advance of the program plan launch, and finalizing the program plan. CAA California intends to partially recoup these costs through early fees invoiced in August 2026.

Table 13: Program Start-up Costs

	2023-2026
Line item \$ M	\$10 to \$20

8.4.13 Management and Administration

CAA California's management and administrative costs reflect the estimated expenses of administering the program, including CAA California staffing and overhead, and support services received from CAA's national teams.

Table 14: PRO Management and Administration Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$41 to \$55	\$49 to \$63	\$53 to \$62	\$57 to \$59	\$61 to \$64	\$260 to \$303

8.4.14 Program Reserves

References: 42051.1(j)(3)

In accordance with SB 54, CAA California will maintain program reserves capped at 60% of annual operating expenses, consistent with the requirements of the Financial Accounting Standards Board's Accounting Standards Update 2016-14, Not-for-Profit Entities. Operating expenses will include new and additional operating costs that could include amortization of capital but will not include direct capital investments.

Program reserves are set based on CAA California's assessment of operating risks and working capital needs as outlined in CAA California's reserves policy. A portion of producer fees will be allocated to build the required level of reserves. In addition, operating contingencies are included within material management costs to address potential increases arising from negotiations with local jurisdictions.

Table 15: Program Reserves Costs

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$112 to \$228	\$120 to \$253	\$127 to \$272	\$135 to \$298	\$147 to \$322	\$641 to \$1373

8.4.15 Closure and Transfer Plan Fund

CAA California will establish and maintain a dedicated account, referred to as the Closure and Transfer Fund, to ensure program continuity in the event the plan is terminated, revoked, or if CAA California ceases to serve as the designated PRO. As required under PRC 42056, this fund will be maintained as a separate account.

The Closure and Transfer Fund will remain active until it is transferred to a trustee or designated agent and will be used exclusively to fulfill PRO obligations during the closure period, including reimbursements to local jurisdictions and service providers, infrastructure and technology investments, and other eligible program expenditures. CAA California will monitor the fund to ensure it remains adequately funded.

Table 16: Closure and Transfer Plan Fund

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$100 to \$200	\$100 to \$200	\$100 to \$200	\$100 to \$200	\$100 to \$200	\$500 to \$1000

8.4.16 Plastic Pollution Mitigation Fund

Beginning in 2027, CAA California will pay an annual \$500 million environmental mitigation surcharge to the California Department of Tax and Fee Administration, which will be deposited into the PPMF. Established under PRC 42064, the fund is administered by state agencies and dedicated solely to addressing plastic pollution.

Over 10 years, CAA California and approved independent producers will collectively raise \$5 billion through producer fees calculated based on each producer's share of plastic covered materials (by weight and component count). Starting in the 2027 calendar year, payments are due annually. In addition, plastic resin manufacturers may contribute up to \$150 million per year to the PPMF. Please refer to Section 9.7 in the Fee-Setting chapter for more details on the targeted engagement with resin makers to request their contributions.

Table 17: Plastic Pollution Mitigation Fund

	2027	2028	2029	2030	2031	TOTAL
Line item \$ M	\$500	\$500	\$500	\$500	\$500	\$2500

Chapter 9: Fee-Setting

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Chapter 9: Fee-Setting

9.1 Introduction

As part of Extended Producer Responsibility (EPR) programs, the Producer Responsibility Organization (PRO) sets and charges producer fees to obligated producers to generate sufficient funding for the PRO to meet regulatory obligations, increase recycling and achieve source reduction. Producers are responsible for paying their fair share of fees to fund collection, transporting, recycling and safe disposal of eligible materials, and investments to improve recycling outcomes.

Understanding the development of the fee schedule (how the fee is composed, what elements contribute to its value and resulting rates) is important, because fee schedules are designed to reflect the recyclability, material type, and environmental impact of products. Transparent and well-designed fee-setting methodologies ensure fairness among producers and create incentives for more sustainable packaging and design choices, thus encouraging companies to reduce waste, improve recyclability, and align with the goals of SB 54.

CAA California is leveraging CAA fee-setting methodology and principles to set producer fees in California in a consistent manner. However, some of the unique cost obligations in California (such as source reduction investments, the Plastic Pollution Mitigation Fund (PPMF), and the Closure and Transfer Fund) will require slight modifications to the standard fee-setting methodology before allocating these costs through producer fees. The fee-setting methodology and resulting fee schedules may also need to be adjusted as CalRecycle makes final determinations on certain California-specific exclusions and exemptions.

9.2 Understanding SB 54 Fee-Setting Requirements and PRC 42053 Provisions

CAA will establish and charge fees to producers that are sufficient to meet SB 54 requirements and fully fund the program plan budget.

This section outlines in detail SB 54's specific statutory requirements around required covered costs, and the conditions to adjust base fees.

9.2.1 Roles and Responsibilities

The PRO and producers have different roles and responsibilities in fee-setting.

1. The PRO

- Develops a fee schedule that ensures fairness across supplied material categories and a fully funded program plan budget
- Adjusts fee schedules at least every year based on updates to funding requirements and reported supply tons each year

2. Producers

- Report the supply of packaging sold into California
- Pay the fees for each program year
- Upon request, provide the PRO with records or other information for the PRO to meet its requirements under SB 54
- As per PRC42053(a)1, EPR fees may not be passed onto consumers as a separate line item on a receipt or invoice for covered materials

9.2.2 PRC 42053 Fee Requirements and Provisions

As per PRC 42053(d), CAA California shall develop a fee schedule that is organized by each covered material category (CMC) and based on the provisions in Table 1. The first four provisions in Table 1 are required by SB 54, while the remaining five are optional. A full analysis of these requirements and how CAA proposes to incorporate them into base fees is provided in section 9.5 How CAA’s Fee-Setting Approach Meets PRC 42053 Requirements.

Table 1: CAA California’s Fee Schedule

Base Fees shall reflect:
1. Variations in fees to reflect that some CMCs are easier and less expensive to recycle or compost, resulting in lower fees
2. Increased costs to manage covered materials that are difficult to recycle or compost due to the incorporation of elements that may be detrimental to recycling or composting, according to relevant industry design guides or criteria established by CalRecycle (described in more detail in the Eco-Modulation chapter)
3. Commodity values of covered materials, where applicable
4. Costs incurred by CAA California to assist producers to meet the program plan source reduction requirements
Base Fees may cover new and additional costs:
A. To develop and sustain viable Responsible End Markets (REMs)
B. To collect, sort, avoid or remove contamination, aggregate, and transport the covered material into defined streams
C. To process and transport covered materials for acceptance by REMs, including reducing contamination of non-certified compostable products
D. To implement the program plan and achieve the source reduction, recyclability and compostability, and recycling rate goals, and other program plan requirements
E. To sample and report on waste stream data, as well as education and outreach (E&O) costs to engage and inform ratepayers on the proper preparation and sorting of covered material

The fee requirements in Table 1 will be covered in the program plan budget presented in the Budget Development chapter, and in the draft fee schedule in Table 5 of this chapter once numbers are finalized. CAA intends to set and charge 2027 EPR (base) fees based on these criteria.

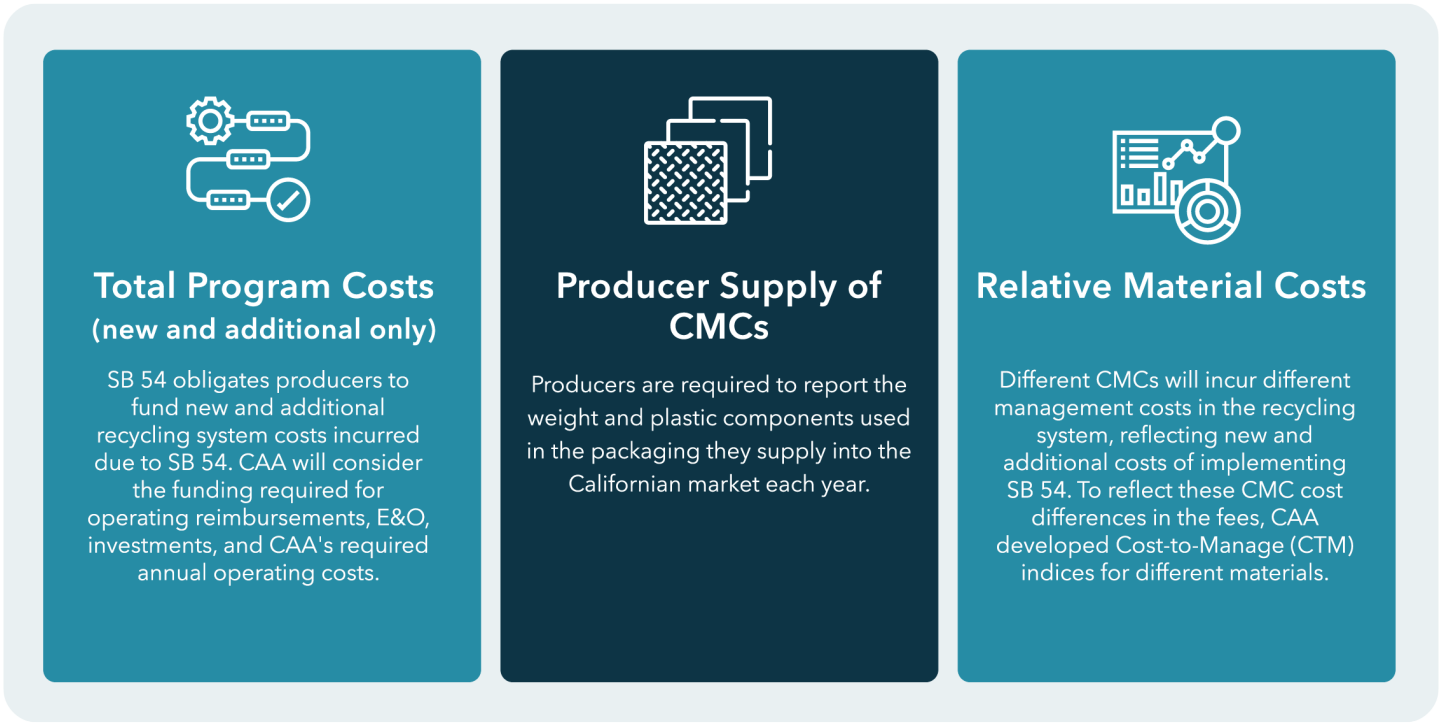
9.3 Developing the EPR (Base) Fees

9.3.1 Overview

This section describes CAA’s harmonized guiding principles and methodology for setting EPR (base) fees in EPR programs.

Three core components are needed to set base fees: total program costs, producer-reported supply of materials supplied in the state, and unique cost-to-manage indices for each CMC. These three components are described below in Figure 1.

Figure 1: CAA’s Three Core Components of Fee Setting



To set EPR (base) fees, CAA establishes the total funding obligations of implementing the California program plan each year and allocates these costs to producers based on their supplied weights of each CMC. The costs associated with each CMC are then adjusted with CTM indices that reflect the different management costs of each material type. The CTM-weighted cost of each CMC is then divided by the total supply weight of each CMC to calculate CMC-specific fee rates for the fee schedule. CAA will use this methodology to set base fees that meet SB 54 requirements and are harmonized with other state EPR programs. The methodology is data-driven and underpinned by a set of guiding principles that emphasize harmonization, fairness and clarity.

9.3.2 CAA Fee-Setting Guiding Principles

CAA has established a set of fair, clear and effective guiding principles to shape fee-setting across multiple states:

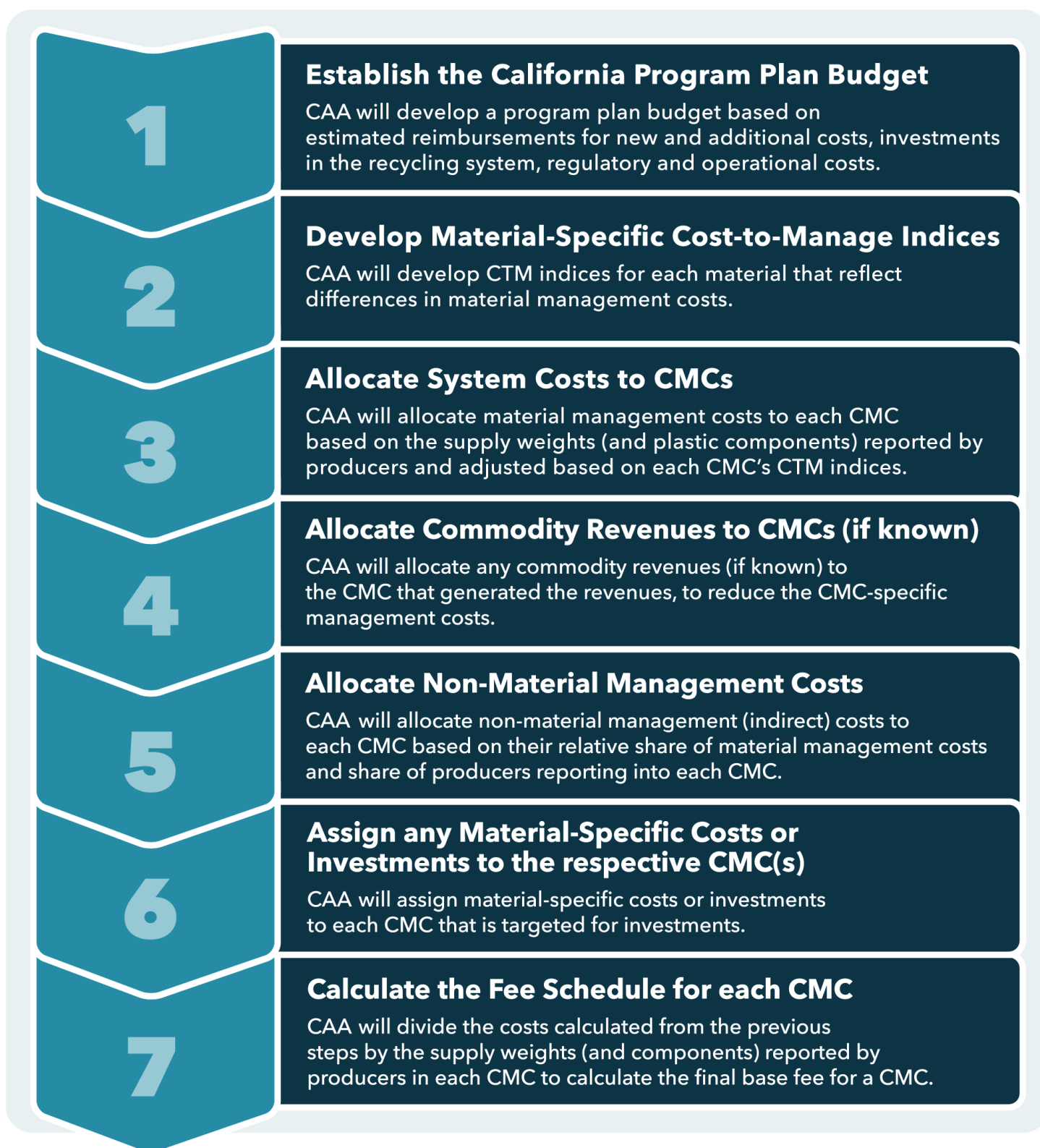
1. **Harmonization:** The national fee-setting methodology will be used consistently across states, but the fee rates will vary by state due to differing state requirements and program costs.
2. **Fairness:** Producers supplying covered materials to consumers must contribute to the costs of the recycling system, including producers that use materials that 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. **Eco-modulation:** Fee-setting will account for measurable environmental objectives and state-mandated eco-modulation policies.
6. **Responsible End Markets:** Fee-setting will factor in the development and maintenance of viable responsible markets with any associated costs attributed to the material category that requires end market development.
7. **Clarity:** Fee-setting materials and consultations will be prepared and conducted in a manner that clearly communicates to producers the principles, and methodologies that CAA is using to determine fee rates.

9.3.3 Fee-Setting Methodology

To determine the EPR (base) fees, CAA's fee-setting methodology allocates the estimated program costs to each covered material based on its share of total supply tons. Variations in program costs for each material reflect CAA's incorporation of CTM indices into the fee calculation process. These indices represent the varying cost impacts of each material type, incurred in the recycling system as it is being managed from collection to transfer and consolidation, and then transportation to processing facilities. Additional details of the CTM model can be found further down in this chapter. Other factors, such as commodity revenues and share of supply quantities, also play a role in material cost variations.

