

# THE STATE OF RECYCLING & COMPOSTING

## IN COLORADO

5th edition

# 2021

FT COLLINS  
LOVELAND

LYONS LONGMONT

Boulder  
LOUISVILLE

SUPERIOR  
WESTMINSTER

GOLDEN  
ARVADA

NORTHGLENN  
COMMERCE CITY

DENVER

GREENWOOD VILLAGE  
LONE TREE

VAIL

FRUITA

GRAND JUNCTION

MONTROSE

GUNNISON

COLO SPRINGS

PUEBLO

ALAMOSA

**eco-cycle**

**CoPIRG**  
Foundation

# 2021 STATE OF RECYCLING & COMPOSTING IN COLORADO

5th annual report

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## Authors

### **Rachel Setzke and Kate Bailey, Eco-Cycle**

Eco-Cycle is a Zero Waste pioneer and one of the nation's oldest and largest nonprofit recyclers. Eco-Cycle innovates, implements, and advocates for local and global Zero Waste solutions to foster a more regenerative, equitable, and climate-resilient future.

For more information visit [www.ecocycle.org](http://www.ecocycle.org)

### **Danny Katz, CoPIRG**

CoPIRG, the Colorado Public Interest Research Group, is a nonprofit, nonpartisan public interest advocacy group with thousands of dues-paying members across the state.

For more information visit [www.copirg.org](http://www.copirg.org)

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# STATE OF RECYCLING & COMPOSTING IN COLORADO 2021

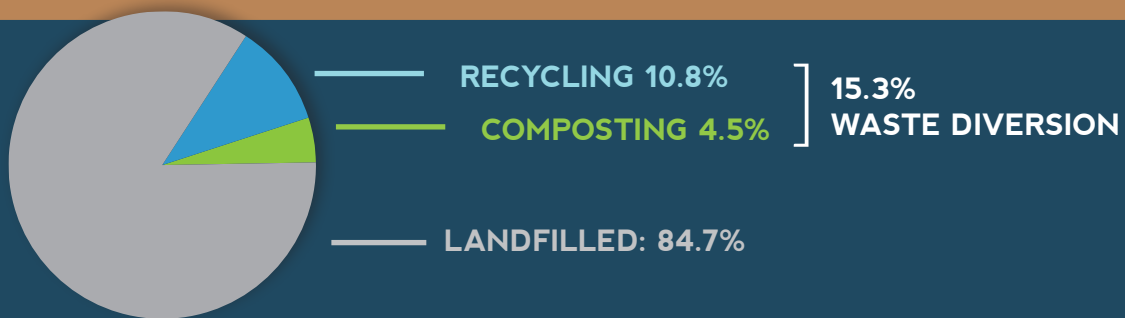
## EXECUTIVE SUMMARY

### COLORADO IS NOT MOVING FAST ENOUGH TO IMPROVE RECYCLING AND COMPOSTING

In the fifth year of the State of Recycling & Composting in Colorado Report, Eco-Cycle and CoPIRG (Colorado Public Interest Research Group) found Colorado is failing to meet its recycling and composting goals and remains one of the 20 most wasteful states.<sup>1</sup> In 2020, Colorado's statewide recycling and composting rate was just 15%, which is less than half the national recycling and composting rate of 32%.<sup>2</sup> The recycling rate for plastics was even worse than the state average, with only 9% of plastic containers and packaging recycled statewide.<sup>3</sup> In total, Coloradans buried over 5,900,000 tons of materials in the state's landfills in 2020.<sup>4</sup>

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FIGURE 1. COLORADO'S MUNICIPAL DIVERSION RATE, 2020



While the state as a whole is failing to make significant progress to increase recycling and composting, some leading Colorado communities are recovering more than 50% of their discarded materials, demonstrating that recycling and composting can be successful solutions for Colorado to reduce climate emissions, create green jobs, and conserve natural resources. The following communities rank as the top recycling and composting programs in the state with best-in-class policies, programs, and infrastructure that serve as models that can be scaled up statewide to meet Colorado's recycling and composting goals.

**FIGURE 2. COLORADO'S LEADERS FOR BEST RECYCLING AND COMPOSTING PROGRAMS IN 2020<sup>5</sup>**

FRONT RANGE LEADERS	COMMUNITY	RECYCLING & COMPOSTING RATE
Best citywide—residential and commercial	City of Boulder	53%
Best residential	City of Loveland	58%
Best industrial	City of Fort Collins	65%
Best countywide—residential and commercial	Boulder County	43%
<b>GREATER COLORADO LEADERS</b>		
Best citywide—residential and commercial	City of Aspen, Town of Durango	32%
Best countywide—residential and commercial	Pitkin County	38%



However, despite these local successes and state and local efforts to increase recycling and composting programs in recent years, it appears the state will fall well short of meeting its 2021 recycling and composting goal of 28%.<sup>6</sup> Colorado is also not on track to meet the national goal of 50% waste diversion by 2030.<sup>7</sup> While the overall tons of materials recycled and composted has been increasing since the state started tracking waste diversion in 2007, this increase has been nearly the same as the state's increased rate of population growth.<sup>8</sup> **This means Colorado is not making any true gains to reduce waste and recover more resources, and is just barely keeping pace with the state's growing population.**

After five years of reporting on recycling and composting trends and rates in Colorado, it is clear **the state is not moving nearly fast enough to improve recycling and composting rates. Lack of funding is the most commonly cited barrier by municipalities, residents, and businesses, and has resulted in inconsistent, inequitable, and inconvenient access to recycling and composting programs.** Additional challenges include low landfill prices that undercut recycling and composting programs, lack of local and regional businesses to buy recycled materials, and the prolific use of nonrecyclable single-use plastics. **Together, the lack of statewide progress to overcome these challenges points to the need for bold, game-changing policies and system-wide solutions to modernize and transform Colorado's recycling and composting systems. By recycling and composting more, Colorado will reduce climate pollution, protect our clean air and water, and create jobs.**

**FIGURE 3. COLORADO IS FAILING TO MEET ITS RECYCLING AND COMPOSTING GOALS <sup>9</sup>**

DIVERSION RATE & GOALS	2020 (actual)	2021 GOAL	2026 GOAL	2036 GOAL
Front Range	16.2%	32%	39%	51%
Greater Colorado	10.6%	10%	13%	15%
Statewide	15.3%	28%	35%	45%

### PRODUCER RESPONSIBILITY POLICY WILL TRANSFORM COLORADO'S DISMAL RECYCLING SYSTEM

The most significant and pressing recommendation to improve recycling in Colorado is a statewide producer responsibility policy for containers, packaging materials, and printed paper. This policy would ensure that every Coloradan has convenient access to recycling the most readily recyclable materials, such as plastic bottles, aluminum cans, glass bottles, cardboard, newspaper, and other printed paper.

