

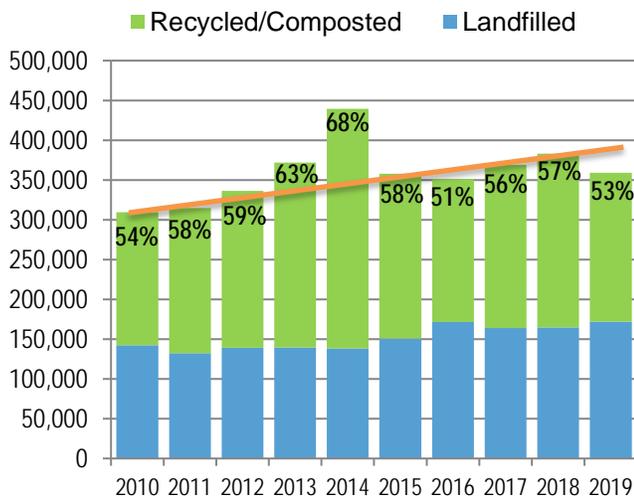
# WASTE REDUCTION & RECYCLING REPORT

## Community Diversion Rate

A diversion rate compares the amount of material that was recycled or composted compared to the total waste generated by the community. Fort Collins tracks trends in the community by measuring diversion rates as well as per-capita volumes of trash generated.

Fort Collins' overall Community-wide Diversion Rate includes all residential, commercial, and industrially-generated trash and recyclable materials. **The Fort Collins Community Diversion Rate in 2019 was 52.7%.**

### COMMUNITY DIVERSION RATES SINCE 2010



### CHANGE IN COMMUNITY DIVERSION RATE FROM 2018 – 2019



### CHANGE IN POUNDS OF LANDFILLED MATERIAL PER CAPITA PER DAY FROM 2018 – 2019



## Drivers for change in Community Diversion Rate from 2018 – 2019

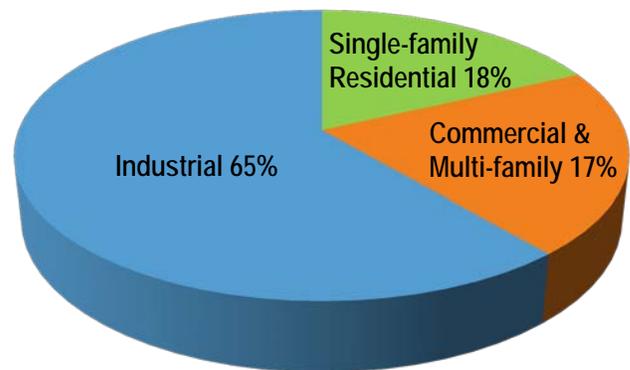
- Less concrete and asphalt recycled at the City's Hoffman Mill Crushing Facility
- Less soil recycled from City projects
- First year that landfill data from roofing projects was available
- Less waste generated from municipal operations and the construction and demolition sector

Details are included in the text on page two.

### DIVERSION RATES BY SECTOR IN 2019

RESIDENTIAL	28.4%
COMMERCIAL / MULTI-FAMILY	25.1%
INDUSTRIAL	66.9%

### PERCENTAGE OF TOTAL COMMUNITY WASTE AND RECYCLING GENERATED BY SECTOR IN 2019



# CHANGES IN 2019 COMMUNITY DIVERSION RATE

## Roofing Materials

2019 is the first year that roofing data is included in the Community Diversion Rate. With a massive hailstorm hitting in July 2019, over 18,000 tons of roofing material was reported to be landfilled in 2019.

## City of Fort Collins' Crushing Facility

The Streets Department operates a Crushing Facility that accepts materials from the public as well as City operations. Concrete, porcelain, and asphalt are crushed and sold for use as road base, and dirt is screened and sold as fill dirt.

As part of typical operational fluctuations, the concrete recycled at this site in 2019 decreased by 43% in comparison to 2018.