9.3.3.1 Fee-Setting Steps

CAA's fee-setting methodology includes seven steps to calculate each CMC base fee rate, as outlined in Figure 2.

Figure 2: CAA's Fee-Setting Steps

This methodology ensures fairness for producers by differentiating material fees based on each CMC's supply, cost and revenues. Materials with the highest supply quantities and CTM indices pay the highest share of costs. Materials generating the most commodity revenues benefit from the largest reduction in costs.

Materials with high recycling rates benefit from high commodity revenues to lower their recycling costs. High recycling rates do not lead to higher fees (unless a material is sold at negative values because its market value is less than the cost of transportation) because highly recycled materials should not be penalized.

9.3.3.2 California-Specific Elements of the Fee-Setting Methodology

CAA California will establish separate fees to fund reuse/refill investments and contributions to the PPMF. These fees will be distinct from the EPR base fees and will apply only to producers that supply plastic packaging.

The fee-setting methodology for these obligations falls outside the harmonized methodology and steps outlined above. Instead, producer allocations will be determined by each producer's share of plastic components and/or the weight of plastic covered material sold, offered for sale, distributed, or imported into California. This approach is fair because it aligns fees with each producer's contribution to the plastic system, reflects actual material presence in the market, and ensures that producers with greater plastic footprints support a proportionate share of the required investments.

Reuse/refill investments will be allocated solely based on weight of plastic placed on the market. Details of the formula for allocating the PPMF are provided in section 9.7 Raising Fees for the Plastic Pollution Mitigation Fund (PPMF).

9.3.4 Development of Cost to Manage (CTM) Indices

This section provides details about the development of CTM indices used with the fee-setting process, explaining what the indices are, why and when they are used, and how they are calculated.

An index is a calculation of the relative costs of materials. It relates the cost of each material to the lowest cost material, starting with 1 and moving up. The higher the index above 1, the higher the relative cost of that material compared with all other materials.

CTM indices fulfill PRC 42503(d) requirements around cost allocation in fee setting. CTM indices are necessary as they reflect the varied costs of managing different CMCs. They provide a means to appropriately allocate costs to different CMC to fairly set producer fees.

These indices are used to allocate costs when different elements of the recycling or composting systems are shared across multiple materials – for example, single-stream recycling collection is shared across all accepted materials.

CTM indices are calculated using the CTM model, which is built from a series of cost modules that model the material management processes and costs associated with each material type. The model reflects specific material types, tonnages and system costs, drawing on the best available cost data and material composition information.

The following section provides more detail around the calculation of the CTM index for recyclables and compostables. The following three terms help describe the building blocks of the CTM model:

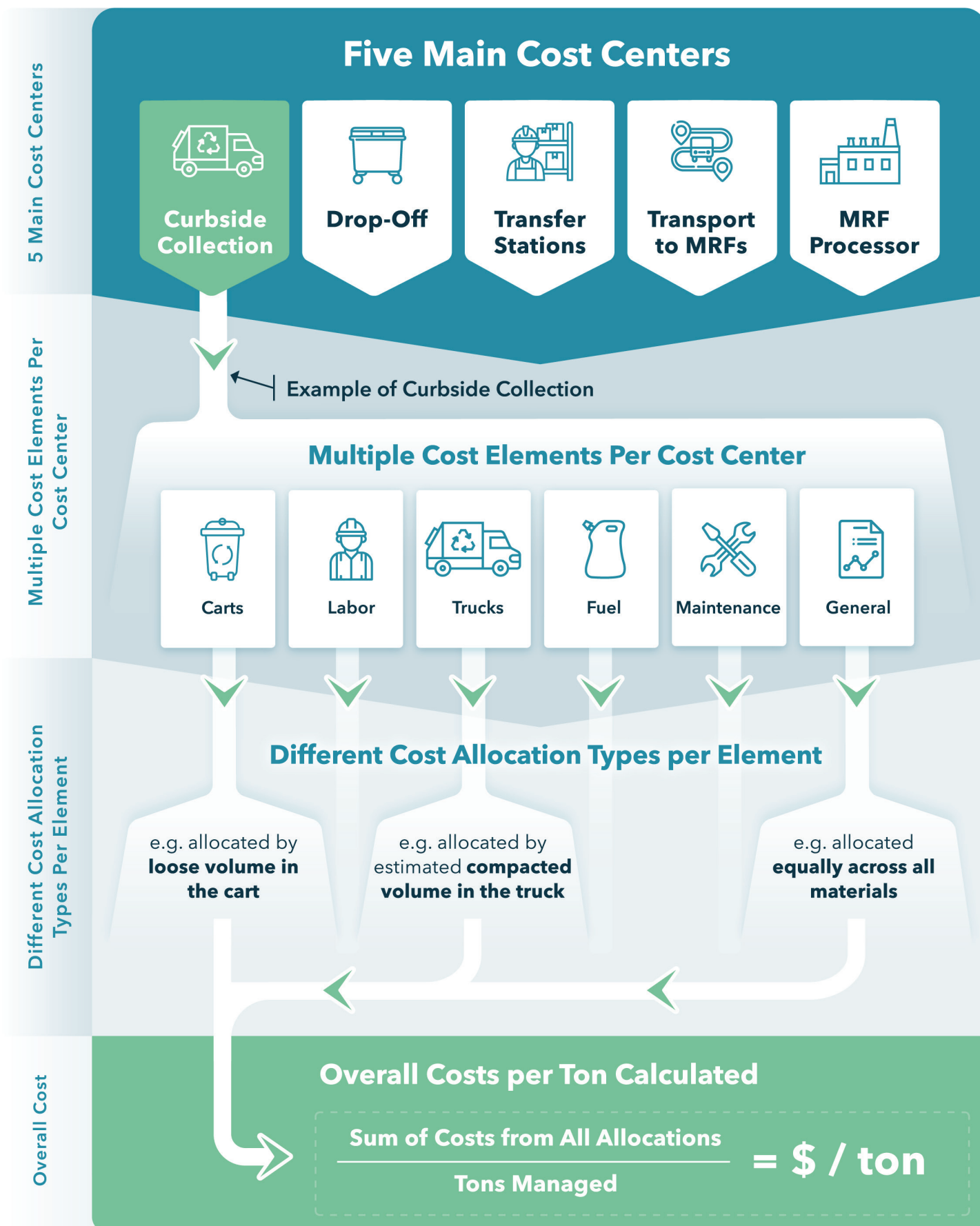
1. **Cost Center:** a budget for a distinct portion of the recycling process
2. **Cost Element:** a line item of the budget in a cost center, either amortized capital or an operational cost
3. **Cost Module:** the calculation engine used to distribute costs from each cost element across the relevant materials

9.3.4.1 CTM Index for Recyclable Packaging and Food Serviceware

Developing the CTM index for recyclable packaging and food serviceware requires several steps:

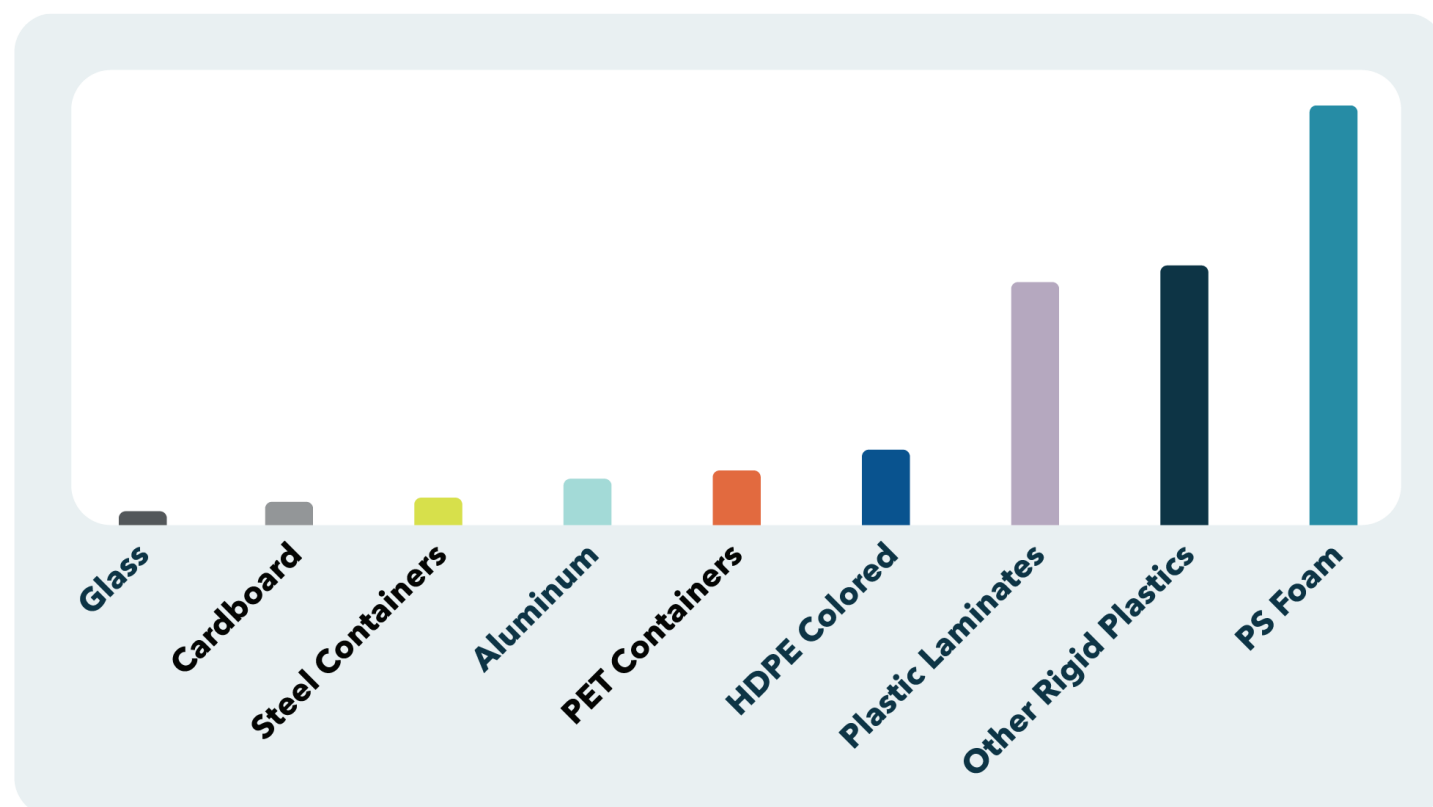
1. Define five cost centers that reflect the key parts of the recycling process:
 - Curbside collection
 - Drop-off sites
 - Transfer stations
 - Transportation to MRFs
 - MRFs (processors)
2. Each cost center is broken down into its core cost elements. Curbside collection, for example, has several cost elements such as recycling carts, trucks, fuel and labor. Each individual cost element is estimated based on analysis of system operations.
3. Each cost module then further allocates the unique costs in each cost element to individual CMCs, using different allocation metrics such as relative material weight or volume. For example, the cost for optical sorters that are used to sort a specific plastic type at a MRF is assigned to the materials that it sorts. In contrast, as can be seen in Figure 3, all materials benefit from both the cart and the truck for collection. These costs are divided up using different measures of the space that each material consumes either in the cart or the truck.
4. Because materials can be contaminated entering the recycling system, contamination handling and disposal costs are also captured and assigned to the materials that are not accepted in the program.
5. The sum of all costs for each CMC from all cost elements is then calculated and divided by the amount of tons managed. This then calculates the cost per ton figure.
6. Finally, each CMC cost per ton is indexed by relating each of them to the lowest cost per ton. This creates the CTM index, with an index of 1 being the lowest cost per ton CMC.

This process is summarized in Figures 3 and 4 below.

Figure 3: Developing CTM Index for Recyclable Packaging and Food Serveware

An example of the relative nature of the CTM index is provided below, where the CMC with the lowest cost per ton is glass with a cost index of 1. All other CMCs have higher costs per ton, and so their cost index values are all greater than 1. The index values are used as part of the fee rate calculation.

Figure 4: Illustrative CTM Index Results



The figure illustrates an example of the relative nature of the CTM Index with glass having the lowest cost per ton with a cost index of 1. Every subsequent category of material types in the graph get incrementally higher in cost index values.

During this program plan period, CAA California will be making significant investments to change and improve the management of materials and will only be funding the new and additional costs. For this reason, the CTM model is forward-looking to include the upcoming investments. The CTM index values are calculated to include the projected performance and costs of the new recycling infrastructure. It is updated on an annual basis with actual and projected performance data and updated cost projections.

9.3.4.2 CTM Index for Compostable Packaging and Food Serviceware

Some CMCs are eligible to be labeled compostable, while other CMCs have both recyclable and compostable designations. As the processes and costs of managing recyclable or compostable packaging are vastly different, CAA will develop and maintain a separate cost module within the CTM model for compostable materials. The resulting CTM indices for recyclables and compostables will be used to inform fees for recyclable and/or compostable packaging individually, or in combination, depending on how each material is categorized by SB 343 or an alternative, evidence-based framework aligned with the operational realities in California.

9.4 Cost Categories Used for Fee-Setting

To set producer fees, costs are grouped into defined cost categories and allocated to each of the CMCs using specified allocation methods. A description of each cost category, examples of costs, cost allocation method and rationale for each cost category is provided in Table 2 below.

Table 2: Cost Categories Used for Fee-Setting

Cost Category	Includes	Cost Allocation Method	Rationale
Material Management (MM)	Direct costs, investments, and reimbursements of new and additional costs associated with collection, transfers stations, transportation, processing capital and operating costs	Supply tons share % x CTM (supply-driven fee-setting methodology)	Materials with the highest supply quantities and cost indices pay the highest share of costs.
Non-Material Management (non-MM)	Indirect costs: Education and outreach, waste characterization, REM development, regulatory costs, program development and program administration	70% based on a material's share of MM costs 30% based on count of producers reporting into each material category	These are indirect costs and may not directly correlate to the quantities supplied or managed. The number of producers reporting and requiring PRO services will have a stronger correlation to the amount of indirect costs needed.
Program Reserves	Working capital, operating and risk reserves	Based on a material's share of MM costs	Program reserves are intended to cover CMC-driven revenue shortfall and/or cost overrun situations.
Closure and Transfer Fund (CTF)	Closure and Transfer Fund	Based on a material's share % of MM costs, or share % of supplied plastic weights (for CTF related to reuse/refill investments)	CTF is a requirement of the Closure and Transfer Plan and reflects six months of operating expenses.
Material-Specific Costs and Revenues	- Commodity revenues - Targeted material investments (e.g. interventions to improve recycling performance, REM, etc.)	No allocation method used as these costs are directly assigned to a CMC or group of CMCs	Material-specific costs do not need any allocations of their costs.
Plastic Pollution Mitigation Fund (PPMF)	Plastic packaging producers are required to pay PPMF	Based on share % of supplied plastic weights/ components	Fund is intended to address requirements for producers to pay for the impacts of plastic pollution.

Cost Category	Includes	Cost Allocation Method	Rationale
Source Reduction Investments including Reuse and Refill	- Reuse and refill investments - Grants for sustainable packaging designs	Based on share % of supplied plastic weights	Source reduction is intended to reduce plastic packaging only.

9.5 How CAA's Fee-Setting Methodology Meets PRC 42053 Requirements

CAA intends to charge eco-modulation fees as described in PRC42053(d), starting in 2027. This section describes how CAA's fee-setting methodology meets these requirements. There are requirements for which CAA has data, and there are also requirements for which it has discretion to defer implementation, either because it does not have the data at the outset of program plan implementation or needs additional time to consult with interest holders. See Table 3 below for the list of statutory requirements and CAA's proposed timing and approach to implement EPR base fees.

