CITY OF BOULDER
CITY COUNCIL AGENDA ITEM

MEETING DATE: June 2, 2015

AGENDA TITLE: Second reading and consideration of a motion to adopt Ordinance No. 8045 amending Title 6, "Health Safety and Sanitation," B.R.C. 1981 to add Universal Zero Waste Requirements.

PRESENTERS
Jane S. Brautigam, City Manager
David Driskell, Executive Director of Community Planning and Sustainability
Susan Richstone, Deputy Director of Community Planning and Sustainability
Kara Mertz, Environmental Project Manager
Jamie Harkins, Sustainability Specialist II
Kelle Boumansour, Sustainability Specialist I

I. EXECUTIVE SUMMARY

The purpose of this item is a second reading of a "Universal Zero Waste" ordinance and to seek council direction on a compliance schedule to require all property owners and businesses in Boulder to provide adequate collection services and proper education for sorting trash, recyclable and compostable materials. Minor modifications have been made since the first reading of the ordinance; therefore two ordinance versions are attached: **Attachment A** (the ordinance language as published at first reading) and **Attachment B** (revised ordinance language for adoption).

This ordinance follows the July 29, 2014 study session and February 17, 2015 City Council meeting. At these meetings, council affirmed the goals and framework for the Zero Waste Strategic Plan and reviewed a proposed regulatory framework for universal provision of recycling and composting services in Boulder; paving the way toward "zero waste;" and re-establishing Boulder as a leader among U.S. communities striving toward zero waste.

The proposed Universal Zero Waste ordinance is based on the direction provided by council in February. The proposed ordinance requires the following:

- All property owners provide adequate trash, recycling and composting service to their tenants and occupants;

- All businesses separate recyclables and compostables from the trash; providing properly placed containers and signage to facilitate the collection of recyclables and compostables;
- All special events in Boulder provide both recycling and composting collection;
- The "six-day review" special trash collection period for student move-in begin to also include a requirement for twice per week recycling collection; and
- All recyclable materials be directed to the Boulder County Recycling Center.

Council is being presented with three options for phasing in compliance with the proposed ordinance.[1] The compliance date will be preceded by an implementation period that includes a shift of existing rebates and incentives targeted to encourage early compliance, as well as technical assistance to help businesses and multi-family property owners minimize landfilled waste. Ultimately, the adopted ordinance will be managed in a way to encourage compliance, rather than target non-compliance.

A City Manager Rule will be published for comment following final ordinance adoption, and it will include the final compliance schedule. An outline of the City Manager Rule is included in **Attachment C**. Three compliance schedule options for council to consider at second reading are included in **Attachment D** as follows:

OPTION A: Within one year of ordinance adoption, all property managers add recyclables and compostables collection service and within three months after this, businesses must add recyclables and compostables containers and signage; and begin using the service provided by the property owners.

OPTION B: All Boulder property owners provide recycling (and, where applicable, compostables) collection within one year of ordinance adoption; all businesses add recycling within three months after this; all landscaping businesses as well as those that serve, sell or prepare food must add compostables containers and signage at this time as well. Further, the rest of Boulder businesses must add compostables collection no later than three years from ordinance adoption.

OPTION C: This option has been added based on conversations since the first reading of this ordinance. It is a hybrid of options A and B. Similar to Option A, all property managers would be required to add recyclables and compostables collection service at the same time. However, the compliance timeline for this option is within *two* years as opposed to *one* year. Three months after that, businesses would need to add recyclables and compostables containers and signage and begin using the service provided by the property owners.

Staff is recommending compliance schedule A as it addresses the environmental impacts of waste and its influence on our community's climate action goals. Most business leaders that were engaged in development of this ordinance felt that one year should be sufficient for property owners to make site and service level changes to comply with this

[1] A "hybrid" compliance schedule has been added since the first reading of this ordinance.

requirement, and the one year time frame responds to council's direction to implement these requirements as quickly as possible.

It should be noted that both options A and C (as compared with B) represent approaches that would be more straightforward for the community because they require that all property owners and all businesses play by the same rules in the same time frame. As such, they would both be less resource intensive to interpret, implement and enforce and would be more equitable among affected parties. Staff is seeking council direction as to which compliance schedule is preferred, and staff will draft the City Manager's Rule accordingly.

II. STAFF RECOMMENDATION

Suggested Motion Language:
Staff requests council consideration of this matter and action in the form of the following motion:

Motion to adopt Ordinance No. 8045 amending Title 6, "Health Safety and Sanitation," B.R.C. 1981 to add Universal Zero Waste Requirements contained in Attachment B.

Furthermore, council directs staff to complete a City Manager rulemaking process to set conditions of compliance in accordance with Schedule A.

III. COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS

- Economic – Universal Zero Waste requirements level the playing field between various businesses in the Boulder community, ensuring a consistent level of service is provided to employees and customers throughout the community. While the cost to some businesses may increase by requiring additional compostables and recyclables be collected separately from trash, some businesses will find their efforts toward zero waste allow them to decrease the frequency of trash collection from the business. The economic sustainability is addressed in more depth in the Analysis section of this memo.
- Environmental – Based on the goals and criteria for analysis included in the draft Zero Waste Strategic Plan, the Universal Zero Waste ordinance moves the Boulder community closer to its zero waste and greenhouse gas emissions reduction goals. A comparison of the relative environmental impacts of the alternative compliance schedules is contained in the Analysis section of this memo.
- Social – The intent of the Universal Zero Waste ordinance requirements is to level the playing field between sectors of the population in Boulder. The multi-family property owner requirements assure that whether you are renting or own your home or whether you live in a single-family or multi-family residence, you will have equal access to recycling and composting collection services. Furthermore, wherever you work in Boulder or where your children attend school, the "rules" will all be the same. This helps minimize confusion and facilitates standardized and understandable guidelines for everyone in the community.

IV. OTHER IMPACTS

- Fiscal – Implementation support for this ordinance is covered by 2015 trash tax revenues and fund balance from 2014.[2] The estimated expenses for ordinance implementation are $738,000, detailed in the Budget section of this memo. Future enforcement and compliance tracking expenses are also anticipated to be covered by existing trash tax revenues.
- Staff time – Ordinance implementation and assistance represent a significant amount of work over the coming year, covered by a total of 3.0 FTEs spread between five city staff members, additional work through city contractors, community partners, two interns and many volunteers.

V. BOARD AND COMMISSION FEEDBACK

The Environmental Advisory Board reviewed the ordinance and compliance options at its May 5 board meeting. A recommendation letter from the board is included in **Attachment E**.

VI. PUBLIC FEEDBACK

In advance of the February 17 council meeting, a survey was sent out to business leaders and residents, which garnered 160 responses. Respondents included homeowners, renters, business owners, property owners and managers, employees, and business tenants. In general, a large majority of business and residential respondents supported the proposed regulations, indicating that they "strongly agreed" with many aspects of the proposal. Some business leaders questioned whether the benefits of requiring compost collection from non-food-generating businesses would warrant the extra expense of collecting these materials. Nineteen community members and business leaders spoke at the Feb. 17 City Council meeting in support of the ordinance and many more attended. Staff developed a new survey to gather feedback on the proposed ordinance language and compliance schedule options and will compile the results and present them at the June 2 meeting. In addition, staff has met with business groups including the Boulder Chamber Community Affairs Council, Downtown Boulder, Inc., and representatives from Boulder Tomorrow and the Boulder Rental Housing Association.

VII. ANSWERS TO FIRST READING QUESTIONS

1. *How do the greenhouse gas (GHG) emissions impacts of this proposed ordinance compare within the context of the communitywide greenhouse gas emissions?*
   As a result of this ordinance, the GHG emissions reductions, as projected using the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions v. 1.0 (October 2012), will be between 4,600 $mtCO_2$ and 6,700 $mtCO_2$. This represents between 21 and 31 percent reduction in the GHG emissions that would otherwise result from sending these same materials to be buried in a landfill with gas and energy recovery. While this represents less than one percent of the overall GHG emissions from all sources in Boulder; there is an emerging trend to analyze solid waste within the context of the GHG emissions associated with the consumption of these goods. Recent modeling protocols show that the true emissions

[2] The adjustment to base for Trash Tax fund balance was included in the budget supplemental request on May 19, 2015.

avoided by recycling and composting materials rather than relying on virgin material extraction, manufacturing, transportation, consumption and discarding materials accounts for almost 40 percent of a typical communities' greenhouse gas emissions.

For example, the ICLEI Recycling and Composting Emissions Protocol (RC Protocol) provides guidance to estimate the overall emissions reductions associated with recycling and composting that go beyond the boundaries of the community inventory, including emission reductions in the manufacturing process from using recycling inputs and increased carbon storage in forests. The RC Protocol draws heavily from the EPA WARM model's underlying methods and data in an attempt to capture the full impact of reducing, reusing and recycling.

2. *How do greenhouse gas emissions compare between composting locally and driving compostables to LaSalle for composting?*
   The greenhouse gas emissions from either approach are comparable. Transporting materials to LaSalle as compared to composting the materials in Boulder results in a net increase of GHG emissions of approximately 67 $mtCO_2$ per year. However, this is offset by a reduction in emissions by using an in-vessel BioGas digester composting system for to process the compostable materials as compared to an aerated windrow composting process that releases more methane into the atmosphere.

3. *Are there building codes that can or should be analyzed to facilitate recycling and composting, especially in multi-family complexes and multi-floor buildings?*
   City staff is working to identify land use, building and health and safety codes that may need to be examined in order to fully facilitate compliance with this ordinance. These codes include requirements for trash enclosures in new construction and trash chutes in multi-story buildings that may need to be expanded to make recycling and composting as convenient as trash. These will also need to be balanced with parking and landscaping requirements that may conflict with the need for expanded enclosure space. Staff will report to council on a quarterly basis regarding progress on this code review along with any compliance, tracking or enforcement issues that might arise.

