Circular Action Alliance (CAA) Overview for MD Advisory Board

May 30, 2024

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Agenda

1. CAA Overview
2. Colorado Statute Review
3. Colorado Needs Assessment: Background
4. Colorado Needs Assessment: Approach
5. Colorado Needs Assessment: Results
6. Colorado Needs Assessment: Lessons Learned

CAA Overview

The U.S. PRO – Circular Action Alliance

- Circular Action Alliance (CAA) is a 501(c)(3) nonprofit PRO dedicated to implementing effective EPR laws for paper and packaging in the U.S.
- CAA was founded by 20 companies from the food, beverage, consumer goods, and retail industries.
- CAA has been approved to be the single PRO in California, Colorado, and was the only PRO to submit an Oregon program plan on April 1, 2024.
- CAA was approved as the single PRO in Maryland in October 2023.

CAA's Mission

- The organization's mission is to provide producers with consistent EPR services across multiple states while developing and implementing EPR programs that:
  - Meet state-specific regulatory requirements;
  - Leverage existing recycling systems and infrastructure; and
  - Advance the circularity of covered materials through collaboration with local governments, service providers, and recycling system stakeholders.

State Updates

CAA was selected as the **single PRO** for Colorado on May 1, 2023. CAA submitted a finalized needs assessment to CDPHE ahead of schedule on January 25, 2024, and is currently developing CAA's program plan, due by February 1, 2025.

CAA was selected as the **single PRO** for California on January 8, 2024. CAA will provide comments on CalRecycle's draft rules to CalRecycle during the SB 54 formal rulemaking period in 2024 and has been appointed as a non-voting member of the SB 54 Advisory Board.

CAA was the single PRO to submit a program plan on **April 1, 2024**. CAA is now working with Oregon DEQ to refine and develop the program through the fall of 2024.

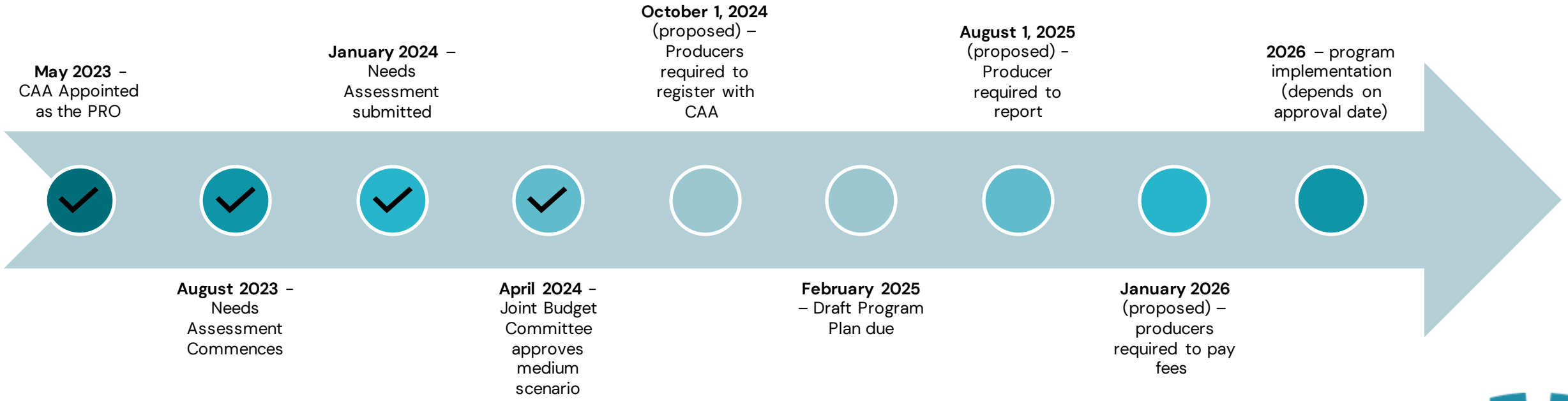
CAA has been engaged in Maine's **stakeholder workshops** and provided comments to Maine DEP. CAA will continue to provide comments to DEP throughout their formal rulemaking process. Maine will not select a PRO until 2026.