9.5.1 Fee-Setting Requirements

Table 3: Fee-Setting Requirements and Timing

Requirement	Timing	Meeting the Requirement
Lower fees for CMCs that are easier and less expensive to recycle	Requirement will be met in 2027 and subsequent program plan years	CAA will use the CTM index to identify CMCs with relatively lower costs within groups of similar materials. Their fees will be comparatively lower due to the application of the CTM index. This will be applicable to recyclable and non-recyclable CMCs only.
Lower fees for CMCs that are easier and less expensive to compost	Requirement will be met in 2027 and subsequent years	CAA will use the CTM index (for compost) to determine CMCs with relatively lower costs within groups of similar materials. Their fees will be comparatively lower due to the application of the CTM. This will be applied to compostable CMCs only, based on SB 343 designation or an alternative, evidence-based framework aligned with the operational realities in California.
Lower fees for CMCs designed to be recycled into a similar covered material	Requirement will be deferred to start in 2029	CAA will take additional time to consider an effective implementation of this fee requirement.
Fees will cover costs to develop and sustain viable responsible end markets	Requirement will be met in 2027 and subsequent years	The REMs development strategy is covered under the Materials Strategy and Covered Material Compliance Plan chapter, and investments are captured in the proposed program plan budget, used to set fees.

Requirement	Timing	Meeting the Requirement
Fees will cover costs to collect, sort, avoid or remove contamination, aggregate, and transport the covered material into defined streams	Requirement will be met in 2027 and subsequent years	Reimbursements for new and additional costs of collection, sortation, contamination management, and transportation are captured in the proposed program plan budget used to set fees.
Fees will cover costs to process and transport covered materials for acceptance by responsible end markets, including reducing contamination of non-certified compostable products	Requirement will be met in 2027 and subsequent years	Reimbursements for new and additional costs of processing and transportation of covered materials to REMs are captured in the proposed program plan budget used to set fees.
Fees will cover costs to implement the plan and achieve the source reduction, recyclability and compostability, recycling rate goals, and other requirements of the program	Requirement will be met in 2027 and subsequent years	Costs of program implementation, including support to producers to achieve SB 54 goals are captured in the proposed program plan budget used to set fees.
Fees will cover costs to sample and report on waste streams data and costs to educate rate-payers to improve the preparation and sorting of covered material	Requirement will be met in 2027 and subsequent years	Costs of waste composition sampling and reporting and public education and outreach campaigns are captured in the proposed program budget used to set fees.
Fees shall cover increased costs to manage CMCs that are difficult to recycle or compost due to the incorporation of elements that may be detrimental to recycling or composting according to relevant industry design guides or criteria established by CalRecycle	Requirement will be deferred to start in 2028	CAA will take additional time to build an effective implementation of this fee requirement and to prepare producers to disclose detrimental elements associated with their packaging. See Eco-Modulation Chapter for more information.

Requirement	Timing	Meeting the Requirement
Fees shall cover commodity values of covered materials, where applicable	Requirement will be met in 2027 and subsequent years	Commodity revenues will be reported by MRFs or represented by commodity price indices and will be applied to the fees of recyclable and compostable CMCs.
Fees shall cover costs incurred by the PRO to assist producers to meet the program source reduction requirements	Requirement will be met in 2027 and subsequent years	Costs of program implementation, including support to producers to make progress toward SB 54 source reduction goals are captured in the proposed program plan budget used to set fees. These costs are applied to plastic CMC fees.
Fee schedule may include a special assessment, charged to producers of a particular CMC, if its nature imposes unusual costs in collection or processing or requires special actions to be successfully recycled or composted	Requirement will be met in 2027 and subsequent years	Material-specific investments or interventions intended to improve future recycling or composting of particular CMCs are captured in the program plan budget used to set fees. Fee revenues generated shall be used to make system improvements for specific CMCs.
Fees shall cover investments or other expenditures necessary to develop REMs, implement source reduction measures for specific CMCs, or shift to reuse and refill systems	Requirement will be met in 2027 and subsequent years	Costs of program implementation including investments and support to producers to make progress towards SB 54 goals are captured in the proposed program budget used to set fees.
Fees shall cover costs to ensure CMCs meet the requirements of this chapter, including minimization of environmental and public health impacts of covered material and the end-of-life management of covered material	Requirement will be met in 2027 and subsequent years	This requirement is reflected by: - Contributions into the PPMF which directly addresses plastic pollution and impacts on disadvantaged, low-income communities or rural areas (as defined in the Equitable Access, Participation and Environmental Justice chapter). - The reimbursement framework requires additional verification and testing for projects undertaken in Environmental Justice (EJ) Communities, to avoid and minimize negative environmental or public health impacts.

9.5.2 Compostable Packaging Fees

EPR (base) fees for certified compostable packaging will reflect both reimbursements to local jurisdictions and processors for eligible costs and interventions directed at producers and organic processors.

The reimbursement process will cover the eligible costs of those local jurisdictions and processors who wish to accept compostable plastic packaging. Eligible costs will include:

- Costs related to collection of compostable CMCs
- Costs to process compostables more efficiently, including contamination removal, and to cover on-going processing cost of compostable CMCs
- Costs for E&O campaigns pertaining to compostables

The interventions will address the drivers of low acceptance in collection programs and at processing facilities, and will include CAA California providing:

- Guidance to producers on labelling and design
- Support for field testing of compostables
- Support for market development
- Evaluation of the feasibility of secondary sorting of compostables

9.5.3 Alternative Collection Program

Materials that are collected outside the residential recycling system that are not commingled with unsorted curbside-collected material, and that meet a high recycling rate threshold may qualify for an exemption from SB 54 requirements, under PRC 42041(e)(2)(H). Producers seeking these exemptions must show the materials achieved a 65% recycling rate in 2024, 2025 and 2026, and a 70% recycling rate in 2027 and each subsequent year.

These standards are high, and CAA California anticipates only a small portion of producer materials may qualify (such as well-documented, commercially generated PE film or OCC that retailers ship directly to mills). CAA California will provide informational support to producers seeking these exemptions, but producers must apply directly to CalRecycle.

Furthermore, as outlined in the Materials Strategy and Covered Material Compliance Plan chapter, CAA will encourage and consider incentivizing producers to keep these covered materials within the program plan, even if they may qualify for the exemption. The high-performing materials that qualify for this exemption can lift their CMC's recycling rate, helping lower-performing, residentially collected materials within the same CMC achieve or maintain SB 54 compliance. However, that's only possible if they remain in the program rather than becoming exempt. CAA is exploring an incentive that could be used to encourage producers to keep these materials in the program.

9.6 Timing of Producer Fees

As set forth in PRC 42053(b), prior to approval of the initial program plan and for the two years following that approval, CAA shall charge all participant producers a fee based on the following: CAA shall determine the fee schedule for each producer based on estimated costs of implementing the plan, operating costs, the cost of completing CalRecycle's Needs Assessment, and the costs to reimburse the Department.¹ In the third program year and each successive year of operation, each producer shall pay an annual fee as established in the program plan.

In 2027, CAA proposes to charge EPR (base) fees on all CMCs and offer select eco-modulation factors, based on PRC42053(d)(e), after receiving program plan approval. See Table 4 for a description of the type of producer fees CAA California will charge, when and for what purpose.

¹ Based on SB54 Final Regulations sec. 18980.6.7 (b)

Table 4: Producer Fees, Schedule and Purpose

	Before Plan Submission (Early Fees 2026)	Plan Submission Y0: June 2026	Program Implementation Y1: 2027	Program Implementation Y3 and onwards: 2029
Type of Fees	Early Fees (charged based on 6 simplified material categories)	Draft range of EPR (base) Fees (weight / component-based)	Actual EPR (base) Fees (weight / component-based)	Actual EPR (base) Fees (weight / component-based)
To be Invoiced \$	Yes	No	Yes	Yes
Purpose	To recoup a portion of pre-program plan costs \$	To comply with plan requirement	To generate fee revenues to implement program	
Statute / Regulation	Fees charged prior to program plan approval	Full SB 54 requirements	EPR (base) fees (partial SB 54 requirements only)	Full SB 54 requirements

9.7 Raising Fees for the Plastic Pollution Mitigation Fund (PPMF)

Under SB 54, the California PPMF is established to address plastic pollution and related environmental justice impacts. The fund is expected to raise \$5 billion over 10 years from producers of plastic covered materials, with up to \$150 million contributed annually through contributions from plastic resin manufacturers.

To raise fees for the PPMF, CAA California will charge PPMF fees to producers that supply plastic packaging based on each producer's share of weight of plastic materials and share of number of plastic components supplied into California. These fees apply only to producers of plastic CMCs and are not included in the CTM module, as they are regulatory charges unrelated to the cost of managing plastic materials.

CAA is also exploring requiring participant producers to report a list of plastic resin manufacturers that sell the plastic resin used in the covered material they supply. CAA California will formally invite these manufacturers to enter into an agreement with CAA California and collectively provide a \$150 million contribution to the PPMF. Under SB 54, participation is voluntary. However, CAA California believes that resin manufacturers have a shared responsibility for the environmental footprint of plastic packaging.

Any remaining PPMF funding requirement will be covered by producers that supply plastic material and will be reflected in the producer fee schedule. Once payments are received, CAA California will apply future credits to producers' PPMF fees based on resin manufacturer contributions.

9.7.1 Calculating Individual Producer Market Share and Corresponding PPMF Surcharge

Pursuant to PRC 42064(f) and Section 18980.6.7(g), the PPMF assessment formula must be based on the number of plastic components and the weight of plastic covered material that a producer offers for sale, sells, distributes, or imports into California.

To meet the requirements of PRC 42053(c)(5) and Section 18980.6.7(g), CAA California proposes the following method for calculating each producer's market share and corresponding PPMF assessment:

$$\text{Producer's share of PPMF}^2 = \text{PPMF \$} \times (80\% \times \text{Producer's \% share of plastic weight} + 20\% \times \text{Producer's \% share of plastic components})$$

Contributions from resin manufacturer fees will be used to reduce the PPMF surcharge payable by producers that supply plastic packaging on a proportional basis.

9.8 Description of Fee Schedule

9.8.1 2027 EPR Base Fee Schedule: Ranges from Low to High

CAA California will use 2025 reported and verified supply data to set the 2027 EPR base fees. The final fee schedule will be published in October 2026 and fee invoices issued to producers in early 2027 following program plan approval.

Table 5: 2027 EPR Base Fee Schedule (Revised June 18, 2026)

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_C1N - Ceramic - All Forms w/o plastic component	-	27				-	67			
25_C1P - Ceramic - All Forms w/ plastic component	-	27	4	17	0.10	-	67	10	25	0.12
25_C2N - Ceramic - Small - Two or more sides measuring 2" or less w/o plastic component	-	27				-	67			
25_C2P - Ceramic - Small - Two or more sides measuring 2" or less w/ plastic component	-	27	4	17	0.10	-	67	10	25	0.12
25_G1N - Glass - Bottles and Jars w/o plastic component	-	1				-	3			
25_G1P - Glass - Bottles and Jars w/ plastic component	-	1	4	17	0.10	-	3	10	25	0.12

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_G2N - Glass - Other Forms w/o plastic component	-	23				-	56			
25_G2P - Glass - Other Forms w/ plastic component	-	23	4	17	0.10	-	58	10	25	0.12
25_G3N - Glass - Small - Two or more sides measuring 2" or less w/o plastic component	-	7				-	18			
25_G3P - Glass - Small - Two or more sides measuring 2" or less w/ plastic component	-	7	4	17	0.10	-	18	10	25	0.12
25_M1N - Aluminum - Non-aerosol Container w/o plastic component	-	4				-	9			
25_M1P - Aluminum - Non-aerosol Container w/ plastic component	-	5	4	17	0.10	-	12	10	25	0.12
25_M2N - Aluminum - Foil sheets w/o plastic component	-	8				-	20			

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_M2P - Aluminum - Foil sheets w/ plastic component	-	10	4	17	0.10	-	24	10	25	0.12
25_M3N - Aluminum - Foil Molded Containers w/o plastic component	-	7				-	17			
25_M3P - Aluminum - Foil Molded Containers w/ plastic component	-	7	4	17	0.10	-	18	10	25	0.12
25_M4P - Aluminum - Aerosol Can w/ plastic component	-	12	4	17	0.10	-	28	10	25	0.12
25_M5N - Aluminum - Other Forms w/o plastic component	-	7				-	16			
25_M5P - Aluminum - Other Forms w/ plastic component	-	8	4	17	0.10	-	19	10	25	0.12
25_M6N - Tin/Steel/ Bimetal - Non-aerosol Container w/o plastic component	-	2				-	5			

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_M6P - Tin/Steel/ Bimetal - Non-aerosol Container w/ plastic component	-	2	4	17	0.10	-	6	10	25	0.12
25_M7P - Tin/Steel/ Bimetal - Aerosol Can w/ plastic component	-	7	4	17	0.10	-	18	10	25	0.12
25_M8N - Tin/Steel/ Bimetal - Other Forms w/o plastic component	-	5				-	13			
25_M8P - Tin/Steel/ Bimetal - Other Forms w/ plastic component	-	6	4	17	0.10	-	14	10	25	0.12
25_M9N - Other Nonferrous - All Forms w/o plastic component	-	8				-	19			
25_M9P - Other Nonferrous - All Forms w/ plastic component	-	9	4	17	0.10	-	24	10	25	0.12
25_M10N - Other Ferrous - All Forms w/o plastic component	-	11				-	27			

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_M10P - Other Ferrous - All Forms w/ plastic component	-	12	4	17	0.10	-	28	10	25	0.12
25_M12N - Metal - Small - Two or more sides measuring 2" or less w/o plastic component	0.5	12				1.3	30			
25_M12P - Metal - Small - Two or more sides measuring 2" or less w/ plastic component	0.5	14	4	17	0.10	1.3	34	10	25	0.12
25_PF1N - Paper/Fiber - Kraft Paper - All Forms w/o plastic component	-	2				-	5			
25_PF1P - Paper/Fiber - Kraft Paper - All Forms w/ plastic component	-	3	4	17	0.10	-	7	10	25	0.12
25_PF5P - Paper/Fiber - Gable-top Cartons	1.3	8	4	17	0.10	3.0	20	10	25	0.12
25_PF7P - Paper/Fiber - Multi-Material Laminate - Other Forms w/ plastic component	0.4	27	4	17	0.10	0.8	67	10	25	0.12

CMC	Low Scenario					High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_PF8N - Paper/Fiber - Waxed Cardboard w/o plastic component	-	12				-	29			
25_PF8P - Paper/Fiber - Waxed Cardboard w/ plastic component	-	13	4	17	0.10	-	32	10	25	0.12
25_PF9N - Paper/Fiber - Cardboard w/o plastic component	-	2				-	5			
25_PF9P - Paper/Fiber - Cardboard w/ plastic component	-	2	4	17	0.10	-	6	10	25	0.12
25_PF10N - Paper/Fiber - Paperboard - All Forms w/o plastic component	-	1				-	4			
25_PF10P - Paper/Fiber - Paperboard - All Forms w/ plastic component	-	2	4	17	0.10	-	5	10	25	0.12
25_PF11N - Paper/Fiber - White Paper - All Forms w/o plastic component	-	2				-	4			

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_PF11P - Paper/ Fiber - White Paper - All Forms w/ plastic component	-	2	4	17	0.10	-	6	10	25	0.12
25_PF12N - Paper/ Fiber - Other/Mixed Paper - All Forms w/o plastic component	-	2				-	5			
25_PF12P - Paper/ Fiber - Other/Mixed Paper - All Forms w/ plastic component	-	3	4	17	0.10	-	8	10	25	0.12
25_PF14N - Paper/ Fiber - Molded Fiber - All Forms w/o plastic component	-	2				-	5			
25_PF14P - Paper/ Fiber - Molded Fiber - All Forms w/ plastic component	-	6	4	17	0.10	-	17	10	25	0.12
25_PF15P - Paper/ Fiber - Aseptic Cartons	1.3	9	4	17	0.10	3.0	23	10	25	0.12

CMC	Low Scenario					High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_PF16N - Paper/Fiber - Small - Two or more sides measuring 2" or less w/o plastic component	-	5				-	12			
25_PF16P - Paper/Fiber - Small - Two or more sides measuring 2" or less w/ plastic component	-	11	4	17	0.10	-	26	10	25	0.12
25_PF17P - Paper/Fiber - Multi-Material Laminate - Paperboard with a Plastic Coating/ Lining	-	6	4	17	0.10	-	16	10	25	0.12
25_P1P - PET (#1) - Bottles, Jugs, and Jars (Clear/Natural)	0.6	11	4	17	0.10	4.1	35	10	25	0.12
25_P2P - PET (#1) - Bottles, Jugs, and Jars (Pigmented/Color)	0.6	13	4	17	0.10	4.1	38	10	25	0.12
25_P6P - HDPE (#2) - Bottles, Jugs and Jars (Clear/Natural)	0.6	13	4	17	0.10	4.1	40	10	25	0.12

