

Raw Table Notes from the Larimer County Solid Waste / Recovery Forum

October 14, 2015

Compiled by Martín Carcasson, CSU Center for Public Deliberation

Table of Contents

Notes from reactions to the initial presentation (if any)	2
Notes from Discussion 1: What is working well right now?	2
Notes on Discussion 2: What concerns you about our current system? What's missing?	4
Notes from Discussion 3: Reactions to the Four Key Challenges	13
Challenge 1: Understandings and Attitudes	
Does the general public currently understand how solid waste management works?	12
How important is it for them to be informed?	15
What is most important for them to know as we move forward?	16
Any additional notes about the Attitudes and Understanding challenge?	17
Challenge #2: Technology and tools	17
Of the potential new tools and technologies related to waste recovery, which seem particularly promising to you?	17
Which raise concerns for you?	18
What questions do you have about them?	19
What are the most important factors in selecting tools/technologies for waste management? (provide the results of slide 14 to discuss).	19
Challenge #3: Collaboration and partnerships	20
What do you see as the biggest obstacles to collaboration moving forward?	20
What suggestions do you have for improving the collaboration between the public, private industries, and the relevant governments (county, cities, towns)?	20
Any additional notes about the Collaboration and partnerships challenge?	21
Challenge #4: Financing strategy	21
If we are to go beyond burying most of our trash, how should we pay for it? What would be fair to all parties? Sales tax? Dedicate property tax? Everybody pays a resource recovery fee? Flat fee? Percent of bill? Tiered?	21
Do you think people will be willing to pay more support new technologies?	22
Any additional notes about the Financing strategy challenge?	22
Notes from large group discussion: Report out question: What idea did you like today?	22
Table Notes on Discussion 4: Next steps	23
Notes from Large Group Report out on Next Steps	24

Notes from reactions to the initial presentation (if any)
They began to discuss the single streaming process, and how that change really hurt revenue for the private industry. One of the women at my table is a hauler for Weld, Larimer, and Boulder counties. She began discussing that Larimer is the greatest county to work with.
-Could the vertical limit to the landfills get raised
- Process to cite a landfill is a long process obstacles including public health and economic considerations, must be approved by an independent state process
-3 years of landfill life was already lost during the flood, what if another one happens

Notes from Discussion 1: What is working well right now?

• Location of landfill in regards to proximity of routing makes it very convenient for a hauler
• Going to single-stream made it much easier to recycle
o A lot more recovery of materials
o Contamination rates here are low compared to other places
• Loveland recycling center takes e-waste, packing materials, yard waste, batteries – makes it extremely convenient
• From a cultural perspective there is a lot of focus on doing the “right thing” people generally want to participate in recycling if they’re given the opportunity
o Present opportunities – make convenient
• Household hazardous waste centers are great to recycling products that could be contaminating
• Curbside yard waste opportunities
• Partnerships are key to moving forward
o Competition creates improvement
o If an issue comes up or there are opportunities for improvement we can immediately address them due to partnerships
• Transfer stations being distributed around the county allow more materials to make it to recycling centers
• Educational piece of landfill to get some understanding to school-aged kids and start training their generation early to the importance of waste management
Working well right now:
- Ethic of Recycling- everyone at the table agreed that much of the population wanted to participate in recycling and supported the ethics behind recycling.
- Multiple Options for Solid Waste Management
- Dialogue between Public and Private institutions- with the rise of waste and interconnectedness of communities, the communication between public and private institutions has increased more over the

years which is crucial to the development of managing the waste issue
-Single Stream Recycling- the evolution of single stream recycling has made it easier for citizens to participate however it does present a contamination issue (those who try to recycle items that are not recyclable), there is also a contamination issue when it comes to composting and organics
- Emerging Collaboration Between Public and Private sectors- this is becoming better as time goes on, they are becoming more willing to work together, ties into dialogue portion
- Haulers see themselves as active participants- it was mentioned that this is not the case in Lakewood but it makes a world of difference when it comes to hauling trash and other waste
- Recycling facilities- the facilities are well used but not used to capacity, they could be utilized more but there is a cost factor to increasing recycling
- Landfill functions well- the overall operation of the landfill including transportation functions well and efficiently which may present problems when searching for alternatives
- People want to know how to recycle- there is an overall demand for education from citizens on how to dispose of waste properly, this is the most pivotal factor in changing the current viewpoint and behaviors associated with waste disposal
-curbside disposal and recycling: but for populated areas
-bans on certain materials (cardboard for instance)
-forecasting problems, identifying problems
-the general system works well: it's not terrible
-data collecting (filling out reports and getting numbers)
-public education programs
-costs (the options available)
-environmental concerns and monitoring
-full recycling center at landfill
-one-stop shopping at landfill
-employees at landfill are well educated and courteous
1. Single Family Residential has good participation in putting recycling out
2. Pay as you throw for single family residents
3. Yardwaste diversion in Loveland is popular and helps reduce difficulty for citizens
4. Pay fees to recycle whether public or private (what we're doing now)
5. Private haulers doing the heavy lifting (without them we would have a huge problem)
6. Climate Wise Program: management and action helping move things forward
7. Education and outreach; much has been done about recycling (this worked with water too)
8. Process that city uses in being inclusive with citizens and businesses in planning

