WASTE AND MATERIALS MANAGEMENT WORKING GROUP

MEETING #1: OCTOBER 5, 3-5 PM

Community Climate Action Plan

City Council Resolution No. 3044

CITY OPERATIONS

Strategic Energy Management Plan to:

- Become carbon neutral by 2030
- Reduce fossil fuel use for City facilities and operations by
  - 40% by 2030
  - 70% by 2050

COMMUNITY WIDE

Community Climate Action Plan to:

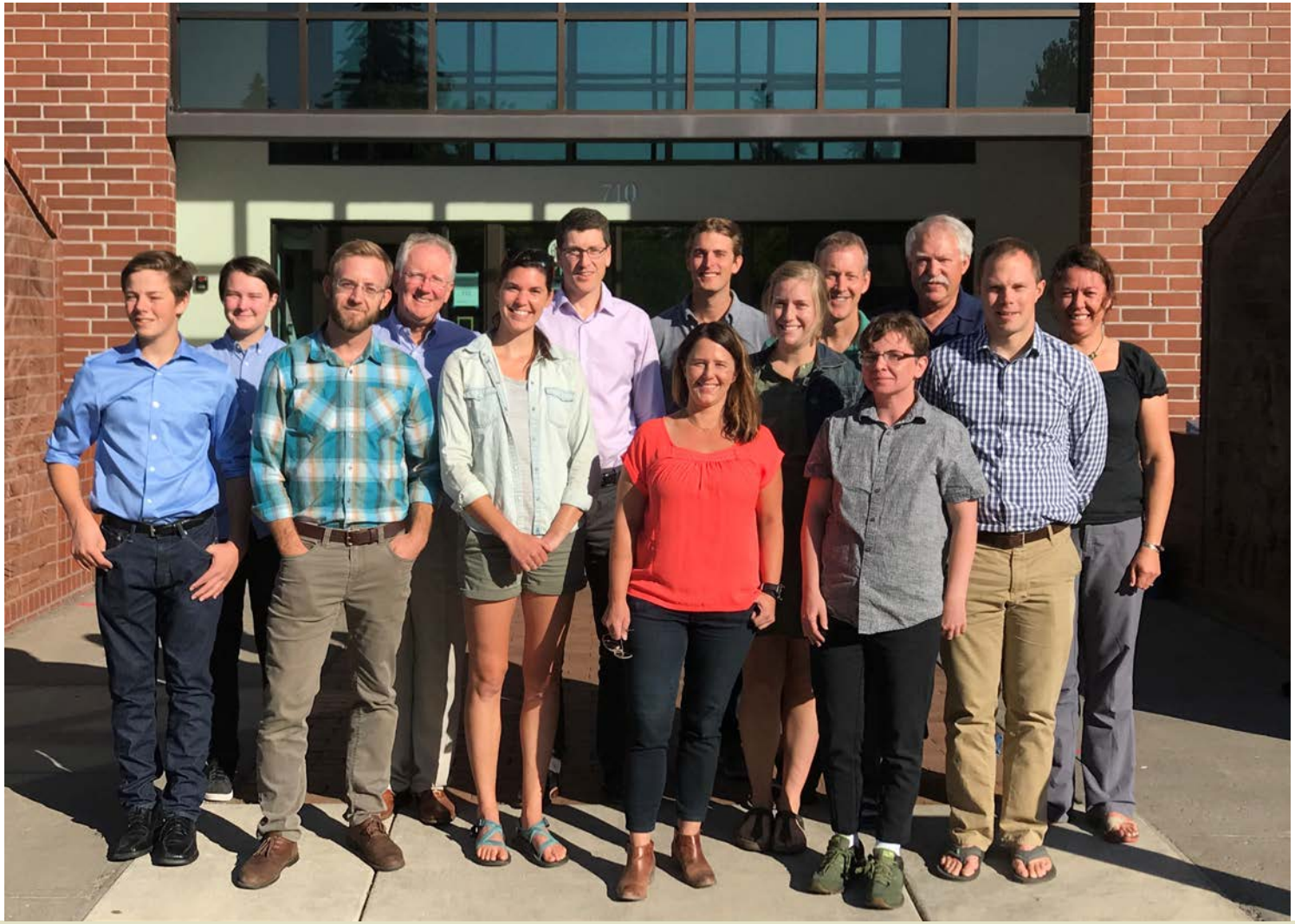
- Reduce fossil fuel use community wide by
  - 40% by 2030
  - 70% by 2050

City Council Resolution No. 3099

- Established Climate Action Steering Committee (CASC) to create Community Climate Action Plan (C-CAP)

