

2015/2016

ACTION PLAN

Zero Waste Strategic Plan

What is this Action Plan?

The ZWAP is designed to set Boulder’s zero waste goals and an overarching framework for achieving them. It provides guiding investment principles and evaluation criteria to assist with the prioritization of year-to-year opportunities for investing trash tax revenue in new and/or expanded programs, incentives and facilities for the Boulder community. This Action Plan is designed to accompany the ZWSP and outlines the strategies the city will pursue in the coming three years based on current waste reduction needs and funding available. The Action Plan, along with community progress towards the ZWSP goals, will be updated annually.

This Action Plan is intended to be viewed in tandem with other community zero waste partners’ action plans, and their strategies for the next 2-3 years are included. Taken together, they paint a more complete picture of the Boulder community’s zero waste facilities, services and regulations, as these are all needed to move toward the zero waste Boulder that is encapsulated by the Strategic Plan. A “Zero Waste Boulder” requires the seven basic zero waste facilities described in the plan with universal access – plus high levels of participation in services driven by programs, incentives and regulations – to bring materials to these facilities and minimize the amount of waste heading toward our neighboring counties’ landfills.

Focus of 2015-2016 Action Plan

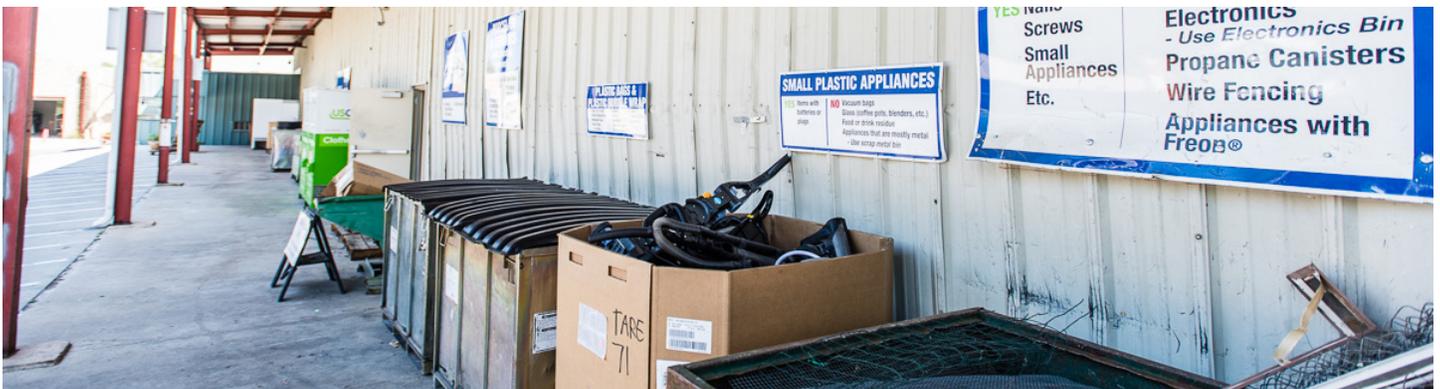
The most recent diversion data for each sector is presented below. Despite the progress made since the original 2006 Master Plan for Waste Reduction, community-wide waste diversion has only risen modestly to 34 percent in 2014. Gains have been made in the residential sector’s diversion rates; however, the percentage of Boulder’s waste stream generated by the commercial sector has increased significantly while the corresponding diversion rate has remained stagnant. This has contributed to keeping Boulder’s com-

munity-wide diversion rate relatively low. Due to this, as well as the significant barriers faced by the commercial sector, the 2015-2016 Action Plan primarily targets this sector along with the multifamily residential sector; and work with community partners to ensure cost-effective, universal access to facilities that can serve the Boulder community for years to come.