<p>2. Not totally a good system because it hides the cost of recycling (misrepresents it). It is key to make people understand that recycling is NOT free. It is good, however, because people usually participate. Because people think recycling is free, they often times won't take it to Hageman's because they don't want to pay. With the markets being bad there are other things involved in the system that make it complex.</p>
<p>. It's working well but really important to further educate</p>
<p>+ owning public landfill is an advantage; easy to collect data (trash generated/rec)</p>
<p>+ dumping fees to fund solid waste programs allows for transfer station.</p>
<p>+Landfill is invisible; is rarely seen by residents.</p>
<p>+Recycle center on riverside; good to have available.</p>
<p>+Residents are interested in recycling; awareness is high.</p>
<p>+Elected leadership in Larimer County is committed to being progressive/ new model solution.</p>
<p>+LC waste collectors are very efficient.</p>
<p>+Choice of 3 waste collectors for residents creates friendly competition.</p>
<p>+ LC landfill is easy to access/ use as a resident directly.</p>
<p>+ infrastructure available in LC is good (compost crushing plant in Loveland, MRF materials recycling facility)</p>
<p>They liked that the schools in the area are getting involved and that they are reaching the younger generation in that way. They also believe that there are a good amount of business that are interested in helping the issue.</p>
<p>-Single Stream as a source of reduction, perhaps not financially, not available to everyone but makes it easier to recycle</p>
<p>-Landfill diverting material</p>
<p>-Drop off points: provides greater access for waste management, convenient, captures waste of people lacking curbside garbage pickup</p>
<p>-Not just doing the minimum: harvesting methane from our trash is doing more than most other municipalities in the nation</p>
<p>-Environmentally sound: Our landfill is not polluting local water sources or air quality, this is exceptional considering the proximity to agricultural communities.</p>
<p>-Our landfill is affordable for it's users (cheap trash disposal and successful determent of illegal dumping.)</p>
<p>-Effective dispensation of education to the public</p>
<p>-Hazardous Waste Drop-off</p>
<p>-Municipality Collaboration and Intergovernmental Agreement</p>

Notes on Discussion 2: What concerns you about our current system? What's missing?

1. Fort Collins – limited trash haulers within the city to do yard waste hauling (restrictions) (limiting the people who can residentially recycle yard waste)
- Residents: “I can’t have them get my trash because they don’t come to my neighborhood.”
- This limits who can recycle
2. Engaging the commercial sector and “pay as you throw” system (gets tougher and tougher as budgets get tighter and tighter, people don’t want to pay to recycle yard waste). “Pay as you throw” isn’t included in a general contract. Also a lot of places don’t have room for bins. This is another reason it’s not engaged.
- All types, including food services
- fast food *
* “Where do I put my frustration with fast food industries and the fact that they don’t recycle at all ... When I go and buy a fast food meal, I take my plastic cup with me to recycle it at home.”
- Table agreed that this was part of “commercial sector engagement” problem, #2
- How do we get fast food places to recycle at least their plastics
Then someone mentioned they don’t know anyone in the area who takes these plastics. “It depends what your program takes here.”
3. Lack of education – this has “a lot of aspects,” needs to be “thoroughly expanded.”
- Someone pointed out that they see things thrown in the wrong bins in public all the time.
4. Keeping the streams clean // Contamination (logical and educational piece)
- Once facility pays someone to pick trash. Trash contaminates mulch.
- There’s a “getting away with it aspect,” and some people just don’t understand that throwing away something like a battery in home trash will cause problems
3&4 Education and Contamination tied together but one is a “proactive measure (education), the other is a result (no contamination).” Also a policy thing – what’s accepted one place could be very different than what’s accepted in another community as recyclable.
5. Inconsistencies in recycling programs
Thought: If materials could be agreed upon regionally, we could reach a regional solution
6. Lack of local infrastructure to collect / process materials such as food, Styrofoam, and hard to recycle items such as Mattresses)
- No solution to Styrofoam – concern that we aren’t solving this problem
Maybe a solution is there but we don’t know about it?
No facility to collect and process it
Someone knew of one facility in Boulder, one in Denver
Fast food places using Styrofoam

