

THE STATE OF RECYCLING IN COLORADO

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Foundation

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Eco-Cycle is one of the nation's oldest and largest nonprofit recyclers. The organization's mission is to identify, explore, and demonstrate the emerging frontiers of sustainable resource management through the concepts and practices of Zero Waste. We believe in personal and community action to transform society's throw-away ethic into environmentally-responsible stewardship.

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

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THE STATE OF RECYCLING IN COLORADO: 2018

EXECUTIVE SUMMARY

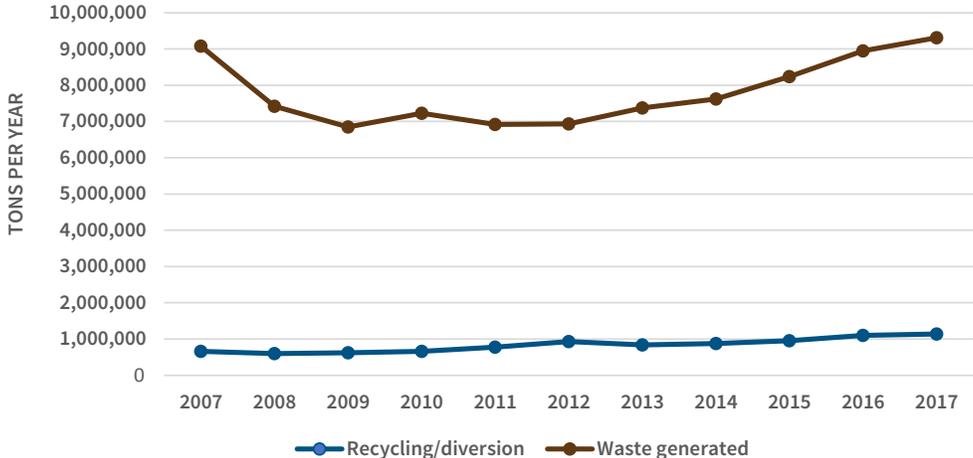
2017 was just downright trashy in Colorado. Our beautiful state continues to be one of the most wasteful in the country. In 2018, we created a record 9,307,000 tons of waste while our recycling rate flat-lined at just 12%, which puts us far behind the national average of 35% recyclingⁱ. On average, each Colorado resident throws away nearly eight pounds of trash per day, or more than 1.45 tons per year. That’s more than eight million tons piling up in our landfills every year. Colorado is headed in the wrong direction—we’re producing more trash each year and not improving our recycling rate.

But it doesn’t have to be that way. Nearly 95% of Colorado’s waste could be recycled or composted: we could recycle 32%, including bottles, cans and paper; 37% could be composted, like grass clippings, food waste and clean wood; and 26% could be reused or recycled through specialized programs for textiles, electronics, construction materials, and other bulky materialsⁱⁱ (see Figure 2). The next four years are crucial for putting Colorado on the path to creating a circular economy where 95% of the materials we throw away are transformed into new products or composted into nutrient-rich soil.

This report is divided into two parts to focus on both state and local actions to transform Colorado’s wasteful habits. First, we lay out four priority actions that our new Governor can take in the first 100 days of his administration to make Colorado a recycling hub for the Rocky Mountain region. Second, we identify cities and counties that are leading the way in various aspects of recycling, including success stories to inspire other communities to take action.

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FIGURE 1. STATEWIDE WASTE AND RECYCLING OVER THE PAST TEN YEARSⁱⁱⁱ



WHY INVEST IN RECYCLING NOW: ENVIRONMENT + ECONOMY

In 2016, Colorado set its first-ever statewide recycling goals^{iv} (see Figure 3). Achieving our first 2021 target of 28% would more than double our current recycling rate and keep an additional 1,500,000 tons of waste out of the landfill every year and put them into productive use. Doing so would create jobs, bolster local economies and protect our environment. **One of the most immediate benefits would be reducing climate pollution: Increasing recycling statewide to 28% would reduce carbon emissions by over 2.2 million tons (MTCO₂e) every year, the equivalent of taking over 485,000 cars off the road annually.^v** In addition to the climate benefits, recycling also reduces air and water pollution, conserves resources and protects natural ecosystems. That's why the EPA called it the #1 thing we can do for the environment.^{vi}

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FIGURE 2. STATEWIDE DATA ON HOW MUCH OF COLORADO'S WASTE COULD BE RECOVERED^{vii}



Recycling is a win for Colorado's economy as well as our environment. Each year Colorado throws away nearly \$265 million worth of recyclable material such as aluminum, cardboard, paper, glass and plastics in our landfills.^{viii} That material could have been recycled here in Colorado, creating local jobs and strengthening local economies. Recycling, reusing and remanufacturing already generate over \$8.7 billion in economic benefits in Colorado annually, even with our low recycling rate.^{ix} On average, recycling creates nine times more jobs per ton than landfills and reusing materials creates 30 times more jobs.^x Yet most of our paper, plastics and metals are shipped out of state, or even out of the country, rather than recycled locally.