Diversion Rates	2004	2014
Single-Family Residential	48%	58%
Multi-Family Residential	14%	20%
Commercial and Industrial	25%	28%
Community Wide	30%	34%

2015-2016 Work Plan Items

- Expand multifamily housing assistance program based on findings of 2014 targeted pilot project which increased diversion at five complexes by between 4% and 16%.
 - o Create a strategy for a cost-effective and efficient approach to providing zero waste education and assistance to the broader multi-family community.
 - o Gather data and research the existing multi-family complexes to inform and prioritize outreach efforts.
 - o Develop tiers of service to address common barriers (will be tailored to needs):
 - First tier will include a toolkit with resources, educational videos, handouts and signs for waste enclosures
 - Second tier will include toolkit alone with additional assistance, including adjustments to collection service levels, door-to-door outreach, and training for residents
 - Final tier will also include waste audits, recycling and compost containers for units, and



- o on-going feedback to residents
- o *Sustainability Framework categories: Livable Community, Environmentally Sustainable Community*
- Implement Universal Zero Waste Ordinance
 - o Develop City Manager’s Rule
 - o Develop ordinance implementation plan
 - o Develop compliance and enforcement plan, including tracking system
 - o Research online self-reporting form option for compliance
 - o Research ways to encourage and incentivize edible food waste donations
 - o *Sustainability Framework categories: Livable Community, Environmentally Sustainable Community, Economically Vital Community*
- Expand business assistance and advising program with multiple tiers of service:
 - o Toolkit for do-it-yourself businesses to include employee training videos, free signage, list of resources; examples of good collection setups (“Tier 1” outreach)
 - o “Tier 2” advising and technical assistance to inform business about the Universal Zero Waste Ordinance, help them establish internal collection systems and signage; incentives available for standardized, bulk-purchased collection bins
 - o “Tier 3” zero waste advising delivered by PACE advisors focused on:
 - Food-generating businesses that need to establish compost collection service
 - Commercial leased spaces where landlord-tenant issues could introduce compliance issues
 - Businesses that choose to go beyond basic service provision and work toward achieving 70-85% waste diversion

Sustainability Framework categories: Livable Community, Environmentally Sustainable Community, Economically Vital Community
- Update waste contracts to reflect partner roles outlined in ZWSP.
 - o *Sustainability Framework categories: Environmentally Sustainable Community, Good Governance*
- Negotiate with Western Disposal and A-1 Organics for equitable, cost-effective and convenient composting options for all area organics haulers.
 - o *Sustainability Framework categories: Environmentally Sustainable Community, Good Governance*



Evaluation of 2015-2016 Strategies

Strategy	Diversion Potential* (tons/year)	Avoided Greenhouse Gas Emissions** (mtCO2e/yr)	Community Engagement	Upstream Conservation	Ease of Implementation	Cost Effectiveness
Expanded Multifamily Housing Assistance (2,000 units)	340 tons	104 mt	2	1	3	\$128/ton diversion \$22/MF unit
Universal Zero Waste Ordinance (effective June 2016)	14,100 – 29,000 tons	4,228 – 12,056 mt	3	2	2	Implementation: \$13 - \$6/ton diversion On-going: \$1 - \$0.54/ton diversion
2015 Business Advising Program (200 Businesses)	828 tons	249 mt	2	2	3	\$92/ton diversion \$380/business
2016 Business Advising Program -Tier 3 full advising (200 businesses)	828 tons	249 mt	2	2	3	\$92/ton diversion \$380/business
2016 Business Advising Program -Tier 2 limited advising (220 Businesses)	396 tons	118 mt	2	2	3	\$140/ton diversion \$251/busines

*Diversion potential for each strategy is based on assumptions around the amount of waste a business or multifamily housing unit produces and the average diversion improvement that can be expected based on prior experience or pilot studies. This calculation will get more accurate in future years with the implementation of the new RE-TRAC waste data collection system and Universal Zero Waste Ordinance tracking system currently being designed.

**Avoided greenhouse gas emissions are calculated using the same waste reduction carbon factor used in Boulder's community greenhouse gas inventory, which does not include consumption-based climate impacts. This calculation will get more accurate in future years with the implementation of the new RE-TRAC waste data collection system.