Community Climate Action Plan

CLIMATE ACTION STEERING COMMITTEE



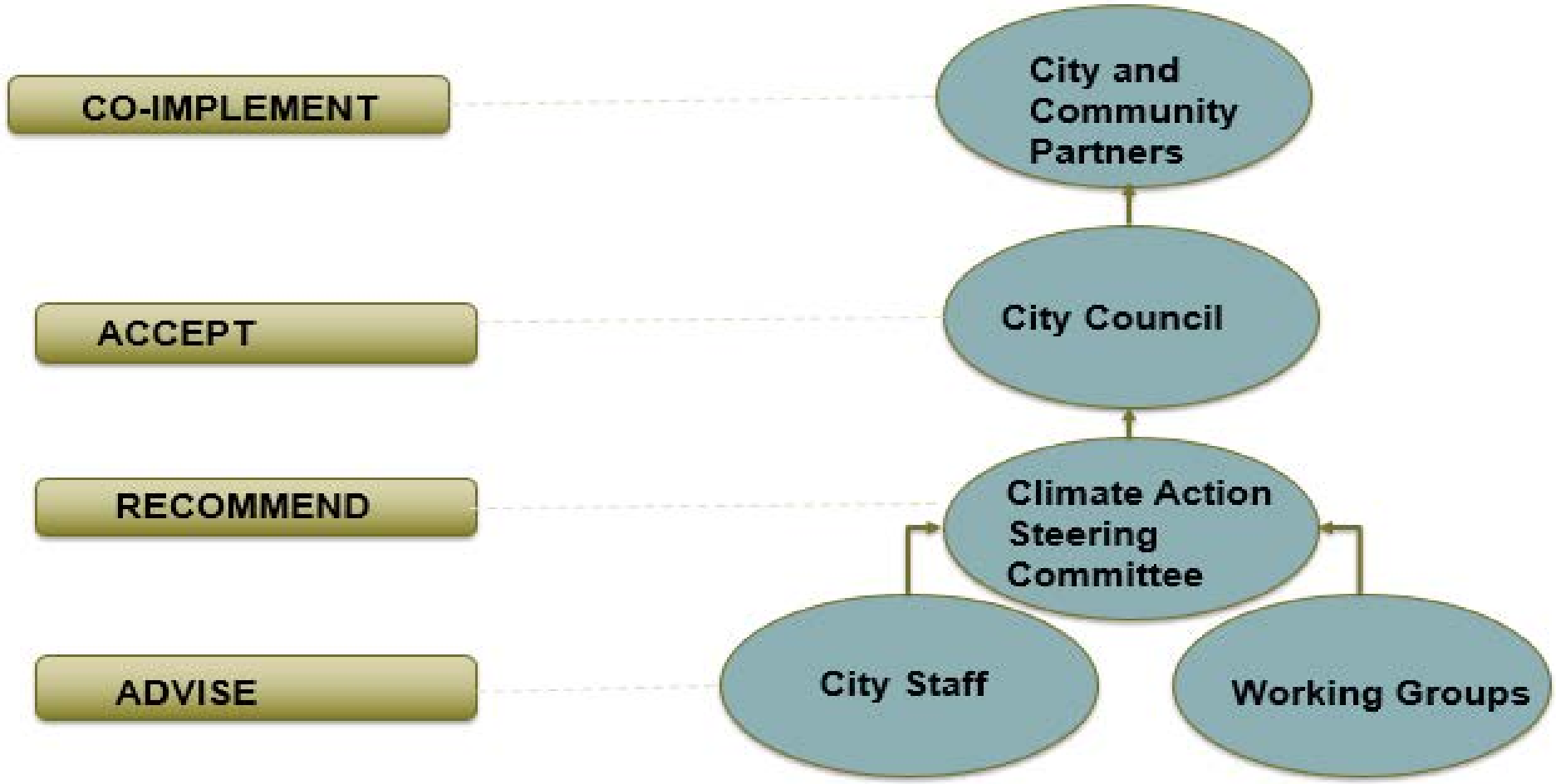

October – December 2018
Brainstorming actions with community engagement
January 2019
Community Survey: Feedback on Ideas
February – May 2019
Evaluating actions through triple-bottom-line lens


May 2019
Community Survey: Feedback on final actions
June – August 2019
Implementation Planning: Engage the relevant stakeholders
September 2019
Draft plan to Council

Sector Working Groups

- Led by Climate Action Steering Committee members
- Direct input on barriers, objectives, and equity considerations
- *Brainstorm and create* list of potential climate actions

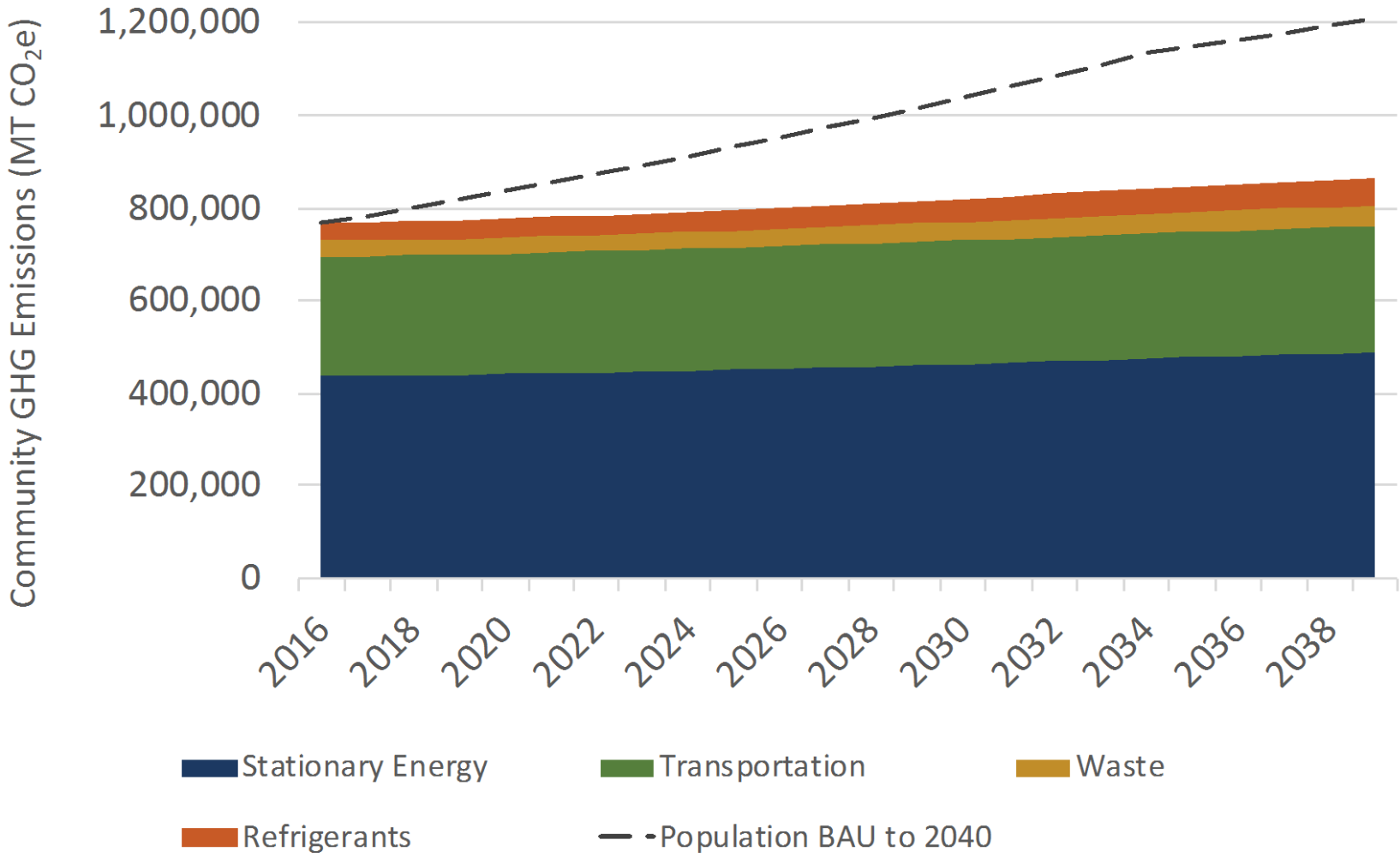
Working Groups advise the Climate Action Steering Committee