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FIGURE 3. COLORADO'S RECYCLING GOALS^{xi}

DIVERSION GOALS	2016	2021	2026	2036
Front Range		32%	39%	51%
Greater Colorado		10%	13%	15%
Statewide	12%	28%	35%	45%

Unfortunately, right now, Colorado doesn't look like a good investment for businesses because of our low landfill prices, too few communities with comprehensive recycling programs, and limited statewide assistance to attract businesses and develop local markets for recyclables. In addition, we lack comprehensive data on what is in our trash so businesses can assess their market potential. **That's why we need state leadership to signal to investors and entrepreneurs that Colorado is ready to expand recycling and willing to provide the tools and services to help businesses succeed and help Colorado create a circular economy.**

3 WAYS ZERO WASTE REDUCES CARBON POLLUTION



SAVES ENERGY

Making new products from recycled materials saves energy, which reduces fossil fuel use. For example, using recycled aluminum cans to make new cans uses 95% less energy than using virgin bauxite ore—recycling just one can saves enough energy to power a computer for 3 hours.^{xii}



REDUCES METHANE

Recycling and composting reduce methane emissions from landfills. Methane traps 84 times more heat than carbon dioxide, making it a powerful greenhouse gas and a top priority for reducing carbon pollution.^{xiii}



STORES CARBON IN SOILS

Composting creates a nutrient rich soil amendment that can help our soils actually pull carbon out of the atmosphere, which helps to reverse the damage already done. Our soils actually store three times more carbon than plants, making compost an incredible carbon sink.^{xiv}

It's time all Coloradans enjoy the benefits of recycling and composting: reduced carbon emissions, cleaner air and water, less habitat destruction, greater conservation of natural resources, plus local job creation and sustainable economic development.

PART I

WHAT THE NEW GOVERNOR SHOULD DO TO PRIORITIZE RECYCLING IN THE FIRST 100 DAYS



To position Colorado as the recycling hub of the Rocky Mountain region and take advantage of the environmental and economic benefits that come with it, Governor Polis needs to set economic policy and encourage investments in Colorado's recycling markets. We call on Governor Polis to take action in the first 100 days of office to make recycling a priority for the new administration by taking the following steps:

#1: APPOINT A STATEWIDE RECYCLING COORDINATOR

The appointment of a statewide Recycling Coordinator in the Governor's office is one of the most prominent signals to investors, businesses and local communities that Colorado is serious about turning around its dismal recycling rate and creating a circular economy. This person would coordinate with other state agencies and efforts, including the Office of Economic Development and International Trade (OEDIT), Colorado Department of Public Health and Environment (CDPHE) and the state climate action plan, and would also interface directly with local governments to create a comprehensive approach to building our new recycling economy.

#2: LAUNCH A RECYCLING MARKET DEVELOPMENT INITIATIVE TO ATTRACT AND EXPAND RECYCLING BUSINESSES

Nearly all of the paper, metal and plastics that we collect for recycling is shipped out of state, or even out of the country, to be made into new products. This represents a major opportunity to attract new “end market” businesses such as remanufacturers to the state, which will keep materials here in our local economies, create jobs for Coloradans, and reduce the pollution impacts of transporting materials out of state. We also need to support existing end market businesses that are already here so they can prosper and expand (see page 9 for business successes in glass and electronics recycling).

We recommend implementing this program under OEDIT to provide end market businesses and secondary processors with:

- Tax breaks such as exemptions for property taxes.
- Funding opportunities through grants and loans.
- Tools and research on recycling markets.
- One-on-one assistance.