#### WHAT ARE CONTAINERS AND PACKAGING MATERIALS?

A producer responsibility policy would fund statewide recycling programs for containers, packaging materials and printed paper. This includes plastic, glass, and metal food and beverage containers; cardboard boxes; newspaper, magazines, junk mail, and other printed paper; and other materials used to contain, protect, wrap, present, or deliver products to consumers. In addition, producer responsibility policies can help reduce the amount of nonrecyclable single-use plastics and encourage companies to use less packaging overall and to choose more recyclable, less toxic packaging formats.

Producer responsibility policies, often called Extended Producer Responsibility (EPR), are gaining momentum in the US as **the most proven and effective strategy to sustainably finance and expand recycling programs to increase recycling rates, reduce plastic pollution, and help curb carbon emissions.** Over 150 global companies and leading organizations support producer responsibility policies as the only proven and likely mechanism to provide sufficient, ongoing, and dedicated funding to increase recycling and reduce plastic pollution.<sup>10</sup> Over 40 countries have mandatory producer responsibility policies for containers and packaging materials, and Maine and Oregon adopted the first US policies in 2021.<sup>11</sup> In addition, producer responsibility is already a proven and successful concept in Colorado. The state has a producer responsibility [program for paint](#) that has substantially

increased paint recycling, provided paint recycling access to 95% of Coloradans, and saved municipalities tens of thousands of dollars per year in recycling and disposal expenses since implementation in 2015.<sup>12</sup>

A producer responsibility policy is expected to be introduced in Colorado in the 2022 legislative session. This policy is [based upon recommendations developed by CDPHE](#) (Colorado Department of Public Health and Environment) and principles developed by consensus within Recycle Colorado, the statewide recycling association, through broad stakeholder engagement with municipalities, container and packaging companies, waste and recycling haulers, nonprofits, and other groups. **Eco-Cycle and CoPIRG strongly support a producer responsibility policy for containers, packaging, and printed paper as the highest priority action to fundamentally revamp and expand recycling in Colorado, eliminate unnecessary and wasteful packaging, and reduce plastic pollution and carbon emissions.**

## THROUGH A PRODUCER RESPONSIBILITY PROGRAM FOR CONTAINERS, PACKAGING, AND PRINTED PAPER, COLORADO COULD:



Increase our recycling rate and reduce climate pollution.



Provide all residents with convenient access to recycling in both urban and rural areas, including multifamily residences.



Save local governments money by reducing taxpayer spending on recycling.



Boost local economies by supporting businesses that use our recycled materials to make new products.



Develop a clear common list of what can be recycled statewide.



Create incentives for companies to use more recyclable, less toxic packaging.



While a producer responsibility policy is the most significant action for Colorado to adopt in 2022, these complementary state and local actions will further accelerate Colorado’s progress toward meeting the state’s waste diversion goals, reducing climate pollution, and reducing plastic pollution:

## RECOMMENDATIONS TO ADVANCE SYSTEMIC CHANGES IN RECYCLING AND COMPOSTING

<p><b>TOP PRIORITY FOR 2022</b></p>	<p>Adopt a statewide producer responsibility policy for containers, packaging materials, and printed paper.</p>
<p><b>STATE LEVEL</b></p>	<p>Launch an end-market development center to attract more recycling businesses to the state.</p> <p>Invest federal stimulus funds to support recycling and composting statewide.</p> <p>Develop a statewide plan to recover more food scraps, yard debris, and other organic materials.</p> <p>Reduce single-use plastic utensils and food service accessories.</p>
<p><b>MUNICIPAL AND COUNTY LEVELS</b></p>	<p>Leverage state grants to expand recycling and composting programs.</p> <p>Use government purchasing policies to buy recycled or reusable products and local compost.</p> <p>Set construction recycling requirements.</p> <p>Collect recycling and composting data to monitor progress.</p> <p>Provide incentives to reduce waste through volume-based pricing for trash.</p>

# RECYCLING AND COMPOSTING REDUCE CLIMATE POLLUTION AND BOLSTER LOCAL ECONOMIES



## GREEN JOBS AND RESILIENT LOCAL ECONOMIES

Recycling and composting produce substantial economic benefits for Colorado:

- Recycling, reusing, and remanufacturing create more than 86,000 jobs and generate over \$8.7 billion in economic benefits in Colorado annually, even with our low diversion rate.<sup>17</sup>
- Recycling creates nine times more jobs than landfills per ton of material.<sup>18</sup>
- Increased recycling also means more money returned to our economy. The recyclable materials Colorado landfills every year could have been sold for over \$100 million in commodity value.<sup>19</sup> These materials are valuable assets that could be sold for profit instead of buried in the ground.
- Expanding recycling access would dramatically increase the amount and quality of recycled materials available to local businesses, creating a more reliable, sustainable local supply chain.

## CLIMATE SOLUTIONS

Recycling and composting are some of the most cost-effective climate solutions that can be readily adopted at the local and state levels.<sup>13</sup> For every one ton of materials we recycle, we save nearly three tons of carbon emissions.<sup>14</sup> In 2020, Colorado’s recycling and composting efforts:

- Saved enough energy to power nearly 150,000 households for a year.<sup>15</sup>
- Reduced greenhouse gas (GHG) emissions by over 1.9 million MTCO<sub>2</sub>e, the equivalent to removing over 407,000 cars from the road annually.<sup>16</sup>

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**FIGURE 4. INCREASING RECYCLING AND COMPOSTING HAS SUBSTANTIAL CLIMATE BENEFITS<sup>20</sup>**

	2020 actual	2021 CO goal	2030 EPA goal
Recycling rate	15%	28%	50%
Reduction in greenhouse gas emissions	1,900,000	3,500,000	6,300,000
Equivalent # of cars removed from road annually	400,000	750,000	1,300,000
Equivalent barrels of oil conserved	2,300,000	4,300,000	7,600,000
Tons of material diverted	1,100,000	2,000,000	3,500,000