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_P7P - HDPE (#2) - Bottles, Jugs and Jars (Pigmented/Color)	0.6	13	4	17	0.10	4.1	39	10	25	0.12
25_P8P - HDPE (#2) - Pails & Buckets	0.6	12	4	17	0.10	4.1	35	10	25	0.12
25_P11P - PVC (#3) - Rigid Items	0.6	33	4	17	0.10	4.1	82	10	25	0.12
25_P13P - LDPE (#4) - Bottles, Jugs and Jars	0.6	17	4	17	0.10	4.1	33	10	25	0.12
25_P14P - LDPE (#4) - Other Rigid Items	0.6	17	4	17	0.10	4.1	48	10	25	0.12
25_P17P - PP (#5) - Bottles, Jugs and Jars	0.6	13	4	17	0.10	4.1	39	10	25	0.12
25_P19P - PP (#5) - Utensils	0.6	29	4	17	0.10	4.1	78	10	25	0.12
25_P20P - PP (#5) - Other Rigid Items	0.6	13	4	17	0.10	4.1	37	10	25	0.12

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_P23P - PS (#6) - Expanded/Foamed Hinged Containers, Plates, Cups, Tubs, Trays, and Other Foamed Containers	0.6	47	4	17	0.10	4.1	127	10	25	0.12
25_P27P - PS (#6) - Utensils	0.6	29	4	17	0.10	4.1	79	10	25	0.12
25_P35P - Other/ Mixed Plastics - Rigid Items	0.6	25	4	17	0.10	4.1	67	10	25	0.12
25_P38P - PET (#1) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs	1.1	12	4	17	0.10	5.5	36	10	25	0.12
25_P39P - PET (#1) - Other Rigid Items	1.1	14	4	17	0.10	5.5	40	10	25	0.12
25_P40P - HDPE (#2) - Other Rigid Items	0.6	12	4	17	0.10	4.2	25	10	25	0.12
25_P41P - PP (#5) - Other Rigid Containers, Cups, Lids, Plates, Trays, Tubs	0.6	11	4	17	0.10	4.2	24	10	25	0.12

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_P42P - PS (#6) - Other Expanded/ Foamed Forms	0.6	48	4	17	0.10	4.1	129	10	25	0.12
25_P43P - PS (#6) - Solid Hinged Containers, Plates, Cups, Tubs, Trays, and Other Solid Containers	0.6	21	4	17	0.10	4.1	61	10	25	0.12
25_P44P - Plastics and Polymers Designed for Compostability - Rigid Items	0.6	18	4	17	0.10	4.1	53	10	25	0.12
25_P5P - PET (#1) - Flexible and Film Items	12.2	45	4	17	0.10	30.3	100	10	25	0.12
25_P10P - HDPE (#2) - Flexible and Film Items	12.2	29	4	17	0.10	30.3	76	10	25	0.12
25_P12P - PVC (#3) - Flexible and Film Items	12.2	69	4	17	0.10	30.3	176	10	25	0.12
25_P15P - LDPE (#4) - Clear Non-Bag Film	12.2	29	4	17	0.10	30.3	75	10	25	0.12

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_P16P - LDPE (#4) - Other Flexible and Film Items	12.2	28	4	17	0.10	30.3	74	10	25	0.12
25_P21P - PP (#5) - Clear Non-Bag Film	12.2	38	4	17	0.10	30.3	95	10	25	0.12
25_P22P - PP (#5) - Other Flexible and Film Items	12.2	31	4	17	0.10	30.3	80	10	25	0.12
25_P29P - PS (#6) - Flexible and Film Items	12.2	70	4	17	0.10	30.3	179	10	25	0.12
25_P33P - Multi-Material Laminate - Other Forms	12.2	58	4	17	0.10	30.3	148	10	25	0.12
25_P34P - Other/Mixed Plastics - Textiles	9.9	98	4	17	0.10	23.7	233	10	25	0.12
25_P36P - Other/Mixed Plastics - Flexible and Film Items	12.2	57	4	17	0.10	30.3	148	10	25	0.12
25_P45P - Plastics and Polymers Designed for Compostability - Flexible and Film Items	9.9	49	4	17	0.10	23.7	120	10	25	0.12

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_P46P - Multi-Material Laminate - Pouches and Envelopes	12.2	59	4	17	0.10	30.3	149	10	25	0.12
25_P47P - Plastic - Small - Two or more sides measuring 2" or less	0.5	16	4	17	0.10	1.3	43	10	25	0.12
25_WO1N - Wood/Organics - All Untreated Forms w/o plastic component	-	2				-	5			
25_WO1P - Wood/Organics - All Untreated Forms w/ plastic component	-	2	4	17	0.10	-	5	10	25	0.12
25_WO2N - Wood/Organics - All Treated or Painted Forms w/o plastic component	-	27				-	68			
25_WO2P - Wood/Organics - All Treated or Painted Forms w/ plastic component	-	28	4	17	0.10	-	71	10	25	0.12
25_WO3N - Wood/Organics - Textiles w/o plastic component	-	81				-	189			

CMC		Low Scenario				High Scenario				
Material Category	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees	Material Specific Fees	Total Base Fees	Reuse Investment Fees	PPMF Weight Fees	PPMF Component Fees
	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components	¢/lb	¢/lb	¢/lb plastic components	¢/lb plastic components	¢/# plastic components
25_WO3P - Wood/Organics - Textiles w/ plastic component	-	82	4	17	0.10	-	191	10	25	0.12
25_WO4N - Wood/Organics - Other Forms w/o plastic component	-	11				-	22			
25_WO4P - Wood/Organics - Other Forms w/ plastic component	-	12	4	17	0.10	-	27	10	25	0.12
25_WO6N - Wood/Organics - Small - Two or more sides measuring 2" or less w/o plastic component	-	11				-	22			
25_WO6P - Wood/Organics - Small - Two or more sides measuring 2" or less w/ plastic component	-	12	4	17	0.10	-	27	10	25	0.12

9.9 CAA California's Process to Collect Producer Fees

After producers submit their annual supply reporting on May 31 of each year, CAA California will verify the submitted data to ensure accuracy and completeness, before using the data to set a base fee for each CMC using the methodology described in section 9.3 Developing the EPR (Base) Fees.

Producer invoices will include the following fees:

- Base Fees
- PPMF Fees (including a weight-based and component-based portion)
- Reuse Investment Fees
- Fees for administrative, legal, and other organizational operating costs
- Any other assessment

Once final fee rates are set and approved by CAA, they will be applied to verified producer-reported supply of CMCs sold, distributed, or imported in or into California within the previous calendar year. The equations are:

$$\text{Base Fee Rate for a CMC} \times \text{Supplied Weight of CMC} = \text{CMC Base Fee}$$

$$\text{PPMF Weight based Rate} \times \text{Supplied Weight of Plastic CMC} = \text{PPMF Weight-based Fee}$$

$$\text{PPMF Component based Rate} \times \text{Supplied \# of Plastic Components} = \text{PPMF Component-based Fee}$$

$$\text{Reuse Investment Fee Rate for a CMC} \times \text{Supplied Weight of Plastic CMC} = \text{Reuse Investment Fee}$$

$$\text{Total Fees} = \text{CMC Base Fee} + \text{PPMF Weight-based Fee} + \text{PPMF Component-based Fee} + \text{Reuse Investment Fee}$$

Total Fees are used to generate fee invoices for each producer in January of the program plan year. Producers will have 45 days to pay their invoices once they are received.



Chapter 10: Eco-Modulation

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Chapter 10: Eco-Modulation

10.1 Introduction

This chapter provides an overview of CAA California's proposed approach to fulfill SB 54 requirements for eco-modulation as well as the timing of implementation of the different criteria.

Extended Producer Responsibility (EPR) fees are charged to obligated producers in California to provide the levels of funding sufficient for CAA California to meet SB 54 targets and obligations. Eco-modulation uses incentives to encourage the use of recyclable, reusable and sustainable packaging types, and disincentives to discourage the use of materials that are difficult to recycle (or compost) or are environmentally harmful. Eco-modulation uses financial signals to drive improvements in packaging design and recycling systems in support of a circular economy. These financial signals are generally in the form of bonuses (incentives) or maluses (disincentives) applied to producer base fees.

10.1.1 Eco-Modulation Types

CAA utilizes two types of eco-modulation nationally; CAA California will leverage both in this plan:

Active: Bonuses granted to individual producers, for which they must apply and provide documentation to prove their packaging meets the bonus criteria. If approved, bonuses are granted to producers based on the quantity of covered materials they supply in the California market that relate to the bonus criteria. Bonuses are voluntary and require producers to substantiate their claims. Active maluses will also be used and require producer self-attestations, where the producer looking to avoid the malus certifies that its packaging doesn't have any relevant negative features, along with packaging audits to ensure compliance.

An example of an active eco-modulation bonus is when a producer includes post-consumer recycled (PCR) content in its packaging. The producer must submit proof of certification of the PCR to qualify for the bonus. The producer will then receive a reduction in fees, with the amount varying depending on how much PCR is used.

An example of an active eco-modulation malus is ensuring the packaging does not have any detrimental features that disrupt recycling, such as carbon black plastic. This would require producers to self-attest that they do not use any pigments that render the packaging unrecognizable to near-infrared (NIR) sorters to avoid the malus. If the producer does use a carbon black pigment, then they will pay a higher fee rate for the packaging.

Passive: Bonuses or maluses automatically applied to the base fee rate of a covered material category (CMC). It is automatically added to all producer fee invoices, affecting all producers who supply that CMC.

An example of a passive eco-modulation bonus can be seen in a CMC that has a high recycling rate, such as natural HDPE. This bonus will apply to all packaging reported in that CMC, in effect lowering the base fee. An example of a passive eco-modulation malus would be a malus applied to a CMC with no recyclability designation, such as PVC. This lack of recyclability would raise the base fee for all producers of that CMC.

10.2 SB 54 Eco-Modulation Criteria and PRC 42053 Provisions

There are nine eco-modulation criteria under PRC 42053(e). Producer base fees may be adjusted using bonuses or maluses, based on the following eco-modulation factors:

Bonuses

1. PCR content in packaging
2. Source reduction to reduce packaging
3. Standardization of packaging to simplify material management
4. Disposal, recycling or composting, or reuse and refill labeling and instructions on packaging
5. Actions taken to accelerate source reduction and invest in reuse and refill systems
6. Use of renewable materials to make plastic
7. Use of certified compostable materials without toxic additives

Maluses

- Presence of hazardous materials in the packaging
- Presence of toxic heavy metals, pathogens, or additives in the packaging



Figure 1: Eco-Modulation Factors

Outline of CA Eco-Modulation Criteria

BONUS	
1	Postconsumer recycled (PCR) content
2	Source reduction to reduce packaging
3	Standardization of packaging to simplify material management
4	Disposal, recycling, composting, or reuse & refill labeling and instructions
5	Actions taken to accelerate source reduction and invest in reuse and refill systems
6	Use of renewable materials to make plastic
7	Use of certified compostable materials without toxic additives
RR	(High) recycling rates % (source: CalRecycle)
MALUS	
8	Presence of hazardous materials in the packaging
9	Presence of toxic heavy metals, pathogens, or additives
NRD	Non-recyclability designation (based on SB 343 criteria)

In the following sections, CAA California describes how eco-modulation factors were selected and proposes a schedule for their implementation, with a strong emphasis on accelerating harmonization with other state programs while complying with SB 54. For producers with a national footprint, eco-modulation will have more of an impact if it is applied consistently across the states that have implemented EPR.

10.3 Developing CAA California's Eco-Modulation Approach

CAA California's eco-modulation approach will be guided by the following set of principles:

- **Support EPR Goals and Circularity:** Eco-modulation will be used to reinforce EPR objectives, promote circularity, and align incentives with progress toward program plan targets.
- **Impact-Based Incentives and Disincentives:** Incentives and disincentives will be based on measurable environmental outcomes and supply volumes, not the cost for producers to implement improvements.
- **Clear and Measurable Criteria:** Goals and criteria must be clearly defined and based on measurable environmental impacts.
- **Harmonization Across Jurisdictions:** Apply consistent criteria wherever possible to support scalability and broad producer adoption.
- **Material-Specific Fund Use:** Revenue from maluses shall be used to pay bonuses within a group of CMCs unless the benefits associated with the bonus extend beyond materials in that group.
- **Financial Safeguards and Fairness:** Implement incentives gradually with financial caps to limit negative impacts on producers and CAA's financial health. Incentives must not exceed total payable base fees for an individual producer and must be accessible to all producers.

10.3.1 CAA Selection and Development Framework

CAA California will apply eco-modulation as a policy tool to help producers meet SB 54 goals and to enhance both the recycling performance and recyclability of packaging. The selection of eco-modulation criteria will be aligned with EPR principles and be based on measurable criteria that promote circularity and positive environmental outcomes.

10.3.1.1 Proposal for Program Plan Year 2027

CAA California proposes two sets of eco-modulation that will apply to 2027 program fees:

1. Source reduction
2. Improve recyclability

The Source Reduction chapter details eco-modulation related to source reduction, including adding PCR to packaging and converting to reuse and refill. CAA will announce source reduction bonus amounts for PCR in 2026 so that producers can increase the amount of PCR in 2027 knowing the value of the bonus. This chapter details eco-modulation that encourages packaging recyclability improvements.

10.3.1.1.1 Eco-Modulation to Improve Recyclability

CAA California proposes to introduce the following eco-modulation criteria in 2027, aimed at encouraging producers to enhance the recycling performance and recyclability of packaging.

Table 1: CAA’s Eco-Modulation Criteria for 2027

Criteria	Data Source
Recycling Rates %	CalRecycle’s approved recycling rates for each CMC
Non-Recyclability	Based on SB 343 criteria or an alternative, evidence-based framework aligned with the operational realities in California

Bonus for High Recycling Rate (Passive)

These bonuses are granted to producers supplying CMCs with high recycling rates, relative to other materials within a material class. A bonus will be granted to the base fees¹ CMCs with relatively high recycling rates within a material grouping.

Malus for Non-Recyclability (Passive)

These maluses are applied to producers supplying CMCs that are not deemed to be recyclable on the SB 54 CMC list updated annually by CalRecycle (based on SB 343 criteria or an alternative, evidence-based framework aligned with the operational realities in California). A malus will be applied to the base fees² of supplied CMCs that are not designated as recyclable or compostable.

These criteria are essential because they reinforce material circularity and directly advance core EPR goals of achieving high recycling performance and promoting packaging design that can be easily recycled. Consistent with CAA’s eco-modulation principles, these criteria are objective and immediately measurable, as the necessary data needed for determinations have been published by CalRecycle. CAA plans to extend these criteria to other state programs to support multi-state harmonization efforts. Establishing consistent incentives and disincentives across states will make it easier for producers to align packaging decisions at a national level.

In future years, CAA California will evaluate whether the values for these eco-modulation criteria need adjustments for more effective outcomes.

10.3.1.2 Proposal for 2028 Program Year Fees: Additional Factors

10.3.1.2.1 Eco-Modulation to Improve Recyclability

In 2028, in addition to the ongoing source reduction incentives, CAA California proposes to introduce the following eco-modulation criteria to encourage producers to improve the recycling performance and recyclability of their packaging.

10.3.1.2.2 Packaging Features that Cause Issues with Recycling

There are cases where a CMC is generally recyclable, but there are specific features of packaging that cause challenges with recycling, such as labels, adhesives and coatings. These features could render the packaging unrecyclable or cause problems with recycling of other materials in the packaging. In the Materials Strategy and Covered Material Category Compliance Plan chapter, CAA California provides examples of packaging design interventions that may be evaluated for their ability to improve recyclability.

¹ Applied to the portion of base fees excluding program reserves and other eco-modulation adjustments.
² Applied to portion of base fees excluding program reserves and other eco-modulation adjustments.