VIII. BACKGROUND

At its July 29, 2014 study session, council requested staff work with the community to develop ordinance language that would significantly increase waste diversion from Boulder's multi-family and commercial sectors. With a foundation of best practices from around the country, staff convened a working group of stakeholders and industry representatives to help craft a regulatory proposal for community and council consideration. In the course of the community conversation around business and multi-family requirements, it became apparent that a universal requirement would be more equitable and would stem the tide of illegal dumping. Based on council feedback, this agenda item includes two proposed ordinances for council consideration.

IX. ANALYSIS

At its Feb. 17 meeting, council reviewed a Draft Zero Waste Strategic Plan (ZWSP) which acts as a guiding document that provides an overarching framework to prioritize future zero waste investment options; and assists council and staff in decision-making. In the fall, once the companion web-based portal for the ZWSP is complete, staff will return to Council for acceptance of the final plan and its associated Action Plan, as well as the

action plans of the city's community zero waste partners. These action plans will describe the next two to three years of significant work plan items and initiatives throughout the Boulder community, including other items council expressed interest in such as research to determine whether every-other-week trash collection would be advantageous in Boulder.

As the very first action item under the auspices of the city's draft Zero Waste Strategic Plan, council is being asked to consider an ordinance requiring universal provision of recycling and composting services throughout Boulder. Boulder's community partners are also implementing action plan items to support this significant move toward zero waste: Boulder County is investing in upgrades to the Boulder County Recycling Center to accommodate the recyclable materials that would result from this ordinance; Eco-Cycle is stepping up its outreach to businesses and multi-family complexes to minimize the waste created and educate tenants on the new requirements; the CU Environmental Center is working to educate students living on and off-campus and assisting with outreach to multi-family tenants and property owners; and the City is working with *all* its community partners to ensure that consistent, clear and understandable guidelines are pushed out to all community members.

i. Proposed Ordinance Language

The proposed Universal Zero Waste ordinance will re-establish Boulder as a zero waste leader throughout the country. It addresses the significant gap between where we are today as a community and where we want to be in terms of minimizing trash and conserving our natural resources.

The proposed Universal Zero Waste ordinance addresses the many sectors of the community to ensure equal access to recycling and composting services. It essentially ensures that wherever a resident, employee or visitor goes in Boulder, if there is a trash can, they will also find a recycling and composting container close by. The signage and guidelines for sorting materials will accompany all containers, will be simplified and will follow standardized guidelines developed by a team of city staff and facility operators. The proposed ordinance includes language to ensure that:

- *All property owners provide adequate trash, recycling and composting service to their tenants and occupants.*
- *All businesses separate their recyclables and compostables from the trash; providing properly placed containers and signage to facilitate the collection of recyclables and compostables.*
- *All special events in Boulder provide both recycling and composting.*
- *The "six-day review" special trash collection period for student move-in includes twice per week recycling collection.*
- *All recyclable materials be directed to the Boulder County Recycling Center as long as the recycling center is paying market prices for source-separated, clean materials.*

<u>Property Owner and Business Requirements</u>

Based on the fact that an estimated 75 percent of Boulder businesses operate in leased space, the proposed ordinance has two parts. First, property owners are required to

subscribe to trash, recycling and compost collection services adequate to accommodate the regular accumulation of these materials on site. Secondly, businesses themselves are required to actually use the service and educate their employees about how to properly sort trash.

Special Events Requirements
The proposed ordinance requires all special events in Boulder to be "zero waste" which expands on the current requirement that only those special events held on City property are required to provide both recycling and composting service.

Six-day Review Requirement
Since its inception, the city has paid for semi-weekly recycling collection service as part of the six-day-review special trash collection period. The proposed ordinance language shifts the cost of this to the property owners. For reference, it has cost the city approximately $10,000 per year to provide this additional service to approximately 650 properties in the affected area.

BCRC Processing Requirement
Following the lead from when the city first required trash haulers to provide recyclables collection to Boulder residents, the proposed ordinance language directs commercial recyclable materials to the Boulder County Recycling Center as well.

In 2014, Boulder County commissioned a study to assess the financial and operational efficiency and cost effectiveness of the Boulder County Recycling Center (BCRC). The study concluded that the BCRC operations would be more cost-effective if additional commercial recyclables could be delivered to the facility. In addition, the study concluded that the efficiency of the BCRC could be improved significantly by investing in an optical sorter, a cardboard baler, a building expansion and other modifications to allow it to accept more recyclables, as well as a wider range of recyclables. The City's 2014 Zero Waste Program Evaluation Study reached a similar conclusion. In February, the Board of County Commissioners voted to begin making some of these investments in the BCRC, which will allow the facility to operate more cost effectively and to be able to accept and efficiently process the increased quantity of recyclables that will be generated as a result of Boulder's proposed ordinance. In order to protect the investment of public funds and to increase the efficiency of the programs predicated on the city's zero waste goals, both options for the ordinance contain language that directs the recyclable materials to the BCRC, and include a provision that the BCRC continue to pay fair market value to Boulder haulers for the recyclables they collect. Further, the City Manager's Rule will contain a definition for Recyclable Materials that will include all the materials that will be acceptable at the BCRC with the new optical sorting equipment and facility expansions, including plastic "clamshell" take-out containers and the potential to accept clean source-separated fiber.

ii. Implementation Period
Based on the ordinance implementation experience of peer communities and to encourage early compliance, staff is crafting its multi-year work plan to be heavily weighted toward technical assistance and incentives prior to adopted compliance deadlines. Once the compliance deadlines have passed, the incentives will go away, but

technical assistance will continue and will be focused on exemption requests and any complaints or warnings issued, in order to bring those properties into compliance as quickly as is practical. Other communities that have similar ordinances have conveyed that while it is important for businesses to know there is a process in which they will get a fine for a violation, most communities are not actually levying fines –

- Seattle has had a business recycling requirement in place for 7 years and has never issued a fine. Instead, it works with businesses where most just need a little assistance to get on the right track.
- In Mecklenburg County, NC, over 1000 inspections have been conducted with only a few violation letters, and no eventual fines. Each business corrected the violation with extra technical assistance.
- Most communities do not dig into trash to measure compliance; the enforcement efforts are directed toward obvious contamination – focusing on large amounts of cardboard sticking out of a dumpster or no recycling bins around; they do not police every little thing.
- Cities take different approaches to initial inspections, sometimes walking in the streets, sometimes asking the haulers to report, sometimes relying on voluntary community reporting. Other communities have found that it's relatively easy to see who does or does not have bins and who is using them properly.

In mid-2015, staff is rolling out new rebates and a tiered service model for both businesses and multi-family complexes that will be affected by the ordinance. Property owners and businesses will be able to access rebates and cost-sharing arrangements for the one-time costs associated with collection containers or trash enclosures. Staff will also be providing assistance in collaboration with area haulers, community organizations and under contract with the Partners for a Clean Environment (PACE) advisors, to help businesses minimize the total trash generated while maximizing the proportion of trash that can be separated into compostables and recyclables collection containers. Technical assistance will be offered in the form of a "do-it-yourself toolkit," a "light touch" or a "deeper dive" assistance service to help encourage early compliance. In 2015, staff will also be developing and testing an online reporting form to determine whether it could be useful for self-reporting compliance with the ordinance. The anticipated timeline for ordinance adoption and assistance is as follows:

Timeline	Action Items
2nd Quarter 2015	Ordinance adoption
2015 through mid-2016 (property owner compliance deadline; may be extended depending on compliance schedule contained in final City Manager's Rule)	Technical assistance, zero waste advising services and first-come-first served incentives to encourage early compliance. Research and targeted implementation assistance for space-constrained business districts (e.g., Pearl Street Mall, University Hill)
3rd Quarter 2016, ongoing	Exemption applications will be reviewed and properties will be provided with technical assistance in order to assess whether a property could be brought into compliance rather than be granted an exemption. Compliance reporting will be a cooperative effort with code enforcement and the community to identify non-compliant properties.

3rd Quarter 2016, ongoing; may shift depending on compliance schedule contained in final City Manager's Rule	Technical assistance, free signage and educational support for any properties issued warnings[3]

iii. Compliance Timeline Options

Council is being asked to consider three different schedules for compliance:

- **Option A** would require that all non-exempt Boulder businesses (estimated at approximately 3,000) establish collection programs for recyclables and compostables *within one year and three months* of ordinance adoption.
- **Option B** phases in the composting service requirement by requiring landscapers and businesses that prepare, serve or sell food to compost within *one year and three months* of ordinance adoption; and all other businesses to add compost collection service within *three years*. Staff estimates that approximately 525 businesses of the total 3,000 fall into the category of landscapers or businesses that prepare, serve or sell food (428 eating and drinking places, 54 groceries, 18 florists, landscaping and garden stores; 28 food and beverage manufacturers).
- **Option C** would require that all non-exempt Boulder businesses (estimated at approximately 3,000) establish collection programs for recyclables and compostables *within two years and three months* of ordinance adoption

The following analysis compares each option's ability to achieve the community's zero waste goals as outlined in the draft Zero Waste Strategic Plan (ZWSP), as well as describing the economic impacts of each option. Inherent in these analyses are policy considerations relating to the facilities currently available to process the community's compostable materials. Council may want to consider whether in the short term, compostable materials should be processed in Boulder at a higher cost or transferred from Boulder to an in-vessel composting system outside of the city for a much lower cost. In the longer term staff will be working with the city's zero waste partners to identify and contract for low-cost, local compost transfer and processing options.

<u>Staff Recommendation</u>

Staff is recommending compliance Schedule A as it would bring everyone on board quickly. Both schedules A and C would be more straightforward to define, understand and implement (i.e., "everyone has to add composting and recycling services" as opposed to "all businesses have to add recycling services; and if your business prepares, serves or sells food, it must add compost now, but if it does not, then you have three years before you have to add that service"); would lend themselves to fewer businesses falling through a regulatory loophole (defining a business that serves, sells or prepares food" as well as a "landscaper or other business that generates a significant amount of vegetative waste" can be confusing and may require a significant amount of staff and community time to interpret); and would present a situation whereby the city and its partners could more easily provide recycling and composting assistance to everyone at once. Furthermore, compliance schedules A and C would be more equitable as everyone in Boulder would have access to the same services on the same timeline, and one specific business type would not be unfairly burdened as compared to another business type.