Producer Services & Reporting

- CAA is currently registering producers ahead of CAA's **July 1, 2024, registration deadline**.
- CAA is developing guidance materials to provide reporting and compliance instructions to producers, anticipated by September 2024.
- The organization's IT team has started the development of the producer reporting portal.
- CAA is projecting that the producer reporting portal will be ready to receive producers' data in Q1 2025.
- CAA anticipates producer reporting in Colorado and California in August of 2025.

Colorado Statute Review

Colorado Timeline



Key Obligations in Colorado

PRODUCERS

- Join PRO
- Report annual supplied quantity to the PRO
- Pay annual dues to the PRO
- Help achieve statewide recycled content goal set by PRO

PRO

- Conduct needs assessment
- Develop program plan
- Register producers and collect data and annual dues
- Ensure residences (including multi-family) and small businesses have access to recycling
- Negotiate contracts with local governments and recycling companies
- Invest in recycling education and infrastructure
- Ensure materials are tracked and properly managed

LOCAL GOVERNMENTS

- If a local government operates their own recycling program, the local government may receive reimbursement from the PRO
- If a local government does not operate their own recycling program, no action required

LOCAL WASTE MANAGEMENT | MATERIAL PROCESSORS

- Receive reimbursement from the PRO for recycled material (waste management)
- Send materials for recycling to responsible end markets (processors)

Needs Assessment vs. Program Plan

- The Needs Assessment assessed baseline recycling in Colorado (i.e., performance, education, infrastructure, etc.) to identify gaps and opportunities to improve recycling.
  - It required the development of three projected recycling scenarios that demonstrate how it will improve outcomes
  - One scenario was recommended to the Joint Budget Committee by CDPHE and was approved on April 17, 2024.
- The Program Plan establishes how the selected scenario will be implemented and sets targets (e.g., collection, recycling, minimum postconsumer). The PRO has some flexibility to adjust the selected scenario.

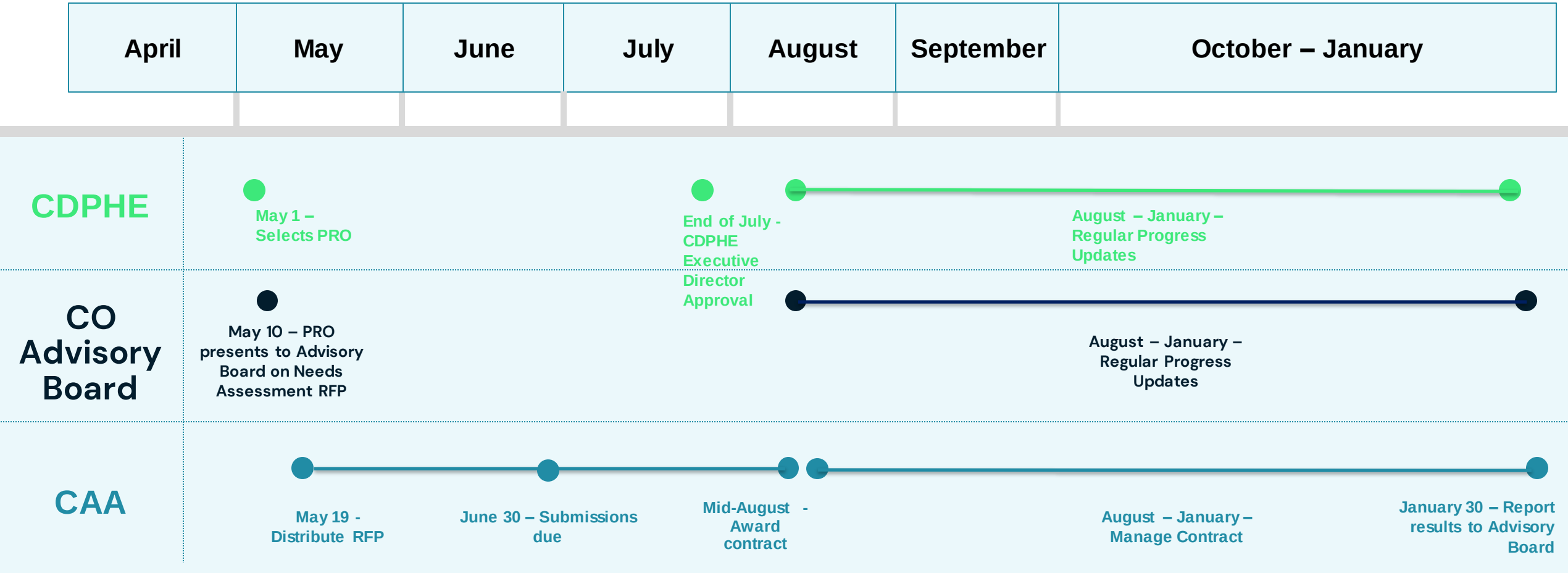
Element	Needs Assessment	Program Plan
Education	Establish the education needs in the state (25-17-705 3(a)(XII)).	Describe how education and outreach program will be implemented (25-17-705 4(y))
Materials	A proposed list of covered materials for inclusion in the minimum recyclable list and additional materials (25-17-705 3(a)(VIII)).	Include the minimum recyclable list (25-17-705 4(o)). Shall update the minimum recyclable list and submit updates for inclusion in annual report.
Targets	Develop at least three recycling scenarios, including recycling rates and collection rates the state could meet by Jan. 1, 2030 and Jan. 1, 2035 including capital costs and operational costs(25-17-705 3(a)(XIII)).	Set targets for the minimum collection rates, minimum recycling rates and minimum postconsumer recycled content (25-17-705 4(p))
Reimbursement	Explain demographic and other factors to be considered in the development of reimbursement rates for service providers (25-17-705 3(a)(III)).	Create a schedule of reimbursement rates for service providers that elect to participate (25-17-705 4(l))

