



Memorandum

To: Vail Town Council
From: Community Development Department
Date: April 7, 2020
Subject: Community Wide Recycling Update

I. Purpose

This presentation provides an update to the Vail Town Council on the Community Wide Recycling Ordinance adopted in 2014. A brief update on the status of waste diversion in Eagle County is also included.

II. Background

In support of the Vail Town Council's value of environmental stewardship and strategic focus on sustainability, the town's adopted Environmental Sustainability Strategic Plan established the following waste diversion goal:

Goal #1, Solid Waste Stream Reduction and Recycling, Reduce the amount of Town of Vail landfill contributions by 10% within 5 years and 25% within 10 years (2019).

The 2010 baseline studies show area diversion rates as follows:

- Town of Vail: 9% (residential) and 19% (commercial)
- Eagle County: 14.7%
- National Average: 34.5%

The 2014 community-wide recycling ordinance added a new chapter to Title 5 of the Vail Town Code establishing the following:

1. Recycling rates embedded with trash hauling rates
2. Residential volume-based pricing (Pay as You Throw)
3. Prohibition on recyclable materials discarded as trash
4. Waste hauler registration and data reporting
5. On-site recycling requirement
6. Equal service rate requirement (residential recycling collected as frequent as trash)

III. Recycling Program Outreach and Initiatives

Since the 2018 Town Council recycling update, several new outreach efforts and recycling initiatives have been implemented. These include partnering with Vail Honeywagon and Ever Green Zero Waste to offer composting services, implementing a Pay As You Throw small cart exchange program, providing the Business Recycling Challenge, educating Town of Vail staff on recycling, participating in a town clean-up day with Red Sandstone Elementary Students, and commissioning a recycled art installation.



- **Composting Program:** Town of Vail partnered with Vail Honeywagon to offer a residential subscription composting program. Vail Honeywagon and EverGreen Zero Waste also began providing commercial, municipal and special event composting opportunities. In 2019, 350 tons of organic material was diverted from the landfill.

- **Business Recycling Challenge:** In 2018, seven Vail businesses participated in the challenge. Each received a weekly waste audit and worked with Town of Vail and Walking Mountains Science Center staff to identify ways to improve recycling and waste diversion. At the end of the month-long challenge, participating businesses averaged a 57% recycling rate, an 8% increase from the start.



- **Climate Action Collaborative:** Town of Vail has partnered with the Climate Action Collaborative Materials Management Task Force for county-wide waste diversion initiatives including deployment of the Waste Wizard app, promotion of the bi-annual recycling education campaigns, and efforts to improve construction and demolition diversion.



- **Education and Outreach:** Recycling education to Town of Vail staff ramped up in 2019 with recycling presentations to parking and library staff, and a field trip with 18 town employees to the Eagle County HHW, MRF, and Landfill facilities.

Town of Vail partnered with Vail Resorts and Vail Honeywagon to provide recycling education and a town clean up event with 80 Red Sandstone Elementary students.

Staff collaborated with Walking Mountains Science Center to co-present on recycling in Eagle County at the November 2019 Lunch with the Locals.

Special events like the Spring Hard to Recycle event and America Recycles Day collection events diverted over 14 tons of material in 2019.

- **Small Cart Exchange Program:** Through a Recycling Resources Economic Opportunity (RREO) mini-grant from CDPHE, the town distributed 40 wildlife resistant, 32-gallon trash bins to increase participation in the Pay As You Throw program while reducing the amount of waste entering the landfill. Recipients were given the option of a recycling sticker to repurpose their larger trash carts into a recycling container or to exchange their larger trash cart. The smaller carts in service have the potential to reduce the amount of trash produced by 28 tons annually.

ARE YOU A SMALL BIN PERSON?