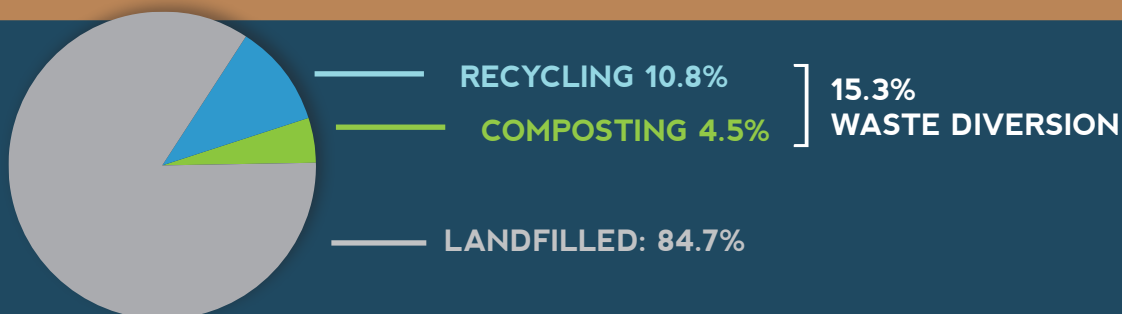
## RECYCLING AND COMPOSTING BY THE NUMBERS

Colorado continues to landfill more and recycle less than its peer states and the national average. In 2020, the state recycled just 15.3% of its municipal solid waste, less than half the national average of 32%.<sup>21</sup> This was down slightly from 15.9% in 2019.<sup>22</sup> Residents and businesses did produce slightly less waste in 2020 due to the pandemic and the economic slowdown; this is consistent with a slight decline in landfill volumes nationwide.<sup>23</sup> However, Colorado still landfilled over 5,900,000 tons of municipal waste in 2020, or over 2,000 pounds per person.<sup>24</sup>

Colorado continues to rank among the worst 20 states at recycling and composting, and sends more to landfills than comparable Western states.<sup>25</sup> On average, Colorado

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FIGURE 5. COLORADO'S MUNICIPAL DIVERSION RATE, 2020

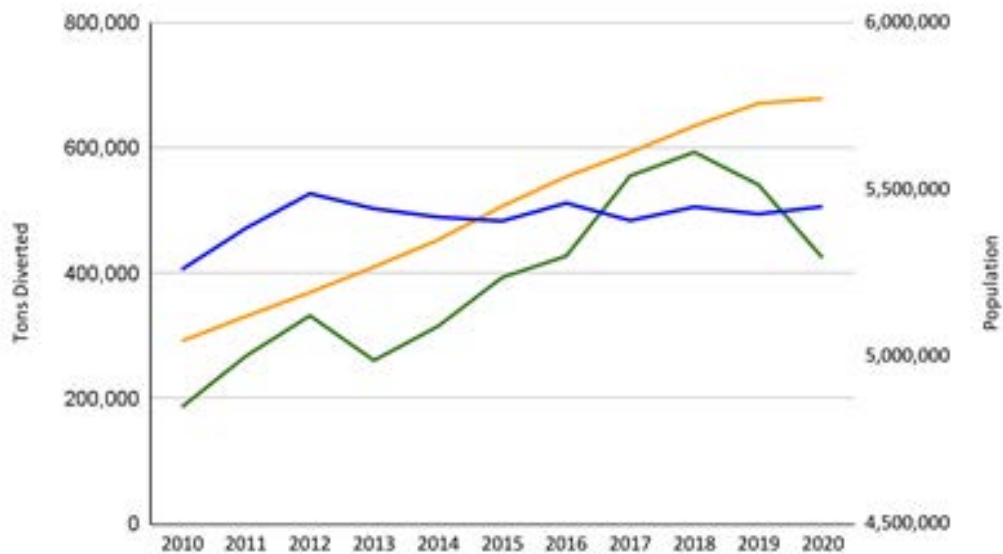


residents recycle and compost only 1 pound per person per day, while residents in leading states like Oregon and Washington recycle 3.1 pounds per person per day—over three times more than Colorado residents.<sup>26</sup>

In 2020, Coloradans recycled just over 500,000 tons of common containers and packaging including cardboard, paper, aluminum cans, and glass and plastic bottles. Residents and businesses also kept nearly 425,000 tons of organic materials out of landfills in 2020, including tree branches, clean wood, yard debris, and food scraps.<sup>27</sup> (There was a slight drop in the organics diversion because of a large fire at a wood mulching facility that destroyed many of the materials waiting to be mulched.)<sup>28</sup> In general, the amount of materials recycled and composted has been increasing since the state started tracking waste diversion in 2007, but this increase has been nearly the same as the state’s increased rate of population growth. **This means Colorado is not making any true gains to reduce waste and recover more resources, and is just barely keeping pace with the state’s growing population.**

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**FIGURE 6. RECYCLING AND COMPOSTING IN COLORADO ARE BARELY KEEPING PACE WITH POPULATION GROWTH**<sup>\*29</sup>



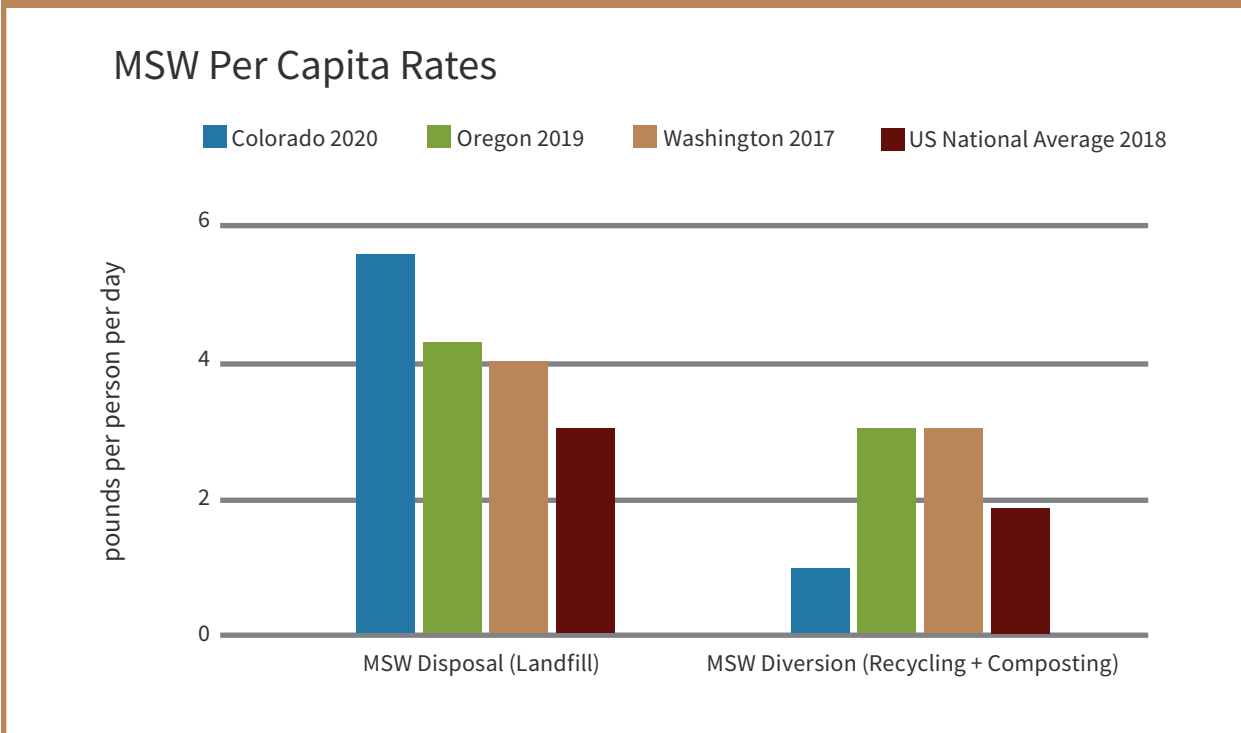
\* 2020 drop in organics diversion due to fire at wood mulching facility<sup>30</sup>