## Soil from Municipal Projects

The City of Fort Collins Water Field Operations Department recycles, dries, screens and then recycles much of the soil generated from its operations. Due to fewer projects taking place in 2019, they recycled 35% less soil than in 2018.

## Less Industrial Waste

The waste generated from City of Fort Collins municipal operations decreased by 31% compared to 2018, and there was a 12% reduction in waste hauled from construction and demolition projects compared to 2018. This combined 11,000 ton reduction in material landfilled offset much of the newly reported roofing materials sent to landfills.

## Changes in Residential and Commercial Materials (MSW)

As there is less material generated by the residential and commercial sectors, fluctuations in these sectors rarely drive changes in the Community Diversion Rate. In 2019, residential materials were fairly consistent, while in the commercial sector, both recycling and composting decreased when compared with 2018. Haulers report recycling decreases are due to increased enforcement of recycling contamination thresholds.

## Residential Trash and Recycling Cart Sizes

Cart size	Residents subscribed	Change from 2017
32 gal trash cart	44%	↑ 3%
64 gal trash cart	39%	↑ 1%
96 gal trash cart	15%	↓ 6%
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32, 64 or 96 gal recycling cart	90%	↑ 4%
18 gal recycling tub	10%	↓ 4%
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64 or 96 gal yard trimmings collection cart	19%	↑ 5%

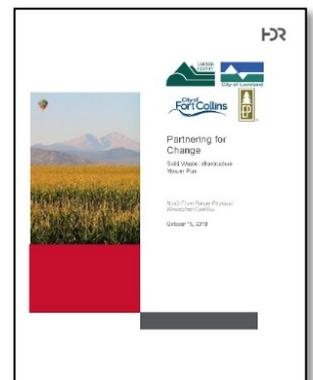
## 2019 PROGRAM UPDATES

### Regional Wasteshed Planning

Planning efforts for future infrastructure to replace the Larimer County Landfill, which will reach capacity and close by 2024, continued to make progress in 2019.

In April 2019, City Council voted unanimously to adopt an intergovernmental agreement (IGA) for regional collaboration with Loveland, Estes Park, and Larimer County to move forward with implementing the master plan for solid waste infrastructure (adopted by Larimer County in 2018).

Implementation of the master plan, including design and permitting of new facilities began in 2019 with continued collaboration between members of the IGA.



## Our Climate Future Planning



In 2019 City staff launched Our Climate Future, an equity-centered combined update to the City's Climate Action Plan, Energy Policy, and Road to Zero Waste Plan.

The Road to Zero Waste plan was originally adopted by City Council in 2013 and has served as a strategic document for the work of the Waste Reduction & Recycling Team and Environmental Services Department. The Our Climate Future process will include an update to this plan, including a review of interim Zero Waste Goals to adapt priorities and strategies to changes that have occurred at global and local levels since the plan was first developed.

In 2019, the Our Climate future planning process engaged nearly 500 community members as part of an initial engagement process called "Understanding Community Priorities". This work continues into 2020 and will result in an updated waste reduction plan that seeks equitable solutions to achieving the Road to Zero Waste goals.

## Construction & Demolition Recycling: Building Code Changes

### Updated Building Code

New building code requirements adopted in 2018 came into effect January 2019. These codes changes expanded C&D recycling requirements to include all new structures and building additions over 2,500 square feet.

### Shingle Requirements

In January 2019, Fort Collins began requiring Class 4 hail-resistant shingles be used on roofs with the goal of waste prevention in this hail-prone area of the country. Part of that requirement was that roofers now report the material landfilled from their projects in Fort Collins.

Since this material is generally hauled by the roofing company rather than a traditional roll-off hauler, this had been a gap in the Community Diversion rate data. With a massive hailstorm hitting in July 2019, over 18,000 tons of roofing material was reported to be landfilled in 2019.