7. Landfill tip fees are too low
8. Lack of data and tracking of data
- How much data will have to be collected for it to be meaningful?
- We need to be tracking the correct information, and know what time frame will leave us with something worthy of action and different decisions
F: "Is there specific data you're referencing that isn't being tracked?"
Ex. Tracking weights of what's going into recycling in all communities. What's going into trash, what's going into compost ...
- Where will funds come from? Public, private?
Response: "I think that's the next conversation."
F: "I want to make sure the concern is that we aren't collecting or tracking the correct data."
- It has to be goal focused – what do we need to know to achieve goals?
9. Missing innovation
Ex. Waste energy ideas, creating different markets, local markets, innovative ways to reuse things
F: "We have about nine items, is there anything else we're missing before the dots?"
Low levels of recycling in Colorado
Rural communities produce waste from things such as cutting down trees and they bring it all to one location which can be hard to manage
More education on recycling is needed
Find better uses for materials that are the least impactful environmentally
Recycling rate is really low compare to other places (mentioned again)
Carbon footprint for increasing interest
More source separation is needed because single stream sometimes contaminates and makes it hard
People are throwing away electronics because they have to pay extra to recycle them and not everyone can afford that or wants to do it
Education and ownership of communities is needed
Landfill is possible and cheap in Colorado, yet some people are still burning trash
Energy waste
Not engaging all sectors: engaging them could help avoid energy loss. For example CSU and other schools could help by handling bio-waste the best way possible
State wide legislation: are there any target goals? and people also mention that there is a lot obstacles trying to get in
There is no financial incentive to recycle

Public sometimes has a “don’t tell me what to do” mentality
Landfill is cheaper and easier than recycling in Colorado
People need more opportunities to make money from recycling
F?) What things are being repurposed?
bikes
social networking is needed to do this
Probably a very small percentage of things
Infrastructure is needed for it
Harder work and costs more
denim is great to recycle
Can save money if it doesn’t go to landfill (personal story to illustrate) → Some construction waste was taken somewhere else to use for another project
Business and companies should offer options for people to bring back stuff to reduce waste
Breweries could have people bring bottles back
king soopers used to have a “bring back cans” option, not anymore
people need an incentive to do it
Things we don’t need are producing a lot of trash such as bottled water
Better communicate to people that such products ^^ are damaging the world
A culture shift is needed
There’s a spectrum of recyclers ranging from hard core to don’t care at all. People in the middle should be the target
Healthy school competitions to see who recycles the most and educating students would be helpful
F?) What’s the link between education and resources?
Not all schools can make recycling a priority
You can’t change human behavior if you don’t give them an alternative
F?) Why do we need these changes? What is the driving force?
Be environmentally friendly
To not contaminate more land
Running out of space for landfill (not everyone agreed)
Increasing world population
Recycling needs more marketing just like any other business

There should be a motivational piece to recycle not just informational and target young people
Reduce the production of trash by using less and learning what products are best buy
F?) What's the role of government?
Discussion needed
Prevent harm
It's one of the main things government should do
Money is more important than recycling to them
• Effective communication/process with the seasonals and visitors
o They aren't aware/don't recycle much
• Education
o We've made major shifts but we still don't reach the public correctly. It needs to be an ongoing process.
o Hundreds of calls are received a day asking what is okay to throw away
o This is where Loveland excels
• More consistent/comprehensive approach to handling yard waste
o Hard to know what's available/where
• Incentives
o To bolster recycling for the consumer not necessarily businesses or haulers
o A lot of businesses don't recycle simple things because a lack of incentives rather than throw away
o Disincentives/punishments for not following protocol
• Reduction of consumption at the consumer level
o Keep the entire process in mind from start to finish (life cycle) of products
• Education and functional products that advertise recycling
o Portable recycling
• Better program for handling recycling glass
o This works a lot better when you separate glass by color but that is much more sorting
o Europe has a system like this
• Programs could become more convenient
o More drop-offs instead of going to landfill
• Legislation/funding for recycling and compost
o A lot of regulation and red tape that makes it very difficult