Similarly, at the local level, recycling and composting rates are not showing significant improvements, with most communities showing little to no growth in residential recycling rates over the past five years of this report. Data collection continues to be a challenge as well. Only 24 communities are able to report data on their residential recycling and composting programs, and fewer than 10 can report community-wide recycling rates, including both residential and commercial diversion.<sup>31</sup>

While this overall lack of progress on recycling and composting is certainly disappointing, it is also not surprising. The past several years have been particularly challenging for recycling around the state and the country. The cost of recycling was cited by multiple municipalities as the most significant challenge to their programs, as well as the lack of and uncertainty in markets for materials, high cost of transporting materials, and a lack of local and statewide infrastructure.<sup>32</sup> This strongly suggests that **greater investments and systemic policy changes are needed to drive Colorado toward a robust, effective, and equitable recycling system statewide.**

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**FIGURE 7. COLORADO LANDFILLS MORE MATERIALS AND RECYCLES LESS THAN THE NATIONAL AVERAGE AND COMPARABLE STATES<sup>33</sup>**



## MUNICIPAL RECYCLING & COMPOSTING LEADERS

In our most comprehensive survey to date, Eco-Cycle contacted more than 180 municipalities and counties to ask about highlights and challenges with their recycling and composting programs and to collect recycling and composting rates for 2020. The following municipalities stand out as leading communities demonstrating that recycling and composting can work well in Colorado:

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**FIGURE 8. COLORADO'S LEADERS FOR BEST RECYCLING AND COMPOSTING PROGRAMS IN 2020<sup>34</sup>**

FRONT RANGE LEADERS	COMMUNITY	RECYCLING & COMPOSTING RATE
Best citywide—residential and commercial	City of Boulder	53%
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GREATER COLORADO LEADERS		
Best citywide—residential and commercial	City of Aspen, Town of Durango	32%
Best countywide—residential and commercial	Pitkin County	38%

\* See Appendix for details on data collection terminology and how rates are calculated.

### These local leaders have five common elements of success:

- ✓ Universal curbside recycling programs where every resident is provided with a recycling cart alongside their trash cart, often at no additional charge to residents.
- ✓ Volume-based pricing for trash that encourages recycling and often composting, rather than flat rates where all trash is the same cost.
- ✓ Convenient drop-off centers or curbside programs for yard debris such as leaves, grass clippings, and branches.
- ✓ Strong education programs that teach residents and businesses why recycling and composting are important and provide clear guidelines on what can and cannot be recycled, reused, and composted.
- ✓ Dedicated staff and funding for waste diversion infrastructure, services, and programs.

Convenient access to curbside recycling services is the most essential among these success factors. Across the state and the country, **municipalities with the best performing recycling programs guarantee that recycling is as convenient as trash services for all residents.**<sup>35</sup> **Simply put, if you have a curbside trash cart, you automatically have a recycling cart provided along with it.**

Unfortunately, in much of Colorado, there is not guaranteed access to recycling for residents. Most households have to opt-in and subscribe to curbside recycling services and often pay more for this additional service. On average, only an estimated 30% of

residents subscribe to curbside recycling under this type of opt-in program.<sup>37</sup> **One of the biggest opportunities to increase recycling in Colorado is to convert these under-utilized, subscription-based programs to a universal system where recycling is provided automatically alongside trash service.**

Currently, six of the ten largest cities in Colorado do not provide universal curbside recycling to all residents.<sup>38</sup> Expanding universal recycling services to these 1.4 million residents is perhaps the single biggest opportunity to increase recycling rates statewide based on national findings.<sup>39</sup> The chart on page 16 highlights those communities that have made recycling as convenient as trash, and identifies the largest cities and towns where curbside recycling access remains limited and inconvenient.

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**FIGURE 9. TOP-PERFORMING MUNICIPAL AND COUNTY RECYCLING AND COMPOSTING PROGRAMS IN 2020<sup>36</sup>**

MUNICIPALITY	Residential Recycling & Composting Rate
Loveland	58%
Boulder	53%
Longmont	41%
Telluride	36%
Lafayette	34%
Aspen*	32%
Durango*	32%
Fort Collins	31%
Golden	30%
Louisville	30%
COUNTY	Recycling & Composting Rate
Boulder	42%
Pitkin	38%
Eagle	30%
Summit	20%

\* Indicates rates for citywide data collection that includes commercial and residential diversion.



*Six of the ten largest cities in Colorado do not provide universal curbside recycling to all residents. Expanding universal recycling services to these 1.4 million residents is perhaps the single biggest opportunity to increase recycling rates statewide.*

10

**FIGURE 10. FEWER THAN HALF OF MUNICIPALITIES WITH 10,000+ RESIDENTS AUTOMATICALLY PROVIDE CURBSIDE RECYCLING FOR ALL HOUSEHOLDS\*<sup>40</sup>**



**All residents have access to curbside recycling automatically**

Arvada	Johnstown
Boulder	Lafayette
Commerce City	Lone Tree
Denver	Longmont
Durango	Louisville
Fort Collins	Loveland
Frederick	Montrose
Fruita	Steamboat Springs
Golden	Superior
Greenwood Village	Thornton



**Residents must subscribe to curbside recycling**

Aurora	Fort Morgan
Brighton	Fountain
Broomfield	Grand Junction
Cañon City	Greeley
Castle Pines	Lakewood
Castle Rock	Littleton
Centennial	Parker
Colorado Springs	Pueblo
Englewood	Sterling
Erie	Westminster
Federal Heights	Wheat Ridge
Firestone	Windsor

*\* Defined as residential properties with less than eight units and not including homeowners' associations; multifamily properties are considered commercial accounts based on state law and are not guaranteed service under municipal hauling services or contracts. Nearly 30 additional smaller Colorado communities and some unincorporated county areas also provide curbside recycling for all residents.*



## RECYCLING & COMPOSTING SUCCESS STORIES IN 2020–2021

### Colorado Becomes National Leader in Preventing Plastic Pollution



Colorado became the first non-coastal state to enact a law to eliminate some of the most polluting single-use plastics, including plastic bags and polystyrene food containers, through the Plastic Pollution Reduction Act ([HB21-1162](#)). Starting in 2024, this policy will ban single-use grocery bags and place a 10-cent fee on paper bags; prohibit restaurants from using polystyrene food containers and cups; and allow local communities to pass their own bans, fees, or other policies to further reduce problematic packaging. Colorado previously had a preemption that prohibited local governments from adopting local policies to reduce packaging, and is the first US state to repeal its preemption on local action.