Roles and Responsibilities – Needs Assessment

Role	Colorado	Maryland
PRO	• Lead the needs assessment process • Define the scope (within statutory requirements) • Hire the contractor • Ensure timely delivery of the needs assessment	• Advise on process, scope, deliverable, etc. of needs assessment through the Advisory Board
State Agency	• Responsible for recommending the preferred scenario to the Joint Budget Committee (JBC) in the Legislature • The state runs the Advisory Board	• Lead the needs assessment process • Define the scope (within statutory requirements) • Hire the contractor • Report the needs assessment findings to the Governor by July 30, 2024 • The state runs the Advisory Board
Advisory Board	• Advise on process, scope, deliverable, etc.	• Advise on process, scope, deliverable, etc.

CO Needs Assessment: Background

Colorado Needs Assessment Timeline (2024)



CDPHE Assessment of Data Gaps

Element	Available Data
Access to Services	Low
Recycling Services Costs	Low
Demographic Factors & Other Variables	Low
Contamination at MRFs & Compost Facilities	Medium
Non-Residential Service Availability, Gaps & Costs	Low
Processing Capacity	Low
Minimum Recyclable List	Medium

Element	Available Data
Markets	Low
Innovative Technologies	Low
Reuse & Refill	Low
Education	Medium
Three Scenarios (impact of exemptions)	Low
Three Scenarios (impact of exemptions in other jurisdictions)	Low
Compost Facilities	Medium

Procurement of Services

- Circular Action Alliance (CAA) worked closely with the Procurement Office, a firm that specializes in public procurement, to assist with:
  - Drafting the RFP
  - The process for proposal submissions
  - The evaluation
  - The selection process.
- The procurement process was conducted in accordance with applicable due process, and probity standards, and in accordance with the applicable procedures in Colorado's Procurement Code for public procurement since this RFP process was subject to those rules.
- All evaluators signed Evaluator Participation Attestation Form to screen each proposed member of the RFP evaluation team for actual, potential, and apparent conflicts of interest. No actual, perceived, or apparent conflict of interests were reported by evaluation team members.