#3: CREATE A STATEWIDE WASTE DIVERSION FUNDING TASK FORCE TO STUDY AND RECOMMEND WAYS TO INCREASE FUNDING FOR WASTE REDUCTION, REUSE, RECYCLING AND REMANUFACTURING

Colorado charges a small fee of \$1.17 on every ton of waste sent to landfills, in addition to the price charged by the landfill. Of that fee, \$0.46 per ton goes to support recycling programs and grants.^{xv} That puts Colorado far behind other states in supporting recycling: states such as Ohio and Wisconsin allocate between \$2 and \$7 per ton to recycling.^{xvi} Colorado’s rate is also insufficient when it comes to meeting current demand: the state currently gives out about \$3.5 million annually in the Recycling Resources Economic Opportunity (RREO) grants, yet the fund receives between \$8 and \$14 million in requests each year.^{xvii} Other states, such as Michigan, are looking to dedicate up to \$15 million per year.^{xviii}

To achieve Colorado’s recycling goals, we need more dedicated funding, and this task force should have recommendations to the Governor and the legislature by the start of the 2020 legislative session. Colorado’s Integrated Solid Waste and Materials Management Plan (SWMMP) outlined several potential funding sources, such as increased service fees, pollution fees, landfill fees, or fees on producers of hard-to-recycle or toxic products, among others.^{xix}

Funding is needed in four primary areas:

- **Assistance to rural communities** to bring their landfills into compliance with national pollution standards and to expand recycling capacity.
- **Improve infrastructure**, particularly for composting food scraps and recovering construction materials.
- **Incentives for developing end markets** and attracting businesses to the state.
- **Technical support and assistance to local communities** to expand recycling by developing local or regional diversion plans, providing collection carts or other financial incentives, developing policies, collecting data and implementing other programs.



#4: LEAD BY EXAMPLE BY EXPANDING RECYCLING AND COMPOSTING AT STATE AGENCIES, PURCHASING COMPOST FOR STATE PROJECTS, AND SETTING RECYCLING GOALS FOR STATE CONSTRUCTION PROJECTS

One of the best ways to say that “Colorado is open to recycling” is for the new administration to lead by example at state agencies through three high-impact policies:

- **Colorado can require recycling and composting (where available) at all state facilities.** Currently the state only requires agencies to recycle at one building per agency. Other state models include South Dakota, Maine and Wisconsin.
- **Purchasing compost for state projects** is a critical step toward expanding compost markets and infrastructure statewide. The state can require the use of certified compost—with preference to programs that collect food scraps—in landscaping and transportation projects. This will improve water conservation, reduce irrigation needs, help revegetate landscapes and protects against erosion. Stronger demand for the compost end products will help compost processors invest in new equipment and facilities to increase the recovery of food scraps and yard debris throughout Colorado. Illinois is a good state model.
- **State agencies can commit to recycling 50% or more of construction debris** in all state-sponsored building projects. This will help reduce waste in the construction industry as well as stimulate investments in construction recycling facilities for aggregates (concrete, asphalt, brick) as well as clean lumber, metal, and cardboard. Over 40% of Colorado’s waste is construction and industrial materials.^{xx}

CASE STUDIES ON RECYCLING BUSINESSES IN COLORADO



Glass

Momentum Recycling opened the first glass reprocessing plant in Colorado in 2016 and helped double the amount of glass recycled between 2016 and 2017, an increase of 22,000 tons in just one year. Glass is collected from area recycling programs and cleaned up before being used to create new beer bottles right here in Colorado. However, Momentum's facility remains at only 60% capacity because most Front Range residents and businesses do not have curbside recycling for glass and other materials.^{xxi} We have plenty of capacity to recycle more glass locally but we need to get the glass out of our trash cans and into the recycle bins.



Electronics

BlueStar Recyclers started in Colorado Springs in 2009 as a social enterprise dedicated to providing quality jobs for people with autism and other developmental disabilities through electronics recycling. The company now has three Front Range locations and plans to expand to the Roaring Fork Valley. BlueStar has provided over 40 local jobs for people with disabilities in Colorado communities, and delivered over \$4 million in new local revenues and \$1.5 million in taxpayer savings.^{xxii} BlueStar also partners with rural communities such as Steamboat Springs on annual collection events where permanent recycling facilities are not in place. Investments in social enterprises such as BlueStar are a good mechanism to achieve social, environmental and financial goals simultaneously.



Cartons

Beverage cartons are an increasingly popular packaging choice for everything from milks to soups, but recycling for these products has been slow to develop. Currently only 60% of U.S. residents have access to carton recycling. Thanks to funding from the RREO grant, Colorado will be soon be home to a new carton recycling company, **ReWall**, which will greatly improve carton recycling statewide. ReWall uses recycled beverage cartons to manufacture roof cover board, exterior sheathing, wallboard, floor underlayment and other building materials. The new facility will employ 15 people and hopes to open in April 2019.^{xxiii} Having in-state markets for carton recycling will help both urban and rural areas expand programs by reducing their transportation costs.