Additional Future Initiatives for the Next 2-3 Years

- Continue improving business assistance and advising program in response to needs and barriers that arise.
- Assess the rate of early compliance with any commercial regulations adopted and adjust business technical assistance to bring as many businesses on board prior to compliance deadlines.
- Expand the reach of the multifamily residential assistance program.
- Expand community-wide educational efforts on available services, incentives, and facilities as well as proper recycling/composting/source reduction methods.
- Collaborate with Boulder County and other partners on developing a regional construction and demolition recycling facility.
- Undertake a strategic development planning process for 6400 Arapahoe Ave.

6400 Arapahoe Strategic Development Planning Process

As part of the overall strategic vision for zero waste in Boulder, the city continues to strive to co-locate its reuse and recycling centers along “Recycle Row,” the one-mile stretch of properties in the eastern portion of the city between Valmont and Arapahoe roads along and just east of 63rd Street. Recycle Row currently includes Western Disposal’s transfer station; the city and county’s yard and wood waste drop-off centers; Western Disposal’s compost site; Boulder County’s Recycling Center and Hazardous Material Management Facility; and the city’s property at 6400 Arapahoe that is home to Eco-Cycle, the Center for Hard-to-Recycle Materials and ReSource the used building materials resale yard operated by the Center for Resource Conservation. In the future, Recycle Row may also host a construction and demolition debris sorting and transfer site as well as other zero waste facilities.

As part of crafting the city’s vision, staff has begun a strategic development planning process for 6400 Arapahoe to examine the existing and proposed uses for the city’s property there, and to map out a funding strategy and timeline for both Phase II development on the west side of the property (6.246 acres; currently leased to the Center for Resource Conservation and Eco-Cycle); and the site uses, concept plan and funding strategy for the east side of the property (1.928 acres; currently undeveloped and unoccupied).

The first part of this process will entail vetting and agreeing upon criteria for evaluation of development proposals, based on the Zero Waste Strategic Plan. Since the property

was purchased by Trash Tax dollars, any use of the property or revenue from the sale of the property should leverage this investment by ultimately serving the community’s zero waste needs. Once these criteria are fleshed out and vetted through a stakeholder process, the criteria can be weighed against each other in a way that makes sense for the community.

Given the current interest in uses for the east side of the property, and the upcoming (December 2017) expiration of site review approval for Phase II on the west side of the property, the timing is ripe to develop a Strategic Development Plan with options for funding sources for any proposed development. This exercise should help flesh out the issues, challenges and opportunities for Zero Waste and other community uses of the property.

Goals and Objectives:

- Gain a detailed understanding of all potential uses, now and into the future, for the City’s property at 6400 Arapahoe.
- Provide an analysis and understanding of the opportunities, costs, issues and challenges related to the property.
- Develop an action plan specific to the funding and phasing of proposed development at the site

Products:

- Concept Plan for the eastern portion of the site (if the city maintains ownership)
- Action Plan for funding and phasing of development at the site for both the western and eastern portions of the site

COMMUNITY PARTNER ACTION PLANS

In addition to the strategies outlined above, the City of Boulder’s community zero waste partners are also planning on pursuing the following action items over the next 2-3 years.

Boulder County

Goal: Boulder County’s Zero Waste Resolution, adopted in 2005, set a goal of eliminating waste for Boulder County government and for the county as a whole (i.e. achieve Zero Waste or “darn near”) by 2025.

