



West Coast Climate & Materials Management Forum

January 6, 2022

**Recycled Content Mandates:
The Good, the Bad, & the Ugly**

West Coast Climate and Materials Management Forum

The West Coast Climate and Materials Management Forum is a collaboration of state, local, and tribal governments

- ▣ Develop ways to institutionalize sustainable materials management practices.
- ▣ Develop tools to help jurisdictions reduce the GHGs associated with materials



Check out the Forum's Resources

- [Original Report Connecting Materials/Climate](#)
- [Research Summaries](#)
- [Turn-key Materials Management Presentation](#)
- [Climate Action Toolkit](#)
- [Food: Too Good to Waste Toolkit](#)
- [Climate-Friendly Purchasing Toolkit](#)

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West Coast Climate
& Materials Management Forum

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This webinar is being provided as part of the West Coast Climate and Materials Management Forum Webinar Series. The Forum is a collaboration of state, local, and tribal governments. We invite guest speakers to share their views on climate change topics to get participants thinking and talking about new strategies for achieving our environmental goals. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

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NERC
NORTHEAST RECYCLING COUNCIL

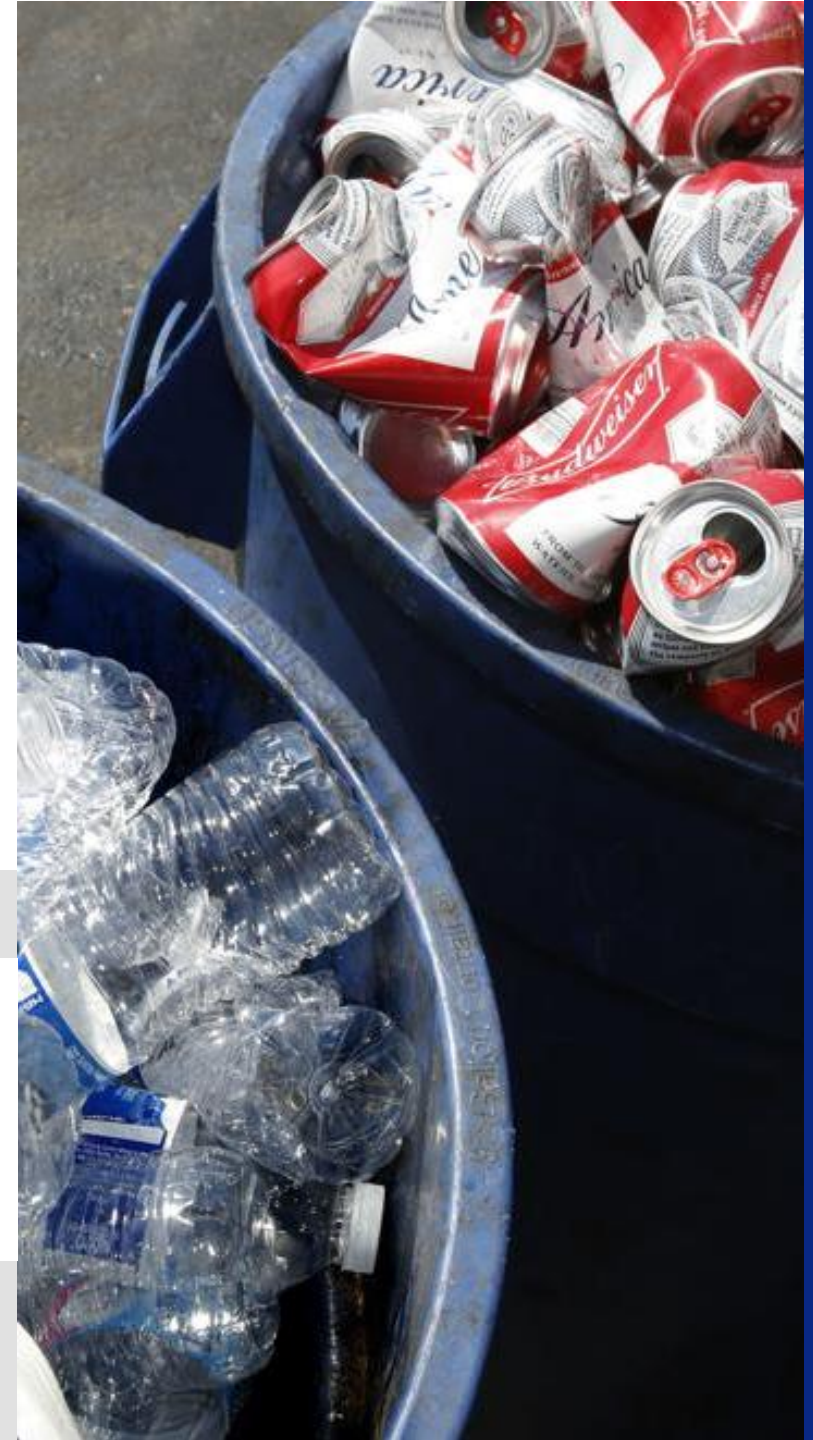
NEWMOA
NORTHEAST WASTE MANAGEMENT OFFICIALS' ASSOCIATION




BUILDING A CIRCULAR MATERIALS ECONOMY: INCREASING PCR RECYCLED CONTENT IN PACKAGING

CALIFORNIA'S AB 793 (TING) MANDATORY RECYCLED
CONTENT IN PLASTIC BEVERAGE CONTAINERS – 2020

Mark Murray,
Californians Against Waste





HISTORIC ENVIRONMENTAL LAW TO ESTABLISH MINIMUM RECYCLED CONTENT STANDARDS- AB 793 (TING, 2020)

In order to encourage efficient use of recyclable plastics, AB 793 set a series of graduated minimum recycled content levels for all plastic beverage containers, ramping up to 50% by 2030 - the highest standard worldwide.

While California has one of the nation's most successful Bottle Bills, more than 3 billion bottles are still dumped in the landfill every year. Additionally, since China implemented its National Sword policy in early 2018, much of the recyclable material we once exported is now ending up in landfills or the environment.

