From Metrics to Action: CARP Zero Waste Goals
Executive Summary

● 80% of waste generated in Evanston ends up in a landfill
  ○ Commercial entities generate the most waste but have a diversion rate of less than 10%
  ○ Food and yard waste currently make up 35% of residential landfill waste

● Reducing waste and increasing waste diversion both require attention
  ○ The City should consider a strategy that balances both goals, aligned to zero waste hierarchy

● To meet the most immediate goal of reaching 50% diversion rate by 2025, Evanston must enact legislation and phase in policies that double the diversion rate from current values over the next four years.
  ○ Modeling a waste diversion strategy with a phased approach requires that major improvements are seen year-over-year between 2022-2024
  ○ Seeing that sustained change requires passing phased legislation now to give the City and businesses enough time to adapt to new requirements

● Focus on food waste mitigation and recycling policies to drive change
The Zero Waste focus area is designed to change the waste system, not just increase diversion.

Goal
Increase community waste diversion rate to:

- 50%  – by 2025
- 75%  – by 2035
- 100% – Zero Waste
Food Waste Mitigation Hierarchy

US Environmental Protection Agency Food Recovery Hierarchy to ground policies and programs around food waste mitigation and composting.
2017 Total Waste Baseline numbers

- More than 90% of commercial waste ends up in a landfill.
- Less than 1% commercial waste is composted.

<table>
<thead>
<tr>
<th>Waste (Tons)</th>
<th>Landfill</th>
<th>Recycling</th>
<th>Compost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>28,695</td>
<td>2,773</td>
<td>54</td>
</tr>
<tr>
<td>Residential</td>
<td>16,718</td>
<td>7,337</td>
<td>2,746</td>
</tr>
<tr>
<td>City Collected</td>
<td>3,153</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Waste</td>
<td>48,566</td>
<td>10,110</td>
<td>2,800</td>
</tr>
</tbody>
</table>
Over 30% of characterized waste consisted of food waste and 4% consisted of yard waste; both could be composted instead.

Unrecoverable materials, construction materials, or non-aluminum metals make up 20% of the total.
The amount of waste currently sent to landfill could be reduced by nearly 75% if recycling and composting were fully utilized.

Next Steps:
1. Key stakeholder engagement to establish zero waste strategic plan
2. Food Waste Mitigation hierarchy, identify current best practices, future opportunities & partnerships
3. Prevention, Reuse and Recycling waste hierarchy, identify current services and future opportunities
Accelerating Landfill Diversion Required to meet CARP Goal

To meet the most immediate goal of reaching 50% diversion rate by 2025, Evanston must phase in policies that double the diversion rate from current values over the next four years.
Increasing Year Over Year Landfill Diversion Required

Year-over-year increase in the amount of waste diverted (assuming total waste constant) to meet CARP targets

If the total amount of waste generated each year is the same, how much more waste will we need to divert each year, relative to the previous year, in order to meet our diversion goals? This chart aims to answer that question; each point shows the % change in the amount of additional waste diverted relative to the previous year. Higher numbers indicate more change, and therefore more required intervention or incentive.
Meeting current waste diversion targets requires diverting a substantial amount of landfill waste, even if the overall amount of waste generated does not change.

Assuming total waste generated remains constant, Evanston will need to recycle or compost nearly 30,000 tons of waste by 2025, a 121% increase.

Landfill waste must decrease by 16,000 tons per year, a 35% decrease.
Waste Diversion - With 2% annual waste reduction

Simultaneously increasing the diversion rate while reducing waste requires cutting landfill waste nearly in half and is therefore challenging, but is aligned to Evanston’s vision of zero waste.

If waste decreases by 2% each year over the previous year, Evanston must compost or recycle 25,000 tons of waste each year, a 92% increase over the current volume.

Landfill waste must decrease by 20,000 tons of waste each year, a 44% decrease.

Recommend waste reduction strategies be incorporated into a Zero Waste Strategic Plan, including reuse, repair and donation opportunities.
Waste Reduction and Prevention is Important

A key element of the Zero Waste Strategy is to encourage City operations, businesses and residents to raise awareness about daily practices that can avoid creating waste in the first place. There are many opportunities, including:

- Participate in Evanston’s repair clinic to prolong the life of clothing, appliances and equipment to cut down on consumption.
- Avoid purchasing single-use water bottles and use of other single-use plastics
- Reduce food waste by buying only what you need, preserve and use leftovers and understand expiration dates.
- Increase fresh food donation to food banks and soup kitchens
Recycling & Compost - Service Level Recommendations

1. Universal Recycling Program
   a. Our recommendation is to phase in composting first, based on weight of food waste in waste characterization studies. However, in the current global economic climate, it may be challenging in the near term to implement.
   b. In addition to composting, focusing on recycling will also help the city achieve its diversion goals, and though it will not be as immediately impactful to do so without a focus on composting, it is perhaps easier and even cost-effective to do so at the moment.