Criteria

- Non-price criteria included:
  - Experience and qualification (15 points)
  - Proposed resources (10 points)
  - Methodology and approach (30 points)
  - Engagement plan (5 points)
  - Detailed project timeline (10 points)
  - Contingency plan (5 points).
- Price was considered after non-price criteria (25 points).
- Two bids were submitted and evaluated.

CO Needs Assessment: Approach

Procurement of Services

- **Strong project team and stakeholder network:**
  - National recycling and compost system understanding (collections, processing, end markets): HDR
  - Experienced EPR partners: Eunomia, Start Consulting, 4R Sustainability, Bell & Associates
  - Local partners: Sandhill Environmental Services, LBA Associates.
- **Data Gathering:**
  - Review of existing documentation and database development
  - Interviews, surveys, and webinars
  - In-person facility evaluations
  - Demographic analysis.
- **Data Assimilation and Quality Review:**
  - Data consolidated into a database
  - Understanding system performance relative to covered materials
  - Analysis to identify high-level findings and trends
  - Formulation and costing of system improvements.

CO Needs Assessment: Results

Data Collection Statistics

70+	Tours/interviews with service provider and end markets
130	Surveys completed
11	Advisory Board meetings since the contract was awarded
10	State Board meetings since the contract was awarded
200+	Comments received and responded to by the project team

Results of Elements

Element	Purpose	Approach	Scenario Considerations
Residential Collection	• Understand recycling and waste services provided to residential properties	• Municipal surveys • Desktop research (municipal websites, HOAs) • GIS research for CDP and rural areas	• Helped establish baseline performance and cost and understand the impact of scenario switches • Understanding of collection method, collection frequency, type of contracting, materials • Access to curbside recycling and curbside trash help evaluate impact of convenience standard
Service Costs	• Identify service costs for collection	• Webinars targeted at hauling community • Online survey (municipal and service providers) • Detailed information-gathering interviews	• Most of Colorado serviced by subscription-based, cart-based, open market hauling • Geography of Mountain and Western Slope Regions can pose challenges for hauling • Cost of services ranges from $5/HH/month to $90/HH/month when bundled w/ waste collection

Demographics	• Outline of demographics in Colorado and environmental justice factors	• Analyze data from:
		  • U.S. Census Bureau
		  • EPA's Environmental Justice Screening and Mapping Tool
		  • Colorado EnviroScreen
		  • Association of People Supporting Employment First
		  • County Health Rankings & Roadmap
			• About 16% of Colorado's population and 77% of the landmass is considered Rural
			• Spanish is second most spoken language (11%)
			• Seasonal population fluctuations in many Mountain communities
			• Significant urban and rural trends

Results of Elements

Element	Purpose	Approach	Scenario Considerations
Contamination	• Estimate existing contamination rates at MRFs and compost sites in Colorado • Identify challenges associated with contamination • Identify common contaminants • Evaluate methods to improve the quality of material received by end markets	• Review past reports to assess available information on contamination in Colorado • Conduct site visits at MRF and compost facilities • Interview facility staff about contamination trends	• MRFs surveyed reported total contamination rate between 10% and 20% • Compost facilities reported contamination rate below 10% by weight. Most reported less than 3% by weight • Contamination can cause equipment downtime, contaminated commodities, lost revenue, worker injuries, reduced efficiency, and other issues
Non-Residential Collection	• Understand service availability, gaps, and recycling services costs associated with providing recycling services to non-residential entities covered	• Survey all municipalities • Conducted 27 interviews with different non-residential entities • Used NAICS codes and other published and unpublished data	• Information was used to estimate current recycling performance from non-residential entities and the impact of providing service for more non-residential entities