Strategies:

- Construction and Demolition (C&D): Conduct

research on C&D recycling strategies and policies, continue outreach, and continue to explore the needs and potential citing for a C&D materials recycling facility

- Review the Zero Waste Action Plan for any updates that need to be adopted
- Support capacity for additional composting
- Support at-home composting
- Support ordinances similar to the City of Boulder's commercial recycling ordinance
- Boulder County Recycling Facility upgrades (in partnership with Eco-Cycle):
 - Install second corrugated cardboard baler with expanded pre-sort line and automatic plastic bag recovery system
 - Upgrade container line to include new optical sorter for plastic containers and glass processing line
 - Expand tipping floor in order to accept new commercial single stream material
 - Create new overhead coverage for bale storage areas

Center for ReSource Conservation:

- Continue to divert building materials from the landfill through our ReSource donation and retail center at 6400 Arapahoe. Keep improving operational efficiency on site so that we can continue to grow. Divert approximately 4,000,000 pounds of materials annually through this site by 2017.
- Provide new services at ReSource which will allow us to divert more materials, particularly the ability to process increased amounts of reclaimed lumber.
- Become the leader in increasing diversion of Construction and Demolition (C&D) materials across Boulder by:
 - Continuing to provide Construction and Demolition (C&D) services to City of Boulder residents, including deconstruction plans, material pickups

and deconstruction expertise.

- Expanding our C&D and acquisition services by increasing our internal capacity (staff, trucks, etc) and by raising funds to make strategic investments and improve our processes.
- Offering multifaceted C&D services, including contractor education and outreach, data tracking and analysis and deconstruction plan verification.
- Serve as a key part of the City's Recycle Row and as an active partner in the Boulder Zero Waste community.

University of Colorado-Boulder:

As the University continues to achieve progress towards carbon-reduction goals outlines in the University's Conceptual Plan for Carbon Neutrality (CPCN), the campus must place greater emphasis on waste reduction program in order to decrease its impacts on ecosystems and communities.

Goals:

- CU-Boulder should increase its own landfill diversion rate to at least 90 percent by 2020 as a continuous improvement benchmarking pursuit of a zero-waste goal.
- CU-Boulder shall prioritize materials management activities according to the time-honored maxim: "reduce, reuse, and recycle", that seeks first to work with suppliers to reduce or eliminate incoming supply chain materials.

Strategies:

- Design and integrate infrastructure and systems that support Zero Waste practices.
- Retrofit Zero Waste collection systems in existing facilities and all outdoor containers.
- Site and construct a compost system off campus in



partnership with the city or county, capable of processing all campus originated pre- and post-consumer organics, and develop on-campus end use destination where possible and market these materials in the community.

- In support of Zero Waste goals and the university's educational mission, examine size, location, and operational capabilities of the existing facility as a campus unit or in conjunction with the city or county.
- Acquire or create small, flexible interim storage facilities to manage construction and demolition waste campus-wide.
- Actively pursue a partnership with the county to manage construction and demolition (C&D) waste.
- Include a requirement to vendors and on-campus contractors to "pack it in, pack it out".

Western Disposal:

- Work with the City of Boulder and Boulder County to require purchase and use of locally processed and produced compost and mulch products by their internal departments and contracted vendors.
- Expanded outreach to customers informing them of the new regulations and potential options to meet the requirements.
- Collaboration with the City of Boulder and Boulder County on Zero Waste Outreach efforts (education, signage, etc).
- Open Western Disposal's composting facility to other commercial haulers.
- Increase in recycling and composting routes due to additional volume and number of customers.
- Increase diversion rates in all sectors: single family residential, multifamily, and businesses.
- Attempt to find new markets for ground yard waste and wood waste coming from City of Boulder and Boulder County sponsored drop off.

Eco-Cycle:

Businesses:

- Help businesses comply with City of Boulder's universal recycling ordinance by:
 - Creating customized trainings, tools, and hauling services to better meet businesses' needs,
 - Supporting downtown or other space-constrained Boulder businesses in overcoming unique challenges, matched with unique collection services,
 - Expanding Eco-Cycle's Green Star Businesses program to at least 50 businesses, and

- Expanding diversion and collections of hard-to-recycle materials from businesses.
- Support ordinance requiring reusable/recyclable/compostable containers to avoid take-out waste.