CO-IMPLEMENT
ACCEPT
RECOMMEND
ADVISE
City and Community Partners
City Council
Climate Action Steering Committee
City Staff
Working Groups

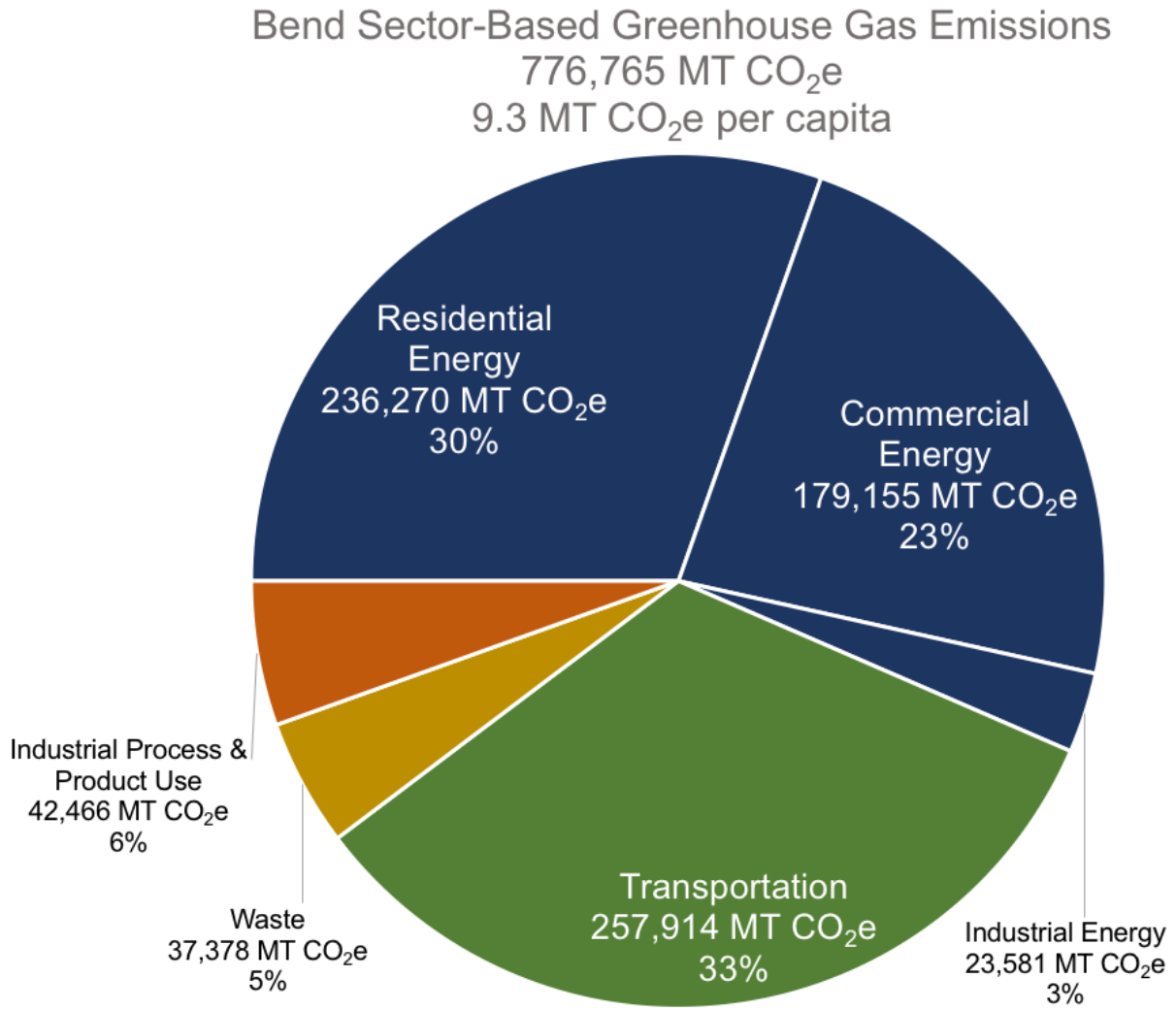
BEND COMMUNITY GHG INVENTORY & WASTE AND MATERIALS MANAGEMENT

BEND COMMUNITY GREENHOUSE GAS EMISSIONS INVENTORY

Business As Usual Emissions Forecast



WASTE AND MATERIALS MANAGEMENT SYSTEM



RELEVANT SOURCES OF EMISSIONS

WASTE

Disposal in landfills and wastewater treatment produces methane, most of which is collected and used for energy, but a fraction leaks out to the atmosphere, having a negative climate impact