The Town of Vail has been given twenty 32-gallon, wildlife resistant trash containers (\$236 value) to give away to residents who are committed to reducing trash produced and increasing recycling efforts. You will also receive a recycling sticker to repurpose your larger trash bin to a recycling container. To receive a FREE small bin, fill out the short application at lovevail.org. Supplies are limited so submit your application today.

970.479.2333
lovevail.org

Love VAIL

TOWN OF VAIL



- **Recycled Art Installation:** The Environmental Sustainability Department worked with AIPP to commission a temporary art installation to educate the public about the importance of waste diversion (Reduce, Reuse, Recycle) as it relates to climate change and impacts on the mountain ecosystem. Artist Jenna Oppenheimer was selected to design and construct a trout and mayfly sculpture built from 100% repurposed materials.

IV. Community Recycling Rates

Recycling rates throughout the Town of Vail have steadily increased since adoption of the 2014 ordinance. In 2019, the Town achieved a combined 25% recycling rate and a 27% recycling rate with compost tonnages factored in (Figure 1).

This data includes municipal solid waste (MSW) or material that is collected on regular residential and commercial routes, recycling, and organic material diverted through composting. It does not include materials generated through construction and demolition activities. These numbers are an aggregate of hauler data submittals collected through sampling periods over the course of the year. Collecting data from haulers in 2019 proved to be very difficult for a variety of reasons. Please note that audit data from one hauler was collected four times only during the 4th quarter of the year rather than throughout the year due to operational and staff changes. Therefore, 2019 data is not as representative of the full year as it has been over the past few years.

TOV Annual Tonnage Estimates					
	2019 tons	2018 tons	2017 tons	2016 tons	2015 tons
MSW	11,487	10,871	9,832	8,995	8,126
Recycling	3,897	3,597	2,755	2,224	1,955
Organics	350	155	50	37.5	0
Recycling Rate	25%	25%	22%	20%	19%
Recycling Rate w/ Organics	27%	26%	22%	20%	19%

Figure 1. Town of Vail Recycling Rates

Residential participation in 2018 was 73% (Figure 2). Data from waste haulers and a set out survey conducted in 2019 indicate residential participation was 83% on average. Participation rates are the number of people setting out both recycling and trash on a given collection week. Data from 2018 indicate multi-family and commercial properties tend to have higher participation rates at 99% and 84% respectively. These data were not provided by haulers in 2019.

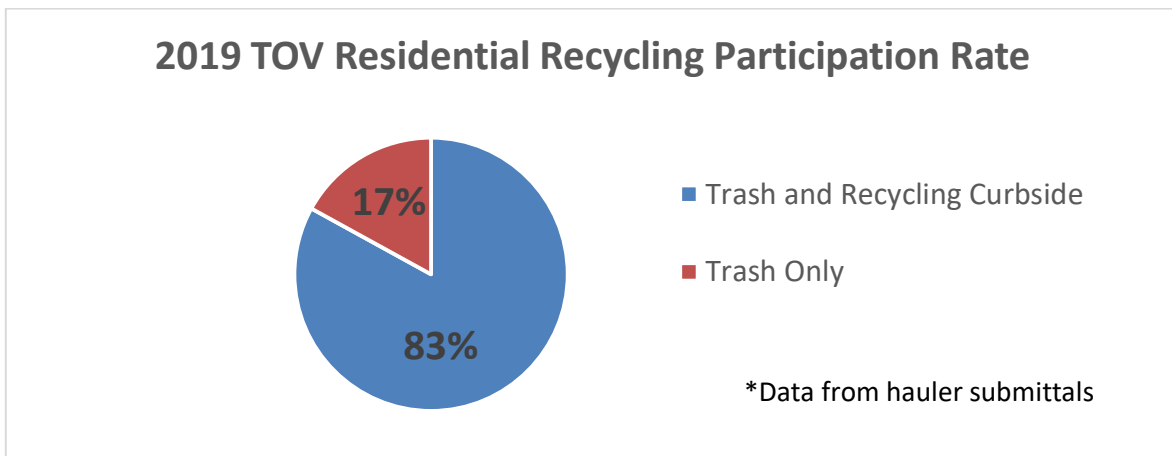


Figure 2. 2019 Residential Recycling Participation Rate

2019 Diversion Rates with Construction and Demolition Debris

In 2019, construction and demolition debris (C & D) data were available. When factored in with municipal solid waste, the overall diversion rate dropped to 23% (Figure 3). Based on 2019 hauler data, approximately 19% of landfill bound waste from Vail is construction and demolition debris. Currently only 3.7% of all C & D debris created in Vail is diverted from the landfill.