## Timberline Recycling Center

Operated by the City, the Timberline Recycling Center entered its third full year of operations at the Timberline Rd. site in 2019. The east side of the facility, where conventional types of recyclables are accepted, received approximately 473 visitors, daily, up from 340 visitors daily in 2018. Visits to the Hard-to-Recycle Materials Yard on the west side of the facility jumped 160% to a total of 14,680 visits compared to 5,638 in 2018. Volumes of recyclable materials collected in both sides of the facility increased from 2018; 13% on the east side and 22% on the west side (Hard-to-Recycle Materials Yard).

Due to changing recyclables markets and low commodity values, the Recycling Center saw increased costs for operation, including increased costs for transporting recyclables to the Larimer County recycling plant.

To address these increased costs, a new bin for white office paper was introduced to the site, since white paper continued to be in high demand by markets. Nearly 11 tons of white paper was collected by this program in 2019.

Installation of a new cardboard compactor on the east yard was also completed using a grant from the State of Colorado.



## ABOP Collection at the Timberline Recycling Center

In collaboration with the City's Utilities Stormwater Department, the Timberline Recycling Center began waiving the \$5 entry fee for community members dropping off antifreeze, batteries, motor oil, and / or paint to the Hard-to-Recycle Materials Yard. Paint-only drop offs had been free of charge previously due to the State of Colorado's PaintCare program, but \$15,000 from City Stormwater helped fund the expansion of the program to cover collection fees for batteries, motor oil, and paint. In 2019, just over 114 tons of these materials were collected.



## Recycling Ambassadors Volunteer Program

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Established in 2017, the Recycling Ambassadors volunteer program continued to grow in 2019, with 23 volunteers.



Volunteers contributed approximately 1,000 hours in 2019 and made nearly 5,000 contacts with the community through educating community members at outreach events and onsite at the City's Timberline Recycling Center.

## City WRAP (Waste Reduction & Recycling Assistance Program)

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During 2019, City staff worked with more than 35 businesses and apartment complexes to start or improve their recycling programs, impacting approximately 5,500 individuals (residents and employees) who received increased education and/or access to recycling.

## Definitions and Notes

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*Non-industrial diversion rate:* includes waste generated by single-family residential, multi-family residential, and commercial sectors.

*Industrial diversion rate:* includes materials such as waste generated by City government operations, concrete and asphalt recycled at crushing facilities, construction and demolition waste, brewery wastes, and biosolids that are land-applied.

*Community diversion rate:* the combined total of industrial and non-industrial wastes – provides an overall view of waste generation and waste diversion for the entire community.

Note about *Alternative Daily Cover (ADC)*: Each day, landfills are legally required to cover the day's contents with soil or another approved material. Various materials can be used as ADC, including wood, drywall or yard waste. Because many of these materials have "higher and better" uses, the City does not include ADC as diversion in its calculations, unlike some other entities, including the State of California.

Notes about Appendix 1 (detailing Fort Collins' waste and recycling):

- data are updated over time as new information becomes available or new methodologies emerge. Appendix 1 is updated yearly, which may result in the data in this appendix not matching the initial report.
- Yellow-shaded boxes are included in the Non-Industrial (MSW) totals
- Orange-shaded boxes are included in the Industrial totals.

## Data Updates in 2019

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- 2019 is the first year that roofing data is included in the Community Diversion Rate. With a massive hailstorm hitting in July 2019, over 18,000 tons of roofing material was reported to be landfilled in 2019. This information will be included in the Community Diversion Rate calculations moving forward (see details in text above).

## Report Prepared By

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## 2019 Fort Collins Community Waste & Recycling Summary