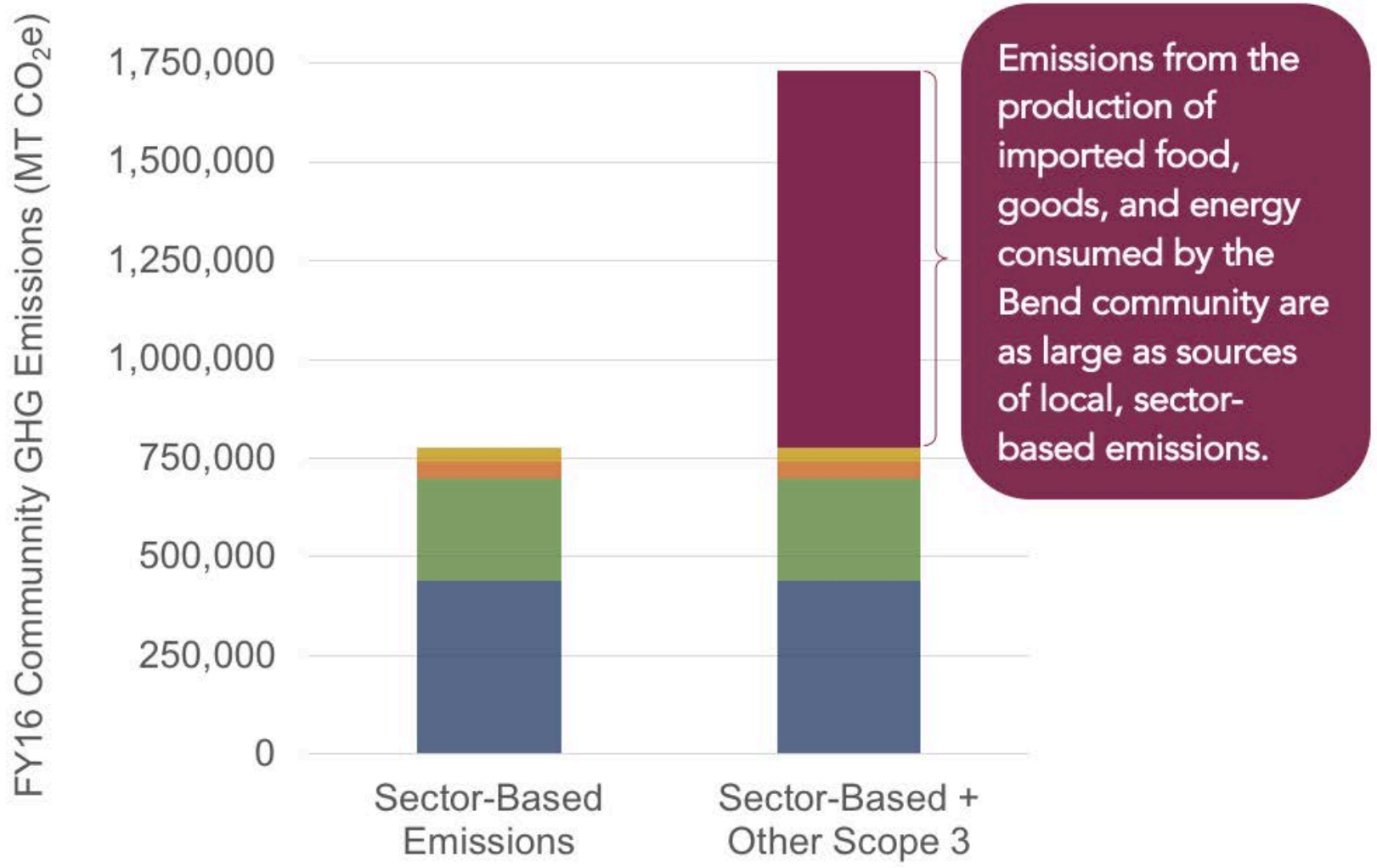
HOUSEHOLD CONSUMPTION

Emissions that are generated outside of the community during the production of goods, foods, energy and services that are consumed by residents of Bend. These emissions are large in scale but are more difficult to accurately measure over time compared to other sources of emissions included in the inventory.

HOUSEHOLD CONSUMPTION

Household goods: Emissions from extraction, manufacture, and transportation of raw materials into final products such as construction, automobile, furniture, clothing, and other goods.

