



## CML 96<sup>th</sup> Annual Conference

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Vail

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## CUSTOMIZING A RECYCLING PROGRAM FOR SMALL- AND MEDIUM-SIZED MUNICIPALITIES

*Laurie Johnson, Executive Director  
Colorado Association for Recycling*

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### What does CAFR do?



**We Convene, Organize & Execute — Advance — Infrastructure, End Markets & Policy**

**Round tables** are the **first step** in exploring the establishment of councils and action groups that take on 12 month **tangible, actionable** and **measurable** projects.

- 2 – 3 hour discussion led by a CAFR facilitator
- Participation of subject matter experts to provide data, expertise and case studies
- Attendees represent a systemic blend of interested stakeholders and sectors
- Identify 2 to 3 major obstacles in advancing infrastructure, end markets or policy to promote a circular economy
- Choose one task that can be accomplished in **12 months** that will make a **measurable** impact.



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### Colorado Diversion Challenges

CO 12% Diversion → Environmental & Economic Benefit

<b>Curbside</b> No Requirement Low tip fees Subscription market	<b>Multifamily/Commercial</b> Low to no Access No Requirement Mixed Routes	<b>Rural/Mtn/Ag</b> Lack of infrastructure Distance to market Education Funding
Funding Technology Public/Private Infrastructure	Need Goals Need requirements Need enforcement Increase tip fees Legislation	Materials capture Manufacturing Incentives End Markets

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### Ultimate Goal


In a circular economy waste is redefined as a resource so that materials can be kept in use and their value retained

**Current**

LINEAR ECONOMY





CIRCULAR ECONOMY



A "circular economy," one in which materials would no longer be consumed but rather would be used and then fully recovered to be remanufactured again and again -- ideally with no degradation and of equal quality to virgin materials. "In the circular economy we are no longer consumers and there's no end of life for products," - Ellen MacArthur

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### Why and What


Why do you want to start or improve a recycling program?

- Environmental
- Economic Development
- Community Service
- Other

What do you already have and what do you need?

- Infrastructure (collection and processing)
- End Markets for collected and processed material
- Policies to support your program

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**Know your potential**

Whether starting new or improving an existing program, start with a waste audit



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**Materials**

Should you accept all material?  
 Plastics #1 – 7  
 Cartons  
 Aluminum  
 Cardboard  
 Loose Paper


Glass in or out of the stream?

Household Hazardous Waste & Electronic Waste – by event or drop off?

**RECYCLE THESE ITEMS**

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**Organics?**

**HOUSEHOLD FOOD WASTE**  
 Some estimates say Americans throw out 25% of the food they buy. Here's the share of each commodity that ends up in consumers' trash.

33%	30%	28%	27%	15%	11%
FISH AND SEAFOOD	ROOTS AND TUBERS	FRUITS AND VEGETABLES	CEREALS	MILK	MEAT

City of Denver waste audit – approx. 50% of residential trash was compostable waste (20% food waste)

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**Single-stream, dual stream, collection, service ??**




18 gallon bins – source separated?  
 65 or 95 gallon carts – single stream?  
 Every week or every other week collection?  
 Will you own carts/will hauler own carts?  
 How will you handle customer service calls?


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**Processing – Materials Recovery Facility**

Where will you process your material?

- Local MRF?
- Distance to transport
- Materials accepted
- Contamination requirements – max percentage






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**Policy**


Will recycling be required?  
 Can residents opt out?  
 What about hauler licensing?  
 Single hauler contract?  
 Single hauler districts?  
 Subscription?

**Pricing – single rate, variable rate (PAYT, volume based)**

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## Do yourself a favor and collect data!


- Baseline tonnage data
- Per household data
- Participation rate
- Set-out rate

**Need data for effective outreach and education!**

Month	Tons			# of House	Lbs. per House	
	Total	Recycled	Collected		Recycled	Collected
Nov-12	412.39	155.14	257.25	535	159	50
Dec-12	286.96	128.81	158.15	535	112	42
Jan-13	321.89	133.21	188.68	535	127	50
Feb-13	283.97	133.23	150.74	535	112	42
Mar-13	328.17	134.21	193.96	535	133	50
Apr-13	356.86	150.76	206.10	535	152	52
May-13	411.11	161.76	249.35	541	174	61
Jun-13	453.54	226.97	226.57	541	187	67
Jul-13	325.36	150.62	174.74	545	152	52
Aug-13	481.26	182.23	299.03	547	176	64
Sep-13	324.85	125.63	199.22	547	127	46
Oct-13	442.26	188.62	253.64	548	138	50
Nov-13	363.99	137.68	226.31	558	138	50
Dec-13	369.77	126.28	243.49	558	138	46
Jan-14	389.96	137.35	252.61	558	138	57
Feb-14	399.96	137.26	262.70	557	138	44
Mar-14	349.87	137.91	211.96	544	129	47
Apr-14	426.96	188.77	238.19	558	154	51
May-14	388.97	184.21	204.76	548	132	59
Jun-14	471.99	133.93	338.06	548	172	69
Jul-14	351.81	163.28	188.53	548	139	52
Aug-14	324.84	138.26	186.58	548	139	52
Sep-14	327.22	133.15	194.07	548	138	54
Oct-14	345.94	151.12	194.82	548	139	56
Nov-14	388.99	158.89	230.10	548	139	57
Dec-14	348.99	133.87	215.12	548	137	45
Jan-15	358.95	137.85	221.10	548	139	45
Feb-15	348.99	138.21	210.78	548	139	45
Mar-15	388.17	155.81	232.36	548	139	54
Apr-15	438.99	182.16	256.83	548	142	62
May-15	388.17	122.8	265.37	548	139	44
Jun-15	432.96	131.42	301.54	552	148	45
Jul-15	323.76	133.42	190.34	552	138	48
Aug-15	347.96	148.02	200.94	552	139	51
Sep-15	343.47	133.42	210.05	552	138	48
Oct-15	388.89	166.8	222.09	552	139	52
Nov-15	343.47	133.42	210.05	552	138	48
Dec-15	388.89	166.8	222.09	552	139	52
Jan-16	388.89	166.8	222.09	552	139	52
Feb-16	388.89	166.8	222.09	552	139	52
Mar-16	388.89	166.8	222.09	552	139	52
Apr-16	388.89	166.8	222.09	552	139	52
May-16	388.89	166.8	222.09	552	139	52
Jun-16	388.89	166.8	222.09	552	139	52

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## Start-up funding assistance

- Closed loop Partners
- State of Colorado – RREO Grant Program
- Grants – Recycling partnership, County, Federal
- Matching fund grants
- Low interest loans

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## Where to get help

- CAFR – statewide and regional councils
- Colorado Department of Public Health and Environment - CDPHE
- Eco-Cycle
- Other cities and towns
- Private haulers
- Form your own recycling advisory group

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## Thank You!

*Laurie Johnson, Executive Director*

*Colorado Association for Recycling*

[Laurie@cafr.org](mailto:Laurie@cafr.org)

(303) 550-2591

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