AB 793 will help to build demand and ensure domestic end-use markets for plastic beverage containers collected for recycling.



RATES AND DATES



ON JANUARY 1, 2022

beverage manufacturers are required to utilize at least 15% recycled plastic.



ON JANUARY 1, 2025

beverage manufacturers are required to utilize at least 25% recycled plastic



ON JANUARY 1, 2030

beverage manufacturers are required to utilize at least 50% recycled plastic



PENALTY STRUCTURE FOR MANUFACTURERS THAT FALL SHORT

Beginning January 1, 2023 , beverage manufacturers that do not meet the minimum content requirements are subject to annual administrative penalties. Penalties will be assessed beginning March 1, 2024 for non-compliance.

Penalties will be calculated at a rate of \$0.20 per pound based on the shortfall of recycled content used compared to the minimum content requirement.

Beverage manufacturers may pay penalties in quarterly installments or arrange an alternative payment schedule.

Beverage manufacturers who fail to meet the minimum content standard may submit a corrective action plan. The penalties assessed on the beverage manufacturer may be reduced if CalRecycle approves the corrective action plan.



2020 PLASTIC BEVERAGE CONTAINER SALES & RECYCLING

Material	Containers Sold	Containers Recycled	Recycling Rate
PET	12,802,225,149	8,761,768,073	68%
HDPE	187,886,759	101,804,440	54%
Total 3-7	217,353,706	38,172,205	18%

Source: Biannual Report of Beverage Container Sales, Returns, Redemption, and Recycling Rates
<https://www2.calrecycle.ca.gov/Docs/Web/119868>

LARGEST BEVERAGE PRODUCER/DISTRIBUTORS AND THEIR 2020 PCR LEVELS

Beverage Manufacturer Name	rPET (tons)	Total PET (tons)	Percent rPET
Coca Cola North America	8,734	85,785	10%
Niagara Bottling, LLC	12,794	65,429	20%
Pepsi Cola Bottling Group	8,897	48,648	18%
CG Roxane - Crystal Geyer AlpineSpring Water	9,425	25,344	37%
Nestle Waters US	7,866	24,038	33%
American Bottling Company	0	9,563	0%
Premium Waters, Inc.	2,902	4,026	72%
Crystal Geyser Water Company	0	3,562	0%
Lassonde Pappas and Company, Inc	0	2,315	0%
Mott's LLP	0	2,194	0%

Thank You

Building a Circular Materials Economy: Increasing PCR
Recycled Content in Packaging

California's AB 793 (Ting) Mandatory Recycled Content
in Plastic Beverage Containers – 2020