Household food: Emissions from agricultural (energy for irrigation, production of fertilizers, methane emissions from livestock, etc.), transportation of raw materials and other finished products emissions/



***Emissions from household consumption =**

871,543 MT CO2e

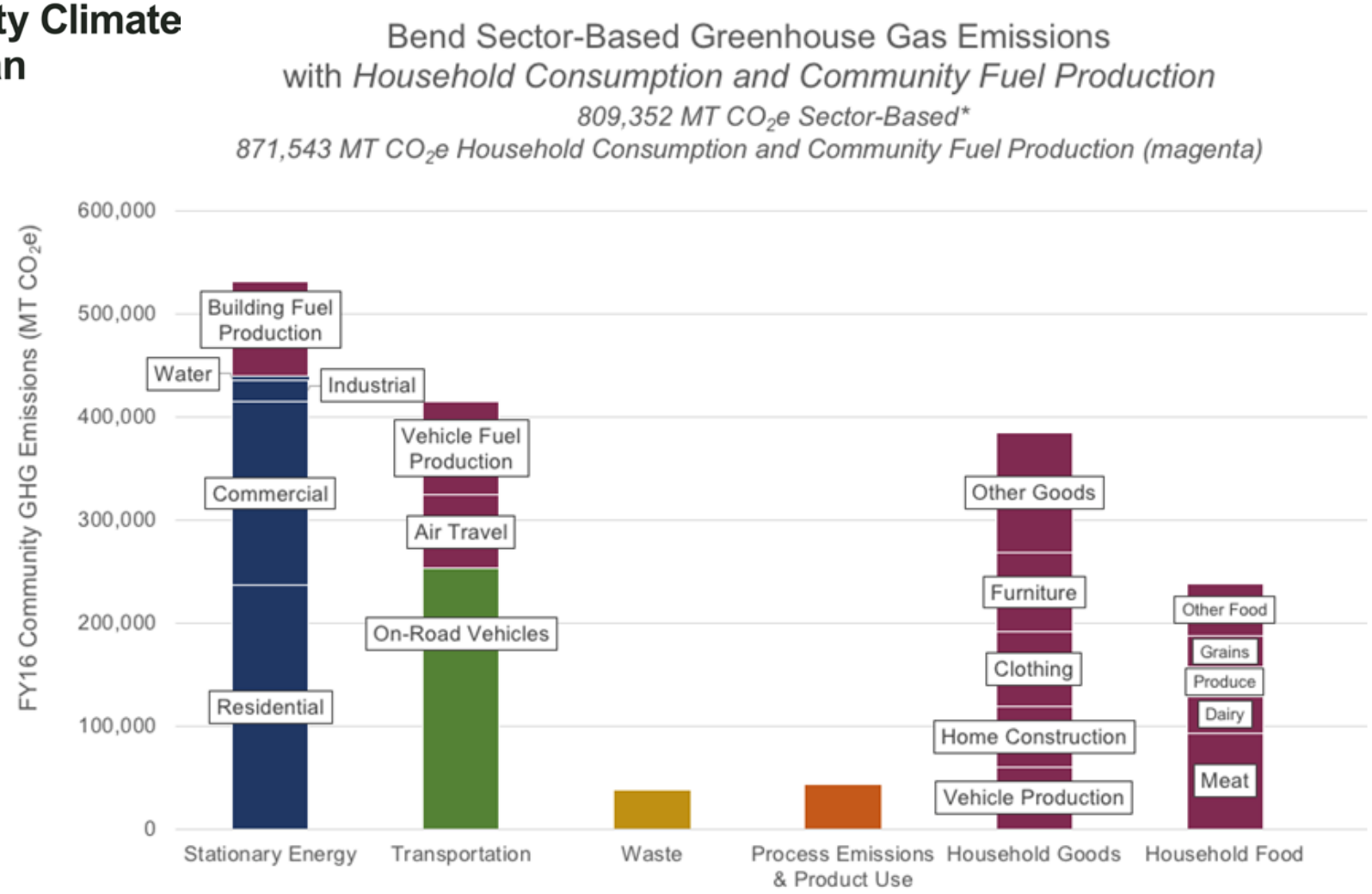


Figure 4: Detailed summary of sector-based emissions and comparison to emissions from household consumption and fuel production.

Note Figure 3 presents location-based emissions for electricity. Market-based emissions details are included in Figure 5 and Figure 7*
Note2: Other Goods include electronics, toys, personal care products, cleaning products, printed reading materials, paper, office supplies, and medical supplies.

BACKGROUND INFORMATION

1. ODEQ Materials Management Program – Elaine Blatt, DEQ
2. Local Waste System and SWMP Update – Timm Schimke, Deschutes County
3. Current and future waste programs – Brad Bailey, Bend Garbage
4. Current education programs – Denise Rowcroft, The Environmental Center

MATERIALS MANAGEMENT IN OREGON
AN OVERVIEW OF DEQ WORK

Elaine Blatt
Bend C-CAP
Materials Management Working Group
Bend, OR
October 9, 2018