o Hard to market compost
• Need to make it work economically
Concerns
-How to pay for recycling without rebate options.
-We need to consider how we're packaging things (manufacturers need to lead the charge of efficient and recyclable materials)
-shorten distance between manufacturer-merchant-consumer-landfill/recycle center.
-closing loopholes in industry
-end disconnect between rural and municipal areas (rural areas face tougher issues)
-landfill is too cheap
-lack of options and space for multiple family units (condos and apartments)
-time (long lines at landfill)
reconfigure the drop off area to accommodate more trucks
-recycling center is not big enough
-go back to dual stream
-proper sorting/better technology
-we waste too much resources
• Food composting
o County wide
o Biggest obstacles: facility, real estate, lining, special equipment, money
• Csu composts in an in-vessel compost but only for CSU. A1 takes it to a plant that generates methane but that may not be the highest and best use of the food waste.
• So it could generate a great product but it's the resources and infrastructure that is lacking
• Finances and Permits
o Order issues (composts)
• Lack of incentives to separate waste
o Through the entire chain from creation
o Punishments
• Lack of separate bins at both landfill
o Enforcement
o Motivations

• Lack of reuse opportunities
o Lack of central location for reusing large items
o Used to have this but it became a liability issue
• Lack of public-private partnerships at the landfill site
• Place to take chemical or hazardous or hydrocarbon waste
o Currently stock piling or taking somewhere themselves or taking it themselves which dangerous
o Need a better system
o Similar to cleaning out a grease trap in a hospital
o Should taxpayers have to pay for this?
o Who is disposing of this?
o Medical waste
• Place to take disposable/reuse equipment
o Sometimes other places will take it but depends on price of metal
• Waste to energy
o Who wants to take on the responsibility of it?
o Incinerator?
• Biomass
• Place to put waste
o Were going to put it in Cheyenne or open space
• People to take on all of these projects
• Stability and transportation costs for waste
o Huge cost and it fluctuates
o Expensive to truck waste
o Centralized waste plan
o Unsolvable because they are always changing and different cities have different plans
o More transfer stations?
• Facilities too close to populations
o Standards aren't great and can hurt populations because the air isn't clean enough
o Ascetics and odor control/nuance
• Lined land filled

o New regulations
o Polluting ground water and surface water
• Container deposit law
o Lack of emphasis on reuse
o America wastes too much
o Pay as you throw by type
• Who would administer it
• Already prices for what you throw out
• More emphasis
- Tipping fees are too low.
* If tipping fees are too high, residents may feel the need to dispose of their trash else where (forests, roadsides, etc.)
-Haulers are having to pay additional fees for recyclables, additional fees will eventually fall on residents.
-It cost far more to take recyclables to recycle center than it does to take it to landfill.
-Curbside recycling may not be effective anymore if it begins to cost more (cost of single stream recycling)
-Not enough focus on composting in LC.
* Need to try more innovative ideas (composting waste energy/hard recyclables)
-the limitation of the current market having to transport recyclables for processing vs. on site.
-Having to transport elsewhere adds additional fees.
-The cost of recovering materials does not cover the cost to process materials.
-LC and Boulder county have same population and boulder county has its own MRF.
* Who pays tipping fees and who does not?
Need more access to recycling options. Repurpose a lot of items as well and let people know where they can drop various items off at. Ex. good will will take cloth that can't be used anymore and recycle it to rags.
-Too Far Down on Efficiency Pyramid (We could be doing better)...
-Cheap Disposal Costs: Disincentive to recycling,
-Compost facility is too expensive and is not breaking even
-All technology impacts the price of recycling
-Transportation costs to end point, interstate and finished product are costly, no local market for products anyways

-Reliance on commodities is uneconomically sound: the market demand for glass, aluminum, compost is not there, storing it would be too costly, this is an incentive to stick with the landfill
-Not capturing methane to the level we could be, technology can be developed to moisten the landfill waste
-Lack of dependable large stream waste, lack of flow control, private trash disposals
-Concern that there is nothing binding trash contractors to the Larimer landfill(s), if we needed to raise our price, we could potentially see flight to other landfills.
-Integration of County facilities; example, waste water treatment needs compost, compost facility isn't able to sell compost, neither department are communicating to satisfy the other's need.
-Recycling facility is lacking, does not recycle Styrofoam, big bundles of waste, or yard waste.
-Lack of state mandate and regulation to align cities to a recycling goal
-State Grants to economic reduction of waster is a largely untapped tool
1) We don't enable the highest and best use for our recycled materials <ul style="list-style-type: none"> a) Changing the message the message of solid waste education. b) The single stream system makes it simpler and reduces the quality/cost <ul style="list-style-type: none"> i) The American consumer doesn't like to use the "lesser quality ii) Change the education iii) What is the impact of multi stream? <ul style="list-style-type: none"> (1) Convince (2) Green house impact (multiple trucks)
2) Limitations in Technology in MERFS <ul style="list-style-type: none"> a) Technologies and cost of MERFS b) In the boulder county MERF many of the sorting already happens c) Is it worth it to spend to x amount of dollars to only benefit a small amount? d) Aluminum is easy to get out of the MERF
3) The emphasis on recycling, not enough reduce <ul style="list-style-type: none"> a) The three R <ul style="list-style-type: none"> i) Reduce hits us in consumption ii) Reuse hits us economically iii) So we default to recycle
4) There needs to be another concept then: There is never a throw "away" <ul style="list-style-type: none"> a) It all comes back either in our air or water b) We have an effect landfill system, we don't realize how other places are c) If it were to get rid of the system, we wouldn't tolerate how much we throw away instead of reduce
5) More emphasis on reduce – secondary with composting <ul style="list-style-type: none"> a) You can compost all day, but if there is no where to put that compost, what is the point?
6) It is too easy to landfill
7) Deposits on bottles
8) We don't have a regional MERF