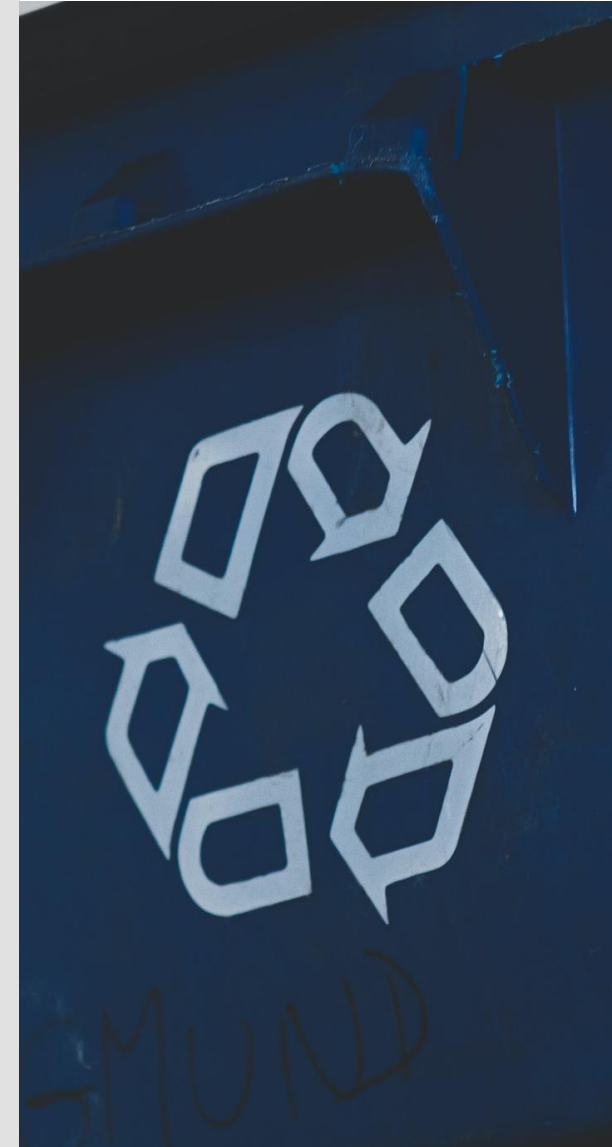
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Recycled Content Mandates: The Good, the Bad, & the Ugly

January 6, 2022
Steve Alexander
APR President & CEO



**The Association of
Plastic Recyclers**

Agenda

- APR introduction
- State laws passed to date (with recycled content requirements)
- Recycled content in EPR context
- Pending Federal Legislation
- APR Programs

WHO IS APR?



The only North American organization focused exclusively on plastics recycling.