WHY MATERIALS MATTER



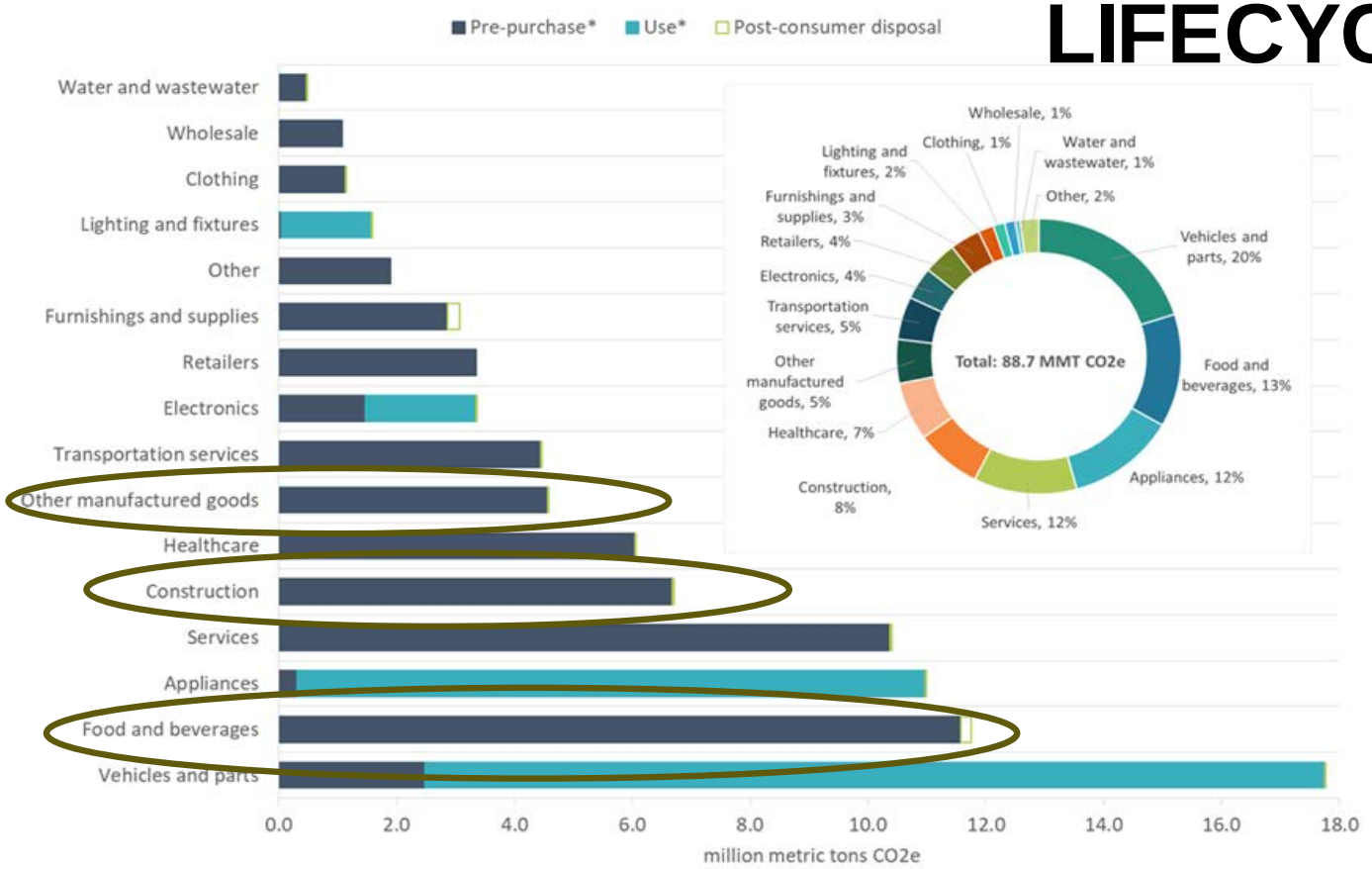




SUSTAINABLE MATERIALS MANAGEMENT: A "LIFE CYCLE" VIEW OF IMPACTS AND ACTIONS

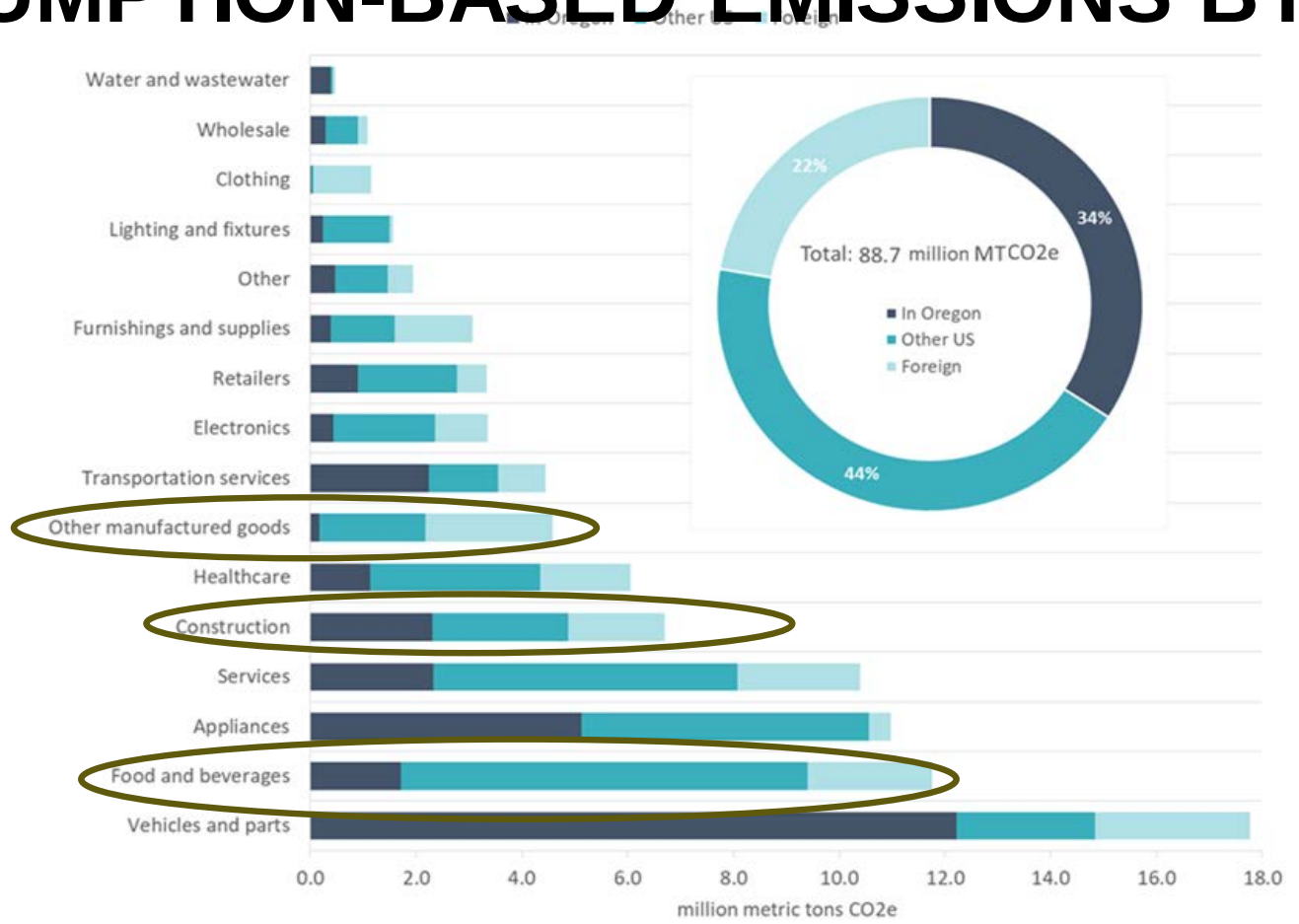
DEQ
State of Oregon
Department of Environmental Quality