<ul style="list-style-type: none"> a) Transportation issues <ul style="list-style-type: none"> i) Permit us to go back to a sorted stream,, b) MERFs work well in size and scale – it needs to be a large scale to be effective <ul style="list-style-type: none"> i) Needs to be 10-12 thousand ii) Regional would be too small; they need to be really big c) Could there be a regional MERF that only takes out a few things, like glass
<p>9) Education about the end destination of the items</p> <ul style="list-style-type: none"> a) They don't know what to do with compostable utensils b) Biodegradable is not the same as compostable, and they need to go in different places c) Causes contamination
<p>10) Measurement by weight instead of by volume</p> <ul style="list-style-type: none"> a) There is more material going into the system because things have become lighter
<p>11) Staff is capable; but it makes it easy for the public to not be engaged</p> <ul style="list-style-type: none"> a) We expect that the municipalities and counties to take care of things; so the citizens are less engaged and less knowledgeable b) Is it because administration is taking over, or is there a lack of education?
<p>12) Commitment to education from the leaders</p> <ul style="list-style-type: none"> a) Must be sustained b) The first thing that leaves every program is the education aspect c) Municipalities get rid of education first d) When you take away the dollars, it hurts
<p>Observation from the tables: Overwhelming emphasis on education</p>

Reactions to the Four Key Challenges

Challenge 1: Understandings and Attitudes

Notes on Discussion 3: Question 1A: A. Does the general public currently understand how solid waste management works?

<p>Questions 1 parts A/B/C got pretty mixed into the discussion.</p>
<p>. There is a core group that is educated but most are not</p>
<ul style="list-style-type: none"> • The core group that do care about the elements is definitely not the majority
<ul style="list-style-type: none"> • Most people just want it to go away and don't have an invested interest in where it goes or why
<ul style="list-style-type: none"> • Developing a culture of "this is what Colorado does"
<ul style="list-style-type: none"> • Elementary schools will motivate this behavior by developing social norms of recycling
<ul style="list-style-type: none"> • Need to understand benefit to climate
<ul style="list-style-type: none"> • People aren't educating around CO2 emissions and how to recapture them

• How long of a time frame will this be
• Using economics/money making as a catalyst for reduction and recycling practices
• Look at best practices of other programs
• Full cultural shift because it is the right thing and needs to happen at every level
• Influence at every angle/ need to focus on more than just the economic aspect
• Bundle packages to appeal to the people ambivalent about recycling by thinking they're paying for it anyway so they may as well recycle
• Need to know where recycling is going and what is happening to it to be invested in the process
+young people have a better understanding of how the system and process works
+younger people ask the right questions because the system is more skewed for them (they have classes, extracurricular etc. that help them be better educated
-younger people understand and are educated but don't act---they are lazy or thinks it doesn't apply to them
lots of people are misinformed (i.e. whether things actually go to the landfill)
+attitudes about waste mgmt much better in CO because we have an accepting community
-Recycling is still a noble aspiration--everyone wants to "do the right thing," but are hesitant to pay (specifically mentioned the \$2 fee).
-There is a definite misperception of cost/value of recycling among the public.
-The public doesn't know/want to know how Waste Management works--until they are personally impacted economically.
-Public thinks of Recycling as "good" until it costs something
-Public doesn't want to be "experts" on trash, they simply place it on the curb and hope something good will happen with it.
-People want to recycle, but recycling is confusing (the protocol differs even within cities).
-Democracy requires understanding/education, so educating the public is a necessary first step.
-Implementing an increase in sales tax is fair, because *ideally* people are throwing away what they've purchased.
There is a general lack of understanding on the recycling process and especially contamination of resources.
-Lack of standardization between waste management companies and municipalities is leading to confused citizens (It was brought up that the county has the ability to amend this by enforcing packaging standards that would inform consumers on what trash goes where, increase fines to incentivize citizen action)
-Lack of public support due to their anxiety towards tax increases, understandable because of the recent economic crisis but nonetheless frustrating because something needs to be done.