This eco-modulation factor will target interventions that affect certain packages within a CMC, but are not relevant to the entire CMC, including:

- Removing or redesigning non-compatible components such as labels, sleeves, valves, nozzles, coatings, or adhesives
- Designing packaging for better sortability, including the use of light-transmitting PET/PP, or avoiding problematic dyes

To tackle these challenging and complex features, CAA California will set up a program to identify a number of these specific features to target each year of the program plan. A malus will be applied to these features. The features will be identified in priority of the severity of the challenges they cause, the prevalence of the feature, and the availability of alternatives. These alternatives could include labels, coatings, adhesives and nozzles that are specifically designed to be compatible with recycling. CAA California will work closely with industry groups, including the Association of Plastic Recyclers (APR), in identifying the targeted features. CAA California will release the list of features each year when the fee schedule is released. In addition, CAA California will publish guidance on how to replace or find alternatives to the problematic features and provide other support to producers.

For CMCs that are affected by these malus(es), producers will need to provide the weights of materials that both do and do not contain any of the targeted features. CAA California will require producers to attest that they have evaluated their packaging for these features.

Each year of the program plan, CAA California expects to increase the malus for each of these features to incentivize producers to modify their packaging. CAA will evaluate the level of malus required to reduce or eliminate the problematic feature but will likely start with a 10% malus for packaging with the targeted features and increase up to 100%, or a doubling of the base fee rate.

10.3.1.3 Proposal for 2029 Program Year Fees and Beyond: Additional Factors

10.3.1.3.1 Eco-Modulation to Improve Design for Recyclability

CAA California proposes to introduce the following eco-modulation criteria in 2029 to encourage producers to use renewable materials and eliminate toxic and hazardous materials from their packaging.

10.3.1.3.2 Eliminate Hazardous and Toxic Additives

CAA California will implement a similar program to the malus for problematic packaging features to incentivize producers to eliminate hazardous and toxic materials from their packaging. CAA California will work with the Office of Environmental Health Hazard Assessment, the Department of Toxic Substances Control, and CalRecycle, to identify hazardous materials. CAA California will also work with diverse interest holders, including both producers and environmental experts, to identify toxic additives to packaging. For this malus to be successful, detailed criteria will need to be developed that identifies the harmful additives and prioritizes the elimination of those with the largest environmental or human health impacts.

CAA California will target specific materials and additives for graduated maluses to eliminate them from packaging. CAA California will evaluate toxic materials included in compostable covered materials as well.

10.3.1.3.3 Promote Use of Renewable Materials for Plastic

Plastics can be produced from feedstocks other than fossil fuels. These commonly include sugar-cane, corn and sugar beets, but also can include agricultural residue and shellfish waste. Using renewable materials in place of fossil fuels in plastic production can provide environmental benefits. These benefits must be weighed against the potential issues including deforestation for more crop land, diminishing water supplies, and replacing food crops. CAA California will develop a detailed set of criteria to ensure that plastic packaging made from renewable materials achieves net positive environmental benefits.

CAA California has significant plastic source reduction targets. Incentivizing the use of plastic made with renewable materials will need to be evaluated against the plastic source reduction targets, where CAA California is reducing the overall amount of plastic packaging in California. After the criteria have been developed and the marketplace for renewable materials is better understood, CAA California will propose an active bonus. Finally, CAA will promote the use of renewable materials only if the packaging or food serviceware products have a clear pathway to recyclability or compostability, which is currently challenging for some products made from renewable materials. For more information, see the Strategy for Compostable Covered Materials chapter.

10.3.1.4 Proposal for all Eco-Modulation Factors Under PRC 42053(e)

CAA California has considered and evaluated all eco-modulation factors and proposes to further evaluate additional factors before inclusion in the program plan. The evaluation and selection will be based on their compatibility with the selection framework outlined above and CAA California's eco-modulation guiding principles. See Table 2 below for a summary of CAA California's proposal for implementing each factor.

10.3.1.5 Proposal for Implementation of Eco-Modulation Factors

Table 2: Proposal of Eco-Modulation Factors

Factor	Required by Law?	Timing and Scope
Bonuses		
(1) PCR content	No	Bonus amount announced in 2026 as part of Source Reduction Incentives. Applies to plastic CMCs only.
(2) Source reduction to reduce packaging	No	Bonus amount announced in 2026 as part of Source Reduction Incentives. Applies to plastic CMCs only.
(3) Standardization of packaging to simplify material management	No	Defer Decision to 2029 Program Year Standardization of packaging is currently being targeted through maluses to discourage use of unrecyclable materials and remove features that reduce the ability to recycle the packaging. CAA California will also evaluate a bonus structure for this factor.

Factor	Required by Law?	Timing and Scope
Bonuses		
(4) Disposal, recycling or composting, or reuse and refill labeling and instructions	No	Defer Decision to 2029 Program Year CAA California to align with national labeling instructions for recycling and composting.
(5) Actions taken to accelerate source reduction and invest in reuse and refill systems	No	Bonus amount announced in 2026 as part of Source Reduction Incentives. Applies to plastic CMCs only.
(6) Use of renewable materials to make plastic	Yes	Defer to 2029 Program Year Fees CAA California to further evaluate impacts to food production, deforestation, and plastic source reduction, as well as recyclability and compostability pathways.
(7) Use of certified compostable materials without toxic additives	No	Defer Decision to 2029 Program Year CAA California to evaluate this factor for harmonization opportunities with other California state programs and with other states with EPR programs.
Recyclability designation on the SB 54 CMC list (based on SB 343 criteria or an alternative, evidence-based framework aligned with the operational realities in California)	No	Implement in 2027 Program Fees as a passive factor to encourage the use of CMCs with high recycling rates.
Maluses		
(8) Presence of hazardous materials	Yes	Defer to 2029 Program Year Fees CAA California to work with the appropriate state organizations and producers to develop criteria for inclusion in the active eco-modulation malus.
(9) Presence of toxic heavy metals, pathogens, or additives	No	Defer Decision to 2029 Program Year CAA California to evaluate this factor for harmonization opportunities with other California state programs and with other states with EPR programs.
Recyclability designation on the SB 54 CMC list (based on SB 343 criteria)	No	Implement in 2027 Program Fees as a passive factor to discourage use of CMCs that are not identified as recyclable or compostable.

Others		
Lower fees for CMCs designed to be recycled into a similar covered material	Yes	Defer to 2029 Program Year Fees CAA California to increase readiness to launch and assess if Factor 3 (standardization of packaging to simplify material management) may be used to satisfy this requirement. May be a passive or active eco-modulation bonus.
Increased costs for CMCs that are difficult to recycle or compost due to the incorporation of elements such as inks, labels, and adhesives that may be detrimental to recycling or composting according to relevant industry design guides or criteria established by CalRecycle	Yes	Malus value and initial factors to be announced in 2027 Described above as Packaging Features that Cause Issues with Recycling (Active Malus).



Chapter 11: CAA Management and Compliance

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Chapter 11: CAA Management and Compliance

11.1 Introduction

In this section, CAA California describes its plans for day-to-day management of the program plan, communications, data gathering and reporting processes, facilitating producer compliance, and related policies and procedures.

CAA California is committed to upholding the highest standards of ethics, integrity, and compliance with all relevant local, state, and federal laws and regulations. Upholding these standards will ensure CAA California maintains the trust and confidence of interested parties, including producers, service providers, municipalities, employees, CalRecycle, and the state of California as a whole.

11.2 General Program Plan Administration

11.2.1 Day-to-day Management and Contact Information

CAA California will provide management of the California program plan's overall day-to-day operations, finance and administration, and local government and community activities, utilizing qualified personnel, some of whom will be dedicated to the program plan. CAA California's management team will conduct activities in accordance with defined policies and procedures.

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

Primary Contact

Name: Emily Coven

Position: California Executive Director

Email: info@circularaction.org

Secondary Contact

Name: Shane Buckingham

Position: Chief of Staff

Email: info@circularaction.org

11.2.2 Producer Recruitment

References: 18980.1.1

CAA California will conduct producer recruitment activities to ensure obligated producers are aware of and understand their obligations under SB 54. Obligated producers will be identified using the producer identification criteria set out in Section 18980.1.1.

11.2.3 Producer Registration

References: 18980.10(a)

CAA California will register each of its participant producers with CalRecycle – unless the producer chooses to report separately – and supply CalRecycle with the following for each producer:

- Contact information, including the name, title, email and phone number for a person authorized to act on behalf of the producer
- Legal entity name
- All business names under which the producer operates
- Federal Employer Identification Number or Customs Assigned Importer Number
- Business mailing address and primary business address
- Business phone number and email address

If a producer registers with CAA California, CAA California will register the producer with CalRecycle within 30 days.

If a CAA California participant producer notifies CAA California its business has changed to the point where it is no longer covered by reporting requirements, CAA California will submit a request to CalRecycle within 30 days of that notification, requesting CalRecycle deactivate the reporting system registration for that producer.

11.2.4 Document Conventions

CAA California will adhere to certain standards in submitting the program plan, program plan amendments, annual reports, and related documents. CAA California will ensure these documents are complete and accurate before submission, will submit them electronically, and – where required – will sign each with a declaration that they are submitted under penalty of perjury.

CAA California will identify any portion of its program plan or other documents that it believes to be exempt from public disclosure and will include a cover letter with the document explaining why the information should be held confidential.

11.2.5 Program Plan Submission

References: 18980.6.1, 6.2, 6.3, 6.4; 42051.3

CAA California is submitting the initial program plan to the Producer Responsibility Advisory Board no later than June 15, 2026, as per Section 18980.6.1(b). When CAA California submits a program plan to the advisory board, CAA California will post the submitted program plan on its website for public review for 60 days.

CAA California will submit the program plan to CalRecycle within 60 days of receiving the Advisory Board's comments. The submitted plan will include a summary of comments received from the Advisory Board and the public regarding the program plan, and a description of any changes made in response to those comments. When CAA California submits a program plan to CalRecycle, CAA California will post any portions of the plan that are not exempt from public disclosure on its website for public review until the plan is approved.

Upon CalRecycle's approval of the program plan, CAA California will post the public version of the approved plan to its website within five calendar days. CAA California will implement the approved plan within 90 days of CalRecycle's approval.

If CalRecycle conditionally approves the program plan, CAA California will submit monthly status updates to CalRecycle, describing progress toward satisfying the approval conditions.

CAA California will submit any amendments that substantially modify the program plan – including by modifying fee setting and collection, modifying how costs will be incurred by local jurisdictions or service providers, or changing how program plan implementation costs are funded – to the Advisory Board for comment. CAA California will submit the amendment, including a summary of comments received from the Advisory Board and a description of any changes made in response to those comments, to CalRecycle. Upon CalRecycle’s approval of the amendment, CAA California will post the amended plan to its website within five calendar days.

CAA California will annually evaluate whether the program plan is reasonably likely to meet the recyclability, compostability, recycling rate, and source reduction requirements. If CAA California determines the plan is unlikely to meet these requirements (with the exception of requirements for which CalRecycle has approved an exemption), it will submit an amendment with additional measures to ensure the plan meets these requirements.

The approved program plan will be valid for five years from the date of approval. CAA California will submit any subsequent program plans at least 180 days prior to expiration of the existing program plan.

11.2.6 Managing Exclusions and Exemptions

References: 18980.2.2, 18980.2.3, 18980.2.4

SB 54 provides a process for the PRO to request certain packaging components to be considered of de minimis weight or volume and therefore excluded from covered material requirements. CAA California anticipates submitting multiple de minimis requests to CalRecycle in writing, describing the component or group of components and including details such as the component’s purpose, range of physical characteristics, impact on recyclability, and the type of products or packaging with which it is typically used. These written requests will include supporting evidence and explanation in support of the de minimis finding.

CalRecycle is responsible for reviewing and making determinations on de minimis exclusion requests. Once these determinations are confirmed, CAA California will inform participant producers and require them to amend their baseline reports, source reduction plan and 2026 California producer reports. Once this data is available, CAA California will then adjust program figures in a revised program plan or plan amendment (such as producer obligations, fee ranges, and budgets) accordingly.

As described in the Materials Strategy and Covered Material Category Compliance chapter, CAA California also developed several requests for unique challenges exemptions at the covered material category (CMC) level, and may also work on behalf of producers to apply for additional exemptions for certain covered materials as it evaluates producer proposals. Exemptions under PRC 42060(a)(3)-(4) are available for materials that cannot feasibly satisfy specific SB 54 targets due to unique challenges, health and safety reasons, or because it is unsafe to recycle the material. CAA California is also authorized to submit applications on behalf of member producers for the demonstrated high recycling rate exemption under PRC 42041(e)(2)(H). However, CAA California anticipates providing informational support only while incentivizing producers to leave qualifying materials within the program plan to help achieve mandated recycling rate targets.

11.2.7 Managing Covered Material List Changes

References: 18980.2.6

CAA California may work with producers to make recommendations to CalRecycle on CMC list changes. SB 54 establishes a process for producers or the PRO to make such requests, which allows CalRecycle to request additional information from the PRO or individual producers. When CAA California receives such requests, it will gather data, analysis, forecasting, or projections relevant to the recommendations and a description of the methodologies that were used. CAA California will also provide analysis of the financial implications of the recommended changes, including the effects on end markets and other supply chain entities.

11.2.8 Managing Responsible End Market Complaints

References: 18980.8(f)

CAA California will implement and maintain a formal process to receive complaints related to Responsible End Markets (REMs) used in the program. This process is explained in the REMs chapter.

11.2.9 Coordination with Independent Producers

References: 18980.8(k); 18980.8(d)(3)

The regulations require CAA California and any Independent Producers to coordinate on certain activities. When CAA California learns of Independent Producers, CAA California will communicate with those entities on a coordination plan for activities including, but not limited to, education and outreach, and coordinating their proportional share of the Plastic Pollution Mitigation Fund.

11.3 Reporting

11.3.1 CAA California's Annual Reports

References: 18980.6.5; 18980.6.6; 18980.9.1; 18980.14; 42051.3; 42053

CAA California will submit annual reports to CalRecycle in two phases for each year of the program plan. The first phase shall be submitted no later than July 1 of each year after CalRecycle has approved or conditionally approved the program plan. The second phase shall be submitted no later than Oct. 1 of each program year after the plan is approved.

If CalRecycle requires more information in the annual report as per PRC 42063, CAA California will respond to CalRecycle's request within 60 calendar days.

If CalRecycle conditionally approves the annual report, CAA California will submit a revised annual report within 30 calendar days.

The reports will be written and presented in a manner that can be understood by the public, and will be delivered each year to CalRecycle as searchable electronic files. After submitting each phase of the annual report, CAA California will make that phase of the report available publicly on its website. Once CalRecycle approves the full annual report, CAA California will post the approved version to its website within five calendar days of approval. CAA California anticipates some of the information in the annual reports will constitute confidential information exempt from public disclosure. CAA California will specify such information when it submits the annual report, as per Sections 18980.6.6 and 18980.14. Such information will be omitted from the publicly-posted reports.

The phased reporting process allows CAA California to report the relevant data when it is ready each year. Some of the data will require rigorous review to ensure accuracy, a process that will take time. For these reasons, the required data will be reported as follows:

11.3.1.1 Annual Report Part One - July 1

This phase will include the following:

Goals of the Program: Description of progress toward meeting key statutory requirements for program plan outcomes and metrics, along with an evaluation of whether CAA California is reasonably likely to meet those requirements

Implementation Overview: Description of the methods and technologies used to collect, transport, process, and recycle or compost covered material; progress toward meeting source reduction goals; and current recycling rates and progress toward meeting recycling rate requirements

Recyclability Data: A list of which CMCs are considered recyclable as per PRC 42355.51(d) (4)-(5)

Responsible End Market Data: Information on REMs utilized during the program year

Source Reduction Data: The information producers will report to CAA California each year detailing the producers' source reduction progress

Producer Contact Information: Updated list of the names and contact information for each program participant

Education and Outreach: A description of E&O efforts CAA California has supported and implemented over the program year

Independent Audit Results: The required annual audit of CAA California's accounting books

Closure and Transfer Plan Information: Information demonstrating the closure fund can satisfy CAA California's obligations for a six-month period

11.3.1.2 Annual Report Part Two – Oct. 1

This phase will include the following:

Financial Overview: CAA California's total cost and revenues, including an updated budget and any fee schedule updates needed to ensure the program has sufficient revenue for continued implementation

11.3.2 Annual Data Submissions

References: 18980.10.1, 18980.10.2; 42052

Separately from the annual reports that track and publicly detail program progress, SB 54 requires producers to provide certain data in annual submissions to CalRecycle. CAA California will submit this data on behalf of participant producers, except for those who choose to report this data directly to CalRecycle. CAA California will submit this information through a reporting system identified by CalRecycle.