2015 OREGON GHGS EMISSIONS BY CATEGORY + LIFECYCLE STAGE



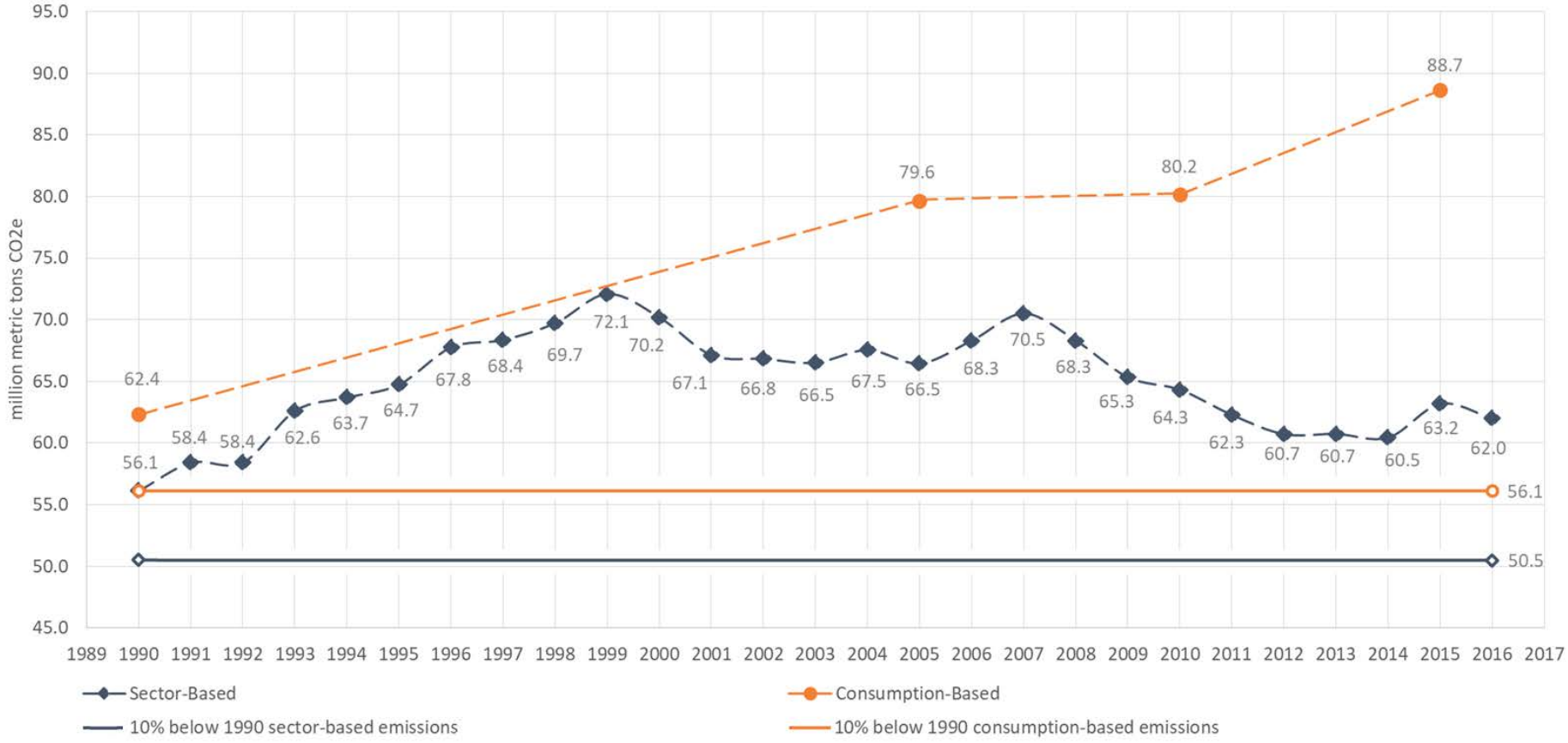
* "Pre-purchase" are all emissions that occur prior to final purchase, including production, supply chain, transport, retail and wholesale. "Use" refers to emissions resulting from the use of vehicles, appliances, electronics and lighting. Other categories (e.g., food and clothing) have use phase emissions that are accounted for elsewhere. For example, emissions from cooking and laundering are both assigned to the category of "appliances", which include ranges and clothes dryers.