[3] Three written warnings, delivered in person will be issued prior to any fines being assessed. 2017 Budget will include trash tax contribution to any additional required resources for enforcement and exemption tracking .

How do the compliance options compare from an environmental perspective?
The following matrix compares the compliance schedule options and their estimated ability to achieve the quantitative and qualitative criteria as outlined in ZWSP. For ease of comparison, composting quantities and GHG emissions reductions are shown for the organics portion of the waste stream only.

	Quantitative Criteria			Qualitative Criteria	
Ordinance	**Estimated Average Annual Waste Diversion Potential in years 1-3** (tons/year)	**Estimated Average Annual GHG Emissions Reduction Potential Years 1-3** (tons/year)	**Community Engagement** (# of affected employees; does not include customers)	**Upstream Conservation**	**Ease of Implementation**
Schedule A	12,000	3,600[4]	94,000	low	medium
Schedule B	8,575	2,572[4]	11,500	low	low
Schedule C	8,000	2,400[4]	94,000	low	high

As is shown, the annual waste diversion potential and resultant greenhouse gas emissions reductions are greatest with compliance schedule A, as more businesses are composting and recycling sooner. After year three, the annual diversion and GHG emissions reductions would "catch up" for all compliance schedules. Schedule A also performs best in the area of "community engagement" in year one as measured by the number of employees affected by the change. It should be noted that this underestimates the total impact as it does not include the number of customers that would presumably be involved in the new zero waste requirements when they patronize these businesses. With respect to the qualitative criteria, there seems to be no difference between the three options in the area of upstream conservation – a business would be no more likely (under one compliance schedule as compared with the others) to look at its purchasing practices or manufacturing processes in order to minimize the total waste generated in the first place. For the reasons described above, schedule B would be more difficult to implement and more confusing to the community. Schedules A and C would be more straightforward than B; with schedule C being somewhat easier for the community to implement as it would provide a two-year time frame for everyone to make necessary adjustments to their collection and processing systems.

How do the compliance options compare from an economic perspective?
Costs to the City
There is not a significant difference between the compliance options with respect to the costs to the city.

Costs to the businesses
The total cost to a business for adding recycling and composting collection can be made up of one or more of the following cost components:

[4] This GHG emissions calculation is based on the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions v. 1.0 (October 2012). The ICLEI Recycling and Composting Emissions Protocol and EPA's WARM model provide a more comprehensive life cycle look into GHG emissions reductions and if these methodologies were used, the projected GHG emissions reductions would be much greater.

1. One-time initial investment in collection bins
2. One-time initial investment in trash enclosure upgrades to accommodate collection containers
3. Ongoing costs to collect recyclables and/or compostables which includes in it a cost factor for a gate fee at a composting or recycling processing facility

With respect to the costs to businesses, all compliance options present the possibility that a business' costs will increase by requiring the provision of recycling and/or compost services. However, some businesses also may find their ongoing costs decrease by decreasing the amount of trash that must be collected while increasing the recyclables and/or compostables collection service. This is particularly true for restaurants and supermarkets whose trash is comprised primarily of compostable materials. The trash tax portion of a business' collection bill will also decrease (though it is typically a small percentage of the total bill) as trash service levels decrease, based as it is on trash quantities, not the quantity of recyclables or compostables that are separately collected.

Hauling and processing costs

There are several local options for haulers with whom Boulder businesses can contract for composting collection services. Colorado law prevents the city from being able to control the costs for this service and it is difficult to obtain standardized cost estimates from haulers for these collection services. As part of the city's Zero Waste Program Evaluation Study, Kessler Consulting estimated the additional costs to a business for adding compost collection would range between $15 and $30/month.[5]

Another way to compare the costs to the community for the compliance schedule options, city and county staff have compiled the following facility and representative transportation costs for processing the compostable materials. Since the costs to a business for collecting compostable materials includes within it a cost for gate fees at the composting site, these costs should be an indication of the comparative costs for collection.

Compostables Processing

There are currently three primary options in the front range for processing of compostables from Boulder: A-1 Organics' Denver Transfer Site, A-1 Organics/EDF Heartland BioGas facility and Western Disposal's Boulder Compost site. As is shown in the tables below, higher processing costs are often offset by lower transportation costs.

Comparative costs for hauling compostables to area facilities

	Facility Gate Fee ($/ton)	Approximate Transfer and Transportation Costs From Boulder ($/ton)	**Estimated Total Costs ($/ton)**
Heartland BioGas Facility	$32	$18	**$50.00**
A-1 Organics Denver Transfer	$26.50 - $35	$37	**$63.50 - $72**
Western Disposal	$67.55 - $77	minimal	**$67.55 - $77**

[5] $15/month assumes collection for (1) 64-gal cart of compostables collected per week; $30/month assumes (1) 64 gallon cart of compostables collected twice per week.

As part of the analysis to inform council's decision on whether to move forward with compliance timeline A, B or C, staff has been meeting with Western Disposal and A-1 Organics to understand the composting process at each facility as well as future cost projections for the three compost processing sites.

A-1 Organics/EDF Heartland Compost Digester and BioGas Facility

Attachment F includes a letter from A-1 Organics explaining its Heartland BioGas in-vessel compost facility. Located in LaSalle, Colorado, this facility is scheduled to be fully operational this month. Developed as a joint venture between A-1 Organics, the largest and longest-running composting company in Colorado and Électricité de France (EDF), the facility is able to accept a wide range of commercial compostable food waste (but not woody yard waste) and sort out a wide range of both recyclables and trash that may accidentally be mixed in with the commercial compostable materials. Once the material is sorted, the food waste is processed by being composted in a vessel to produce a peat moss substitute and natural gas. The Heartland facility has a 20-year contract to sell the natural gas to the Sacramento Municipal Utility District in California.

Western Disposal Composting Site

Located in Boulder along 63rd Street, this facility currently accepts all the material from the residential curbside composting program in Boulder as well as compostable food waste from Western Disposal's commercial customers that subscribe to compost collection services. As is reflected in the table above, the current gate fee at Western's compost site is $67.55/ton for source separated food waste, expected to increase to $77/ton as more materials come into the composting site in the future. **Attachment G** includes a letter from Western Disposal that includes a description of the components of this cost. Discussions with Western Disposal have indicated the following general breakdown of these gate fees:

Compost site operations:	75%
Route administration & capital overhead:	4%
Sales, customer service and marketing of end product:	4%
IT department:	3%
General Overhead (legal, audit, Mgmt, etc.):	14%

A-1 Organics' Stapleton transfer station

A-1 Organics currently operates a transfer station in Denver. The material is currently transferred to a compost site in Keenesburg, CO. Once the Heartland site opens, all commercial food waste will be brought there from the Denver transfer site and all woody yard waste will continue to be processed in Keenesburg. Gate fees at the Stapleton transfer station are expected to increase from the current rate of $26.50 to approximately $30 or $35/ton in the future.

Future facility options

The City of Louisville has been investigating the possibility of developing a new compost or transfer site at its municipal public works yards. If this is developed in coming years, it could present a cost-effective alternative to the existing compost facilities.

In addition, the Erie landfill has indicated it is willing to provide a transfer site for compostable materials heading to the Heartland BioGas facility. The landfill operators estimate a $50/ton gate fee to transfer food waste to the Heartland site.

Staff Recommendation

Staff is recommending compliance schedule A to move as quickly as is practical, for ease of implementation, equity and to minimize confusion in the community.

In order to keep potential costs down to Boulder businesses, staff also recommends entering into a one- to three-year contract with Western Disposal to transfer commercial compostables to the Heartland BioGas facility. This option would provide Boulder businesses flexibility for higher levels of contamination in the compostable materials as everyone gets used to properly sorting their waste as we ramp up compliance with the new regulations. A contract would allow all haulers to use a local drop off center minimizing the GHG emissions associated with individual rear load vehicles driving materials to Erie or LaSalle directly; it would set an equitable gate fee for all haulers; and it would control the gate fee portion of the hauler's collection costs, thus offering a lowest cost option for businesses who are adding compost collection. The one- to three-year contract term would allow for staff to pursue alternative transfer sites and lower cost compost facilities in the medium to long-term.

iv. Post-compliance period

In order to track compliance with the new requirements and exemptions issued, an internal tracking system will be developed in 2015. There is not an existing trigger or business process with the city that affects all businesses once they receive their business license, so compliance will need to be enforced through other mechanisms and will likely be a combination of proactive enforcement and complaint-based processes. Code enforcement personnel can check for adequate collection systems outside of properties as well as any egregious contamination issues. Staff from the city's environmental team and community partners can collect information about bins inside businesses, proper signage and education. Taken together, a cooperative compliance process may be developed to implement and enforce this regulation. This is the common enforcement approach taken by peer cities with similar ordinances. Once the implementation period is over, trash tax incentive funds can be transitioned to cover exemption processing and enforcement costs.

An internal tracking system will also create a workflow for providing appropriate education and assistance services to businesses and multifamily housing complexes that need help complying with the requirements.

X. BUDGET

The 2015 proposed budget for implementation of this ordinance is as follows:

Personnel	$164,000
Interns and volunteers	$20,000
Ordinance outreach and compliance tracking system	$50,000
Business and MFU Rebates	$200,000
"Toolkits" for businesses and MFUs	$82,000
PACE Zero Waste Advisors	$107,000

MFU advising program	$70,000
Recycling/composting collection containers for city facilities and public places	$45,000
TOTAL	**$738,000**

XI. NEXT STEPS:

Once council provides direction for its desired compliance schedule and adopts this ordinance, staff will draft the City Manager Rule and post it for public comment. Staff will return to council with a final Zero Waste Strategic Plan and associated Action Plan (as well as partners' action plans) in the fall of 2015, and will report to council on a quarterly basis regarding any compliance, tracking or enforcement issues. One year after ordinance adoption, staff will return to council with any recommended future modifications to the City Manager's Rule or ordinance clean-up based on any compliance or enforcement issues that might arise.