### Landmark Investment in Soil Health to Help Drive Composting



In many parts of Colorado and the US, farmland soils are eroding faster than they can regenerate.<sup>41</sup> With the passage of the Colorado Agricultural Soil Health Program ([HB21-1181](#)), Colorado joins 18 other states in creating a state program to encourage farmers, ranchers, and land managers to voluntarily adopt practices that build soil, conserve water, and sequester carbon. Colorado's bill goes beyond similar state programs by accentuating the use of compost as a key practice to regenerate soils. Greater use of finished compost in agriculture will help support and expand composting businesses in the state, which will then lead to more programs for residents and businesses to divert their food scraps, yard debris, and other organic materials.



### Local Community Highlights to Expand Recycling, Composting Services<sup>42</sup>

Several communities made significant improvements to their recycling and waste diversion programs in 2021 that provide models for other cities and towns to follow:

- **Longmont** increased its year-over-year recycling and composting rate by 6% due to growth in its curbside composting program, and to more recyclables being collected through both its curbside recycling program and the city's drop-off center.
- **Durango** and **Golden** are adding curbside composting to their citywide trash and recycling services.
- **Arvada** launched a new citywide curbside recycling program in July 2021, becoming the largest city in Colorado to contract for a universal recycling program. **Johnstown** also launched curbside recycling for all residents.
- **Superior** and **Colorado Springs** hired their first sustainability staff.
- **Boulder** launched an education and outreach program to increase recycling at mobile home parks.



### State Grants Support Recycling and Compost

The [Front Range Waste Diversion \(FRWD\)](#) Enterprise Grant Program, established by the state legislature in 2019, awarded over \$3.4 million in funding during its first 18 months to communities, businesses, and organizations to improve waste diversion.<sup>43</sup> Broomfield and Arvada received funding for a zero waste plan and recycling carts, respectively, and funds also went to nonprofits and businesses including Habitat for Humanity, Perks Deconstruction, and Western Disposal to expand construction recycling and reuse infrastructure and deconstruction programs.

The [Recycling Resource Economic Opportunity \(RREO\)](#) grant program awarded roughly \$4.2 million statewide in 2020 and 2021 to nonprofits, schools, businesses, and local governments to invest in compost and recycling infrastructure and market development.<sup>44</sup> In 2020, RREO funded projects for Direct Polymers (Denver) and Vartega (Jefferson County) to expand plastics recycling and for Table to Farm Compost (Durango) and Montezuma County Landfill to expand compost operations.<sup>45</sup>



### IMPACTS OF COVID-19 ON COLORADO PROGRAMS

Nearly two-thirds of the municipalities surveyed in this report shared challenges to their recycling or waste systems in 2020 due to the COVID-19 pandemic. About a third of these municipalities had to temporarily close recycling or composting facilities, ranging from a couple of weeks to a few months, though most programs were back to nearly normal operations by year-end.<sup>46</sup>

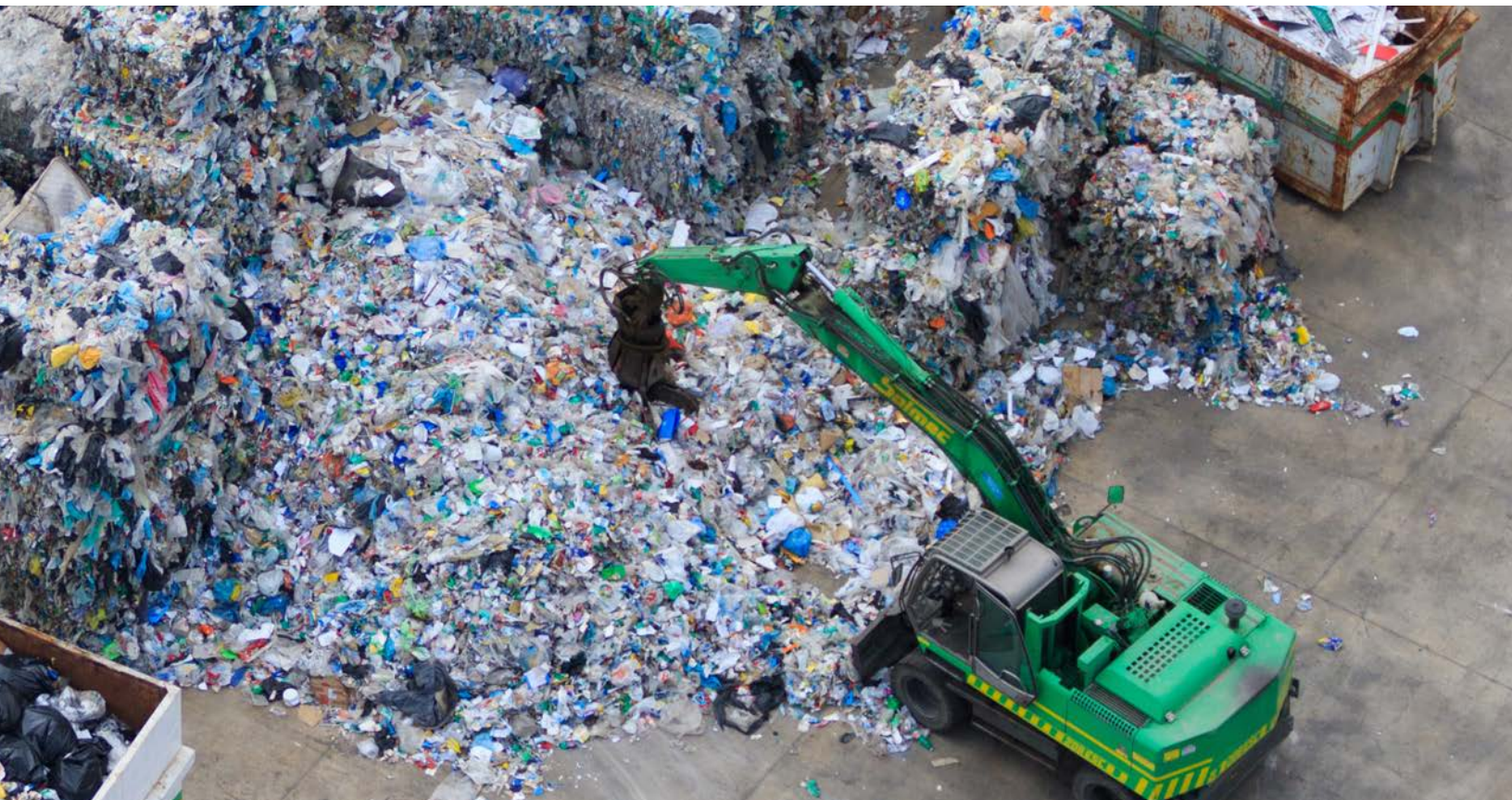
## CHALLENGES FACING COLORADO

Despite notable efforts by some Colorado municipalities and counties, **Colorado's statewide recycling and composting system as a whole is largely underdeveloped, disjointed, underperforming, and inequitable.** Surveys show that Colorado residents and businesses frequently want better recycling and composting programs, but municipalities often lack the financial and staffing resources, political will, and technical knowledge to increase or provide services. **Further, local governments do not have any influence over how products are made or whether products are recyclable, reusable, or compostable.** Colorado continues to face several challenges to building a stronger, more sustainable, and more resilient local recycling economy, including:

- **Lack of funding:** The increased costs of recycling and composting are the most substantial barrier for residents and businesses to take greater action to reduce their waste. Municipalities are limited in their abilities to implement diversion policies and programs due mainly to a lack of funds and staff dedicated to diversion programs. Lack of funding is directly or indirectly tied to most of the challenges limiting the state's progress on recycling and composting.
- **Insufficient curbside recycling programs:** Only 45 of Colorado's 271 municipalities automatically provide curbside recycling to all residents alongside their trash service. Six out of ten of Colorado's largest cities do not have comprehensive curbside recycling programs.<sup>47</sup>



- **Inequitable recycling programs for multifamily, rural/mountain areas, and less affluent communities:** First, only 30% of multifamily households have curbside recycling access nationwide compared to 70% of single-family homes, showing a significant disparity in services.<sup>48</sup> Second, recycling is much more expensive and limited in rural and mountain areas. Third, recycling programs are more widely available in wealthier communities.<sup>49</sup>
- **Low landfill fees:** The Front Range has some of the lowest landfill costs around the country. Some communities pay less than \$25/ton compared to the national average of \$55/ton.<sup>50</sup> Many communities cannot afford the additional costs to recycle and compost.
- **Limited local and regional recycling businesses:** Colorado ships nearly all its paper, metal, and plastics out of state to be recycled because there is a lack of local and regional businesses to use recyclables to make new products.
- **High transportation costs:** Shipping recyclables out of state adds increased costs to local programs. High transportation costs are a significant challenge in particular for rural and mountain communities.
- **Limited composting infrastructure:** Organic materials are over one-third of what Colorado buries in landfills each year, yet much of the state lacks sufficient collection and processing infrastructure for organics diversion.<sup>51</sup> Despite increases in food and yard waste diversion programs, only two new composting operations accepting food scraps have been successfully permitted in the last five years.<sup>52</sup>



## RECOMMENDATIONS FOR 2022

Colorado needs groundbreaking new policies to transform our recycling and composting system to overcome these challenges and realize the substantial benefits of reducing unnecessary packaging, reducing plastic pollution, cutting climate emissions, creating local green jobs, protecting our clean air and water, and conserving natural resources. These priority actions can significantly scale up recycling and composting in Colorado.

### STATE-LEVEL RECOMMENDATIONS

#### TOP PRIORITY

#### PROVIDE CONVENIENT, EFFECTIVE RECYCLING FOR ALL RESIDENTS AND BUSINESSES THROUGH A PRODUCER RESPONSIBILITY POLICY

A producer responsibility policy for containers, packaging materials, and printed paper is a groundbreaking opportunity to transform Colorado's recycling system and accelerate progress toward the state's recycling and climate goals. A statewide producer responsibility policy will provide every Coloradan with convenient and easy access to recycling for common materials such as plastic bottles, aluminum cans, glass bottles, cardboard, and printed paper.

Over 150 global companies and leading organizations support producer responsibility as the only proven and effective tool to provide sufficient, ongoing, and dedicated funding to increase recycling and reduce plastic pollution.<sup>53</sup> Over 40 countries have mandatory producer responsibility policies for containers and packaging, and Maine and Oregon adopted the first US policies in 2021.<sup>54</sup> Colorado's [producer responsibility program for paint](#), run by PaintCare, is a proven success and has substantially increased paint recycling, provided recycling access to 95% of Coloradans, and saved municipalities tens of thousands of dollars per year since implementation in 2015.<sup>55</sup>

#### **Producer responsibility will fund convenient access to recycling for all residents.**

The additional costs to recycle and the lack of convenient, equitable access to recycling is a primary barrier to increasing recycling statewide. Six out of the ten largest cities in the state do not provide curbside recycling to all residents. **The City of Aurora**, Colorado's third largest city, closed its only single-stream recycling drop-off center in 2020 due to limited staff and funding resources and illegal dumping challenges.<sup>56</sup> A producer responsibility policy would fund curbside recycling collection for all residents in all cities like Aurora without requiring funding from local governments.



67%

of US residents agree “companies that manufacture food and beverage containers should be responsible for the cost of collecting and recycling their products after people use them.”<sup>57</sup>

### Producer responsibility will reduce local government costs for recycling.

Producer responsibility for containers and packaging can offset some or all of a local government’s costs to operate drop-off centers for common recyclables, saving tens to hundreds of thousands of taxpayer dollars per year or allowing them to be reallocated for other services. For example, **the City of Pueblo** spends nearly \$300,000 per year to operate a recycling drop-off center that could be funded by a producer responsibility policy.<sup>58</sup>

### Producer responsibility will fund recycling in rural and mountain areas to ensure equitable access.

Recycling in Colorado’s mountain and rural areas is often significantly more expensive than in the Front Range, which makes it more challenging to provide and financially sustain these programs. Yet all residents deserve the same convenient access to recycling, both urban and rural. A producer responsibility system will provide sufficient and ongoing funding to support drop-off and/or curbside recycling in rural and mountain areas. Currently most recyclables collected in **Steamboat Springs, Routt County**, and most of Northwest Colorado are hauled over 150 miles to be recycled at material recovery facilities (MRFs) in Denver.<sup>59</sup> A producer responsibility program would cover transportation costs, alleviating one of the major financial barriers to recycling in rural communities. In addition, it could help develop greater regional coordination to increase efficiencies in transportation or to build more regional recycling centers or transfer stations.

### Producer responsibility will expand equitable recycling services to underserved multifamily residents.

There are over 20 Colorado municipalities where more than 25% of their residences are multifamily properties.<sup>60</sup> Less than 60% of multifamily residents nationwide have onsite recycling programs, creating a significant barrier for recycling and a gross inequity between single-family and multifamily residents.<sup>61</sup> For example, **the City of Denver** provides curbside recycling to all single-family homes, but more than one-third of residences in Denver are multifamily properties not covered under the city’s program and have limited recycling programs.<sup>62</sup> A producer responsibility program would fund convenient access to recycling collection at multifamily properties across the state and build a more equitable system for all residents.