PART II

HOW COLORADO CITIES COMPARE AT RECYCLING

To better understand how to move Colorado forward on recycling, we need to first look at what's happening at the local level: how are our communities doing on recycling? Unfortunately, this question isn't that easy to answer. Most Colorado cities do not collect data on their recycling or trash programs, making it difficult to track progress. This is a big stumbling block—you can't be a sustainable city if you do not even know the scale of the waste, recycling and composting in your community. Simply put, you can't manage what you don't measure.

Those cities that do measure their waste, recycling and composting deserve recognition. This report highlights 27 cities and 30 counties that have taken at least a first step toward tracking their recycling and waste efforts. We hope to encourage every Colorado community to follow their lead and start tracking.

Ideally, every community would have annual recycling and waste data from households, businesses and the industrial sector. Unfortunately, most communities simply have data from households. **Fort Collins** deserve recognition for being the only Colorado city collecting all this information on residential, commercial and industrial diversion. And when you include their industrial recycling numbers, Fort Collins has the highest recycling rate in the state at 55%.^{xxiv}

The next most complete data set includes recycling at both households and businesses, or what we call city-wide diversion. **Boulder** deserves credit here, both for its great data tracking and for leading the state with a 51% city-wide recycling rate. **Aspen** also does a good job of tracking both residential and commercial recycling, reporting a 37% city-wide diversion rate.

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FIGURE 4. SECTOR DIVERSION RATES FOR COLORADO COMMUNITIES WITH THE MOST COMPLETE DATA TRACKING^{xxv}

CITY	CITY or COUNTY WIDE	INDUSTRIAL	COMMERCIAL	RESIDENTIAL
Fort Collins	55%	70%	28%	29%
Boulder	51%		35%	52%
Pitkin County	30%	63%		
Durango	30%			
Aspen	26%		20%	40%
Vail	22%		30%	17%

Most cities that collect data focus on single-family households, known as the “residential recycling rate.” **Loveland** continues to lead Colorado cities with the highest residential recycling rate of 61%. Overall 27 cities around the state track a residential or citywide recycling rate. Curbside recycling is available in all of these communities and haulers are required to provide data to the cities so they can track their recycling progress. Or, in the case of a few cities, the city itself provides recycling and trash services, and tracks their own data internally.

We are excited to report that this list includes a few new cities that are tracking their recycling rates, including **Edgewater, Morrison, New Castle, Rifle and Silt**.

Another frequently used option for data collection is to measure participation rates: how many residents or businesses have recycling service or how often are

they putting out their carts. The **town of Vail** and **city of Thornton** deserve recognition for tracking participation in these categories.

We would like to emphasize that no matter where communities land on this list—whether they are at the top or the bottom—they should be congratulated for having a recycling program in place and for collecting data. This is a critical first step that is still lacking in most Colorado cities. In addition, there are countless examples of citizens, businesses and local governments investing in recycling programs (see page 16) that are not reflected in this data because they are pilots, start-ups or their community doesn’t track data. We honor all these efforts and hope they can serve as inspiration at both the state level, to provide more support local community programs, and at the local level, to help other communities to get more actively involved in improving recycling participation and services.

KEY TO SUCCESS: BUNDLE CURBSIDE RECYCLING WITH TRASH SERVICE



Nearly 90% of people in the U.S. find curbside recycling to be a valuable service.^{xxvi} Yet here in Colorado, we could do a lot more to make recycling more convenient. Currently, residents in most cities have to go out of their way to get curbside recycling—they have to find a hauler that offers it and then add it to their service, often paying more. In contrast, leading recycling cities remove this barrier to participation by bundling recycling and trash service together: when you sign up for trash service, you get a recycling cart automatically along with it. National studies show this is one of the most effective ways to get more people to participate in recycling and to collect more recyclable material per household.^{xxvii} Curbside composting or yard waste drop-off programs are also needed to make it convenient for residents to divert their food scraps and yard debris. Four of the top five highest performing cities in Colorado provide curbside composting or seasonal yard waste collection.