ATTACHMENTS

A: First Reading Ordinance Language
B: Alternative, Second Reading Ordinance Language
C: City Manager's Rule outline
D: Compliance schedule options A, B and C
E: May 14, 2015 letter from Environmental Advisory Board
F: Feb. 5, 2015 letter from A-1 Organics
G: April 27, 2015 letter from Western Disposal

ORDINANCE NO. 8045

AN ORDINANCE AMENDING SECTIONS 6-3-2, "DEFINITIONS," 6-3-3, "ACCUMULATION OF TRASH, RECYCLABLES, AND COMPOSTABLES PROHIBITED," 6-3-9, "SPECIAL TRASH SERVICE REQUIREMENTS ON CERTAIN RESIDENTIAL RENTAL PROPERTIES AT CERTAIN TIMES," AND 6-12-6, "DISPOSITION OF RECYCLABLE OR COMPOSTABLE MATERIALS," B.R.C. 1981, AND ADDING NEW SECTIONS 6-3-13, PROPERTY OWNER REQUIREMENTS FOR RECYCLABLES AND COMPOSTABLES COLLECTION," 6-3-14, "BUSINESS OWNER REQUIREMENTS FOR RECYCLABLES AND COMPOSTABLES COLLECTION," 6-3-15, SPECIAL EVENTS REQUIREMENTS FOR RECYCLABLES AND COMPOSTABLES COLLECTIONS," 6-3-16, "APPLICABILITY," 6-3-17, "EXEMPTIONS," 6-3-18, "VIOLATIONS," B.R.C. 1981, AND SETTING FORTH RELATED DETAILS.

WHEREAS, THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO, FINDS AND RECITES THE FOLLOWING:

A. The city, through its policies, programs, and laws, supports efforts to reduce the amount of waste that must be disposed of in landfills and pursues "zero waste" as a long-term goal by emphasizing waste prevention efforts;

B. The City of Boulder has been managing recycling and composting programs since 1981 when the Trash Tax, Chapter 3-10, B.R.C. 1981, was first instituted;

C. The City has found the most effective way to ensure maximum recovery of recyclable and compostable materials from trash is to require they be separated from trash;

D. City Council encourages businesses that prepare, serve or sell food to investigate donating edible food waste prior to composting it;

E. No entity currently exists in Boulder County that will accept mixed trash and separate it into recyclable and compostable materials offsite. Such post-collection processing of mixed trash and recyclable materials is not an environmentally effective or efficient method of managing trash;

F. The Boulder County Recycling Center is a publicly owned facility that can bolster the City's goals of increasing both the amount of recyclables being processed and the efficiency of implementing the City's Zero Waste Strategic and Action plans;

G. Therefore, the purpose of this Ordinance is to ensure every person within the City of Boulder is able to separate recyclables and compostables from trash and that the materials designated by the City Manager to be recyclable and compostable are recycled and composted properly.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO:

Section 1. 6-3-2, B.R.C. 1981, is amended to read:

6-3-2. - Definitions.

The definitions in Chapter 1-2, "Definitions," B.R.C. 1981, shall apply to this chapter, including, without limitation, the definitions of compostables, hauler, recyclable materials, trash, trash container, visible to the public, and wildlife-resistant container.

The following terms used in this chapter have the following meanings unless the context clearly indicates otherwise:

Bear-resistant container shall mean a container that meets the requirements for such a container established by the city manager in a rule adopted pursuant to Section 6-3-11, "City Manager Authorized to Issue Rules," B.R.C. 1981.

Bear-resistant dumpster shall mean a dumpster that meets the requirements for such a container established by the city manager in a rule adopted pursuant to Section 6-3-11, "City Manager Authorized to Issue Rules," B.R.C. 1981.

Bear-resistant enclosure shall mean a fully enclosed structure that meets the requirements for such a container established by the city manager in a rule adopted pursuant to Section 6-3-11, "City Manager Authorized to Issue Rules," B.R.C. 1981.

Business shall have the meaning set forth in Chapter 1-2, "Definitions," B.R.C. 1981, and as used in this section shall also include, without limitation, educational institutions, and charitable or nonprofit organizations.

Owner shall have the meaning set forth in Chapter 1-2, "Definitions," B.R.C. 1981, and as used in this section, shall include a business operator or business manager. With respect to requirements relating to the provision of recyclable and compostable materials collection for a condominium or cooperatively owned development, "owner shall include the owners' association or its equivalent.

Person shall have the meaning set forth in Chapter 1-2, "Definitions," B.R.C. 1981, and shall also include, without limitation, owner of any property or vacant land; occupant, owner, operator, or manager of any single-unit dwelling, multi-unit dwelling, mobile home, mobile home park, private club, or other similar property; or owner, operator, manager, or employee of any business or business property.

Property Manager shall mean any person who is an owner's representative, has charge of, or controls any property of an owner appointed to manage on-site property operations including trash collection services for the property.

Refuse attractant shall mean any trash or other substance which could reasonably be expected to attract wildlife or does attract wildlife, including, but not limited to, soiled diapers, sanitary pads, food products, pet food, feed, kitchen organic waste, food, food packaging, toothpaste, deodorant, cosmetics, spices, seasonings, or grease. Attractants do not include recyclable materials properly enclosed in a recycling container, or materials that do not meet the definition of trash in Section 1-2-1, "Definitions," B.R.C. 1981, and is fruit associated with a fruit tree or bush, produce associated with a garden, or a bird feeder.

Self-haul when used in reference to trash, recyclable and/or compostable materials generated by a business or person, shall mean the collection and transportation of such materials from a property where an owner, employee or agent of the property or business hauls the material rather than a hauler or to perform this function

Venue facility means any structure used for temporary events.

Section 2. 6-3-3(b), B.R.C. 1981, is amended to read:

6-3-3. - Accumulation of Trash, Recyclables, and Compostables Prohibited.

…

(b) No owner of any property ~~containing one or more rental dwelling units~~ shall fail to maintain in effect a current and valid contract with ~~a~~ one or more haulers providing for the removal of accumulated trash, recyclables and compostables from the property, which contract shall provide for sufficient trash, recyclables and compostable materials hauling to accommodate the regular accumulation of trash, recyclables and compostables from the property no less frequently than on a biweekly basis.

…

Section 3. 6-3-9(c), B.R.C. 1981, is amended to read:

6-3-9. - Special Trash Service Requirements on Certain Residential Rental Properties at Certain Times.

(c) Within the special trash service zone and during a designated period, no owner of property required to be licensed by Section 10-3-2, "Rental License Required Before Occupancy and License Exemptions," B.R.C. 1981, shall fail to maintain in effect a current and valid contract with a commercial trash hauler providing for the removal of accumulated trash from the property, which contract provides for trash hauling:

(1) The hauler will check the regular trash containers for the property every day, excluding Sundays and holidays.

~~(1)~~(2) The recyclables hauler will check the regular recycling containers for the property at least two times per week

~~(2)~~(3) Any trash container which is full Monday through Friday will be emptied by the hauler. On Saturdays, containers will be emptied if more than half full.

(4) Any trash which is on the ground or otherwise near the container is picked up by the hauler.

~~(3)~~(5) Any recycling container which is more than half full when checked will be emptied by the recyclables hauler.

Section 4. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-13. - Property Owner Requirements for Recyclables and Compostables Collection.

(a) For all services that meet the requirements of this section, the property owner or property manager must establish on-site collection areas for recyclable and compostable materials that are convenient to occupants and tenants. The recycling and compost collection containers shall be placed in a location or locations within reasonable and convenient proximity to all buildings and other uses on site and be at least as convenient to occupants and tenants as trash containers.

(b) When a property owner or property manager provides janitorial services to its tenants, employees or occupants, the contract for janitorial services shall include recyclables and

compostables collection service that meets the requirements of this section.

(c) At least once per year, the property owner or property manager shall conduct training and distribute to all tenants information about how to use the on-site system established for collection of recyclables and compostables pursuant to this section. Property owners and managers shall provide new tenants with this information within 30 days of tenant move-in and no later than the thirtieth day after a substantive change in the recycling or composting location or service offered at the property.

(d) Property owners or managers must maintain and make available upon request, to the city manager for inspection and copying during normal business hours, any contracts and invoices for collection and disposition of recyclable and/or compostable materials for a period covering the most recent three years.

Section 5. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-14. - Business Owner Requirements for Recyclables and Compostables Collection.

(a) All business owners must separate recyclable and compostable material from the trash and wherever business owners provide trash containers to employees or customers, they must also provide recyclables and compostables containers for employees and customers' use. Containers must be at least as conveniently located as trash and be of adequate size and number to prevent recyclables and compostables from being mixed with trash.

(b) At least once per year, business owners must conduct training that instructs all employees how to use the containers established for collection of recyclables and compostables pursuant to this section. Business owners shall provide new employees with this information within 30 days of when the employee begins work and no later than the thirtieth day after a substantive change in the recycling or composting service offered at the business.

(c) All business owners must provide Spanish and English or picture-only signs at each recyclables and compostables container, clearly indicating the appropriate materials to be placed inside the container in accordance with rules issued by the city manager.

(d) Business owners or managers must maintain and make available upon request, to the city manager for inspection and copying during normal business hours, any contracts and invoices for collection and disposition of recyclable and/or compostable materials for a period covering the most recent three years.

Section 6. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-15. - Special Events Requirements for Recyclables and Compostables Collection.

All special events and temporary events at a venue facility in the City of Boulder must provide recyclables and compostables collection in compliance with the city's Special Event Permit requirements.

Section 7. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-16. – Applicability.

(a) The requirements of section 6-3-13, "Property Owner Requirements for Recyclables and Compostables Collection" shall apply to all property owners within the City of Boulder beginning one year from the date this Ordinance is adopted by city council.

(b) The requirements of section 6-3-14, "Business Owner Requirements for Recyclables and Compostables Collection," shall apply to all businesses existing within the City of Boulder by the date established in a rule adopted by the city manager in accordance with Chapter 1-4, "Rulemaking," B.R.C. 1981.