2019 TOV Tonnage Estimate with C & D		2019 TOV Tonnage Estimate	
MSW w/ C & D	14,296	MSW	11,487
Recycling w/ C & D	4,000	Recycling	3,897
Organics	350	Organics	350
Diversion Rate including C&D	23%	Recycling Rate	27%

Figure 3. 2019 Diversion Rates with Construction and Demolition

Municipal Operations

Town of Vail municipal operations continue to divert material through single stream recycling, composting, Hard to Recycle events and other waste diversion practices. Data from 2018 and 2019 are included below (Figure 4). Seven percent of all waste diverted in 2019 was due to municipal operations.

Town of Vail			2018 TOV Operations		
2018 Collection Events			2018 TOV Operations		
Spring 18 Collection Event:	280 cars		Scrap Metal	10	tons
Paper Shredding:	3,120 lbs		Vehicle Oil (TOV Recovery- 1,763 gal)	6.5	tons
HHW (Paint/Chemicals, etc)	7,815 lbs		Vehicle Oil (Mesa Environmental- 441 gal)	1.6	tons
E-Waste	16,319 lbs		Chipping and Composting	50	tons
Total	27,254 lbs		E-Waste	1.25	tons
			Municipal Compost	25.98	tons
Fall 18 Collection Event	189 cars		Total	95	tons
E-Waste	9,871 lbs		TOV Drop Site		
Paper Shred	1,840 lbs		Co-Mingle	48.7	tons
Total	11,711 lbs		Paper	51.2	tons
2018 Total Collection Events:	19 tons		Cardboard	46.2	tons
			Total	146.1	tons

Town of Vail			2019 TOV Operations		
2019 Collection Events			2019 TOV Operations		
Spring 19 Collection Event:	280 cars		Scrap Metal	7	tons
Paper Shredding:	2,500 lbs		Vehicle Oil (TOV Recovery- 1,358 gal)	5	tons
HHW (Paint/Chemicals, etc)	3,411 lbs		Vehicle Oil (Mesa Environmental- 475 gal)	1.8	tons
E-Waste	13,130 lbs		Chipping and Composting	50	tons
Total	19,041 lbs		E-Waste	1.9	tons
Fall 19 Collection Event	147 cars		Municipal Compost	31	tons
E-Waste	6,957 lbs		Total	97	tons
Paper Shred	1,420 lbs		TOV Drop Site		
Vinyl Banners	1,000 lbs		Co-Mingle	49.2	tons
Bike Tubes	50 lbs		Paper	50.1	tons
Total	9,427 lbs		Cardboard	50.2	tons
2019 Total Collection Events:	14 tons		Total	149.5	tons

Figure 4. Municipal Waste Diversion Operations

Zero Waste Events

The Town of Vail partners with Walking Mountains Science Center to provide Zero Waste services at the weekly Farmer's Markets throughout the summer. In addition, eight other town events utilized Walking Mountains Science Center to provide Zero Waste services in 2019, including the Burton Open, Taste of Vail, GoPro Mountains Games, and Gourmet on Gore. The average diversion rate for these events in 2019 was 80.4% (Figure 5). All events are required to

provide recycling and events with 2,500 attendees and 3 or more food vendors are required to provide Zero Waste services including compost. Moving forward the Event Review Committee (ERC) will also require any event receiving funding from the Commission on Special Events to provide Zero Waste services regardless of event size and will require they report waste diversion data during the post event debrief. ERC will also review the current standard for zero waste requirements established in the Celebrate Green events checklist for all other events and tighten the standard to ensure more events are providing Zero Waste services.