CAA California will provide participant producers with access to its Producer Portal, a secure online reporting platform, to facilitate the submission of annual supply data. This reporting portal will allow CAA California to capture and aggregate the information that must be submitted to CalRecycle in the annual report, as well as the applicable individual producer data where required.

For this data submission, CAA California will only collect data pertaining to materials covered under this program plan. CAA California will consider this data confidential and will not disclose it publicly or to other producers.

CAA California will monitor the effectiveness of this reporting portal and make adjustments to improve efficiency and accuracy. CAA California will also provide necessary training and support to all producers and relevant interested groups on use of the reporting portal.

CAA California's data submissions on behalf of participant producers will include the following data points for CMCs, covering the previous calendar year:

- The total weight of material supplied – either sold, distributed, or imported in or into – the state
- The total number of plastic components supplied – either sold, distributed, or imported in or into – in the state
- The total weight of material disposed of
- The total weight of material recycled

Additionally, for CMCs collected and recycled through an alternative, non-curbside collection program, the data submissions will include:

- Identification of each alternative collection program
- The total weight of CMCs collected, and CMCs recycled by each CAA California-contracted alternative collection program

CAA California will submit the first supply data, along with its initial program plan (due by June 15, 2026). CAA California will submit this data on or before July 1 of each subsequent program year. The data submissions will be made electronically in a manner identified by CalRecycle.

If CalRecycle requests more information in this data submission, CAA California will respond within 14 calendar days.

11.3.3 Producer Reporting

References: 18980.8.1; 42057(d, e)

CAA California will collect records from producers that demonstrate the producer has complied with the program plan and SB 54.

CAA California will also collect data from producers to track source reduction efforts and, as described in the Source Reduction chapter, has established procedures and methods to ensure reuse and refill claims satisfy requirements. Producers will report this information to CAA California in an Individual Source Reduction (ISR) Plan report, and ongoing annual source reduction reporting. CAA California will report this source reduction progress data to CalRecycle in the program plan, as well as in annual reports.

The ISR Plan will include information on prior source reduction activities and future source reduction plans. It will detail the amount of covered material source reduced since Jan. 1, 2013, broken out by number of plastic components and weight of covered material. It will also indicate the amount of plastic covered material the producer plans to source reduce by Jan. 1, 2027; Jan. 1, 2030; and Jan. 1, 2032, broken out by number of plastic components and weight of plastic covered material.

The plan will indicate how many plastic components and how much weight of plastic covered material the producer plans to source reduce through:

- Shifting to refillable or reusable packaging
- Elimination
- Shifting to a non-plastic material
- Concentration, right-sizing, lightweighting, and shifting to bulk or large-format packaging that allows consumers to refill home or commercial reusable containers
- The amount of PCR used in place of virgin resin in covered material
- The annual source reduction reporting will include information needed to track producers' progress toward source reduction targets.

11.3.4 Managing Compliance

References: 18980.6; 42051.1(m); 42060(b)

CAA California will not impose any requirement that is in direct conflict with a federal law or regulation, as per PRC 42060(b)(2).

CAA California will take action to ensure participant producers comply with the requirements of the program plan. This will involve ensuring producers adhere to CAA National's reporting and payment policies.

CAA California will conduct proactive outreach, including support and education of producers about program plan requirements. CAA California will also provide compliance incentives. These will include producer penalties for failing to meet requirements, such as failing to provide accurate and timely information required by CAA California.

CAA California will monitor producer compliance by conducting periodic operational and record audits, utilizing an audit cycle that will include desktop audits.

CAA California's contracts with its participating producers provide termination rights if a producer violates a material term or condition of its contract with CAA California or a violation of any material requirements, guidelines, or rules for the California EPR Program, including, without limitation, failure to keep required records, non-filing of required reports, or non-payment of required fees. Prior to any such termination, CAA California will provide producers with written notice of any breach and provide the producers with an opportunity to remedy its breach. In the event of a termination, CAA California will notify CalRecycle of the producer's cancelled registration under the California EPR program with a similar notice directed to the producer.

CAA California may impose financial penalties and interest on members for failure to pay invoices in accordance with participation rules.

CAA California participant producers must retain records to substantiate and verify the accuracy of the information submitted in their reports. These records must be retained for a specified period following the submission. That period will be clearly communicated to producers. The records will be subject to inspection by CAA California.

Upon written request from CAA California, participant producers shall provide documentation in support of their reports to CAA California. This may include specific data, calculation methodologies, and audit reports. CAA California may impose financial penalties on members for failure to provide such documentation.

At the request of CAA California, participant producers must cooperate with an audit process that may include providing access to premises, data, or documentation, or providing confirmation of reporting via an authorized officer.

11.3.4.1 Notifications to CalRecycle

References: 42051(d)

CAA California will notify CalRecycle of certain cases in which a participant producer fails to register, report data or pay fees. As per PRC 42051 (d) (1), this notification would occur within 30 days of the end of a three-month period in which the registration, reporting or fee lapse occurred. Per PRC 42051 (d) (2), CAA California will also notify CalRecycle when a producer no longer participates in CAA California's program plan.

11.4 Information Management

References: 42052(d, e, f); 42054(a, b, c, d (1-2)); 42060(a)(2)(E); 18980.2.6; 18980.4.2; 18980.6.8; 18980.8.1; 18980.14(c)

CAA California will retain records related to the implementation and administration of its program plan for at least three years and have them available for inspection by CalRecycle or other authorized agencies within 10 calendar days, upon request. These records will include:

- The weight – disaggregated by each participant producer – of covered material supplied into the state, recycled and disposed of, and the number of plastic components supplied into the state
- The weight collected, recycled and disposed of for covered materials handled through a program other than a curbside collection program
- Those required to verify REMs, without redactions
- Minutes, books and records that reflect CAA California's activities and transactions
- CAA California's contracts or agreements with end markets, service providers and intermediate supply chain entities for the duration of the contract and for three years after it ends
- Those used to develop the annual data submissions
- Information used to compile annual end-market compliance audits and verification, and copies of the audits or investigations themselves
- Those demonstrating compostability labeling exemptions, pursuant to regulatory Section 18980.3.3(c)(4)(A)
- Those of complaints received about responsible end markets

All documents are stored and managed by CAA California within its cloud storage and contract management systems. These systems ensure secure access, maximize uptime, and maintain backups for all CAA California information.

CAA California will provide producers with ability to mark trade secrets in certain submissions to CalRecycle.

11.5 Financial Management

References: 42056(a-b)

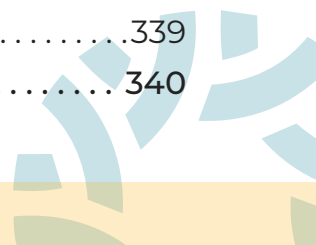
CAA California will create and maintain an escrow account for use if this program plan terminates or is revoked, or if CAA California's closure and transfer plan is activated (a full description of this plan is included in the Closure and Transfer Plan chapter).



Chapter 12: Closure and Transfer Plan

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Chapter 12: Closure and Transfer Plan

12.1 Purpose and Regulatory Authority

12.1.1 Purpose of the Closure and Transfer Plan

This Closure and Transfer Plan (CTP) applies if CAA California, acting as the approved PRO under SB 54, is dissolved or if CalRecycle revokes CAA California's approved program plan.

The CTP provides continued program compliance, operational continuity, and an orderly transition of responsibilities consistent with statutory and regulatory requirements. This CTP establishes the governance structure, financial assurances, operational continuity measures, transfer mechanics, communication protocols, and execution steps necessary to maintain program continuity during the transition period until transfer to a successor PRO.

For purposes of this CTP, the Closure Period is the period beginning upon execution of this CTP and continuing until program responsibilities are fully assumed by one or more successor PROs approved by CalRecycle or otherwise resolved in accordance with CalRecycle's direction. A central element is the requirement to have established a Closure and Transfer Fund (CTF) to be in place and ready in the event of a triggering event. The CTF is structured as a segregated financial assurance mechanism dedicated solely to supporting Closure Period obligations. The CTF is maintained separately from PRO operating accounts and is accessible by the Trustee upon execution of this CTP.

Consistent with regulatory requirements, this CTP provides for ongoing funding of the CTF to demonstrate financial readiness, including the ability to support at least six months of operational obligations during the Closure Period.

Funds within CTF are restricted solely for use in connection with closure administration, continuity of operations, and transfer of responsibilities in accordance with this CTP.

12.1.2 Role Within the Program Plan

As a requirement of the program plan, the CTP provides a path for participant producers to continue to meet their SB 54 obligations during a Closure Period. During a Closure Period, the Trustee will continue operations consistent with the latest approved program plan, subject to CalRecycle's direction and any CalRecycle approved adaptive management strategies.

12.1.3 Regulatory Authority

This CTP aligns with:

- Regulations Sections 18980.8.1 and 18980.8.2
- PRC 42051.1(f) and 42056
- Other applicable provisions of SB 54 and implementing regulations

CAA California designed this CTP to comply with these statutes and regulations, and in recognition of CalRecycle's authority to oversee, direct, and enforce closure administration, financial assurance, and transfer requirements.

12.1.4 Guiding Principles for the CTP

CAA California's development of the CTP is guided by the following principles, which are aligned with statutory and regulatory requirements under SB 54:

- **Continuous Compliance:** The CTP supports operational continuity aligned with applicable statutory, regulatory, and approved plan requirements throughout the Closure Period.
- **Operational Sufficiency During Transition:** Funding will be sufficient to maintain the operational, administrative, and reporting functions necessary to preserve system integrity, support regulatory oversight, and enable orderly transfer to a successor PRO.
- **Orderly Transition and Program Stability:** CAA California and the Trustee(s) will support timely and accurate transfer of records, contracts, data, and operational information to a successor PRO, as appropriate, allowing for continuity without disruption to participant producers or service providers.
- **Transition-Focused Scope:** The CTF is structured to reflect operations during the Closure Period, which is distinct from normal program operations. CTF funding requirements are for this transitional phase, not for continued full program operations.
- **Fiscal Prudence with Operational Sufficiency:** The CTP reflects prudent stewardship of producer funds while remaining responsive to regulatory requirements and CalRecycle oversight.

12.1.5 Closure Fund Approach

CAA California funds the CTF through producer fees to support operational continuity during the Closure Period and to avoid disruption to regulated activities. CAA California will cover funded activities to the necessary scope, relying on internally documented assumptions and minimizing the risk of either underfunding or overfunding the CTF. CAA California anticipates that upon transfer, a successor PRO will assume responsibility for long-term program operations, including any suspended expansion activities or program development functions.

The CTF supports a six-month period of operational continuity at the level necessary to maintain compliance with SB 54 and its implementing regulations; preserve records, contracts, and assets; maintain billing, financial administration, and reporting functions; administer closure activities through the Trustee; and support the orderly transfer of responsibilities to a successor PRO.

Covered functions are activities required for compliance, continuity, and transfer. The CTF does not support full program continuation and does not fund program expansion or growth; new capital investments or infrastructure expansion; new studies, pilots, or waste characterization activities; new education or outreach campaigns beyond required notices; end market development not required for immediate compliance; non-essential staffing or administrative expansion; the Plastic Pollution Mitigation Fund (PPMF); program reserves or eco-modulation funds.

12.1.6 CalRecycle Oversight and Authority

Nothing in this CTP limits CalRecycle's authority under SB 54 or implementing regulations.

12.2 Governance Structure

Upon execution of this CTP, authority to administer closure activities vests in the Trustee. The Initial Trustee is Circular Action Alliance Closure Plan LLC, a special-purpose legal entity exempt from federal income tax under Internal Revenue Code Section 501(c)(3) established to administer Closure Period operations. The Successor Trustee is Circular Action Alliance, also exempt from federal income tax under Internal Revenue Code Section 501(c)(3) and the parent of CAA California. Each of these trustees is profiled below.

Following execution, and subject to the applicable requirements of SB 54 and its implementing regulations, the Trustee assumes full authority over closure administration. CAA California retains no authority over closure administration after execution except for ministerial cooperation expressly required by this CTP, requested by the Trustee or directed by CalRecycle.

12.2.1 Initial Trustee Profile

Initial Trustee Entity Name: Circular Action Alliance Closure Plan LLC

Entity Form: Limited liability company exempt from federal income tax under Internal Revenue Code Section 501(c)(3)

Affiliation: Wholly-owned by Circular Action Alliance

Primary Officer & Contact: Jeffrey Fielkow, Manager, legal@circularaction.org

Secondary Contact: Jason Kelroy, Authorized Representative, legal@circularaction.org

Business Address: 20 F Street NW, 7th Floor, Washington DC 20001

12.2.2 Successor Trustee Profile

The Successor Trustee under this CTP will be Circular Action Alliance (CAA), which possesses qualifications similar to those of the Initial Trustee.

Upon assuming the secondary trustee role, CAA holds the full authority granted to the Trustee under this CTP, subject only to CalRecycle direction and CalRecycle – approved adaptive management.

Successor Trustee Entity Name: Circular Action Alliance

Entity Form: Nonprofit corporation exempt from federal Income tax under Internal Revenue Code Section 501(c)(3)

Affiliation: Parent entity of CAA California

Primary Officer & Contact: Jeffrey Fielkow, Chief Executive Officer, legal@circularaction.org

Secondary Contact: Kashif Ali, Chief Financial Officer, legal@circularaction.org

Business Address: 20 F Street NW, 7th Floor, Washington DC 20001

12.2.3 CalRecycle Trust Protector and Beneficiary

On the Execution Date, CalRecycle will serve as the Trust Protector and the beneficiary of the CTF. CalRecycle may provide direction to the Trustee, may remove and replace the Trustee, and may appoint a replacement Trustee at CalRecycle's discretion. Unless the CTP is triggered, neither CalRecycle nor the Trustee will have access to the CTF.

12.3 Self-Execution Structure

This CTP self-executes, meaning it takes effect once a triggering event occurs without further discretionary action by CAA California, to the extent permitted by applicable law and third-party requirements (e.g., banks/contract counterparties), and subject to CalRecycle's direction. Following a triggering event, this CTP becomes operative in accordance with this plan.

12.3.1 Triggering Events

This CTP may execute following one of three specific triggering events:

- i. Dissolution of CAA California.
 - a. Dissolution refers to a formal decision by CAA California's governing body to cease operations, including initiation of legal dissolution actions or filings with applicable authorities.
- ii. Termination of CAA California's approved program plan.
 - a. Termination refers to a discontinuation of CAA California's approved program plan, either at the election of CAA California or at the direction of CalRecycle. In this scenario, CAA California may elect, or CalRecycle may determine, that CAA California will no longer administer the program plan, even if the entity continues to exist, and may require transition to a successor PRO.
- ii. Revocation of CAA California's approved program plan.
 - c. Revocation refers to an enforcement action by CalRecycle under SB 54 and its implementing regulations, whereby approval of the program plan is withdrawn due to noncompliance or failure to meet regulatory requirements. Upon revocation, this CTP executes and the Trustee administers the program under direct CalRecycle direction. In this scenario, continuation of program activities and any transition to a successor PRO, if applicable, are determined solely by CalRecycle.

The effective date of execution, or the Execution Date, depends on the applicable triggering event. In the case of dissolution or termination, the Execution Date is the effective date specified in the notice of intent provided to CalRecycle. In the case of revocation, the Execution Date is the effective date that occurs five calendar days after actual revocation.

12.3.2 Notice of Dissolution Actions

CAA California will notify CalRecycle within a reasonable amount of time if the governing board or members of the organization serving as the PRO take affirmative steps toward dissolution. Such actions include governing board votes or resolutions authorizing dissolution, filings with the California Secretary of State or other governmental authorities, requests for governmental approvals or waivers associated with dissolution, or other formal actions in pursuit of dissolution.

12.3.3 180-Day Dissolution or Termination Notice

If CAA California, as the PRO, proposes dissolution or if CalRecycle or the PRO proposes the termination of the approved program plan, CAA California will use good faith efforts to provide CalRecycle with a written electronic notice of intent no fewer than 180 days before the proposed effective date of dissolution or termination. The notice will contain the information required by applicable regulations.