(c) The requirements of section 6-3-15, "Special Events Requirements for Recyclables and Compostables Collection" shall apply to all special events and temporary events at venue facilities beginning on January 1, 2016.

Section 8. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-17. - Exemptions.

(a) Applications for exemptions from complying with the requirements of sections 6-3-13, "Property Owner Requirements for Recyclables and Compostables Collection," or 6-3-14, "Business Owner Requirements, must be made by the owner of the property or business. Any exemption shall be for a period of one year. Property or business owners may re-apply for one additional exemption at the expiration of the initial exemption period. City staff will review exemption applications and work with the applicants to

bring the property owner or business owner into compliance. Applications must be received within sixty days of the start of the compliance period established in section 6-3-17, "Applicability." The city manager may issue additional rules that govern the conditions under which an application for an exemption may be submitted and granted. In order to be granted an exemption, applicants must demonstrate they have considered all reasonable options that would bring their business or property into compliance and must explain to the satisfaction of the city manager why none of these options are viable. The city manager shall determine whether an exemption will be granted. Applications for an exemption may require submission of an application processing fee.

(b) The following persons are exempt from the provisions of this chapter:

(1) The owner of a business that occupies less than fifty percent of the floor area of a residence.
(2) A business or property owner or manager that can demonstrate extreme economic hardship as defined by the city manager.
(3) Businesses that generate a de minimis volume of trash, recyclables or compostables as defined by the city manager.
(4) Any business owner or manager who can demonstrate that compliance would require the business to violate other municipal codes or regulations.
(5) A businesses or property owner that hauls its own trash, recyclables or compostables as certified by a self-hauling certification, the contents and format of which is defined by the city manager, may be granted an exemption from section 6-3-3(b).
(6) A property or business owner that composts on-site in compliance with all applicable laws pertaining to Title 6, Chapter 3, Section 6-3-6, "Compost piles permitted if not a nuisance."
(7) Property owners that share collection service as certified by a shared service certification, the contents and format of which is defined by the city manager, may be granted an exemption from section 6-3-3(b).
(8) A business or property owner that can demonstrate to the satisfaction of the city manager that the property is sufficiently space constrained so as to preclude compliance with the provisions of these sections.
(9) Innovation exemption - business or property owner may apply for an exemption if they are reusing or repurposing a significant portion of their waste stream.

Section 9. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-18. - Violations.

If the city manager finds a violation of any provision of this chapter, the manager, after notice and an opportunity for hearing under the procedures prescribed by Chapter 1-3, "Quasi-

Judicial Hearings," B.R.C. 1981, may impose a civil penalty according to the following schedule:

(a) For the first violation of the provision, $500;

(b) For the second violation of the same provision, $1,000;

(c) For the third and subsequent violations of the same provision, $2,000; and

(d) The city manager's authority under this section is in addition to any other authority the manager has to enforce this chapter, and election of one remedy by the manager shall not preclude resorting to any other remedy as well.

(e) Violations of this chapter are also punishable as provided in Section 5-2-4, "General Penalties," B.R.C. 1981.

Section 10. 6-12-6, B.R.C. 1981, is amended to read:

6-12-6. - Disposition of Recyclable or Compostable Materials.

(a) No person other than the person placing the recyclables or compostables for collection or that person's designated hauler shall take physical possession of any recyclables or compostables separated from trash, set out in the vicinity of the curb or alleys, and plainly marked for recyclables or compostables collection.

(b) Each property owner, property manager, residential customer, commercial customer, or multifamily customer shall relinquish recyclable materials to a hauler only on the condition that the hauler deliver the recyclable materials only to a recyclables processing center as set forth in subparagraph (c) below.

(c) In the absence of an express written designation to the contrary initiated by the customer, it shall be presumed that each property owner, property manager, residential customer, commercial customer -or multifamily customer has designated recyclable materials to be hauled to the recyclables processing center owned by Boulder County or its successor in interest. However, each customer may designate another recyclables processing center by notifying the hauler of that designation in writing. This written notification must be given at the initiative of the customer, not the hauler, and may not be written on a form furnished by the hauler.

(d) Haulers shall take all compostable materials collected to a state permitted compost facility that can certify that the material is processed into a compost product. Haulers shall maintain receipts and records for a period of five years. Upon request by any customer or the city manager, haulers shall produce receipts from the facility utilized.

Section 11. This ordinance is necessary to protect the public health, safety, and welfare of the residents of the city, and covers matters of local concern.

Section 12. The city council deems it appropriate that this ordinance be published by title only and orders that copies of this ordinance be made available in the office of the city clerk for public inspection and acquisition.

INTRODUCED, READ ON FIRST READING, AND ORDERED PUBLISHED BY TITLE ONLY this 5th day of May, 2015.

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_____
Mayor

Attest:

_____
City Clerk

READ ON SECOND READING, PASSED, ADOPTED, AND ORDERED PUBLISHED BY TITLE ONLY this 2nd day of June, 2015.

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_____
Mayor

Attest:

_____
City Clerk

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ORDINANCE NO. 8045

AN ORDINANCE AMENDING SECTIONS 6-3-2, "DEFINITIONS," 6-3-3, "ACCUMULATION OF TRASH, RECYCLABLES, AND COMPOSTABLES PROHIBITED," 6-3-9, "SPECIAL TRASH SERVICE REQUIREMENTS ON CERTAIN RESIDENTIAL RENTAL PROPERTIES AT CERTAIN TIMES," AND 6-12-6, "DISPOSITION OF RECYCLABLE OR COMPOSTABLE MATERIALS," B.R.C. 1981, AND ADDING NEW SECTIONS 6-3-13, PROPERTY OWNER REQUIREMENTS FOR RECYCLABLES AND COMPOSTABLES COLLECTION," 6-3-14, "BUSINESS OWNER REQUIREMENTS FOR RECYCLABLES AND COMPOSTABLES COLLECTION," 6-3-15, SPECIAL EVENTS REQUIREMENTS FOR RECYCLABLES AND COMPOSTABLES COLLECTIONS," 6-3-16, "APPLICABILITY," 6-3-17, "EXEMPTIONS," 6-3-18, "VIOLATIONS," B.R.C. 1981, AND SETTING FORTH RELATED DETAILS.

WHEREAS, THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO, FINDS AND RECITES THE FOLLOWING:

The city, through its policies, programs, and laws, supports efforts to reduce the amount of waste that must be disposed of in landfills and pursues "zero waste" as a long-term goal by emphasizing waste prevention efforts;

A. The City of Boulder has been managing recycling and composting programs since 1981 when the Trash Tax, Chapter 3-10, B.R.C. 1981, was first instituted;

B. The City has found the most effective way to ensure maximum recovery of recyclable and compostable materials from trash is to require they be separated from trash;

C. City Council encourages businesses that prepare, serve or sell food to investigate donating <u>or repurposing</u> edible food waste prior to composting it;

D. No entity currently exists in Boulder County that will accept mixed trash and separate it into recyclable and compostable materials offsite. Such post-collection processing of mixed trash and recyclable materials is not an environmentally effective or efficient method of managing trash;

E. The Boulder County Recycling Center is a publicly owned facility that can bolster the City's goals of increasing both the amount of recyclables being processed and the efficiency of implementing the City's Zero Waste Strategic and Action plans;

F. Therefore, the purpose of this Ordinance is to ensure every person within the City of Boulder is able to separate recyclables and compostables from trash and that the materials designated by the City Manager to be recyclable and compostable are recycled and composted properly.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO:

Section 1. 6-3-2, B.R.C. 1981, is amended to read:

6-3-2. - Definitions.

The definitions in Chapter 1-2, "Definitions," B.R.C. 1981, shall apply to this chapter, including, without limitation, the definitions of compostables, hauler, recyclable materials, trash, trash container, visible to the public, and wildlife-resistant container.

The following terms used in this chapter have the following meanings unless the context clearly indicates otherwise:

Bear-resistant container shall mean a container that meets the requirements for such a container established by the city manager in a rule adopted pursuant to Section 6-3-11, "City Manager Authorized to Issue Rules," B.R.C. 1981.

Bear-resistant dumpster shall mean a dumpster that meets the requirements for such a container established by the city manager in a rule adopted pursuant to Section 6-3-11, "City Manager Authorized to Issue Rules," B.R.C. 1981.

Bear-resistant enclosure shall mean a fully enclosed structure that meets the requirements for such a container established by the city manager in a rule adopted pursuant to Section 6-3-11, "City Manager Authorized to Issue Rules," B.R.C. 1981.

Business shall have the meaning set forth in Chapter 1-2, "Definitions," B.R.C. 1981, and as used in this section shall also include, without limitation, educational institutions, and charitable or nonprofit organizations.

Owner shall have the meaning set forth in Chapter 1-2, "Definitions," B.R.C. 1981, and as used in this section, shall include a business operator or business manager. With respect to requirements relating to the provision of recyclable and compostable materials collection for a condominium or cooperatively owned development, "owner shall include the owners' association or its equivalent.

Person shall have the meaning set forth in Chapter 1-2, "Definitions," B.R.C. 1981, and shall also include, without limitation, owner of any property or vacant land; occupant, owner, operator, or manager of any single-unit dwelling, multi-unit dwelling, mobile home, mobile home park, private club, or other similar property; or owner, operator, manager, or employee of any business or business property.

Property Manager shall mean any person who is an owner's representative, has charge of, or controls any property of an owner appointed to manage on-site property operations including trash collection services for the property.

Refuse attractant shall mean any trash or other substance which could reasonably be expected to attract wildlife or does attract wildlife, including, but not limited to, soiled diapers, sanitary pads, food products, pet food, feed, kitchen organic waste, food, food packaging, toothpaste, deodorant, cosmetics, spices, seasonings, or grease. Attractants do not include recyclable materials properly enclosed in a recycling container, or materials that do not meet the definition of trash in Section 1-2-1, "Definitions," B.R.C. 1981, and is fruit associated with a fruit tree or bush, produce associated with a garden, or a bird feeder.