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FIGURE 5. RESIDENTIAL RECYCLING RATES IN COLORADO CITIES WITH DATA COLLECTION^{xxviii}

CITY	RESIDENTIAL RECYCLING RATE	CHANGE SINCE 2017
LOVELAND	61%	0%
BOULDER	52%	- 1%
LOUISVILLE	44%	- 4%
ASPEN	40%	+ 1%
LONGMONT	40%	+ 5%
LAFAYETTE	38%	+ 1%
GOLDEN	34%	0%
FORT COLLINS	29%	- 1%
GREENWOOD VILLAGE	27%	- 1%
RIFLE	23%	N/A
SUPERIOR	23%	+ 2%
DENVER	22%	+ 2%
LONE TREE	20%	+ 3%
SHERIDAN	20%	+ 2%
EDGEWATER	18%	0%
GRAND JUNCTION	17%	+ 4%
VAIL	17%	0%
MORRISON*	16%	N/A
SILT	16%	N/A
NEW CASTLE	14%	N/A
FRUITA	11%	0%
NORTHGLENN	11%	0%
MONTROSE	9%	0%
COMMERCE CITY**	N/A	N/A
LYONS**	N/A	N/A
THORNTON**	N/A	N/A

* Data estimated

** Tracks data but 2017 recycling rate not reported

*** We apologize to any city that was missed from this list. We attempted to contact as many of Colorado's largest cities as possible for data. Please contact us to be added to the list for future tracking.



SHORTCOMINGS IN DATA COLLECTION

The term “recycling rate” means different things both across Colorado and across the country, which makes it hard to compare between cities and states. This report tries to clarify how existing recycling data refers to different parts of the community. Here are the common data categories used in Colorado:

- **City-wide recycling rates**, including households, businesses and construction/industrial
- **City-wide recycling rate** for just households and businesses, also known as municipal solid waste (MSW)
- **Residential recycling rate**, mostly single-family homes and apartments up to seven units
- **Participation rate**, including how many people have services or set out their bins every week

While industrial waste and recycling is the least available data at the city level, it is of growing importance because of its high volume and its high recyclability. CDPHE estimates over 40% of what’s buried in Colorado’s landfills is construction and industrial waste.^{xxix} One city who has addressed this challenge is Fort Collins, which diverts nearly 70% of its industrial waste, including wood waste, scrap metal, and concrete and asphalt.^{xxx}

RECYCLING RATES AT THE COUNTY LEVEL

Only five Colorado counties collect recycling data every year, including Boulder, Denver, Eagle, Pitkin and Summit. Overall, of Colorado's 64 counties, nearly half have at least a baseline report on their recycling rate from the last five years or so. This represents a good start and should be a basic goal for the rest of the counties. The state Recycling Resources Economic Opportunity (RREO) grant and CDPHE have been instrumental to funding many of these rural and regional studies. To access that grant, visit www.colorado.gov/pacific/cdphe/recycling-grants-and-rebates.

The chart on the following page reflects the best known data on county-wide recycling rates in Colorado:



RURAL RECYCLING CHALLENGES

Across the U.S., recycling in rural areas is generally more challenging than in urban areas, and Colorado's mountain and rural areas face several disadvantages, including:

- Higher transportation costs because of long distance to markets
- Lower material generation requires more storage space or regional cooperation to gather a sizeable load for shipping
- Lower tax base to fund infrastructure investments
- Low population density limits availability of curbside collection programs, relying more on drop-off centers for collection

However, there are also countless success stories of rural, low-density areas overcoming these challenges and creating strong recycling programs. Colorado's rural areas need tailored solutions to address these challenges, many of which are outlined in the state solid waste plan, and must be an integral part of achieving Colorado's recycling goals.

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FIGURE 6. RECYCLING RATES IN COLORADO COUNTIES WITH DATA^{xxx1}

COUNTY	RECYCLING RATE	DATA YEAR
ANNUAL DATA COLLECTION		
BOULDER	40%	2017
PITKIN	30%	2017
SUMMIT	23%	2016
DENVER*	22%	2017
EAGLE	22%	2017
ONE-TIME RECYCLING RATES & WASTE STUDIES		
LARIMER	35%	2017
OURAY, SAN MIGUEL	20%	2016
ALAMOSA, CONEJOS, COSTILLA, MINERAL, RIO GRANDE, SAGUACHE	18%	2016
LA PLATA	17%	2014
CHAFFEE	16%	2016
LAKE	16%	2016
CUSTER	15%	2016
GRAND	14%	2014
SAN JUAN	14%	2014
FREMONT	12%	2016
EL PASO, TELLER	11%	2010
DOLORES	7%	2014
MONTEZUMA	7%	2014
BENT, CROWLEY, OTERO	6%	2016
PUEBLO	4-6%	2017
ARCHULETA	3%	2014
WASTE STUDIES BUT NO RECYCLING RATES		
BACA, HUERFANO, LAS ANIMAS		2017
GARFIELD, MOFFAT, RIO BLANCO, ROUTT		2017
MESA, DELTA, MONTROSE, AND GUNNISON		in progress