12.3.4 Vesting of Trustee Authority

On the Execution Date, and without further governing board action or discretionary act(s) by CAA California, authority to administer this CTP vests in the Trustee. Upon execution, the Trustee may exercise powers to implement this CTP without approval, ratification, or instruction from CAA California or any affiliated entity, except as CalRecycle may direct in writing.

On the Execution Date, control and access to the CTF transfers to the Trustee, subject to CalRecycle's oversight.

12.4 Trustee Governance

12.4.1 Trustee Scope of Work and Duties

Upon execution, the Trustee administers the CTF and carries out activities necessary for day-to-day service, preserves transfer readiness, manages essential contracts and financial administration, maintains and provides required records and reporting, issues required communications, and coordinates transfer to a successor PRO. The Trustee implements the most recently approved program plan at the level necessary for day-to-day service delivery.

Upon execution, CAA California retains no authority over closure administration except for ministerial cooperation required by this CTP or directed by CalRecycle.

Unless approved by CalRecycle, the Trustee will not undertake activities outside the scope of this CTP.

The Trustee meets weekly with CalRecycle unless this provision is waived, submits required annual reports, facilitates transfer to a successor PRO if directed, and oversees settlement of the CTF if directed or if continuation is no longer feasible. The Trustee notifies CalRecycle within five calendar days of any material breach by the PRO of its contract affecting implementation of this CTP.

12.4.2 Trustee Compensation

Compensation for closure administration may be provided. Personnel performing services in support of closure administration under this CTP may be compensated by using funds from the CTF. All agreements will be documented and available to CalRecycle upon request.

12.4.3 Qualifications and Expertise

The Initial and Successor Trustees possess the credentials, qualifications, requisite industry knowledge, financial knowledge, and contract administration capability necessary to carry out the duties required under SB 54 and the CTP. The Trustees are capable of administering segregated funds, implementing payment controls, overseeing receivables and payables, managing contract assignment and novation, maintaining secure access to records, and executing orderly transfer to a successor PRO under CalRecycle's direction.

These functions may be carried out through personnel and resources within the Trustee organization, support from affiliated entities like CAA where appropriate, or engagement of qualified third-party service providers, as necessary to support continuity, compliance, and effective administration of closure activities.

12.4.4 Consent to Serve

CAA California will maintain the Trustee's executed consent to serve, identify the individuals authorized to act for Trustee purposes, and confirm acknowledgment of CalRecycle's authority to direct, remove, and replace the Trustee and role as Trust Protector and beneficiary of the CTF. Documentation is available to CalRecycle upon request.

12.4.5 Service Agreement

The Initial Trustee entity may enter into, or rely on, one or more written services agreements with CAA and/or other qualified third parties, to the extent necessary to administer obligations under SB 54 and this CTP, subject to CalRecycle's

12.4.6 Annual Credential Confirmation and Readiness Review

CAA California will confirm annually, and as reasonably directed by CalRecycle, that the Initial Trustee and Successor Trustee remain willing and able to serve. CAA California will notify CalRecycle within a reasonable time after determining that a Trustee is unwilling or unable to serve.

12.4.7 Scope of Work Changes

CAA California and/or the Trustee(s) may submit proposed changes to the Trustee's scope of work to CalRecycle prior to implementation of the CTP. Requests may describe the modification, operational rationale, financial effect, and impact on continuity and transfer readiness. Approved changes will be documented by a written proposal sent by CAA California and written approval of the same by CalRecycle.

12.5 Closure and Transfer Fund Structure

12.5.1 Form

CAA California will establish a segregated account for the purpose of the CTF. CAA California will deposit funds directly into this segregated account. Supporting documentation describing account structure, controls, and governing provisions will be maintained and made available to CalRecycle upon request.

12.5.2 Segregation from Operations

To the extent required to meet the closure funding obligation and permitted by applicable law and existing restrictions, the CTF is distinct from and remains separate from active PRO operating accounts, and any other funds maintained by CAA California subject to CalRecycle direction, upon execution of this CTP. The CTF supports only the day-to-day operations covered during the Closure Period.

In addition to the core CTF funds, upon execution of this CTP, or unless CalRecycle directs otherwise, CAA California will prioritize satisfaction of existing operations under the program plan and then also transfer remaining available funds to the CTF. CAA California undertakes an orderly closure and transfer of such accounts and funds to the CTF within a reasonable time frame, consistent with applicable legal, contractual and operational constraints.

12.5.3 Restricted Purpose

The Trustee will use the CTF only for activities necessary to carry out the scope of obligations during the Closure Period, consistent with the principles of the CTP.

The Trustee will not use the CTF for program growth, expansion, or other non-essential activities outside the scope of the CTP. The Trustee may implement expenditures not otherwise described where approved in writing by CalRecycle as part of an adaptive management strategy to maintain compliance during the Closure Period.

In the event SB 54 is repealed or otherwise rendered inactive, funds maintained within the CTF will be refunded to CAA California.

12.5.4 Continuity Through Transfer

The CTF will remain in place until the Closure Period is terminated. The Closure Period terminates if CalRecycle directs transfer to a successor PRO, or if the CTF is dissolved in accordance with CalRecycle's direction.

CAA California intends to pre-arrange banking controls so that the CTF can be accessed promptly. The timing is subject to financial institution requirements.

12.5.5 Revenue Administration During Closure

During the Closure Period, the Trustee will continue to administer billing, remittance, and related financial processes as necessary to support compliance, financial administration, and transfer readiness. Revenue collected during this period will be administered in accordance with the CTP and applicable regulatory requirements.

12.5.6 Annual Surcharge Allocation

CAA California's CTP is not required to fund contributions to the PPMF. However, if the CTP is activated at a time CAA California has collected annual surcharge funds for the PPMF but has yet to remit those funds to CalRecycle, CAA California will remit those funds to the CTF on a timely basis.

12.6 Funding Coverage

CAA California confirms the CTF will contain sufficient resources to fully support the funding required to carry out CTP obligations. All such resources will be funded exclusively through producer fees. While CAA California may utilize a combination of cash, cash-equivalents (including rights to future producer fees), or credit facilities for timing and liquidity purposes, all amounts are backed by and derived from producer fee obligations.

CAA California will determine this amount using the six-month financial sufficiency model described in section 12.7 of this chapter. CAA California may apply a staged funding approach together with any financial assurance instruments required under applicable regulations. CAA California monitors necessary funding required using a structured funding path and adjusts funding cadence and amounts as necessary to maintain compliance with this requirement.

CAA California sizes the CTF using a methodology centered on operating obligations and essential administrative functions required to maintain compliance and transfer readiness. This methodology excludes planned initiatives, new capital pledges, discretionary spending, and uncommitted future investments unless continuation is essential for regulatory compliance, or as CalRecycle directs in writing.

The full six-month funding amount will not be available upon program plan approval. Instead, the CTF is funded through a staged approach aligned with program cash flow and producer fee collection timing. Contributions occur on a defined semiannual cycle, with an objective to reach planned levels by the end of the year. During the funding ramp period, the financial assurance approach may supplement the CTF to support funding sufficiency.

CAA California evaluates CTF sufficiency on an ongoing basis and through periodic reassessment, including annual reporting, and adjusts funding mechanisms as necessary to maintain compliance.

12.6.1 Scope of Cost Coverage

The CTF will include sufficient funds to cover, for a six-month period:

- Operating costs needed to support ongoing program continuity and operations including legal compliance
- Previously approved and contractually committed service provider reimbursements needed to prevent any material management and education and outreach service disruption
- REM verification to the extent it is regulatorily required

During the Closure Period, the CTF will not fund:

- PPMF, program reserves, eco-modulation funds
- Program growth, ramp-up, or expansion activities
- New studies, pilots, or waste characterization projects
- New marketing, education, or outreach campaigns
- End-market development initiatives not required for immediate compliance
- Capital projects beyond those required to maintain existing operations
- Program administration, management, or staffing costs beyond what is strictly necessary for orderly closure and transfer

12.7 Six-Month Financial Sufficiency Model

CAA California bases the financial sufficiency model on the most recently approved program plan, current program activity levels, the most recent cost and revenue data available, and commitments and administrative functions necessary to maintain compliance and transfer readiness during the Closure Period. CAA California maintains documentation supporting the assumptions, methodologies and cost categories used in the model as part of the administrative record.

12.7.1 Model Updates

CAA California updates the financial sufficiency model at least annually and upon material changes in the program structure, cost profile, or contractual commitments. Updates reflect current program conditions and available data. CAA California may also update the model upon CalRecycle direction.

12.7.2 CTF Solvency Certification

CAA California maintains a documented process to confirm CTF sufficiency. After CTP execution, the Trustee confirms the CTF's sufficiency and provides supporting documentation, as appropriate, to CalRecycle upon request and through applicable reporting processes.

12.7.3 Multi-Year Funding Requirement and Funding Path

CAA California maintains a year-end funding path showing the estimated annual obligation, estimated six-month amount, and year-end funding target for each year of the staged funding period. This funding path aligns with the financial sufficiency requirements. Amounts are shown in the five-year program budget that is available in the Budget Development for SB 54 Implementation chapter.

12.8 Cost Category Analysis for Closure and Transfer Fund

CAA California establishes the basis for determining how program costs are treated during the Closure Period. Each cost category is evaluated to determine its treatment, whether included, excluded, or partially included, and the rationale to include during the Closure Period.

CAA California uses this approach to map annual budget line items and active contractual commitments into the calculation of six months of funding. CAA California applies this approach conservatively, by limiting funding obligations to only those costs that must be definitively incurred during the Closure Period. Below is a table summarizing the financial modeling cost categories and how they are treated within the model.

Table 1: Cost Category Analysis

Category Name	Treatment in Model (Included, Excluded, Partially Included)	Rationale of Incorporation
Processing Capital and Operating Costs	Partial	Excludes expansion and new services; includes only operating obligations required to avoid regulatory noncompliance or operational or service disruption
Collection Capital and Operating Costs	Partial	
Composting Capital and Operating Costs	Partial	
Transfer Facilities and Transportation Costs	Partial	Includes obligations necessary to maintain services to avoid operational or service disruption
Source Reduction Costs	Partial	Ongoing source reduction activities deferred to successor PRO; only required close-out functions retained
Reuse and Refill Costs	Partial	Ongoing activities that avoid operational or service disruption. Long-term deployment and infrastructure development shift to the successor PRO
Education and Outreach Costs	Partial	Includes obligations necessary to maintain contracted services
Material-Specific Investments	Exclude	Prospective and developmental investments shift to successor PRO
Responsible End Markets (REMs) Development and Verification Costs	Partial	Includes only current verification or obligations necessary for compliance
Regulatory Costs	Include	Regulatory compliance remains mandatory during Closure Period
Program Management and Administration Costs	Partial	Includes necessary Closure Period administration

Category Name	Treatment in Model (Included, Excluded, Partially Included)	Rationale of Incorporation
Program Reserves	Exclude	Separate from CTF until transfer upon closure
Eco-Modulation Fund	Exclude	Separate from CTF

12.9 Closure Period Operations

12.9.1 Reliance on Existing Systems and Services

The Trustee will use existing support services associated with CAA to the extent necessary to carry out Closure Period operations. This approach reduces the risk of disruptions for producers and service providers/local jurisdictions, mitigates overall implementation costs, and leverages CAA’s established infrastructure and data platforms used to execute on the same SB 54 obligations. By utilizing a written service agreement with CAA, the goal is for the Trustee to preserve the user experience and continuity for PRO business processes.

12.9.2 Producer Reporting, Fee-Setting, Invoicing Processes and Fee Collection

During the Closure Period, the Trustee will maintain oversight for billing, remittance, and receivables functions to the extent necessary to support compliance, financial administration, and transfer readiness. Billing and fee administration will follow the approved program structure in effect at the time of execution unless CalRecycle directs otherwise. Revenue collected during the Closure Period will be used to support Closure Period obligations consistent with the CTP.

12.9.3 Claim Submissions for Project Funding and Reimbursement and Accounts Payable Administration

The Trustee will maintain oversight for claim validation activities and accounts payable (AP) processes sufficient to receive, review, approve, and pay permitted invoices. The AP process will confirm that each cost requested for reimbursement falls within the allowed budget and scope. The Trustee also will retain supporting invoice documentation for CalRecycle review.

12.9.4 Contractor and Service Provider Continuity

The Trustee will maintain all relationships necessary to preserve compliance, records integrity, financial administration, transfer readiness, and continuity of operations during the Closure Period. To the extent practicable, the Trustee will maintain existing contractual relationships on a temporary or interim basis to support continuity until a successor PRO is approved and assumes responsibility, unless modifications are required to maintain compliance or as directed by CalRecycle. Where continuity depends on assignment, novation, or replacement contracting, the Trustee administers those arrangements in a manner that preserves continuity of services. If assignment is not available, the Trustee may implement interim administration or other temporary measures necessary to maintain operations until the transfer to a successor PRO.

12.9.5 Recordkeeping and Reporting During Closure Period

The Trustee will maintain accounting books and records sufficient to administer the CTF. These records are available to CalRecycle upon request.

The Trustee will maintain the ability to produce reports sufficient for CalRecycle oversight during the Closure Period. Reporting will reflect CTF activity, financial status, and operational readiness and will be provided as required under applicable law and regulations.

12.10 Contract Assignability and Transfer

CAA California will use commercially reasonable efforts to ensure no relevant contract prohibits assignability and assumption to the Trustee and, if required, to a successor PRO. Upon assignment, rights and obligations vest in the Trustee, and CAA California retains no administrative, financial, or approval rights except as required by contract or directed by CalRecycle. Documentation will be maintained and updated on an ongoing basis and available upon request.

On or promptly after the Execution Date, CAA California assigns contracts to the Trustee to the extent permitted. If assignment is not available, the Trustee may implement interim administration arrangements sufficient to preserve continuity until assignment, novation, or replacement contracting is completed.

If assignment cannot be completed due to consent, novation, or other restrictions, the Trustee notifies CalRecycle and may preserve continuity through interim administration, continued performance, short-term agreements, replacement vendors, or successor re-contracting, as appropriate and consistent with CalRecycle direction.

If directed by CalRecycle, the Trustee transfers contracts and related administration responsibilities to a successor PRO through assignment, novation or temporary administration, depending on contract requirements and timing.

12.11 Records and Data Transfer

The following establishes the records access and transfers necessary to implement this CTP. CAA California provides the Trustee and CalRecycle, upon request and in accordance with the CTP, with access to records required for closure administration and successor transfer, subject to applicable confidentiality, privilege, privacy, and contractual restrictions.

12.11.1 Revocation, Dissolution, or Termination

If triggered by revocation, CAA California prepares records and completes required transfers by no later than five calendar days after plan revocation.

If triggered by dissolution or termination, CAA California provides required records by no later than the Execution Date specified in the notice, unless otherwise directed by CalRecycle, and will certify completeness.

If directed by CalRecycle, the Trustee will transfer records necessary to support continuation of the program in a format sufficient for successor PRO administration. Transfer will be electronic unless otherwise directed by CalRecycle. The Trustee will coordinate with CalRecycle and the successor PRO to support continuity of operations.

12.11.2 Department Records Access

Upon written request by CalRecycle, the Trustee will provide records necessary to determine compliance with SB 54 and its implementing regulations, either through physical access or electronic submission.

12.11.3 Records Transfer Protocol

CAA California maintains a structured records access and transfer protocol sufficient to support closure administration and successor transfer in accordance with this CTP. These records are organized to allow timely identification, access, and transfer. Records will be provided in a form sufficient to support continued administration by the Trustee or a successor PRO. CAA California will certify completeness at the time of full transfer.

CAA California maintains confidentiality protections while providing access sufficient for closure administration and CalRecycle oversight and will not transfer shared credentials or other sensitive authentication artifacts.

CAA California may maintain a records index identifying record categories and locations, together with supporting documentation describing record structure and transfer sequencing, which will be available to CalRecycle upon request.

12.12 Communication Protocols

This section establishes communication requirements necessary to implement this CTP. Communications under the CTP are limited to those required to satisfy statutory and regulatory obligations, maintain operational continuity during the Closure Period and support CalRecycle-directed transfer to a successor PRO.