Residential:

- Support Multi Family Units (MFUs) in complying with the new ordinance with efforts including canvasses, volunteer trainings and recruitment, collection services, etc.
- Better support the Spanish-speaking community in the use of Zero Waste services and programs.
 - Recruit and train Spanish-speaking Block Leaders and MFU champions.
 - Increase the amount of educational and outreach materials in Spanish.
- Significantly increase residential understanding of additional resources available to them to help them achieve their goals, such as:
 - Eco-Cycle A-Z Guide, which features more than 200 materials that can be recycled or reused within Boulder County through a wide variety of businesses and programs,
 - Guidelines, tools, programs, etc. provided by Eco-Cycle and others, and
 - Recycle Row and its facilities.

Schools:

- Make every school in Boulder Valley and St. Vrain Valley School Districts a Green Star (Zero Waste) School, currently 27 on the waiting list.
- Modify the Green Star Schools program to fit the unique needs of larger schools, particularly high schools.
- Expand reach of K-12 award-winning multi-topic environmental education program.

Zero Waste Events:

- Help shape ordinance language that has clear and enforceable requirements for event planners to exclusively use Zero Waste products.

Center for Hard-to-Recycle Materials (CHaRM):

- Continue to increase diversion by accepting more types of hard-to-recycle materials as new opportunities develop.
- Complete Phase 2 of 6400 Arapahoe development to allow for Eco-Cycle and ReSource expansion as

originally planned.

- Continue to develop social enterprise/community building opportunities by partnering with ReSource and potentially other businesses (e.g. Blue Star) to create higher-end uses for materials, local jobs and business creation, and reuse.
- Work with community partners through Boulder County Resource Conservation Advisory Board (RCAB) to explore and identify and create appropriate infrastructure and policies to increase diversion of construction and demolition materials.

Compost:

- Work with local partners, including Boulder County Resource Conservation Advisory Board (RCAB), to create local opportunities to collect, process and disseminate compost and build local soils.

Community-wide Programs:

- Collaborate with Boulder County partners to address some of the most significant materials still being landfilled, focusing on materials with greatest opportunity to reduce GHG emissions and set targets for significant increase in successful diversion.
- Create Micro-Green Star Communities (Sustainable Communities), combining Zero Waste with Zero Emissions and Resiliency.
- Help shape and support a county sustainability tax, including funding for Zero Waste infrastructure.
- Create extensive training and empowerment programs for citizen volunteers.
 - o Train Network volunteers to implement sector-specific campaigns to implement diversion at MFUs, businesses, neighborhoods, etc.
 - o Train volunteers to be climate captains, well versed on all things Zero Waste, Zero Emissions, and Resiliency.

Community-wide Education:

- Advocate for the importance of Zero Waste as a significant climate change connection.
- Create “Zero Waste Online Channel” on Eco-Cycle website as part of the website upgrade.
 - o Create quick video, presentations, volunteer webinars, PSA’s, how-to’s, etc. for all sectors.
 - o Provide a platform for viewing all Eco-Cycle and other local videos on Zero Waste, including from interested partners.
- Expand Choose to Reuse campaign to significantly further the reuse movement.
 - o Promote Tour de Thrift map of reuse opportunities within our community.
 - o Expand use of Choose to Reuse pledge campaign to accompany effort to reduce food take-out packaging.
 - o Promote the sharing economy in neighborhoods with Block Leaders (where sharing of tools, garden produce, cars, etc. is structured and encouraged).
- Continue to create guidelines, articles, blogs, infographics, holiday-related content, 3-R content, and distribute through Eco-Cycle Guide, holiday guide, ads, brochures, website, videos, presentations, tours, etc.

Eco-Cycle International:

- Expand new online “Eco-Cycle Solutions Hub,” launched in 2015 to help communities around the nation achieve Zero Waste.
 - o Continue to populate map and database of best Zero Waste practices from around the nation and world.
 - o Continue to collect and create Zero Waste tools for communities.