2. Establish recycling and compost mandatory minimum tote size provided by vendors for residential, multi-family and commercial properties
   a. If the City would like ZWWG to provide a recommendation on tote size, more data is required about current service levels to be able to make a definitive size recommendation.

3. Partner with recycling and compost vendors to develop mechanisms for quality checks to reduce contamination
   a. Ex: “Nope” tags when contamination identified in recycling bins during pick-ups
   b. Community awareness and education to reduce contamination
Zero Waste Strategy Recommendations

1. Establish Zero Waste Strategic Plan with key stakeholder engagement

2. Food Waste Mitigation:
   ○ Establish / expand food donation programs (ex: food pantries during COVID-19 response)
   ○ Access to composting for all residential & commercial (phased in)

3. Recycling:
   ○ Establish mandatory recycling at all properties & commercial businesses (phased in)

4. Community Education & Partnerships:
   ○ Education on existing donation opportunities (ex: Goodwill, textile donations, etc)
   ○ Education on reuse opportunities (ex: Evanston Rebuilding Warehouse, Repair Clinics)
   ○ Hosting community events & programs (ex: Evanston Recycles event, Great Pumpkin Compost, plastic film)
   ○ Reduce contamination in recycling and composting waste streams

5. Prevention & Reuse: 2% annual waste reduction goal for CARP Zero Waste

6. Looking Ahead - explore Circular City / Economy concepts
Looking Ahead: Intro to Circular Economy
Circular Charlotte

Circular Charlotte is a new, regenerative economic model designed to produce zero waste. Currently, Charlotte’s 900,000 tons of annual waste represent a residual value of roughly $111 million per year. By simply adopting a comprehensive waste diversion strategy, Charlotte could create more than 2,000 jobs by harnessing material instead of dumping it into ever-growing landfills.

The City of Charlotte will implement Circular Charlotte as an economic development strategy in Charlotte. The Circular Charlotte initiatives will help Charlotte address key issues impacting the entire city - economic and social mobility. The expectation is that Circular Charlotte will help Charlotte become the epicenter for people and cities to learn how to experiment, create and innovate.

1. Charlotte as a Zero Waste City
2. Charlotte as a Resilient and Healthy City
3. Charlotte as an Innovative City of the Future
4. Charlotte as a City with Opportunities for All
VISION FOR BOULDER

On November 13th, we hosted a public workshop to co-develop a vision for a Circular Boulder. We invited the community to think about how Boulder’s unique characteristics could support circularity, and how circularity could support other values the community wants to foster locally. The following pages outline a first draft of this vision.

The vision is organized by three themes explored in the workshop:
1. Environment & Resilience
2. Society
3. Economy & Equity

Graphic recording interpretation of the workshop events and discussions, by artist Emma Ruffin (Desert Raven Design).
Circular Cities

Cities play a central role in the global economy. Home to more than half of the world's population, they are creative, innovative centres of growth. This learning path explores how applying the principles of the circular economy to urban development will create cities that are able to thrive in the long-term, bringing prosperity to their citizens within planetary boundaries. Buildings, mobility, products and services, and food systems are examined in detail as these are urban systems that play an important role in our lives, and where transformations can be made. Added to this, they can be managed at the local level and can have significant impact. Within each of these systems the opportunities offered by innovations in design, business models, and digital technology are highlighted.
Are we next?

★ Equity-Centered
★ Resilient
★ Zero Waste
★ Innovation & Economic Opportunity
Next Steps

1. Development of Zero Waste Strategic Plan
   a. Establish roles, responsibilities, key stakeholders/partners and timelines for development and implementation
   b. Feedback on Circular City concept
2. Incorporate 2019 waste data (City to provide)
3. Revisit timeline and 2020 action plan: ZWWG from February 9, 2020 meeting minutes

Broader Opportunity for Environment Board, Community Partners & Businesses:
Serving our community, addressing economics for our businesses during COVID-19. Focus on food waste mitigation by rapidly expanding food donation programs in the City
● Reduce food waste & waste disposal fees for businesses
● Expand volumes of food available to our food insecure in our communities