Results of Elements

Element	Purpose	Approach	Scenario Considerations
Processing Capacity	• Identify MRFs currently operating in Colorado • Identify current permitted capacity, throughput, feedstocks accepted, contamination rates, equipment use, end-market products, costs, and potential expansion opportunities	• Review CDPHE's list of registered recyclers to identify which were subject to Needs Assessment • Review focused on facilities with sorting and baling capabilities • Survey and interviews to request information	• Project team visited 9 MRFs in Colorado and interviewed 3 additional MRFs. Publicly and privately owned facilities were included • Most of the MRF processing capacity is in the Front Range • MRF operators indicated that they could take additional feedstock if packaging recycling increases • MRFs may require equipment upgrades to increase capacity
Opportunities and Costs	• Evaluate the opportunities and costs of enhancing Colorado's existing recycling and composting infrastructure	• Develop high-level cost estimates of expanding and/or improving existing MRF, compost facility, and transfer station infrastructure	• Total cost of capital upgrades to the existing MRF infrastructure in Colorado is approximately $85M-$100M, yielding approximately 600,000 tons of additional capacity • 3 new MRFs in Front Range expected to begin operation in 2025-2026 • Total cost of capital upgrades to existing compost facility infrastructure is approximately $49M to process food waste and compostable packaging

Results of Elements

Element	Purpose	Approach	Scenario Considerations

Minimum Recyclables List	• Evaluate which materials could be uniformly collected as part of the minimum recyclables list and which materials may be on the additional materials list	• The project team developed a list of materials to be evaluated
		• Each material on the updated list was evaluated on the following criteria:
		  • Availability of Recycling Services
		  • Recycling Collection and Processing Infrastructure
		  • Sortability of Materials at the MRFs
		  • Recycling End Markets
		  • Detriments
			• The list determines what materials will be collected as part of the different scenarios

End Markets	• Evaluate the current State of end markets for recyclable material collected in Colorado	• Review publicly available information such as the EPA's Recycling Infrastructure Market Opportunities map; Circular Colorado's member directory, and University of Colorado Denver's Manufacturing • Interviews with MRFs, brokers, and recyclers	• Based on the availability of end markets the scenario controls can demonstrate the viability of collecting the material

Results of Elements

Element	Purpose	Approach	Scenario Considerations
New Technologies	• Evaluate recycling solutions that can potentially expand or improve collection, sorting, and processing of recyclable packaging materials • Equipment at commercial stage	• Develop list of technology options that not all facilities or haulers currently use in Colorado • Identify technology gaps through surveys and site visits • Contact reputable vendors for technology information, commercial availability, and cost estimates	• Benefits include increased safety & efficiency, processing of additional material types, ability to adapt to changing markets, potential for increased diversion, reduced contamination, and reduced staffing needs • Fire detection systems can protect processing capacity at existing MRFs • Contamination software, routing software, automated collection, and scheduling tools improve data collection, route efficiency, and worker safety
Reuse	• Understand the availability and scope of reuse and refill systems in Colorado	• Assemble database of reuse and refill operators in the state • Interviewed internal and external reuse and refill experts, key Colorado stakeholders, and several reuse service providers	• Reuse was not directly included as a scenario control, but the growth of reuse options was taken into consideration when estimating potential waste reduction in the state

Results of Elements

Element	Purpose	Approach	Scenario Considerations
Education	• Evaluate current recycling education programs in Colorado • Evaluate cost of recycling education • Identify best practices and recommendations for recycling education	• Review existing reports and study that address recycling education in Colorado • Review websites of Colorado municipalities for recycling education • Survey municipalities regarding recycling education • 2 stakeholder workshops with EcoCycle to gather information on local recycling programs and seek input on recycling education strategies	• Approximately two-thirds of municipal survey respondents noted that they provide recycling education • Material lists of what can and cannot be recycled were among municipalities' most commonly available educational tools • Nonprofit recycling and zero waste advocacy organizations in Colorado provide educational support for recycling programs and can continue to play a role in the future to improve outcomes
Compost	• Outline capacity and feedstocks of composting facilities in Colorado • Evaluate whether facilities accept compostable packaging and service ware, capacity of composting facilities, and potential for expanded capacity	• Review existing studies and regulations impacting Colorado's composting programs • Site visits and interviews of representative composting facilities	• Based on review of municipal codes, composting not a clearly defined use (grouped with solid waste facilities); may limit access to properly zoned land • Most facilities surveyed accept a mixture of green and food waste • Most common processing approach was windrow composting • Current processing capacity estimated to be 400,000 tons per year, with potential capacity of 1.1M tons per year