2019 Zero Waste Event Data	Pounds	Tons
Landfill	12,940.5	6.5
Recycling	34,752.7	17.4
Compost	12,145.8	6.1
2019 Total Collection	59,839.0	29.9
Average Diversion Rate	80.40%	

Figure 5. Zero Waste Diversion Rates for 2019 Events

V. Eagle County Update

The Climate Action Collaborative’s Materials Management Task Force continues to make progress on waste diversion efforts in Eagle County. They have implemented bi-annual recycling education campaigns to help clarify how to recycle correctly, launched the Waste Wizard app that allows any resident to find out how to best recycle or dispose of any items, and hosted a construction and demolition (C & D) debris roundtable with contractors, haulers, and municipalities to determine how to improve upon diversion of C & D debris from the landfill.

The Construction and Demolition Pilot Program at the Eagle County Landfill was initiated in 2018 and accepts clean dimensional lumbar, concrete with rebar, and concrete without rebar. In 2018, 3,000 tons of material was received, much of which was from the Vail Health construction project. In 2019, 1,500 tons was received. Tipping fees at the C & D site are \$15/ton, versus \$47.45/ton tipping fee at the landfill. The lower fees are to incentivize use of the site.

Eagle County waste diversion and recycling rates peaked in 2015, experienced a decline in the following two years, and showed improvement again in 2018. Recycling and diversion rates for 2019 are not yet available. In 2018, the county was matched with the Town of Vail at a 26% recycling rate, including composting. (Figure 6). In 2019, the Town of Vail increased the recycling rate with organics to 27%.

Eagle County Diversion Rates									
Recycled Material (Residential & Commercial)	2010 Tons	2011 Tons	2012 Tons	2013 Tons	2014 Tons	2015 Tons	2016 tons	2017 tons	2018 tons
MSW Residential and Commercial ^{ab}	4,188	7,036	7,595	8,284	9,535	13,683	11,735	10,743	14,038
Organics ^c	5,907	4,231	3,856	4,808	6,432	4,798	5,134	4,175	4,007
HHW and Ewaste ^d	34	55	60	102	125	138	130	144	101
			-	-	-	-	-	-	-
Total MSW Recycled	10,129	11,322	11,510	13,194	16,092	18,619	16,998	15,061	18,146
Total MSW Disposed ^e	58,547	47,472	47,336	46,246	48,693	50,549	51,430	52,676	51,583
Total MSW Generated	68,676	58,794	58,846	59,440	64,785	69,168	68,428	67,737	69,729
MSW Recycling Rate ^f	14.7%	19.3%	19.6%	22.2%	24.8%	26.9%	24.8%	22.2%	26%

Diverted Materials (Industrial)	2010 Tons	2011 Tons	2012 Tons	2013 Tons	2014 Tons	2015 Tons	2016 Tons	2017 tons	2018 tons
Diverted Materials (non-MSW)	855	1,595	2,669	1,583	1,734	521	96	92	4,159
Total Recovered Material (Residential, Commercial, and Industrial) ^g	10,984	12,917	14,179	14,777	17,826	19,140	17,094	15,153	22,305
Total Solid Waste Disposed	86,988	82,539	68,480	69,552	78,862	78,505	82,770	84,022	107,736
Total Solid Waste Generated	97,972	95,456	82,659	84,329	96,688	97,645	99,863	99,175	130,041
Diversion Rate	11.2%	13.5%	17.2%	17.5%	18.4%	19.6%	17.1%	15.3%	17%

^a Includes: Glass, Plastics #1 - #7, OCC, ONP, OP, steel, tires, aluminum

^b Sources: Vail Resorts, Waste Management, Honeywagon, Costco & City Market, Eagle County MRF, Eagle County Landfill