The Association of
Plastic Recyclers



Increase
Supply



Enhance
Quality



Expand
Demand



Communicate
Value

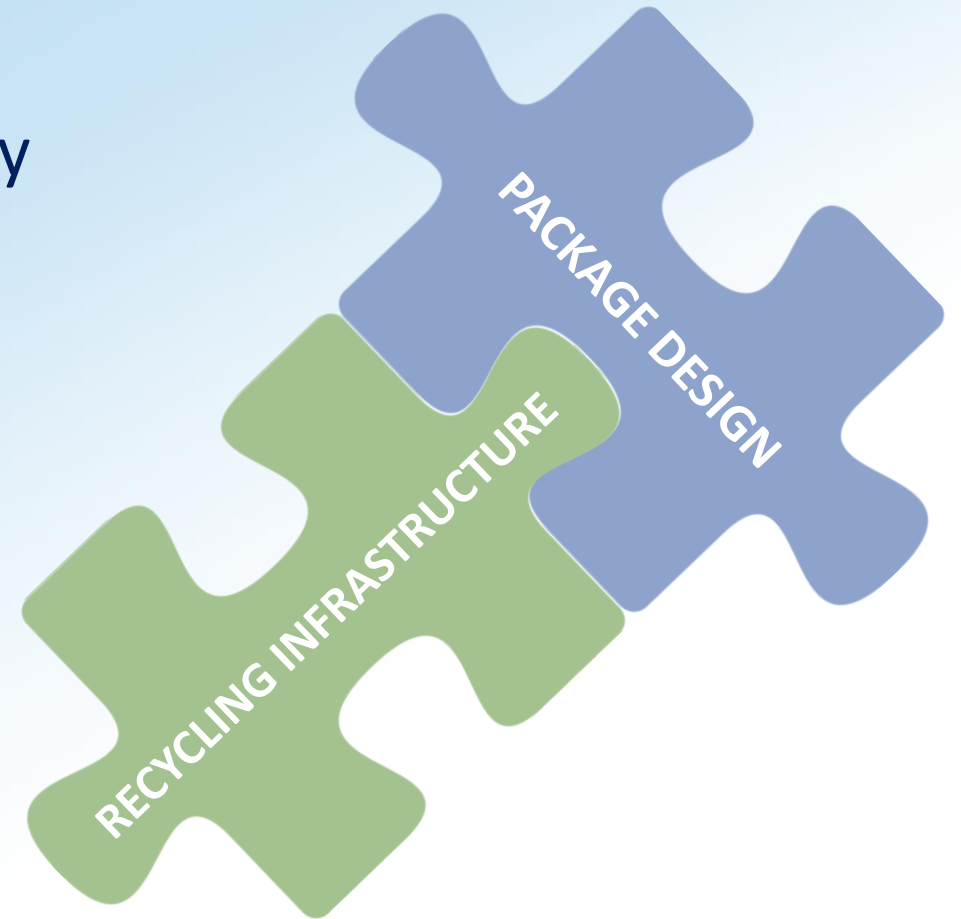
APR Primary Goals



The Association of
Plastic Recyclers

WHAT DO WE DO?

- APR Design® Guide for Plastics Recyclability
- Test Methods
- Training
- Communication
- Advocacy (APR Position Statements)
<https://plasticsrecycling.org/position-statements>
- APR Recycling Demand Champions
- PCR Certification
- Resource Development





APR Position: Degradable Additives Use in Bottles, Forms, and Films

The APR recognizes that degradable additives that weaken products or shorten the useful life of durable plastics have a strongly negative impact of postconsumer plastics recycling.

[View](#)

APR Position: Landfill Bans

The APR supports legislation to ban postconsumer plastic bottles from being landfilled.

[View](#)

APR Position: Postconsumer Recycled Content

The APR supports mandatory postconsumer recycled content legislation.

[View](#)

APR was the first plastics related trade group to support mandatory recycled content in 2006.

State Content Laws in Effect

California and Washington



The Association of
Plastic Recyclers

California AB 793

Plastic Minimum Content Standards

- Signed into law September 2020
- Requires minimum content in beverage containers subject to the California Redemption Value (CRV):
 - ✓ No less than 15% recycled content by 1/1/2022
 - ✓ No less than 25% by 1/1/2025
 - ✓ No less than 50% by 1/1/2030
- Small manufacturers exempt (\$15,000 or less in annual processing fees)
- Penalties for non-compliance assessed beginning 3/1/24 for non-compliance as of 1/1/23
- Penalties calculated at \$.20 / pound for content shortfall



The Association of
Plastic Recyclers

WA State 5022

Plastics Recycled Content Law

- Law effective as of July 2021
- Requires content in plastic bottles, trash bags, household cleaning and personal care products
- Plastic bottles (all resins)
 - ✓ No less than 15% by 1/1/23
 - ✓ No less than 25% by 1/1/26
 - ✓ No less than 50% by 1/1/31
- Trash bags: no less than 10% by 1/1/23; 15% by 2026; 20% by 2027
- Household Cleaning, Personal Care Products: no less than 15% by 2025; 25% by 2028; 50% by 2031
- APR on Advisory Committee



The Association of
Plastic Recyclers

Content in context of Extended Producer Responsibility (EPR) Bills

Oregon and Maine

New Jersey in 2022?

Oregon SB 582A

Oregon's Plastic Pollution and Recycling Modernization Act of 2021

- Signed into law in August 2021
- **Recycled content mandates are *not* part of this law**
- Producer Responsibility Organizations will set and pay fees based on covered products sold in the state. Fees are “eco-modulated” to include:
 - ✓ **Post-consumer content**
 - ✓ Product-to-package ratio
 - ✓ Choice of material
 - ✓ Evaluation and disclosure of life cycle impacts
 - ✓ Recycling rate



The Association of
Plastic Recyclers

Maine LD 1541

An Act To Support and Improve Municipal Recycling Programs and Save Taxpayer Money

- Signed into law July 2021
- No specific content mandates
- Stewardship organization program goals, and factors that inform payment schedules must include “...an increased amount of post-consumer recycled content in packaging material used by producers”



The Association of
Plastic Recyclers

Pending Federal Legislation



Federal Policy

Infrastructure Investment and Jobs Act

U.S. Senate RECYCLE Act

U.S. House RECOVER Act

Ocean-Based Climate Solutions Act

Rewarding Efforts to Decrease Unrecycled
Contaminants in Ecosystems (REDUCE) Act

Save Our Future Act

****Break Free From Plastic Pollution**

****Climate Leadership and Environmental Action
for our Nation's (CLEAN) Future Act**

Federal Policy

Pending, not expected to progress in near term

S. 984/H.R. 2238 – BREAK FREE from Plastic Pollution Act of 2021

Sponsors: Jeff Merkley (D-OR) and Alan Lowenthal (D-CA-47) - Reintroduced March 2021