Self-haul when used in reference to trash, recyclable and/or compostable materials generated by a business or person, shall mean the collection and transportation of such materials from a property where an owner, employee or agent of the property or business hauls the material rather than a hauler or to perform this function

Venue facility means any structure used for temporary events.

Section 2. 6-3-3(b), B.R.C. 1981, is amended to read:

6-3-3. - Accumulation of Trash, Recyclables, and Compostables Prohibited.

…

(b) No owner of any property ~~containing one or more rental dwelling units~~ shall fail to maintain in effect a current and valid contract with ~~a~~ one or more haulers providing for the removal of accumulated trash, recyclables and compostables from the property, which contract shall provide for sufficient trash, recyclables and compostable materials hauling to accommodate the regular accumulation of trash, recyclables and compostables from the property. Properties containing one or more rental dwelling units shall maintain a contract for the collection of trash no less frequently than on a biweekly basis.

…

Section 3. 6-3-9(c), B.R.C. 1981, is amended to read:

6-3-9. - Special Trash Service Requirements on Certain Residential Rental Properties at Certain Times.

(c) Within the special trash service zone and during a designated period, no owner of property required to be licensed by Section 10-3-2, "Rental License Required Before Occupancy and License Exemptions," B.R.C. 1981, shall fail to maintain in effect a current and valid contract with a commercial trash hauler providing for the removal of accumulated trash from the property, which contract provides for trash hauling:

(1) The hauler will check the regular trash containers for the property every day, excluding Sundays and holidays.

~~(1)~~(2) The recyclables hauler will check the regular recycling containers for the property at least two times per week during the city manager's designated consecutive days in the third quarter of the calendar year.

~~(2)~~(3) Any trash container which is full Monday through Friday will be emptied by the hauler. On Saturdays, containers will be emptied if more than half full.

(4) Any trash which is on the ground or otherwise near the container is picked up by the hauler.

~~(3)~~(5) Any recycling container which is more than half full when checked will be emptied by the recyclables hauler.

Section 4. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-13. - Property Owner Requirements for Recyclables and Compostables Collection.

(a) For all services that meet the requirements of this section, the property owner or property manager must establish on-site collection areas for recyclable and compostable materials that are convenient to occupants and tenants. The recycling and compost collection containers shall be placed in a location or locations within reasonable and convenient proximity to all buildings and other uses on site and be at least as convenient to occupants and tenants as trash containers.

(b) When a property owner or property manager provides janitorial services to its tenants, employees or occupants, the contract for janitorial services shall include recyclables and compostables collection service that meets the requirements of this section.

(c) At least once per year, the property owner or property manager shall conduct training and distribute to all tenants information about how to use the on-site system established for collection of recyclables and compostables pursuant to this section. Property owners and managers shall provide new tenants with this information within 30 days of tenant move-in and no later than the thirtieth day after a substantive change in the recycling or composting location or service offered at the property.

(d) Property owners or managers must maintain and make available upon request, to the city manager for inspection and copying during normal business hours, any contracts and invoices for collection and disposition of recyclable and/or compostable materials for a period covering the most recent three years.

Section 5. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-14. - Business Owner Requirements for Recyclables and Compostables Collection.

(a) All business owners must separate recyclable and compostable material from the trash and wherever business owners provide trash containers to employees or customers, they must also provide recyclables and compostables containers for employees and customers' use. Containers must be at least as conveniently located as trash and be of adequate size and number to prevent recyclables and compostables from being mixed with trash.

(b) At least once per year, business owners must conduct training that instructs all employees how to use the containers established for collection of recyclables and compostables pursuant to this section. Business owners shall provide new employees with this information within 30 days of when the employee begins work and no later than the thirtieth day after a substantive change in the recycling or composting service offered at the business.

(c) All business owners must provide Spanish and English or picture-only signs at each recyclables and compostables container, clearly indicating the appropriate materials to be placed inside the container in accordance with rules issued by the city manager.

(d) Business owners or managers must maintain and make available upon request, to the city manager for inspection and copying during normal business hours, any contracts and invoices for collection and disposition of recyclable and/or compostable materials for a period covering the most recent three years.

Section 6. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-15. - Special Events Requirements for Recyclables and Compostables Collection.

All special events and temporary events at a venue facility in the City of Boulder must provide recyclables and compostables collection in compliance with the city's Special Event Permit requirements.

Section 7. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-16. – Applicability.

(a) The requirements of section 6-3-13, "Property Owner Requirements for Recyclables and Compostables Collection" shall apply to all property owners within the City of Boulder beginning one year from the date this Ordinance is adopted by city council.

(b) The requirements of section 6-3-14, "Business Owner Requirements for Recyclables and Compostables Collection," shall apply to all businesses existing within the City of Boulder by the date established in a rule adopted by the city manager in accordance with Chapter 1-4, "Rulemaking," B.R.C. 1981.

(c) The requirements of section 6-3-15, "Special Events Requirements for Recyclables and Compostables Collection" shall apply to all special events and temporary events at venue facilities beginning on January 1, 2016.

Section 8. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-17. - Exemptions.

(a) Applications for exemptions from complying with the requirements of sections 6-3-13, "Property Owner Requirements for Recyclables and Compostables Collection," or 6-3-14, "Business Owner Requirements, must be made by the owner of the property or business. Any exemption shall be for a period of one year. Property or business owners may re-apply for one additional exemption at the expiration of the initial exemption period. City staff will review exemption applications and work with the applicants to bring the property owner or business owner into compliance. Applications must be

received within sixty days of the start of the compliance period established in section 6-3-17, "Applicability." The city manager may issue additional rules that govern the conditions under which an application for an exemption may be submitted and granted. In order to be granted an exemption, applicants must demonstrate they have considered all reasonable options that would bring their business or property into compliance and must explain to the satisfaction of the city manager why none of these options are viable. The city manager shall determine whether an exemption will be granted. Applications for an exemption may require submission of an application processing fee.

(b) The following persons are exempt from the provisions of this chapter:

(1) The owner of a business that occupies less than fifty percent of the floor area of a residence.
(2) A business or property owner or manager that can demonstrate extreme economic hardship as defined by the city manager.
(3) Businesses that generate a de minimis volume of trash, recyclables or compostables as defined by the city manager.
(4) Any business owner or manager who can demonstrate that compliance would require the business to violate other municipal codes or regulations, or applicable state or federal regulations.
(5) A businesses or property owner that hauls its own trash, recyclables or compostables as certified by a self-hauling certification, the contents and format of which is defined by the city manager, may be granted an exemption from section 6-3-3(b).
(6) A property or business owner that composts on-site in compliance with all applicable laws pertaining to Title 6, Chapter 3, Section 6-3-6, "Compost piles permitted if not a nuisance."
(7) Property owners that share collection service as certified by a shared service certification, the contents and format of which is defined by the city manager, may be granted an exemption from section 6-3-3(b).
(8) A business or property owner that can demonstrate to the satisfaction of the city manager that the property is sufficiently space constrained so as to preclude compliance with the provisions of these sections.
(9) Innovation exemption - business or property owner may apply for an exemption if they are reusing or repurposing a significant portion of their waste stream.

Section 9. Chapter 6-3, "Trash, Recyclables, and Compostables," B.R.C. 1981, is amended by the addition of a new section to read:

6-3-18. - Violations.

If the city manager finds a violation of any provision of this chapter, the manager, after notice and an opportunity for hearing under the procedures prescribed by Chapter 1-3, "Quasi-

Judicial Hearings," B.R.C. 1981, may impose a civil penalty according to the following schedule:

(a) For the first violation of the provision, $500;

(b) For the second violation of the same provision, $1,000;

(c) For the third and subsequent violations of the same provision, $2,000; and

(d) The city manager's authority under this section is in addition to any other authority the manager has to enforce this chapter, and election of one remedy by the manager shall not preclude resorting to any other remedy as well.

(e) Violations of this chapter are also punishable as provided in Section 5-2-4, "General Penalties," B.R.C. 1981.

Section 10. 6-12-6, B.R.C. 1981, is amended to read:

6-12-6. - Disposition of Recyclable or Compostable Materials.

(a) No person other than the person placing the recyclables or compostables for collection or that person's designated hauler shall take physical possession of any recyclables or compostables separated from trash, set out in the vicinity of the curb or alleys, and plainly marked for recyclables or compostables collection.

(b) Each property owner, property manager, residential customer, commercial customer, or multifamily customer shall relinquish recyclable materials to a hauler only on the condition that the hauler deliver the recyclable materials only to a recyclables processing center as set forth in subparagraph (c) below.

(c) In the absence of an express written designation to the contrary initiated by the customer, it shall be presumed that each property owner, property manager, residential customer, commercial customer -or multifamily customer has designated both single stream and source-separated, clean fiber recyclable materials as defined by city manager rules to be hauled to the recyclables processing center owned by Boulder County or its successor in interest ("Boulder County Recycling Center"). However, each customer may designate another recyclables processing center by notifying the hauler of that designation in writing. This written notification must be given at the initiative of the customer, not the hauler, and may not be written on a form furnished by the hauler. The presumption in this subsection (c) shall not apply with respect to source-separated, clean fiber recyclable materials if the hauler can demonstrate in writing to the city manager that the revenue received from the Boulder County Recycling Center is less than eighty-five percent of the hauler rebate offered by or revenue received from another recycling center that also accepts single stream recyclable materials.

(d) Haulers shall take all compostable materials collected to a ~~state permitted~~ compost facility that is in compliance with state composting regulations and can certify that the material is processed into a compost or biogas product. Alternatively, haulers may deliver compostable materials to a facility that repurposes the materials for beneficial uses, such as feeding animals, if the facility is in compliance with all federal, state and local laws. Haulers shall maintain receipts and records for a period of five years. Upon request by any customer or the city manager, haulers shall produce receipts from the facility utilized.

Section 11. This ordinance is necessary to protect the public health, safety, and welfare of the residents of the city, and covers matters of local concern.

Section 12. The city council deems it appropriate that this ordinance be published by title only and orders that copies of this ordinance be made available in the office of the city clerk for public inspection and acquisition.