Recyclables	
Residential Curbside Recycling	Tons
Single-stream	8,732
<b>Curbside Total:</b>	<b>8,732</b>
Multifamily & Commercial Recycling	
Commercial single-stream	4,454
Multi-family single-stream	558
Paper Mix (ONP, OMX, etc)	112
Office paper	1
Corrugated Cardboard	1,397
Glass	1,688
Commingled containers (aluminum, steel, glass, plastic)	82
<b>Multi-Family &amp; Commercial Total:</b>	<b>8,293</b>
Drop-off Centers	
Corrugated cardboard	646
Paperboard, low-grade paper	0
Mixed Paper	507
Commingled containers	137
Glass	358
White Office Paper	14
Hard-to-recycle items from Timberline Recycling Center	158
<b>Drop-off System Total:</b>	<b>1,819</b>
Other Recyclables	
Electronics	252
Plastic bags / shrink wrap	96
Textiles	0
<b>Total Other:</b>	<b>348</b>
<b>TOTAL MSW RECYCLING TONS</b>	<b>19,191</b>
Industrial Recyclables	
Scrap metal (ferrous) -- iron, steel	24,297
Concrete	23,155
Asphalt	63,703
Other aggregate / soil	24,110
<b>Total Industrial Recycling Tons</b>	<b>135,264</b>
<b>TOTAL RECYCLING TONS</b>	<b>154,455</b>

Organics	
Residential / Commercial Organics	Tons
Food Waste (Residential)	57
Food Waste (Commercial)	1,488
Yard Waste (Residential)	4,740
Yard Waste (Commercial)	5,313
<b>Total MSW Organics</b>	<b>11,597</b>
Industrial Organics	
Spent brewery grain	728
Wood waste (Commercial)	12,804
Other organics (Industrial)	4,719
Biosolids	3,057
<b>Total Industrial Organics</b>	<b>21,308</b>
<b>TOTAL ORGANICS TONS</b>	<b>32,906</b>

Landfill	
Tons of Solid Waste Landfilled	Tons
Residential	48,318
Multi-family	4,396
Commercial	41,580
Industrial	70,595
Alternative Daily Cover (soils used to meet landfill cover needs)	6,964
<b>TOTAL LANDFILL TONS</b>	<b>171,853</b>

Recycling Participation	
Customer Type	% of Customer w Recycling
Residential	96%
Residential yard trimmings collection	14%
Multi-family	68%
Commercial	57%
Industrial	8%
<b>Total customers with recycling</b>	<b>91%</b>

Non-Industrial Totals (MSW)	Residential	Commercial	Overall	Lbs / Capita / Day
Total Landfill	48,318	45,976	<b>94,294</b>	2.99
Total Organics Composted	4,797	6,801	<b>11,597</b>	0.37
Total Recycling	10,551	8,640	<b>19,191</b>	0.61
PAYT Source Reduction "tons"	3,820	n/a	<b>3,820</b>	0.12
Total Disposed	67,486	61,417	<b>128,903</b>	4.09
Diversion Rate	24.1%	25.1%	<b>24.6%</b>	
Diversion Rate w/ Source Reduction	28.4%	n/a	<b>26.8%</b>	

Industrial Totals	Tons	Lbs/Cap/Da
Total Landfill	<b>70,595</b>	2.24
Total ADC	<b>6,964</b>	0.22
Total Organics Composted	<b>21,308</b>	0.68
Total Recycling	<b>135,264</b>	4.29
Total Disposed	<b>234,131</b>	7.43
Diversion Rate	<b>66.9%</b>	
Diversion Rate, ADC as diversion	<b>69.8%</b>	

Combined Totals	MSW	Industrial	Overall	/Day
Total Landfill	94,294	70,595	<b>164,889</b>	5.23
Total ADC	n/a	6,964	<b>6,964</b>	0.22
Total Organics Composted	11,597	21,308	<b>32,906</b>	1.04
Total Recycling	19,191	135,264	<b>154,455</b>	4.90
PAYT Source Reduction	3,820	n/a	<b>3,820</b>	0.12
Total Disposed	128,903	234,131	<b>363,034</b>	11.52
Diversion Rate, no Source Reduction	24.6%	66.9%	<b>52.2%</b>	
Diversion Rate with PAYT Source Reduction	26.8%		<b>52.7%</b>	
Diversion Rate with PAYT Source Reduction, ADC as diversion			<b>54.6%</b>	

*single stream recycling totals reduced by 13.7% to account for contamination (and trash totals increased commensurately)*