Projected Scenarios

- Goal: Develop 3 scenarios and estimate their impacts on collection and recycling rates of covered materials in Colorado, to be met by 2030 and 2035, including associated operating and capital costs.
- Modeling is a culmination of findings from the other elements.
- Identified factors that impact collection and costs:
    - Access
    - Collection
    - Materials
    - Education
    - Infrastructure
    - Waste generation.
- Using these factors, “low”, “medium”, and “high” scenarios were developed

Medium Scenario

- On April 17th, 2024, CAA's medium scenario was approved by the Joint Budget Committee. The medium scenario will now form the basis for the development of CAA's program plan, due February 1, 2025.
- Key Elements of the Medium Scenario:
  - Curbside recycling services to residences in the same frequency as their waste collection.
  - In the Front Range this means weekly collection, and in other regions, for those that are receiving waste collection, their curbside recycling will be at least bi-weekly.
  - Non-resident covered entities will also receive services under the medium scenario by 2028.
  - Expansion of drop-off sites and investments in composting facilities.
  - Standardized list for the entire state of what materials can recycled, and a producer-funder recycling education program based on best practices.

		2022 (Baseline)	2030	2035
Medium	Recycling rate (%)	22% - 28%	38% - 44%	52% - 58%
	Recycling rate (k tons)	~310	~530	~720
	Performance increase over baseline (% increase)		~62%	~119%
	Cost increase over baseline (% increase)		~72%	~105%

CO Needs Assessment: Lessons Learned

Collaboration

- There were many lessons learned, but primary ones were:
  - Setting the stage for effective collaboration
  - The tighter the timeline, the worse the result
  - Scope the project appropriately
  - Anticipate the inevitable data limitations.

Setting the Stage

Clearly articulate the roles of the state, the Advisory Board, and the PRO.

Beyond the roles, clearly define how the parties will collaborate to ensure the success of the needs assessment. This includes:

Outline whether a group is directing the process, informing it, or making recommendations

Understand the "decision-tree," who is empowered to do what and when

Clearly define the channels available to share information and suggestions and the timing of collaborative inputs (note: this should not limit these activities, as collaboration and co-creation are vital)

Create guardrails to avoid inherent scope creep or unnecessary tangential deep-dives

Recognize the strategic importance of the needs assessment to the PRO's development of the Program Plan.

Overarching Lesson: Develop a considered approach to co-creation and collaboration

Carefully Consider Timeline and Scope

Tight Timelines

This factor impacted all elements of the project, significantly impacting:

- Data collection
- Data analysis
- Ability to seek, receive and incorporate feedback.

Project Scope

Due to tight timelines, ensuring your project scope is focused is essential.

However, the needs assessment also provides vital information to inform the drafting of the PRO's program plan, so the scope should contemplate opportunities to inform it.

Overarching Lesson: The importance of the relationship between timelines and scope cannot be understated and have a critical impact on the success of the project.

Consider Data Gaps

Data Limitations

Waste management always struggles with data gaps. These include:

Insufficient data

Industry/local governments not collecting data

Some small private operators (depots, haulers, and processing facilities) may not be collecting and tracking data

Lack of information/data related to non-residential materials

Uniformity

When collected, the data is not readily comparable

Contamination volume and content tracking mechanisms at recycling and composting processing facilities are not uniformly tracked.

Contamination at one MRF might not be considered contamination at another (e.g., bowling balls and hoses vs. unaccepted packaging material).

Disclosure

Even when data is available and comparable, some entities are unwilling to share it.

E.g., Entities' costing and market sales information.

Applies to both private companies and local governments.

Lesson: must take different approaches to address the data (top down and bottom up), creating back-ups, etc.

Overarching Lesson: must use multiple approaches to address the data (e.g., top down and bottom up, creating alternate options, etc.)

Thank You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