Notes on Discussion 3: Q1B: How important is it for them to be informed?

+ important because people are paying for it
- people don't understand why they're paying more
- don't know much about waste energy compound
~however, it depends on waste energy compound
- waste energy compound is not a solution to some
~triple bottom line: waste water charges, people don't understand, we would be moving back!- single stream "ruined" separation (going back to it that is)
- 35% of single stream contamination (because of convenience)
*important because any move will be more money
+ city recognizes issue
~people will be more positive than negative
- environmental impact/cost going up
- "blame-passing"
? is there money allocated for teaching people? (answered? - not yet)
? do we have a landfill or jump on waste management? (will go to cheapest)
~public v. private
? does county need to jump on that?
+ good spot for Resource Center (where landfill is now)
?How long is WM contract?
education is very important
-lots of people don't pay attention, but need to
-even with pictures and words on recycling bins, people don't understand how to recycle, compost etc-- --need to be much better taught and informed
-The public doesn't want to be informed--they like the invisibility of WM
-People don't want to be "experts" on their trash, they just put it out and hope something "good" happens to it
-People only care when they realize the service costs something
Very important.
Response was disparaging, it doesn't matter how much we inform the public if they are unwilling to bear the cost

Notes on Discussion 3: Q1C. What is most important for them to know as we move forward?

People need to understand that we will be at capacity
With that, what options would they like?
~lots of people going to landfill (long lines on the daily)
~additional scales?
- length of road to scales
~ staffing - get info beforehand
+new facility will have increased capacity
+time is money
+fair tradeoff
+address efficiencies
~ we'll do this better next time
(growth rate is really big)
- going to cost
***could design in it phases (REALLY LIKED)
+keep facility with better equipment (pull out aluminum?)
~county is considering to minimize increases
~also considering another facility
? is there any way to make it easier for public to see the amount of recycling occurring?
~people should know real #'s because they will be "pressured" or more incentivized to recycle (seeing other doing it)
~it's too convenient to just throw things away, so there needs to be more incentive/pressure to make people recycle
+it's much easier to accomplish all of this than people think
need to know where the different types of trash are going
-that the landfill cannot keep going as a process
fluctuations in the trash industry are normal in resource needs for example
Future's Contracts---how much things are worth or will be worth
+people can invest, have incentives to make this process better (i.e. aluminum market)
Reduction and Reuse much more important than just recycling
legislation needs to change---people can't do this on their own

-legislation will cause problems because people don't like being told what to do
easy vs. what is effective---have to swing people's views and more knowledge will help this
simplistic messages need to be drilled into people's heads---ideas that we want to change the process
-solid waste management is actually very complicated--lots of steps (i.e. recycling, hazardous waste etc.)
-Recycling costs money
-Better education about the cost and effort involved in recycling
-Public doesn't know or want to know how WM works
-People only care when they incur a personal economic cost
-Better education on what needs to be recycled and what they can make money off of (participant specifically mentioned cardboard v. aluminum)
-People would be more willing to pay for something today if they understand it as a generational issue
How to prevent contamination.
Public lacks the expertise on how to deal with solid waste management

Any additional notes about the Attitudes and Understanding challenge?

very difficult process connected to values and desires
tensions between easy and effective, willingness and ability
people's views and values on the issue need to sway
There was an interesting discussion on how to "scale" the issue. There was consensus that the issue needed to be understood on a more regional level. They agreed that large-scale matters are not as easy to dismiss as smaller matters. Thus, we need to make the issue more visible?
Also discussed that composting should be made more visible/feasible. Composting locally is necessary--people want to see where their compost is going. This enables OWNERSHIP (this was a huge point). Enabling people to own their trash/recycled goods.
If something is not economically feasible the public will not back it, if the public cannot be persuaded we cannot move
Public private partnership necessary to share burden, there must be profit.

Challenge #2: Technology and tools

Notes on Discussion 3: Q2A: Of the potential new tools and technologies related to waste recovery, which seem particularly promising to you?