^c Sources: Honeywagon, EverGreen Zero Waste, TOV, Grub Dump, Eagle County Landfill

^d Sources: Eagle County HHW, ERI, Metech, Blue Star

^e Total MSW disposed is total landfill tonnage minus diverted materials and industrial (C&D) waste

^f Total MSW recycled/total MSW generated

^g Total MSW recycled + total industrial diverted

Figure 6. Eagle County Waste Diversion Rates

VI. Discussion

The Town of Vail adopted goal of 25% waste reduction by the end of 2019 has been achieved. In 2019, Town of Vail achieved a 27% recycling rate including organics being composted. The 2019 State of Recycling Report indicates that Vail has the third highest recycling rate of Colorado mountain communities, behind Durango and Aspen. The Town of Vail is well ahead of the statewide recycling rate of 17.2%; however, underperforming when compared to the national recycling rate of 35%. As a national and global leader in sustainability, the Town of Vail should match or surpass the national average. Currently, the 2009 Environmental Sustainability Strategic Plan is in the process of being updated and more ambitious zero-waste goals are being discussed by the community. In order to continue improving upon our current recycling rate and to achieve future zero waste goals, additional work is required. Outlined below are initiatives the Environmental Sustainability Department is planning to implement in 2020, followed by other initiatives for Town Council to discuss and consider.

Currently Planned Initiatives for 2020:

A. Dedicated annual funding for waste reduction education

In 2020, Staff plans to re-invigorate the Love Vail recycling and waste reduction campaign and provide outreach and materials to residents, visitors, and businesses. With the assistance of summer interns, the Environmental Sustainability Department will take inventory of residential, multi-family, and commercial recycling compliance and provide hangtags to identify how entities can improve recycling and reduce

contamination. Additional outreach will be provided to identified entities experiencing challenges with recycling.

B. Curbside compost pilot program

Based on the 2017 Northwest Colorado Waste Diversion Study, 37% of all waste entering the Eagle County Landfill is comprised of organics, 30% of which is food waste. Anaerobic decomposition of organic material in a landfill contributes to the release of methane gas, which is approximately 84% more potent of a greenhouse gas than carbon dioxide. Diverting organics from the landfill through composting is one critical step to increasing waste diversion while reducing greenhouse gas emissions. The Eagle County Climate Action Plan, which is supported by Town of Vail, aims to reduce organics from the landfill 30% by 2030. In 2019, composted organics comprised 2% of waste diverted from the landfill in Vail, which helped increase the recycling rate from 25% to 27%. Implementation of a curbside compost pilot program in 2020 will provide insight into the effectiveness of curbside composting in Vail and inform potential composting requirements or incentives to residents and businesses.

C. Improve Celebrate Green zero waste requirements and infrastructure

As outlined above, the Event Review Committee will make Zero Waste requirements more stringent at events in Vail as well update resources for event producers to aid in compliance. In addition, the Economic Development and Environmental Sustainability departments have been collaborating to identify options to incorporate a mobile washing station at events. This would allow durable service-ware to be employed rather than single use items. Staff has been in communication with Reduce Waste Solutions, a promising entrepreneurial business working to research, design, and secure capital for a mobile washing station that would fit the needs of Vail and Eagle County events.

D. Consistent trash and recycling labels/signage across Eagle County

The Eagle County Climate Action Collaborative's Materials Management Task Force is working on consistent labeling for all trash and recycling receptacles utilizing Recycle Across America labels. Recycle Across America labels are simple and have shown to be effective around the United States on improving recycling rates and decreasing contamination in public areas. Town of Vail can consider updating signage on trash and recycling receptacles throughout town to utilize Recycle Across America signage. Eagle County and Edwards have currently adopted this signage and other local communities are considering it. Staff is currently investigating cost and potential effectiveness of this initiative in helping achieve waste diversion goals.