## ADDITIONAL STATE-LEVEL RECOMMENDATIONS

### ★ **Direct Stimulus Investment to Recycling, Composting Projects**

The Colorado legislature plans to distribute nearly \$850 million in funding in 2022 from the federal [American Rescue Plan Act](#) to stimulate the state's economy, provide necessary relief for Coloradans, and address emerging economic disparities resulting from the pandemic.<sup>63</sup> The statewide recycling organization, Recycle Colorado, is recommending a portion of funds be spent on recycling and composting infrastructure, programs, and services. Extensive stakeholder working groups have identified several shovel-ready rural and urban projects that would create jobs and stimulate local end markets for diverted materials, as well as meet other state goals including wildfire mitigation.

### ★ **Launch End-Market Development Center to Attract and Grow Recycling Businesses**

In order to be recycled into new products, most of the recyclables collected in Colorado are shipped out of state, which adds extra costs to recycling programs, increases carbon and air pollution from transportation, and results in over \$100 million in lost economic value each year.<sup>64</sup> Bringing more recycling businesses to Colorado will create jobs, improve local economies, and increase the environmental benefits of recycling. A Recycling End-Market Development Center in Colorado would create a comprehensive, proactive, cross-agency effort to expand recycling businesses in the state based on proven initiatives in other states. Colorado passed legislation in 2020 to direct CDPHE to provide recommendations on the development of a Center and [a proposed plan was released in July 2021](#). The state legislature can direct stimulus funding to implement this needed program that will create jobs and strengthen local economies.

### ★ **Prioritize Statewide Organics Management Plan**

Over one-third of Colorado's trash is organic material such as food scraps and yard waste that could be composted. Colorado is currently engaged in the creation of a statewide organics management plan to identify and prioritize the compost infrastructure needed to capture our organic materials, along with the incentives and regulations necessary to utilize this important soil amendment. Soils enriched by compost remove carbon dioxide from the atmosphere and hold more water, making Colorado's landscapes more resilient to drought. Composting is beneficial for both rural and urban economies as well, providing twice as many jobs per ton processed as landfills.<sup>65</sup>





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*South Carolina invested strongly in businesses and remanufacturing facilities that recycle plastic bottles into new carpet and other materials, and has successfully driven job growth and economic impact in the state. Over eight years, the recycling industry doubled its total economic impact from \$6.5 billion to \$13 billion and job growth grew 44%.<sup>66</sup>*

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## ★ Reduce Single-Use Plastic Utensils and Food Service Accessories

In 2021, Colorado took a tremendous first step to reduce plastic pollution by adopting the Plastic Pollution Reduction Act ([HB21-1162](#)). However, much more work is needed to reduce disposable, single-use plastics. A strong next step is to cut back on the use of plastic utensils and food service accessories, especially in food delivery and take-out. In May 2021, the Denver City Council passed the state's first [By-Request-Only ordinance](#) that requires restaurants and third-party food delivery platforms to provide single-use items—including straws, utensils, napkins, and condiment packets—only when requested by the customer, rather than handing them out by default with every order. This not only reduces the amount of unnecessary plastic materials going to consumers, but can also save businesses money by reducing the amount of these materials they need to purchase. The Colorado legislature can adopt a similar policy statewide to reduce waste, cut plastic pollution, and save local restaurants money.



## ORGANICS DIVERSION IS A POWERFUL CLIMATE SOLUTION WITH ADDED BENEFITS

When organic materials such as food waste, yard waste, wood, and tree branches are buried in a landfill, they decompose without oxygen. This releases methane gas, a greenhouse gas 84 times more potent than CO<sub>2</sub>.<sup>67</sup> Landfills generate 15% of the methane produced in the US<sup>68</sup> and the latest United Nations Intergovernmental Panel on Climate Change (IPCC) climate report specifically called out the need to limit methane production as a key approach to fighting climate change.<sup>69</sup> Diverting organic materials from landfills through food waste reduction, composting, mulching, anaerobic digestion, or creation of biochar—and using these products as a resource to build soil—can substantially reduce methane emissions and create significant economic and environmental benefits:

- Composting creates at least twice as many jobs per ton as landfilling.<sup>70</sup>
- The application of finished compost reduces irrigation needs and use of synthetic fertilizers by increasing soil nutrients and water retention.<sup>71</sup>
- Applying finished compost improves soil quality by returning carbon and nutrients back to the soil.<sup>72</sup>
- Applying finished compost reduces erosion and stormwater runoff.<sup>73</sup>
- Investments in organics diversion programs are some of the most cost-effective climate change solutions.<sup>74</sup>

## MUNICIPAL RECOMMENDATIONS

### ★ Leverage State Grants to Expand Recycling, Composting Programs

The [Front Range Waste Diversion \(FRWD\) Enterprise grant program](#) will provide over \$100 million in grants over 10 years to help municipalities, haulers, schools, and businesses on the Front Range implement new recycling, composting, reuse, and waste reduction programs. The next round of funding will be available in January and is focused on increasing organics recovery, with general funding expected in early 2022. In addition, the [Recycling Resource Economic Opportunity](#) grant program continues to be a valuable funding source to help build out recycling and composting infrastructure statewide.

### ★ Set construction recycling requirements

The US produces more than twice as much waste from construction projects as it does from homes and businesses.<sup>75</sup> The majority of these materials can be readily reused or recycled, such as concrete, asphalt, dirt, scrap metal, cardboard, and clean lumber. Unfortunately, Colorado severely lacks the infrastructure and end markets to collect and recycle these materials, and there are limited requirements or incentives for contractors to divert these materials. Colorado communities need to adopt policies that encourage or require construction and demolition (C&D) recycling and waste reduction to drive investment in these programs.

- Adopt an ordinance requiring stronger hail-resistant shingles to extend the life of rooftops and reduce the waste caused by frequently replacing roofs. (Examples: Fort Collins, Lafayette)
- Update green building codes to include C&D recycling. (Examples: City of Boulder, Pitkin County)
- Require recycling for common building materials such as cardboard, metal, and clean wood. (Examples: Fort Collins, Nederland)

### ★ Stimulate local economies by buying recycled or reusable products and locally-produced compost

Governments are collectively the largest purchaser in the US, and local governments can leverage their environmentally preferable purchasing policies to help boost recycling and composting infrastructure.<sup>76</sup> Government purchasing policies can give preference to materials with high recycled content and reusable or refillable packaging models. In addition,



local governments can purchase compost made from local programs that collect food scraps to be used in public projects, such as landscaping, construction, and stormwater management. Good tools for communities to use include the [EPA model purchasing guidelines](#), resources from the [Northeast Recycling Council](#), and a [model compost-use policy and additional resources](#) through the Natural Resources Defense Council.