- Creates requirements for waste and recycling collection systems
- Would also require domestic PCR content in plastic beverage containers:
 - By 2025, at least 25%
 - By 2023, at least 50%
 - By 2035, at least 70%
 - By 2040, at least 80%

H.R. 1512 – CLEAN Future Act

Sponsor: Frank Pallone (D-NJ-06) -- Introduced in March 2021

- Establishes post-consumer recycled content standards for plastic beverage containers.
- All must be from US sources
- Plastic manufacturers must incorporate:
 - By 2025, at least 25% PCR content
 - By 2030 at least 30% PCR content
 - By 2035 at least 50% PCR content
 - By 2040, at least 80% PCR content

APR Programs to Boost DEMAND.



Market Demand Monetizes the System

What's the difference?



Post-consumer (PCR)

Reclaimed material from homes and businesses.



Post-industrial (PIR) aka pre-consumer

Imperfect bits and scraps recovered from a factory.

Now you know.
#BuyRecycled



The Association of
Plastic Recyclers

Postconsumer Resin (PCR)

- Recognize the Value of PCR
- Postconsumer recycled material is the key ingredient to circularity
- Postconsumer recycled content allows for consumer brand companies, both to serve their consumers and to uphold their public sustainability commitments.
- Mandated recycled content is key.



How PCR Certification Works



1

APR sets definitions & guidelines

APR's guidelines ensure a clear, consistent definition of PCR, and increase accessibility to and confidence in PCR certification.



2

APR endorses qualified certifying bodies

Auditors apply for endorsement. They must demonstrate the ability to conduct audits in accordance with the guidelines.



3

Reclaimers hire an APR-endorsed auditor

Reclaimers request an audit of their pellet, flake, or regrind as part of the APR PCR Certification Program.



4

The reclaimer is audited

The auditor analyzes material sourcing and flows within the facility, and provides a certificate upon successful audit.



5

APR promotes certified PCR

APR operates a directory of certified PCR and promotes its members with certified PCR of any resin.



Get certified or find certified PCR at
plasticsrecycling.org

YEAR 3

(2019-2020)

APR RECYCLING DEMAND CHAMPIONS YEAR END REPORT

Consistent, reliable demand is critical for recycling to be mature, vibrant and sustainable



Design for Recyclability is Key...



“Consumer product companies must design their packaging so that it is easier to recycle in today's mechanical systems and recognize that they are their own raw material suppliers in a circular economy. It is difficult for recyclers to manufacture a clean supply of recycled resin if the stream of material they receive is contaminated with non-recyclable packaging.”

Source: [APR Comments on U.S. Senate EPW Circular Economy Hearing](#), APR blog



Questions?

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Recycled Content Mandates: The Good, the Bad, and the Ugly

David Allaway, Senior Policy Analyst
Oregon Department of Environmental Quality
January 2022



Today's presentation

1. Some limitations of PCR mandates
2. An alternative approach to the challenge of recycling markets



Potential limitations & unintended consequences

1. Long supply chains don't support local supply



Potential limitations & unintended consequences

1. Long supply chains don't support local supply
2. Environmental benefits may not be maximized
 - And existing beneficial end markets may be disrupted, at higher cost!