E. Continue monitoring state legislation

The Town of Vail supported the 2020 bill to remove the state-wide pre-emption on plastic bans, allowing for consideration of bans on single-use plastics and polystyrene. The bill was not passed out of committee but may return in the future. At that time, staff will consider pursuing discussions on bans on single use plastics, including polystyrene.

For Council Discussion and Consideration:

While these efforts will help improve the town's recycling rate, additional measures must be considered in order to really move the needle on waste diversion efforts, allowing Vail to move forward as a national leader in waste diversion. The Environmental Sustainability Department is seeking Town Council direction on the following:

F. Increased enforcement of current regulations

Since the implementation of the recycling ordinance in 2014, little enforcement has occurred beyond outreach and one on one discussions with businesses not in compliance. As currently written the ordinance can be enforced with a court summons and determination by the Judge. Providing warnings, court summons, and potential fines up to \$1,000 to residents and businesses will send a message that the Town of Vail takes waste diversion seriously and will improve participation rates and compliance. Ideally, enforcement will mirror that related to wildlife resistant canister compliance efforts.

G. Construction and demolition waste diversion standards

Based on the 2017 Northwest Colorado Waste Diversion Study, approximately 13% of all waste entering the landfill is construction and demolition debris (C & D). Vail's average is higher with approximately 19% of landfill bound waste being comprised of C & D debris (based on 2019 hauler data). Currently, only 3.7% of all C & D debris created in Vail is diverted from the landfill. Given the new C & D recycling site at the landfill, there is an opportunity to divert additional waste from the landfill. If amenable by Council, Staff will return with additional information on C&D waste diversion standards for construction projects in the Town of Vail.

H. Single Hauler Municipal Contract

Staff requests Town Council consider the option of adopting a single hauler municipal contract. Currently, there is an open market for waste hauling with requirements through the recycling ordinance under Title 5 of the Town Code in Vail with three waste haulers registering and operating- Vail Honeywagon, Waste Management, and Vail Valley Waste. In the current environment, trash and recycling trucks from these three different companies are on the streets of Vail six days a week servicing residential, multi-family, and commercial entities. Each hauler is required to report data at least bi-annually for all municipal solid waste collected, including recycling broken down by residential and commercial waste. Historically, accurate bi-annual data collection has been a challenge for haulers, so Staff worked with each hauler to allow for data to be submitted through quarterly audits. In 2019, tracking down data from the quarterly data proved to be even more difficult due to operational and staff changes for at least one of three haulers.

State legislation allows communities to enable a single hauler system for residential waste services for properties with fewer than eight units. Through this process the town would select one hauler through a Request for Proposals (RFP) procurement process to provide curbside trash, recycling, and potentially compost service. Moving to an organized single hauler system is one effective tool to help communities achieve higher waste diversion goals and is in place in Eagle, Minturn, Carbondale, Rifle, New Castle, Fruita, Telluride, Louisville, Superior, Manitou Springs, Golden, and several more.

Studies support that organized single hauler systems often result in positive outcomes, including:

Environmental Impact

- Increased residential waste diversion and recycling rates on average of 13% over recycling rates prior to implementing a single hauler contract.
- Increased recycling and possible composting options could reduce greenhouse gas emissions related to landfilling municipal solid waste.
- Consolidated number of collection days for residential services reduces number of trucks on the roads resulting in reduced air pollution and greenhouse gas

emissions. A study conducted in Arvada, Colorado indicate moving to a single hauler contract can reduce greenhouse gas emissions related to trash and recycling service up to 33%.

- Improved data collection as the municipality can require specific reporting requirements, including on-truck scales to accurately measure municipal solid waste, recycling, and compost collected. In addition, there are fewer haulers to from which to track residential data, reducing staff time and inaccuracies/inconsistencies in reporting.
- Reduced contamination in recycling with streamlined recycling messaging.
- Reduced dumping of residential municipal solid waste in public areas, including parks and the recycling drop site, in turn reducing burden on Staff removing illegally dumped waste from these areas.
- Potentially less exposure of trash and wildlife to trash can with fewer days of service per week.