PART III

SUCCESS STORIES FOR 2018

Colorado's recycling rate may be stagnant at the statewide level, but there are several bright spots around the state that show local communities are prioritizing recycling and launching new or expanded programs. Highlights from 2018 include:



CITY OF LONGMONT

Longmont deserves recognition for taking the biggest leap forward in its residential recycling rate. The city bumped up their residential recycling by 5% thanks to a new curbside composting program that provides residents with an optional subscription service to conveniently compost food scraps, yard debris and other organics right at the curb.



CITY OF BOULDER

The City of Boulder diverts over 50% of its waste citywide, hitting a record 51% in 2017 and boasting an impressive 16% increase from last year. Boulder's success is due in large part to the implementation of its Universal Zero Waste Ordinance that requires all businesses, apartments and homes to have recycling and composting collection.



CITY OF PUEBLO

Pueblo opened its first public drop-off center to recycle cardboard, paper, glass bottles, plastic containers, and aluminum and steel cans. A recent study for Pueblo County found nearly two-thirds of Pueblo's trash could be recycled or composted, and over 90% of residents surveyed supported more recycling options. Their new recycling center is a big first step toward boosting the area's current recycling rate of only 5%.^{xxxii}



DENVER

The city of Denver was one of two cities nationwide that were chosen by the Natural Resources Defense Council (NRDC) for a comprehensive study on the potential to recover edible food that is currently being wasted. The NRDC report found over 7 million additional meals could be donated each year in Denver alone, which could help the city meet more than 40% of its unmet food needs.^{xxxiii} The report lays the foundation for maximizing food donation from retailers, institutions and other consumer-facing businesses located in the community.



EAGLE COUNTY

Vail Honeywagon opened the first commercial composting site in Eagle County. The company will collect food scraps for composting from businesses, and residents will have access to six drop-off sites throughout the County. The facility will sell its compost products locally as nutrient-rich soil amendments, which will help create a closed loop for organics and reduce the need to truck compost products up from the Denver metro area.^{xxxiv}



ROUTT COUNTY

The Yampa Valley Sustainability Council (YVSC) expanded their annual recycling drop-off collection to a semi-annual event due to strong community support. Nearly 600 households participate in each event and the program services businesses as well. More than 60,000 pounds of materials were collected and recycled this spring, including mattresses, electronics, paint and other household hazardous waste, yard debris, appliances, clothing and more. YVSC is also spearheading a comprehensive stakeholder process to develop a strategic waste diversion plan for Routt County, which should be released in early 2019.^{xxxv}



CREATIVE RURAL SOLUTIONS

In response to a unique agricultural challenge, plastic baling twine recycling is expanding statewide with collection sites in Alamosa, Larimer, Rio Grande and Weld counties. This project started in 2012 through the Fort Collins Conservation District and a grant from CDPHE helped fund processing equipment that enabled the program to expand statewide. Baling twine causes several problems if it is not properly collected. Birds can get tangled in the twine and livestock become ill after ingesting it. The plastic is unsafe to burn because it emits toxic fumes, and can also become easily tangled in farm equipment. The program is a fundraiser for 4-H, Future Farmers of America (FFA) and other community groups, and is a good model partnership between environmental and agricultural programs.^{xxxvi}

PART IV

CONCLUSION

In the wake of dire warnings about the need for immediate action on climate pollution and the equally alarming proliferation of plastic pollution in our oceans, there has never been a more important time for Colorado to double down on its commitment to protect our environment and build smart, sustainable communities. Recycling should be at the cornerstone of that commitment: it is one of the fastest, easiest and most cost effective local solutions to reduce carbon pollution. It is an accessible, simple solution that everyone can participate in every day—at home, at work, at school and everywhere. And it is the foundation of a circular economy, where we can create value from our waste and feed it back to local businesses, creating economic, environmental and social benefits.

While many cities are leading efforts on recycling and composting, we need concerted leadership from the new Governor and his administration to take Colorado from being one of the worst states for waste diversion to living up to its green reputation. Together we can make 2019 the year we ditched our trashy ways and made Colorado a hub for the circular economy.

Find out more about how you can help move Colorado forward at www.ecocycle.org/zerowastecolorado.

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SOURCES FOR ALL CITY AND COUNTY DIVERSION DATA

Figure 4. CITYWIDE DIVERSION RATES

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