Example: end markets for glass packaging



Packaging



Fiberglass



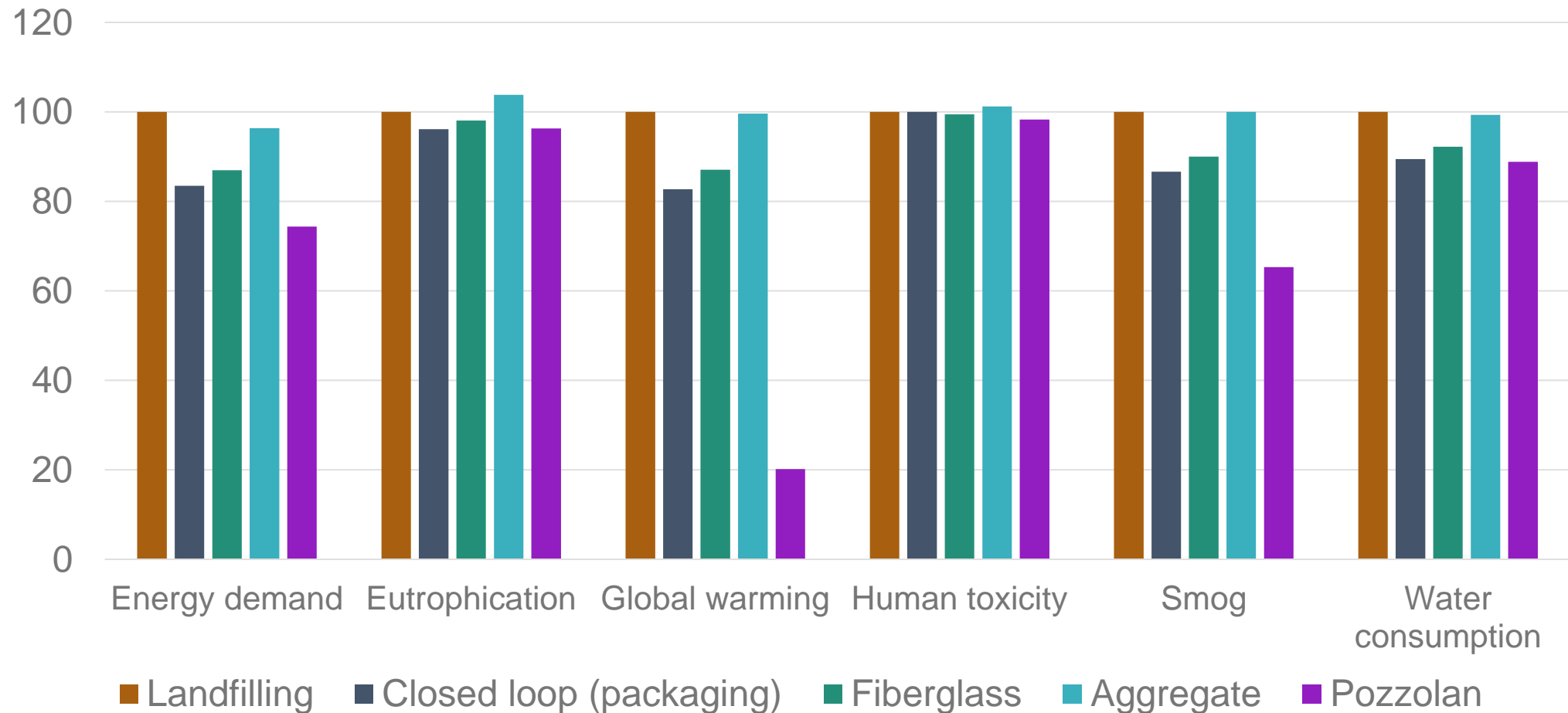
Aggregate



Pozzolan

Relative environmental impacts (life cycle)

Glass bottle production plus disposal or recycling via 4 different end markets





Sample exemption language

Oregon Revised Statute 459A.550

(5) On or after January 2, 2008, in determining whether a glass container manufacturer has met the 50 percent minimum percentage requirement, the department shall credit toward the requirement the combined amount of recycled glass generated in Oregon for secondary end uses. If the combined amount meets the 50 percent minimum percentage requirement, the department shall not initiate enforcement action.

Example: end markets for HDPE packaging

End market	Material displaced	Processing requirements	Net benefit
Closed loop 	Virgin HDPE	Higher	Worse
Open loop 	Virgin HDPE	Lower	Better

Closed Loop (“Upcycling”) vs. Open Loop (“Downcycling”)

FORUM

Common Misconceptions about Recycling

Roland Geyer, Brandon Kuczynski, Trevor Zink, and Ashley Henderson

Keywords:

closed-loop
displacement
industrial Ecology
life cycle assessment
open-loop
recycling

Summary

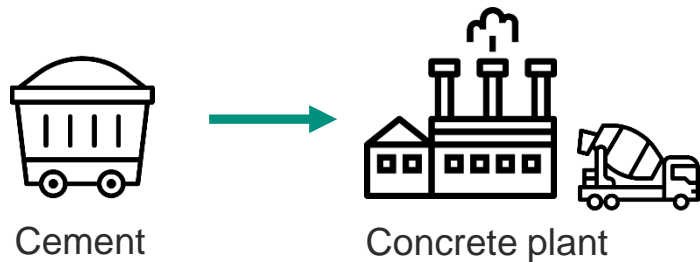
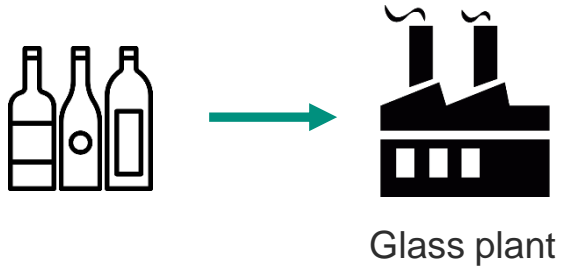
The recycling of material resources lies at the heart of the industrial ecology (IE) metaphor. The very notion of the industrial ecosystem is motivated by the idea that we should learn from natural ecosystems how to “close the loop.” Recycling is not just central to IE, it is part of everyday life. Unfortunately, how the IE community and the public at large think about recycling includes several misconceptions that have the potential to misguide environmental assessments, policies, and actions that deal with recycling and thus undermine its environmental potential. One misconception stems from naïve assumptions regarding recycled material displacing primary production. Two others assert the environmental advantages of recycling material multiple times, or at least in a closed loop. A final misconception is the assumption that the distinction between closed and open recycling loops is generally useful. This article explains why these misconceptions are flawed, discusses the implications, and presents an alternative set of principles to better harness the potential environmental benefits of closing material loops.