Health, Safety, and Aesthetics

- Reduced number of trash and recycling trucks on the road improves safety on the roads for pedestrians in residential areas.
- Reduced trucks on the road reduces emissions, leading to improved air quality and reduced odor and noise.
- A single hauler schedule limits number of days containers are set out throughout the week in different neighborhoods.
- Ease of code enforcement with one hauler as it streamlines monitoring of wildlife resistant canisters and compliance issues.
- Increased service level, including cleanliness and appearance of trucks.

Rates, Service, and Communication

- Reduced cost to residents for municipal solid waste and recycling hauling services between 12% and 42%. Free-Market MSW collection systems typically have higher household costs than competitively-bid, contracted systems.
- Increased accountability and level of service making it easier to resolve on-going issues and complaints.
- Streamlined communications from the town regarding waste and recycling services, including established collection days and consistent messaging and education on recycling.

While a single hauler contract limits free market hauler services in the residential sector, commercial entities and multi-family residences with eight or more units would still choose a waste hauler of their choice, providing opportunity for all three waste haulers to continue business operations in Vail. Residents would still have the opportunity to choose level of service and cart sizes in terms of the Pay as You Throw program.

Pricing is reflective of cart sizing and a variety of billing options can be explored, from billing in house through the Finance department to requiring the contracted hauler to continue billing. Given the Town of Vail's current recycling ordinance and requirements, the town is well poised to shift to a single hauler system as many necessary requirements and infrastructure for a successful single hauler program are already in place. A single hauler system can be an effective tool to help the Town of Vail achieve sustainability goals including increased waste diversion and reduced greenhouse gas emission goals, while providing a higher level of waste hauling service to residents.

VII. Staff Recommendations

Based on potential effectiveness to increase waste diversion in the Town of Vail, while supporting other sustainability goals such as reducing greenhouse gas emissions, staff recommends prioritization of pursuing a single hauler municipal contract, including the following steps:

- Work with town attorney to identify legal questions
- Establish program objectives and identify components to include
- Gather community input through public meeting process, online comment portal, and general outreach
- Gather hauler input through individual stakeholder meetings
- Develop an RFP

Staff also recommends implementing improved enforcement efforts and development of C & D waste diversion standards and will bring additional information forward for further discussion.

Single Hauler Resources:

City of Lakewood Sustainability Division. *2019 Lakewood Residential Trash Collection Report*. January 2019.

City of Lakewood Sustainability Division. *Analysis of Residential Waste Collection Improvements Options*. June 2019.

Colorado State Statute on MSW hauling: Colorado Statute: <https://codes.findlaw.com/co/title-30-government-county/co-rev-st-sect-30-15-401.html>

Email Communication with LBA Associates March 18, 2020.

Minnesota Pollution Control Agency. *The Benefits of Organized Collection: Waste Collection Service Arrangements*. February 2012.
<https://www.pca.state.mn.us/sites/default/files/leg-12sy1-06.pdf>. Accessed March 25, 2020.

MSA Consultants and LBA Associates. *Residential Hauling Study: Prepared for City of Arvada, Colorado*. January 2011.

R3 Consulting Group, Inc. *Trash Services Study: Presented to City of Fort Collins*. July 2008.

Community websites:

Eagle, CO- <https://www.townofeagle.org/551/Curbside-Trash-and-Recycling>

Carbondale, CO- <https://www.carbondalegov.org/departments/utilities/trash.php>

Louisville, CO- <https://www.louisvilleco.gov/residents/public-works/refuse-recycling-compost-service>

Golden, CO- <https://www.cityofgolden.net/live/residents-guide/trash-recycling/>
Telluride, CO- <https://www.telluride-co.gov/383/Trash-Recycling-Services>