+change more to optics
+optics - sort more for glass

+/- expensive but worth it
+ practically no glass broken
~not exactly new tech, but new to us?
~more tech for MRF's
~people need to jump on this mindset
not enough information to answer this---people confused
look more closely at tools and technology
more tech education needed---lowest emissions for example
+composting--design facilities
-may not help with MSW but would help battle problem
+creates beneficial products
-Odor----where would you put the facility?
-Methane recovery plants
-Build a new MRF for the Northern Colorado Area
-Collaboration and partnership between cities
-Establish a supply chain
-Look into establishing a PRF (specifically for plastic products)--instead of buying "virgin" plastic
There was a large conversation about the waste digestion plant in Greely and the benefits of potentially switching to separate stream recycling.
-Let's inject brewery waste into the landfill to produce methane
-Make a closed loop system, use waste to fuel trucks that dispose of waste (CNG system)
-Heartland Anerobic digestion facility that takes differentiated waste streams into "cooking" a recipe that creates a high amount of gas of use
-Pipeline waste energy to a grid that sells energy to Southern California
-Establish end use points to ensure cost is captured and not lost and burdensome

Notes on Discussion 3: Q2B: Which raise concerns for you?

-Fort Collins can only produce enough methane to power its own facilities--not the whole town
-MRF/PRFs are expensive
-Its difficult to justify the high cost of methane production, especially because the cost of power is so low
-A new MRF facility can be dirty or clean depending on how it's structured

-Using a commodity based waste management system is ill advised because it is volatile under normal market conditions

-Investors want revenue now, not later, further delegitimizing MRF as an option

Notes on Discussion 3: Q2C: What questions do you have about them?

what is the cleanest technology?---wants stats

dioxins? ---how many would be in the waste

how would tech battle this

-want to screen tech by financial and environmental costs--\$\$ huge issue in system and need to get people to buy into them

-Would the extra cost deter people from seeking a more sustainable/local option?

Notes on Discussion 3: Q2D: What are the most important factors in selecting tools/technologies for waste management? (provide the results of slide 14 to discuss).

~revenue

~formula - how fast can you pull things through?

~can you sell it?

~how much contamination?

~environmental v. money (bang for buck)

~human factor at the end of the day (basic human needs)

~machinery that you can get parts for

- parts from places like Germany

- what are you supposed to do in meantime waiting for part to fix machine?

+ purchased from someone reputable, closer, get supplies easily from

these campuses will have to be run by private industry (metal recovery vs. compost. vs landfill

bidding system?

need country and industry collaborators

need to look at other countries and systems

-COST

-Environmental Impact (sustainable)

-Market Conditions

-Willingness of public to bear cost

Challenge #3: Collaboration and partnerships

Notes on Discussion 3: Q3A: What do you see as the biggest obstacles to collaboration moving forward?

? do Foco and Loveland go well together?
?Are there different ordinances and should they be changed to have something more universal? (more balance needed)
+ this will increase understanding
~design of facility -- collaboration
~govern how it receives - UNIFIED
~different containers again?
~everyone has different system
-each city in county needs to bring something to the table and contribute but need to corral them all together
-how to get people to buy into the idea and better systems
really long process
-Differing interests and objectives between regions and counties (especially regarding fees)
-Professionals would most likely have to walk the public/cities through some of the processes
-we need to continue to meet, have these open conversations between the private and public sector. It is difficult to stay un-threatened and open
-we need to know what everyone wants in order to see how we can get it done, what we use and how we can work together is missing because there isn't communication going on between politicians/educators/private sector etc.
Private industry needs financial incentive in order to collaborate.

Notes on Discussion 3: Q3B: What suggestions do you have for improving the collaboration between the public, private industries, and the relevant governments (county, cities, towns)?

more collaboration with natural disasters (ie flood and fire) between cities
communication and knowledge about what to do in these situations
county and business collaboration!
more state projects (i.e. benches, community things made from natural or waste products)
make it sound better and more inviting i.e. Processing Park
gather more support from public
-Having a shared vision--a preferably linear one

-Build a local market for recycled goods (reduces transportation costs)
-"Keep the CPD involved"
-Financially, we need to have transparency, we cannot hide what this is truly going to cost
-We need to have timelines and markers- this has to be a constant movement.
The public has some methods for collaboration with the private like land ownership.

Any additional notes about the Collaboration and partnerships challenge?

My table each was a different 'piece' of the puzzle and they all enjoyed and were intrigued about each other's knowledge and thoughts on the subject. Each person repeatedly said collaborations like this were helpful and necessary.