Article *in* Journal of Industrial Ecology · October 2015

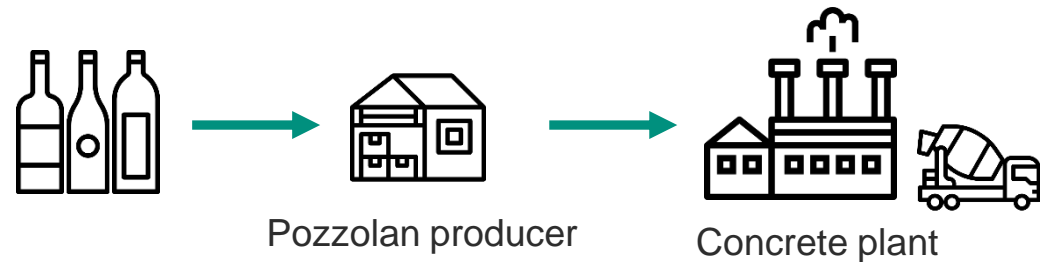
DOI: 10.1111/jiec.12355

A simple example

“Closed loop” recycling



“Open loop” recycling



Higher levels of PCR don't always translate into displacement of virgin resources



Potential limitations & unintended consequences

1. Long supply chains don't support local supply
2. Environmental benefits may not be maximized
 - And existing beneficial end markets may be disrupted, at higher cost!
3. Administrative burdens, loopholes and exemptions

Potential limitations & unintended consequences

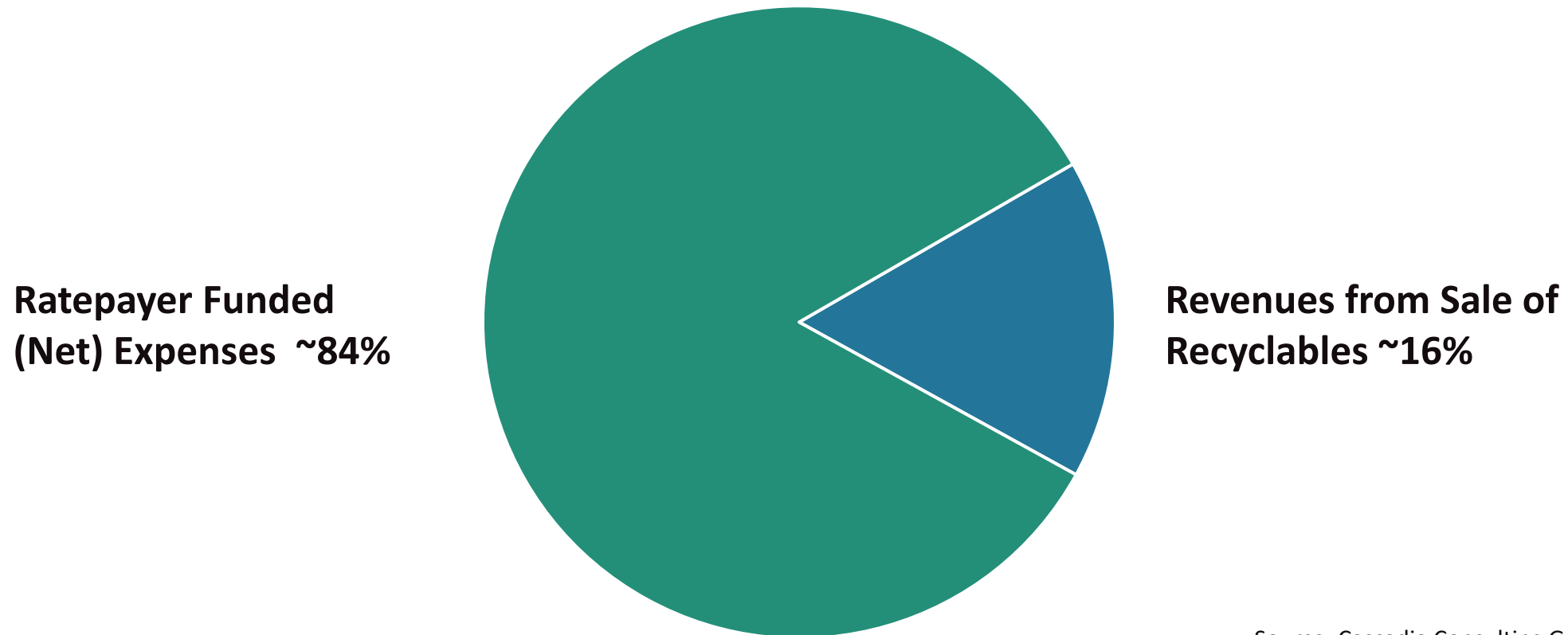
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2. Environmental benefits may not be maximized
 - And existing beneficial end markets may be disrupted, at higher cost!
3. Administrative burdens, loopholes and exemptions
4. Potential for limited impact on prices (recycling revenue)