The objectives of Closure Period communications are to:

- Provide timely notice to CalRecycle of trigger events and execution milestones
- Ensure continuity of financial, contractual and operational administration
- Prevent conflicting or unauthorized communications following execution
- Support CalRecycle oversight, direction and control throughout closure administration and any successor transfer

Before execution of the CTP, CAA California remains responsible for issuing required notices. Upon execution of the CTP, authority and responsibility for Closure Period communications transfer to the Trustee.

Unless otherwise specified by statute, regulation or CalRecycle direction, required communications will be provided as written electronic notice and maintained as part of the administrative record.

Required communications to CalRecycle include, as applicable:

- Notice of proposed dissolution or program plan termination
- Notice of initiation of dissolution actions
- Confirmation of CTP execution and Trustee assumption of authority
- Underfunding and solvency notifications
- Trustee unwillingness or inability-to-serve notifications
- Trustee notifications of material breach affecting plan implementation
- Revised producer remittance or billing instructions during the Closure Period

- Contract assignment or interim administration notices
- Records access, preservation and transfer notices
- Successor PRO transfer coordination communications when directed by CalRecycle

Key entities subject to required communications may include, as applicable:

- CalRecycle
- CAA
- Contractors
- Intermediate supply chain entities
- Local jurisdictions
- Materials recovery facilities (MRFs)
- Participant producers
- Recycling service providers
- Responsible End Markets (REMs)
- Successor PRO(s)
- Other interest holders

Specific names and roles will be developed and compiled upon program plan approval and available upon request to CalRecycle thereafter. Nothing in this section creates an obligation to issue public-facing communications or disclosures beyond those expressly required by statute, regulation, contract or CalRecycle direction. This section does not create messaging commitments or substantive representations beyond compliance and administrative notice requirements.

Nothing in this section limits CalRecycle's authority under SB 54 or its implementing regulations to direct, modify, sequence or require additional communications during the Closure Period or successor transfer.

12.13 Underfunding and Solvency Monitoring

12.13.1 Governance and Responsibility for Solvency Monitoring

CAA California oversees financial sufficiency assessments, provides required notices, and initiates corrective action in the event of underfunding. CAA California escalates any underfunding determination and provides notice to CalRecycle in accordance with this CTP.

12.13.2 Monitoring Cadence and Annual Reassessment

Before execution, CAA California monitors the CTF on an annual basis and will perform formal reassessment after year end. After execution, the Trustee monitors the CTF and related obligations at a cadence appropriate for closure administration and consistent with CalRecycle's direction. The assessment evaluates the CTF balance, the amount required to support the six-month period, the status of any financial instrument, active contractual commitments, billing and receivables status, and performance against any applicable funding targets.

12.13.3 Underfunding Threshold and Notice

An underfunding condition exists if the CTF, together with all available financial instruments and rights to future producer fee invoices, is less than the amount required to fund the six-month period, if funding targets are materially missed in a manner that risks timely sufficiency or if CalRecycle determines that solvency cannot be verified.

CAA California will notify CalRecycle upon determination of an underfunding condition during its annual reporting. It will also describe the shortfall, cause, corrective action, and expected timing of replenishment.

CAA California will restore CTF sufficiency unless CalRecycle directs otherwise. CAA California may adjust its subsequent year fee model, contribution structure, or other funding mechanisms and take steps to restore CTF sufficiency within a reasonable timeframe, considering program cash flow, funding mechanisms, and CalRecycle direction.

12.13.4 Independent Payment Confirmation

CAA California (and, after execution, the Trustee) maintains documentation sufficient to verify financial activity, including payments, disbursements, and/or transfers.

12.14 Adaptive Management Authority

12.14.1 General Authority

After this CTP is executed, the Trustee may propose adaptive management strategies to CalRecycle if specific elements of the most recently approved plan conflict with meeting SB 54 obligations during the Closure Period. Adaptive management strategies require prior CalRecycle approval, and they apply only during the Closure Period. They are particularly relevant in circumstances where no successor PRO has been identified. They do not confer any permanent operational authority beyond what is necessary to maintain compliance during closure administration.

12.14.2 Permitted Scope

Adaptive management strategies may include temporary changes necessary to preserve compliance during closure administration, including temporary modifications to billing administration, service arrangements, reporting processes, communication timing, contract administration, and fee schedules and related fee implementation components if necessary to avoid conflict with SB 54 and if approved in writing by CalRecycle.

12.14.3 CalRecycle Approval Process

The Trustee may submit any proposed adaptive management strategies to CalRecycle. The proposal may explain the conflict or operational issue, the proposed corrective measure, the expected effect on compliance, the expected financial effect, and the expected duration. The Trustee will not implement the measure until approved by CalRecycle.

12.15 Successor PRO Transfer

Transfer to a successor PRO occurs when and as directed by CalRecycle, which may determine the timing, sequence, and scope of transferred functions based on operational readiness, regulatory compliance needs, and the successor PRO's approved program plan.

12.15.1 Transfer Components

Unless CalRecycle directs otherwise, transfer to a successor PRO may include contracts, producer master files, billing and receivables data, accounts payable records, CTF balances and related accounting support, reporting templates, operational workpapers, and other materials necessary to support transition. Records access, export, transfer format, and credential restrictions will be governed by this CTP.

12.15.2 Cooperation Obligation

The Trustee, together with CAA, will cooperate with CalRecycle and the successor PRO to facilitate transfer, including by providing records access, exporting data, explaining active contracts, transferring reporting templates, and supporting successor re-contracting where assignment is unavailable.

12.15.3 Transition Completion

The transition will be complete when CalRecycle determines that the successor PRO has assumed administrative and operational control of the transferred functions. Upon that determination, the Trustee completes final reconciliations, transfers remaining balances as directed, preserves closing records, and ceases closure administration except for any residual actions directed by CalRecycle.

For questions or concerns regarding the Closure and Transfer Plan, please contact legal@circular-action.org or the designated Trustee contacts.



Glossary

Administered exchange system: A market-based mechanism, administered by CAA California, that enables producers that exceed their source reduction targets to exchange their excess source reduction with producers that do not meet their targets.

Advisory Board: California's Packaging Producer Responsibility Advisory Board, established pursuant to Section 42070.

Allowance: The right of a producer to supply an amount of plastic covered material as part of an administered exchange system.

Alternative compliance: An alternative pathway to compliance with SB 54 source reduction targets is the use of plastic post-consumer recycled (PCR) content in plastic packaging (which does not result in a reduction to a producer's plastic supply). As plastic PCR replaces virgin plastic feedstock with recovered plastic feedstock, SB 54 denotes the use of PCR plastic that replaces virgin plastic feedstock as alternative compliance.

Alternative collection: Defined in Section 18980.1(a)(2) as a program that collects covered materials, regardless of whether the covered material is discarded or considered solid waste and regardless of the manner and location of collection, and is not "curbside collection," as defined in PRC 42041(g) because it is not conducted by a local jurisdiction or recycling or composting service providers under contract with a local jurisdiction.

Anaerobic digestion (AD): See definition in Section 18980.1.(a)(3).

Base fees / EPR fees: Fees charged to registered and obligated producers as part of the program plan. These fees vary by Covered Material Category (CMC) and are typically weight-based, especially in packaging programs. Fee variations reflect the material management costs of the CMC, its commodity revenues, its recyclability or compostability, and its supply quantity.

Bonus: In the context of eco-modulation, a bonus is a monetary incentive granted to producers that use sustainable packaging and formats with lower environmental impacts and potentially contribute to program performance goals. For source reduction specifically, a bonus is granted to producers that succeed in reducing plastic use via one of CAA California's incentive programs.

Brokers: Companies that buy materials from MRFs and sell them directly to end markets. These businesses generally do not reprocess materials but ensure materials flow to end markets.

Community-based organization (CBO): A place-based nonprofit organization serving specific communities of people residing in areas that face higher pollution impacts and negative health outcomes as the result of environmental health hazards and harms.

Compostable, eligible to be labeled compostable: The requirements a producer must fulfill to feature the word compostable on the package the producer offers for sale in California. Products must be eligible for being labeled "compostable" as defined in Section 18980.3.3(a), in accordance with PRC section 42355-42358.5.

Compostables, compostable packaging, compostable food serviceware: These terms broadly include fiber and wood items, fiber items that incorporate compostable plastic (e.g., fiber cup lined with compostable plastic), and compostable plastic items. Compostables are designed to decompose entirely into water, carbon dioxide, and biomass (i.e., nutrient-rich compost) within a specific timeframe when placed in defined composting conditions.

Compostable plastic / Plastic designed for compostability: Plastic designed to decompose entirely, such as polylactic acid (PLA) and polyhydroxyalkanoates (PHA). Compostable plastics include both fiber items that incorporate compostable plastic (e.g., a paper bowl lined with compostable plastic) and compostable plastic items (e.g., a PLA cup).

Component: See definition in Section 18980.1.(a)(4). This may expand into definitions for “detachable component”, “non-detachable component”, and “separable and distinct component.”

Contamination: Any non-acceptable material in a recycling or organics stream.

Contamination rate: The amount of nonrecyclable or non-compostable materials arriving at a materials recovery facility or other recycling or composting facility in relation to the total amount of inbound material.

Cost-to-Manage (CTM) model: A modeling tool that estimates the relative cost to manage each Covered Material Category (CMC). It simulates California’s recycling system using material-specific data (types, tonnages, and system costs) and produces CTM indices used in producer fee setting. The model incorporates both operational activities and infrastructure, equipment and technology investments required to manage each material.

CTM model components

- **Cost center:** A grouping of major system costs for material collection and recycling, including operating activities and capital investments such as collection fleets, transfer station infrastructure, MRF equipment, and new or upgraded sorting technologies.
- **Cost element:** The specific tasks or assets within each cost center, representing amortized capital or operational activities (e.g., truck driving time, unloading at transfer stations, MRF sorting labor, equipment operation and maintenance, and technology-specific processing steps).
- **Cost module:** The calculation engine that allocates each cost element to each CMC using relevant cost drivers (e.g., collection route drive times, material density on trucks, operation of material-specific screens, optical sorters, or other technologies). These calculations generate the CTM indices used in fee-setting.

Cost-to-Manage (CTM) index: A normalized cost index representing the relative cost per ton to manage each Covered Material Category (CMC). Built from the CTM model, the indices reflect material-specific operational costs and capital needs (including infrastructure, equipment, and technology investments) using the best available cost and composition data. CTM indices are used to allocate shared system costs (such as single-stream collection or shared processing infrastructure) across materials and to support fair producer fee-setting based on each material’s relative cost impact.

Covered cost(s) / eligible covered costs: See definition in Section 18980.8.(g).

Covered materials: See definition in PRC 42041(e)(1) and Section 18980.1.(a)(5).

Covered Material Category (CMC): See definition in PRC 42041(f) and Section 18980.1.(a)(6).

Disadvantaged Community: See definition in PRC 42041 (i).

Early fees: Fees charged to registered and obligated producers prior to the launch date of the state EPR program. These fees vary by broad material groupings and are intended to cover any program and plan development, start-up and any regulatory cost obligations.

Eco-modulation: An element of fee-setting that uses incentives to encourage the use of recyclable, reusable and sustainable packaging types, and disincentives to discourage the use of materials that are difficult to recycle (or compost) or are environmentally harmful. It aims to use financial signals to encourage and incentivize producers to make continual improvements in packaging design that will lead to overall improvements in recycling performance for EPR programs in support of a circular economy. These adjustments, when applied onto the base fees, reflect the environmental impact of different packaging types and materials and may not reflect actual costs of recycling.

- **Active eco-modulation:** A bonus for which individual producers must apply and submit documentation to prove their packaging meets the bonus criteria. If approved, the bonus is applied to the producer's portion of the relevant Covered Material Category (CMC) supply. Incentives are voluntary and require producers to substantiate their claims. Disincentives will require producer self-attestations or packaging audits; this process will be determined at a later date when guidance is issued.
- **Passive eco-modulation:** A bonus or malus applied to the base fee rate of a CMC. It is automatically added to all producer fee invoices, affecting all producers who report supply of that CMC.

Eligible entity: Pursuant to PRC 42051.1(g) entities eligible for SB 54 funding include local jurisdictions, recycling service providers, alternative collection systems, and others under SB 54.

Elimination: See definition in PRC 42041(j).

End market: An entity that buys and reprocesses materials, converting them into recycled feedstock to replace virgin feedstock.

Environmental Justice (EJ): See definition in GOV Code Section 65040.12(e)(1-2).

Environmental Justice (EJ) Communities: Low-income communities, disadvantaged communities and disadvantaged unincorporated communities, Tribal Nations and Native American communities, and rural areas.

Food serveware (FSW): See definition in Section 18980.1.(a)(8).

Individual Source Reduction Plan (ISR Plan): A plan that sets out how a producer intends to reduce the amount of plastic packaging it supplies to the market. In their ISR Plans producers are required to forecast how much plastic (by weight and components) they plan to reduce for each target year and attribute their source reduction activity toward each of the five source reduction pathways defined in PRC 42057(a)(2).

Joint Powers Authority (JPA): A separate public agency in California formed by an agreement between two or more public entities (such as cities, counties or school districts) to jointly exercise common powers, share resources and provide services more efficiently, such as for insurance, financing or specific projects, operating under the California Joint Exercise of Power Act (GOV Code Sections 6500, et seq.). JPAs act as independent entities, allowing members to achieve goals beyond their individual capacities, such as pooling risk for lower insurance costs or undertaking large infrastructure projects.

Lightweighting: See definition in PRC 42041(l).

Local jurisdiction: See definition in PRC 42041(m).

Low-income community: See definition in PRC 42041 (n).

Malus: See definition in PRC 42041(o).

Materials Recovery Facility (MRF): See definition in PRC 42041(p).

Needs Assessment: A study completed by CalRecycle and prepared pursuant to Section 42067.

Organics recycling: Refer to the definition for "recycled organic product" from Section 18980.1.(a)(20).

Organic waste: Refer to the definition for "recycled organic product" from Section 18980.1.(a)(20).

Participation rate: The percentage of users who actively use a collection program made available to them.

Plastic Pollution Mitigation Fund (PPMF): See definition in PRC 42064(d) and PRC 42064(e)(1).

Post-consumer recycled (PCR) content: Material that has completed its intended use by a consumer, household, or commercial and/or institutional facility and has been diverted from the waste stream for recycling as a material feedstock.

Producer: See definition in PRC 42041(w)(1) and Section 18980.1.(a)(17).

Producer Portal: CAA California's online portal for obligated producers to access CAA California's fee payment system and other services.

Recycle or recycling: See definition in PRC 42041(aa)(1-4).

Recycling capture rate: The weight of target covered material collected for recycling or organics recycling, divided by the weight of target covered material collected in all streams (i.e., recycling or organics stream and waste stream combined).

Recycling rate: See definition in PRC 42041(ab) and Section 18980.1.(a)(21).

Recycling Service Provider (RSP): See definition in PRC 42041(ac).

Reimbursement process: The evaluation, verification, determination and payment for eligible covered costs, in accordance with Section 18980.8(g).

Reimbursable costs: Refer to covered cost and eligible covered costs definitions.

Responsible End Market (REM): See definition in PRC 42041 (ad) and Section 18980.1.(a)(23).

Reusable or refillable: See definition in PRC 40241(af) and Section 18980.1.(a)(25).

Right-sizing: See definition in PRC 42041(ag).

Rural area: See definition in Health and Safety Code Section 50101.

Secondary processors: Facilities buying materials from MRFs to upgrade their quality by removing contaminants or sorting them into more granular streams. They typically sell their outputs to end markets. Secondary processing can also occur at an end market entity if such entity is equipped with a front-end inbound cleaning system.

Service provider portal: CAA California's online portal for local jurisdictions, tribes, service providers and other eligible entities to access CAA California's reimbursement system and other services.

Source Reduction: See definition in PRC 42041(aj).

Source Reduction incentive mechanism: An incentive program specifically designed to incentivize producers to maximize efforts to reduce their plastic packaging weights and components. The program includes bonuses and maluses and may also include the establishment and exchange of supply allowances.

Verification body: An independent, third-party organization that assesses, audits and certifies that a company's products, services or management systems comply with specific standards.

Yield: The total weight of material that has been recycled, divided by the total weight of material that has been accepted by the end market and not sent to a responsible end market for further processing, as defined in Section 18980.3.2.(b)(2)(B).