Challenge #4: Financing strategy

Notes on Discussion 3: Q4A: A. If we are to go beyond burying most of our trash, how should we pay for it? What would be fair to all parties? Sales tax? Dedicate property tax? Everybody pays a resource recovery fee? Flat fee? Percent of bill? Tiered?

landfill tipping tax
what are budgets?
FEMA?---some FEMA should go to natural disaster landfill costs
need more financial incentives for businesses---pluses for counties and businesses--win-win
business manager for waste management where that is their single job
-Sales tax is presumably fair and much less noticeable
-Waste is generated through consumption, so it stands to reason that the people who consume should pay
?Possibly tax based upon consumption of recycled goods?
-It was proposed that those who advocate for recycled products should pay (I'm not entirely sure where he was going with this and he didn't clarify very well).
-Suggested a Nexus between the bill and recovery fee
-Suggested implementing a Tipping fee
-Should it be laid out? Taxes?
-the problem with a fee is it is only a flat fee.. we would need to maybe adjust depending on each household...it should be transparent of what each person is paying for.
-Worried about alienating people, we need them to buy in and participate
We should avoid flat fees because it is a reverse incentive to move towards zero waste.

Notes on Discussion 3: Q4B: Do you think people will be willing to pay more support new technologies?

it was about half and half: some people thought no way and others said yes
lots thought it would have to be forced or incentivized
-Yes, as long as the process is visible to the public
*There was general consensus on this
-If we have the citizens finance, we need to educate them on why this is important and what the benefits are.

Any additional notes about the Financing strategy challenge?

-There was concern that charging people a flat fee would naturally cause the market to shift and the haulers would be forced to migrate to other dumps
--

Notes from large group discussion: Report out question: What idea did you like today?

<ul style="list-style-type: none">• Finding and involving the correct markets/economics• Alignment of the markets and public<ul style="list-style-type: none">○ People understand what they are getting out of recycling• Collaboration and the financial strategies must be kept together• Collaboration necessary for going all the way through the processing to end marketing to building local customers, keeping the resources we are recovering as local as possible• Regional collaboration on waste guidelines to make the regional• The need for tying the consumption and disposal together. Focus on reduce and reuse• Tying financing of reduction to consumption side• Recovery park is a great idea, have the components be from the private sector<ul style="list-style-type: none">○ Lease different components to certain business that pay a fee to operate there, or we pay them, i.e. metal recovery component• In regards to financial strategy, depends on education, income and age classes• With new technologies, there needs to be easier accessibility for the parts, from dependable sources (closer to repair the machines)• Education: should be at the top of the priorities, there are many that care a lot, but how do we get the majority of this county to care<ul style="list-style-type: none">○ We are limited in the ways we can educate○ A message that is not in front of them everyway○ Need to drive it away from cost, but to cultural change to do the right thing<ul style="list-style-type: none">▪ “it was shameful if you don’t participate”• Didn’t know enough details to go into any great depth, but it was good to have the discussion,

- Environmentally safe
- Economically viable

Table Notes on Discussion 4: Next steps

collaboration---formalizing, meetings, organizations, schedules set, goals set etc
more experts regarding tools and technology and collaborations
either go to them or have them come to us
may start at county goal such as education
start actually setting goals for recovery park--Go for it!
specialized committee and formalize it
education and marketing
how we are going to actually do it
one message does not fit all
many different components to education
investigate government or business incentives
permitting processes
taxbreaks
get funding help from governments---grants going straight to research for technologies
life cycle analysis of resources
zero waste, not practical
-The participants seemed to like the idea of the Waste Management park, because we have a surplus of land and a relatively low population
-They also liked the idea of having these operations co-located
-Hold more stakeholder meetings
-Maximize diversions of waste and recyclables (MERFS and CHARM programs)
-Do the "easy" things first--like getting aluminum out of the waste stream
-Use the old landfill for composting after it has been closed
-more meetings, collaboration, and feedback
-small scale demonstration projects that will work on public, private, and government (triple helix)
-maximize social media communication: time and energy need to be put in
-education, organization, surveys

-Doing, not just talking
-have the communication ---> show it on social media ---> then bring in more people (helix)
Next steps focus on staying connected and continuing the Deliberation process.
Rally Public Support
Create a special trash district
Continue with plans to open the new landfill, we need a contingency plan if there is another natural disaster shortening the life of the current landfill plus we need to consider the laborious nature of getting a landfill approved, this is a time sensitive issue.

Notes from Large Group Report out

<p>Question #4: What is the most important next step?</p> <ul style="list-style-type: none"> • Formalize collaboration: <ul style="list-style-type: none"> ○ Setting more strict setting and goals • Focus on the decision on the landfill <ul style="list-style-type: none"> ○ Public v. Private • Look at the waste divergence (resource recovery park) campus model • Task force to develop the ideas to move forward <ul style="list-style-type: none"> ○ Private ○ Public ○ Business ○ Elected officials • Look at smaller scale demonstration projects with triple helix <ul style="list-style-type: none"> ○ Academic, public, private • Develop solid waste district or authority • Regional Education consistent and continually updated and fully funded • Keep this group engaged and connected between now and next meeting • Maximize social media