Potential limitations & unintended consequences

1. Long supply chains don't support local supply
2. Environmental benefits may not be maximized
 - And existing beneficial end markets may be disrupted, at higher cost!
3. Administrative burdens, loopholes and exemptions
4. Potential for limited impact on prices (recycling revenue)
5. Limited impact on supply

The “signal” of market prices is masked by public mandates and subsidies

Estimated Oregon 2018 Public Recycling System Gross Expenses (in 2020\$): \$267 million

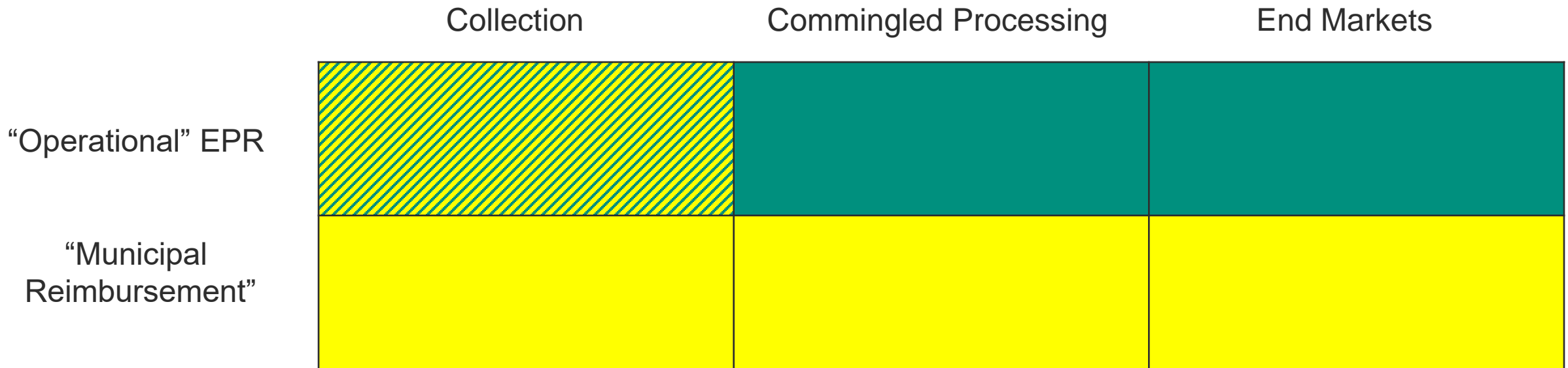


Source: Cascadia Consulting Group/Oregon DEQ


Is there another path?



Elements of EPR



 Operational obligation by PRO(s)

 Reimbursement obligation by PRO(s)

Elements of EPR

Collection

Commingled Processing

End Markets

“Operational” EPR

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“Municipal Reimbursement”

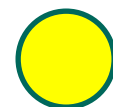
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Oregon’s Recycling Modernization Act (SB 582, 2021)

<p>some materials (e.g., commingled mix)</p>		
<p>other materials (e.g., return to retail)</p>		



Operational obligation by PRO(s)



Reimbursement obligation by PRO(s)

Additional elements of reform

- Boost supply by expanding collection services and increasing the number of materials collected
- Close loopholes that result in harmful exports
- Significantly improve quality of material sent to end markets
- Address multiple social equity concerns
- Disclose and reduce life cycle environmental impacts
- Fund waste prevention and reuse



Photos: Megan Ponder

Can EPR and PCR mandates work together?





Thank you!

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