### ★ **Provide financial incentives to reduce waste through volume-based pricing programs**

In many municipalities in Colorado, residents do not pay directly for trash services or they commonly pay a flat rate for an unlimited amount of trash. Communities that charge for trash service based on the volume of trash collected have stronger recycling programs because there is a financial incentive for residents to produce less trash and recycle and compost more. These volume-based pricing programs are commonly called Pay As You Throw (PAYT) or Save Money and Reduce Trash (SMART). This is the same way residents are charged for other utilities, such as electricity, gas, and water—based on how much they use. Nearly 9,000 communities across the US use volume-based pricing to provide fair, cost-effective trash services and encourage recycling and composting, making it one of the most proven policies to improve waste diversion rates.<sup>77</sup>

### ★ **Collect recycling and composting data**

Municipalities and counties need consistent data on how much of the local waste stream is recycled, composted, and landfilled, yet access to data is very limited. Of the over 170 cities and towns we contacted, less than 30 were able to report a waste diversion rate. We recommend cities and towns use the free data tools available through the [Municipal Measurement Program](#). Using this national platform helps to ensure that recycling and waste diversion data is reported consistently between communities and across the US.

## CONCLUSION

Colorado is failing to meet its goals to reduce waste, reduce carbon emissions, and curb plastic pollution. Now is the time for a system-wide solution to modernize and transform Colorado's recycling and composting systems, and a producer responsibility policy for containers, packaging, and printed paper is the most impactful, game-changing policy that can be adopted in 2022.

Eco-Cycle and Recycle Colorado, the statewide recycling organization, have been working extensively with diverse stakeholders to develop framework policy principles for a producer responsibility policy, based on the producer responsibility [recommendations developed by CDPHE](#) earlier this year. These principles will be used to create a producer responsibility policy for containers, packaging, and printed materials to be introduced in the Colorado legislature in early 2022. **Eco-Cycle and CoPIRG strongly support a producer responsibility policy for containers, packaging, and printed paper as the highest priority action to fundamentally revamp and expand recycling in Colorado, eliminate unnecessary and wasteful packaging, and reduce plastic pollution and carbon emissions.**

Find out how you can support producer responsibility in Colorado at: [www.ecocycle.org/zerowastecolorado](http://www.ecocycle.org/zerowastecolorado)



# APPENDIX

## DATA COLLECTION TERMS

The term “diversion rate” means different things both across Colorado and across the country, which makes it hard to compare between cities and states. This report distinguishes the diversion rate—or the amount of material recycled or composted—based on the different parts of the community, including:

- Citywide diversion rate—just households and businesses, also known as municipal solid waste (MSW)
- Residential diversion rate—single-family homes and apartments up to seven units (may not include homeowner associations, also known as HOAs)
- Industrial diversion rate—includes materials generated through agricultural activities, construction and demolition, energy production, and other industrial activities.

## HOW TO CALCULATE THE DIVERSION RATE

The diversion rate, commonly called the recycling rate, is the amount of material collected for recycling and composting divided by the total amount of discards generated, i.e.

$$\frac{(\text{recycling} + \text{composting})}{(\text{recycling} + \text{composting} + \text{trash})} = \text{diversion rate}$$

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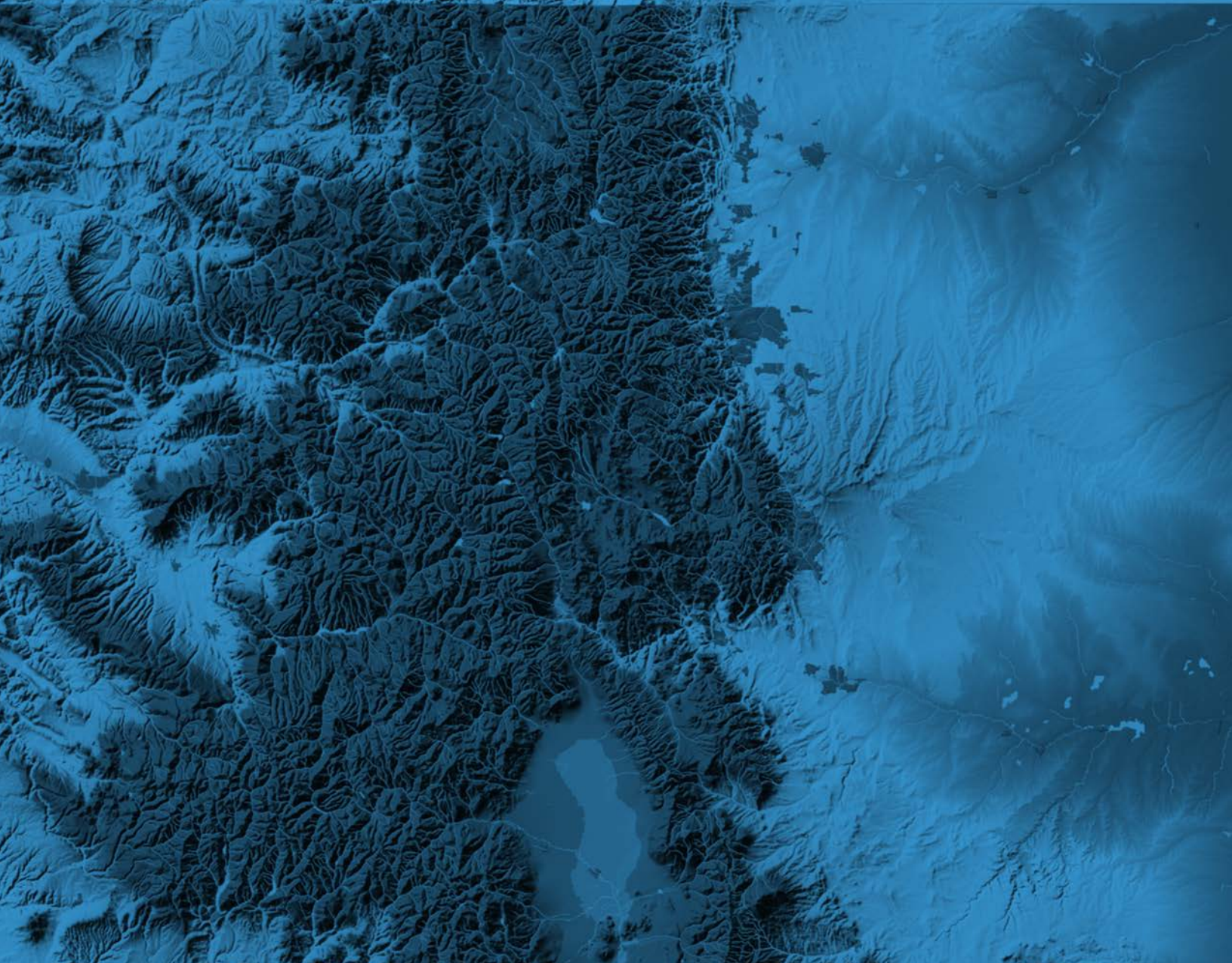
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