INTRODUCED, READ ON FIRST READING, AND ORDERED PUBLISHED BY TITLE ONLY this 5th day of May, 2015.

.

_____
Mayor

Attest:

_____
City Clerk

K:\CMEN\o-8045-2nd-b-1974.docx

READ ON SECOND READING, AMENDED, AND ORDERED PUBLISHED BY TITLE ONLY this 2nd day of June, 2015.

.

_____
Mayor

Attest:

_____
City Clerk

READ ON THIRD READING, PASSED, ADOPTED, AND ORDERED PUBLISHED BY TITLE ONLY this _____ day of _____, 2015.

.

_____
Mayor

Attest:

_____
City Clerk

K:\CMEN\o-8045-2nd-b-1974.docx

Universal Zero Waste Ordinance
City Manager's Rules
Outline

I. Compliance Schedule

a. As per council direction for existing businesses
b. All new businesses and property owners must comply with these sections within 30 days of operating within the City of Boulder.

II. Definition of Recyclable Materials

a. "Single Stream recyclable materials" is defined as …
b. "Clean fiber recyclable materials" are defined as source-separated corrugated cardboard, newsprint, or any other source-separated paper that conforms to national marketing standards as established and reported by the North American Pulp and Paper Industry Market Indices

III. Exemption Application Process and fees, if applicable

IV. Violation Process

a. Three written warnings, delivered in person will be issued prior to any fines being assessed.

V. Reporting Requirements

a. May require a Zero Waste Report in an electronic format provided by the City.

VI. Guidelines for signage

VII. Definition of Extreme Economic Hardship

VIII. Self-Hauling Certification

IX. Shared Service Certification

UNIVERSAL ZERO WASTE ORDINANCE
COMPLIANCE SCHEDULE OPTIONS

Implementation Schedule Option A:

Applicability:

The **Property Owner Requirements** apply to all property owners within the City of Boulder beginning <one year from ordinance adoption>. The **Business Owner Requirements for Recyclables and Compostables Collection** apply to all businesses within the City of Boulder <fifteen months from ordinance adoption>. The **Special Events Requirements** apply to all special events and temporary events at venue facilities beginning on January 1, 2016. All new businesses and property owners must comply with these sections within 30 days of operating within the City of Boulder.

Implementation Schedule Option B:

Applicability:

The **Property Owner Requirements** apply to all property owners within the City of Boulder beginning <one year from ordinance adoption>. The **Special Events Requirements** apply to all special events and temporary events at venue facilities beginning on January 1, 2016. All new businesses and property owners must comply with these sections within 30 days of operating within the City of Boulder.

With respect to the requirements included in the section entitled, **Business Owner Requirements for Recyclables and Compostables Collection**, the following compliance schedule applies:

Business Owner Requirements for Recyclables Collection

<Within fifteen months of ordinance adoption>, all business owners must separate recyclable material from the trash and wherever business owners provide trash containers to employees or customers, they must also provide recyclables containers for employees and customers' use. Containers must be at least as conveniently located as trash and be of adequate size and number to prevent recyclables from being mixed with trash.

At least once per year, business owners must conduct training for all employees about how to use the containers established for collection of recyclables pursuant to this section. Business owners shall provide new employees with this information within 30 days of when the employee begins work and no later than the thirtieth day after a substantive change in the recycling service offered at the business.

All business owners must provide Spanish and English or picture-only signs at each recyclables container, clearly indicating the appropriate materials to be placed inside the container in accordance with rules issued by the City Manager.

Business Owner Requirements for Compostables Collection

<Within fifteen months of ordinance adoption>, all businesses that provide landscaping services or generate significant vegetative waste on a regular basis must separate compostable material from the trash.

<Within fifteen months of ordinance adoption>, all owners of businesses that prepare, serve or sell food must separate compostable material from the trash and if these businesses provide trash containers for employees' use, business owners must also provide compostables containers for employees' use. Owners of businesses that prepare, serve or sell food and that provide trash containers for customers' use, must also provide compostable materials containers for customers' use inside the business and in outside eating areas. Containers must be at least as conveniently located as trash and be of adequate size and number to prevent compostables from being mixed with the trash.

At least once per year, owners of businesses that prepare, serve or sell food must conduct training for all employees about how to use the containers established for collection of compostables pursuant to this section. Business owners shall provide new employees with this information within 30 days of when the employee begins work and no later than the thirtieth day after a substantive change in the composting service offered at the business.

All owners of businesses that prepare, serve or sell food must provide Spanish and English or picture-only signs at each compostables container, clearly indicating the appropriate materials to be placed inside the container in accordance with rules issued by the City Manager.

No sooner than <3 years after ordinance adoption>, the City Manager may issue rules to require all business owners to separate compostable materials from the trash and wherever business owners provide trash containers to employees or customers to also provide compostables containers for employees' and customers' use. Containers must be at least as conveniently located as trash and be of adequate size and number to prevent compostables from being mixed with trash. Said rules will also contain requirements for training and proper signage for the compostables collection service.

Implementation Schedule Option C:

Applicability:

The **Property Owner Requirements** apply to all property owners within the City of Boulder beginning <two years from ordinance adoption>. The **Business Owner Requirements for Recyclables and Compostables Collection** apply to all businesses within the City of Boulder <twenty-seven months from ordinance adoption>. The **Special Events Requirements** apply to all special events and temporary events at venue facilities beginning on January 1, 2016. All new businesses and property owners must comply with these sections within 30 days of operating within the City of Boulder.

May 14, 2015

To Boulder City Council:

The Environmental Advisory Board would like to present this letter of support for the proposed Zero Waste Ordinance. We support the two-year adoption timeframe, which allows sufficient time for business' fiscal cycles and for the disposal center's preparations.

We also encourage Council to promote the positive nature of this ordinance and the incentives for businesses to become early adopters rather than comply within the required timeframe. We would like to stress that fines should be issued as a last resort. We suggest that the Council consider the economic aspects of the ordinance to ensure it is not regressive, burdensome, nor punitive. Implementation costs should consider that some larger businesses could achieve economies of scale that smaller business cannot. In such cases, smaller business could pay a disproportionately high cost to implement the ordinance relative to their operating expenses, to the point that the ordinance becomes burdensome and unmanageable.

We welcome any questions the Council may have in reference to our support.

With regards,

The Environmental Advisory Board

Steve Morgan, Chair
Tim Hillman
Morgan Lommele
Brad Queen
Karen Crofton

Colorado's Leader in Organic Recycling

February 5, 2015

Hillary Collins
Kara Mertz
Boulder, Colorado.

Re: Foodwaste Transfer Site – Renewable Natural Gas Cost Estimates

Dear Hillary and Kara,

Over the past few weeks, there has been much discussion around the foodwaste transfer option that I have been speaking about for several months. During these past months we have also been able to narrow down the nature of our operations and cost options related to foodwaste SSO (Source Separated Organics) as well as composting of foodwaste bearing greenwaste streams. I have also been asked my opinion related to true sustainability and viability aspects of composting (that of course produces compost) versus anaerobic digestion that produces renewable natural gas (RNG) and digested solids (DS). I know I have connected with the two of you during this time as well as others.

In an effort to provide clarity to the estimated costs, benefits, risks, and rewards associated with foodwaste SSO recycling and what my opinions are I felt it would be beneficial to write you as well as others addressing these items. You may want to sit back…this could be a rather lengthy letter.

My strong opinion is that the most beneficial, viable, and low risk option for SSO is via Anaerobic Digestion (AD) to produce renewable energy, be that through the creation of RNG and its option of CNG, or electricity. The challenges, risks to site operations, potential environmental impacts, and back end options (marketing of compost) with composting the SSO are considerable and are growing. I speak from 25 years in this industry and from the prospective of one of the original pioneers in foodwaste composting operations in the country.

Composting is a viable option of course for SSO, but it is most viable when dealing with lower volumes of SSO combined with little time pressure to deal with them. As the volumes are growing, and as the time available to deal with them is decreasing, the challenges and risks have responded in their own way. Even without the SSO stream, composting of the mixed greenwaste and foodwaste stream (residential) will need to expand as more and more of that stream presents itself.

The challenges and risks associated with debris management, removal of non-compostable materials as well as compostable materials, odor issues, dust issues, fire risk management, neighbor relations,

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escalating concerns over air emissions (be they viable or not…another debatable item), increasing regulatory burden and cost, escalating costs of equipment and labor needed to compost these materials, marketability of finished compost produced from SSO, siting challenges and costs, and finally simply being able to collect enough revenue to cover the related costs and produce a profit have become monumental.

We also see considerable pressure on the bulking agent (greenwaste stream) that is necessary to compost SSO. These pressures will result in increased costs to obtain the bulking agent needed to compost the SSO and once again put pressure on tipping fees. The AD option does not require bulking agents, it reduces the volumes of total materials hauled and handled.

Additionally we feel a significant responsibility to our front end clients that have invested in compostable packaging and containers for us to actually compost these materials and limit the risk that they end up in a landfill. AD provides that opportunity, composting diminishes it due to cross contamination, composting in windy dry conditions, having to expose these materials to the outside versus the inside of a windrow, and on and off site litter collection.

Composting of foodwaste is receiving ever increasing publicity and pressure to expand and grow on a national level. While we desire the same goals of diversion and zero waste, we also have seen the major negative impact of composting SSO on the composting entities and industry itself. Many operations across the country have been forced to close or have incurred significant penalties. Especially those that receive large volumes of SSO on tight schedules. Where composting of large volumes of foodwaste has been successful it has required major investment in very expensive systems and processes and as such requires significant increases in tipping fees for the SSO. Those entities only exist in areas with high landfill tipping fees, and they require materials be transported a large number of miles…sometimes in the hundreds of miles one way.

Those are some of the reasons I feel the best sustainability option for SSO is AD. It provides a much more controlled environment, reduces volumes of materials that have to be handled. Simplifies the material management process, still provides compost out the back side of the plant after removing the VOC's and producing RNG and can not only provide an option to reduce the tipping fees for SSO versus composting, but it can also provide stability in pricing through long term RNG offtake and product procurement agreements.

DPS – in the discussion below related to costs you will see reference to the "DPS". This is an acronym for Digester Processing System. This digester project is designed to succeed. In order help insure its success, A1 has taken on the challenge of constructing an estimated $3,000,000 DPS system to be located on the digester site itself.

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The DPS is being designed and built to insure that we can remove packaging from incoming substrates (including SSO), blend materials, hydrate them properly for the digester, and deliver them to the digester. It will include multiple storage and processing options, redundant systems to remove the packaging, compostable containers, and yes non-compostable items that WILL be present. These as well as other recyclable items such as cans, jugs, cardboard, etc. can be segregated so that they can find their final recycling or composting home.

The systems we have invested in will also significantly increase the diversion and recycling opportunities for streams that without this option could not even be composted and would have to be landfilled (out of date packaged products, liquids in jugs, chips in bags, catsup packets, spoiled meat in packages, etc.)

The transfer site system is an important part to the success as well. To hold down our costs at the DPS, we are requiring the transfer site itself to be responsible for pre-screening incoming SSO. It will be responsible to detect reject loads, separate them, and landfill them. We are asking the transfer site to also remove larger identifiable non-compostable items in the smaller loads they receive prior to loading on the transfer trailer destined for the DPS. The transfer site cannot be a "low budget" operation. It will need to maintain good housekeeping, efficient material management, provide necessary containment and loading options, plus the normal administration options, overhead requirements etc.

OK, having said all that, I am sure additional questions may be out there and I will do my best to respond promptly to them. Meanwhile, below is a summary of costs and conditions for the options identified. They are to being presented as estimated at this time until we are sure of the demands and conditions that may be presented in the coming weeks from the Boulder County area.

One other point of clarification. As all are aware, for years we provided a transfer option at our Stapleton Site where we had installed our DODA system. That site was scheduled for redevelopment and we have been in the process of vacating it for several months now. The replacement site has been located and after many months of developmental planning and the approval process we are now moving dirt on it. It will be located near the intersection of I76 and 88th in Commerce City. The major change with the new site will be that we cannot receive and transfer SSO foodwaste at it. It is not designed as a transfer site, it will be a greenwaste and wood waste recycling site. The DODA will be located at the DPS. We cannot stockpile and ship mixed greenwaste and SSO foodwaste from that site. That is another reason why locating local transfer sites in Boulder is the right move.

Costs and conditions associated with the SSO transfer option, as well as some costs associated with other woody and or mixed stream materials:.

Option 1: Commercial foodwaste SSO Transfer. SSO (i.e. restaurants, grocery stores, food production facilities, etc.) may contain compostable items such as BPI or ASTM 6400 certified packaging, paper towels, etc. This is a range estimate until final inputs are considered. This cost loaded on our trailer would be **$30-$35 per TON.** This represents ONLY the cost of transportation and processing via DPS and digestion. It does not include the cost of operations at the transfer site.
The transfer site would receive, inspect, reject and dispose as needed, and remove light contaminants before loading on A1 transfer trailer. The transfer site would be responsible for proper permitting, compliant operations, and disposal costs.

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A1 would provide special transfer trailers (24-25 ton material capacity) for switch-out process. A1 would switch-out trailers and transport to the DPS system at Heartland Biogas Digester

Estimated minimum volume is 1 load per day, 5-6 days per week.

This material can also contain containerized or packaged products like out of date plastic jugs of milk, cartons of cereal, yogurt and fruit cups, wrapped cheese, canned products, potato chips in boxes, etc. NO GLASS OR CERAMICS. The process would require transfer site assistance in separating highly containerized products from standard SSO to allow for separation at the DPS of compostables, which will be composted at one of our compost sites separately. If loads are co-mingled with standard SSO all packaging removed will be landfilled. Organics will be digested to create RNG (Renewable Natural Gas) and digested solids for beneficial reuse.

Option 2: Direct Delivery to DPS – SSO or packaged product delivered directly to DPS located on the HBG Digester site at which is at Weld County Road 49 and 40. **$30-$32 per TON FOB DPS site.**

This material will require pre-screening at the DPS site by A1 and the subsequent culling and disposal of rejected materials which will need to be transported to a landfill. This option will also entail handling of numerous smaller loads and reduced efficiency at the DPS.

I hope this information is helpful. There is still much more I can say that I have not included in this letter. If you need me to do a Q&A with anyone please feel free to request that and to of course call me as needed. In full disclosure I am copying Bryce Isaacson here as well. I will also provide these quotes to others who desire to consider the transfer site option. Our desire is to work with Boulder and Boulder County on options to efficiently and effectively pursue their zero waste goal.

Sincerely

Bob Yost
Vice President, CTO

Cc: Bryce Isaacson, Western Disposal

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Western DISPOSAL SERVICES
THE WAY TO A BETTER ENVIRONMENT

April 27, 2015

RE: Compost processing options for commercial compost service requirement

To Mayor Applebaum and City Council:

As the City of Boulder contemplates meeting the objectives of the Zero Waste Strategic Plan (ZWSP) with options including requiring commercial sector recycling and composting, Western Disposal wanted to provide Council with this memo to specifically address issues related to the processing of commercially collected organic material.

Western Disposal is an engaged partner with the City of Boulder, indeed the entire local area, in helping to achieve ambitious zero waste goals through numerous service offerings including organics collection and composting service. Western's compost processing operation, located on 14 acres in east Boulder, was originally built in 2003 to manage the increasing volume of yard waste from Boulder's organics spring cleanup and material from the City and County sponsored yard waste drop-off. It was expanded in 2008 to include food waste processing to serve as a critical underpinning to the City of Boulder's curbside organics collection policy initiative. Today, Western provides compost service to nearly 31,000 residential customers and more than 400 businesses and HOAs in the City and County, processing over 8,000 tons of yard and wood waste into mulch and producing over 20,000 cubic yards of compost. Through investment of private resources, we have kept the material local and paved the way for the County as a whole to increase diversion to levels that far exceed other Colorado communities.

Western would like to assist the City in meeting the goals in the ZWSP by offering cost effective solutions for businesses to comply with any composting collection requirement. In order to assist the City Council with the decision making process regarding this requirement, Western is offering two options for the handling of the organics collected from City of Boulder businesses at our compost facility. These two options contain both costs and environmental considerations that must be weighed by stakeholders to determine the best option. These options include fully composting all materials on our site or serving as a transfer facility for the materials and hauling them to the Heartland Biogas Facility and are discussed below.

Option #1 - Compost On Site

The first option is for Western Disposal to compost all the commercial organics from the new requirement. Western's compost facility is currently open to residential subscription haulers and we will open our facility to all commercial haulers if/when the City passes business composting requirements. The key benefits for this option are that these organics would be composted in the City of Boulder and it would require the fewest number of miles driven. This would not only reduce greenhouse gas emissions

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associated with transportation, but would also promote a local solution for this material. However, this option will be more expensive for Western and other haulers due to the costs of composting the material. Western estimates that our tipping fee for organics would be $77.00 per ton.

We recognize that this tipping fee is notably higher than that of A1 Organics composting site located in Keenesburg, CO. A1 Organics' tipping fee has recently been used as a comparison to Western's fee during recent meetings of the Boulder County Resource Conservation Advisory Board. We appreciate the opportunity to address this issue and illuminate the factors behind the differences of our relative fee structures and transportation costs:

1. Location: Western's convenient location comes at a cost. Our compost yard is sited on municipal, industrial land valued at approximately *$500,000* per acre as contrasted to agricultural Keenesburg with an average value of *$10,000* per acre. Our taxes are significantly higher, as is the carrying cost of the land. This cost difference must be accounted for in the pricing per ton of material Western processes.
2. Economies of Scale: Western processes approximately 17,000 to 20,000 cubic yards of compost per year. A1 Organics Keenesburg facility processes over 200,000 cubic yards of compost per year. With 10 times the volume, they spread operational and equipment costs over far greater volume output, keeping their processing cost per ton lower.
3. Capital Investment: As per the compost capacity analysis authored by Matthew Cotton of Integrated Waste Management Consulting, LLC, Western would need to expand our pad in order to handle the expected additional volume. In addition, we will need to make key investments including purchasing & installing a scale and upgrading/replacing equipment. We also anticipate adding an FTE to manage the additional volume.

Option #2 - Transport to Heartland Biogas

The second option involves Western serving as a transfer site for organics collected from commercial establishments within the City. All haulers would unload these organics at our compost yard. Rather than compost these materials on site, however, this material would be hauled to the Heartland Biogas facility located in Weld County, Colorado. At this site, this material would be placed in an anaerobic digestion system producing methane for use by the Sacramento Municipal Utility District as an alternative to coal. In addition, the composted material by-product which is a high-value peat-moss type material that would be sold as a soil amendment.

The tipping fee for this option at our yard is estimated at $50 per ton, which is the same as proposed by the Front Range Landfill for a second transfer site. This is a less expensive option for haulers and ultimately for businesses, however as the material is shipped approximately 1 hour away, the transportation produces greenhouse gas emissions and the soil amendment materials would not be locally produced.

Western has long prided itself on being a true community partner with local governments. For almost 45 years, this partnership has involved assisting residents and businesses in complying with a variety of policy initiatives ranging from increased diversion to protection of urban wildlife. Western's capital

investment in our three-cart collection system helped to increase diversion by providing larger containers for recycling and paved the way for the change to single stream recycling and embedded compostable collection. Our capital investment in a composting facility allowed the City of Boulder, unincorporated Boulder County and the City of Louisville to increase their diversion rate by 20% or more and allowed residents to have compostables collection in 2009; years ahead of other communities in the State. And our capital investment in our retrofit designs for the bear-resistant cart and container regulations helped to bring a lower cost alternative to City residents and businesses.

Western is supportive of the City's new ZWSP and remains committed to working with the City to ensure any new policies seeking to increase diversion are successful. Thank you for the opportunity to provide this additional information regarding the processing of commercially collected organic material.

Sincerely,

Bryce Isaacson
Vice President of Sales and Marketing
Western Disposal Services