CONSUMPTION-BASED EMISSIONS BY LOCATION



2015 Oregon consumption-based greenhouse gas emissions, by location of emission

TRENDS IN OREGON SECTOR-BASED AND CONSUMPTION-BASED GHG EMISSIONS, 1990 - 2016

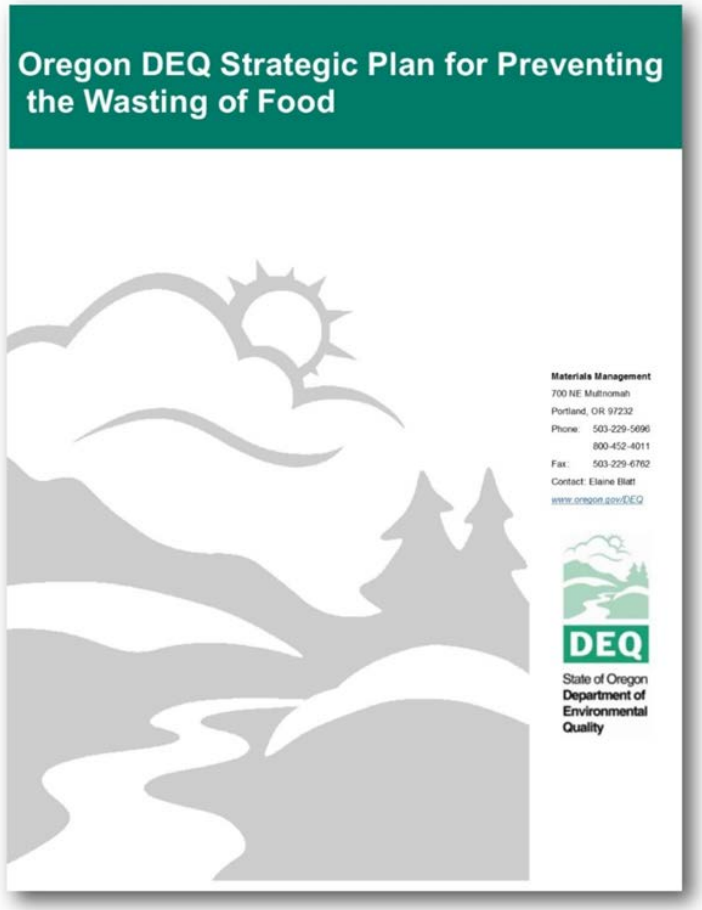


HOW MIGHT ONE REDUCE CONSUMPTION-BASED EMISSIONS? (FOCUSING ON MATERIALS)

- A few current examples from DEQ:
  - Preventing the wasting of food
  - Extending the lifespan of products (“Make Every Thread Count”)
  - Environmental product declarations for concrete
  - Reuse/repair
  - Recycling

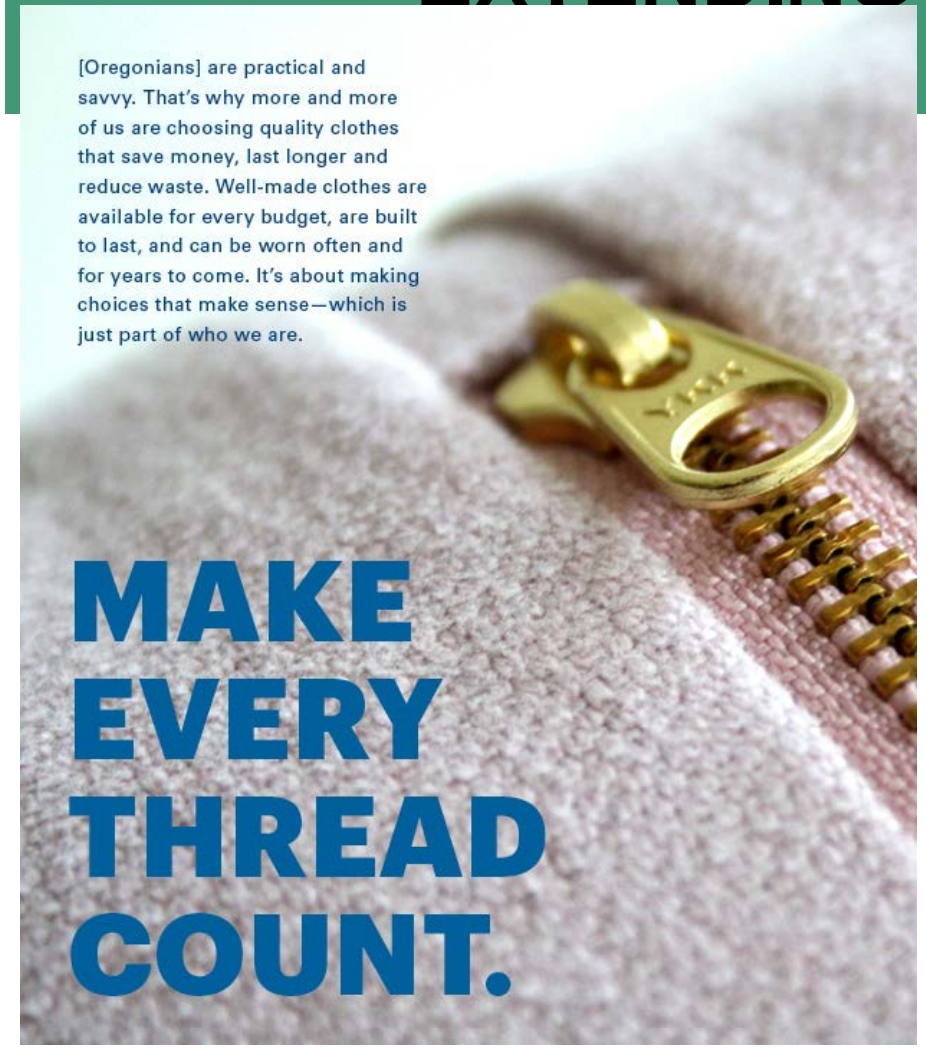
- Local government toolkit under development this year by Carbon Neutral Cities Alliance (international)
  http://carbonneutralcities.org/

PREVENTING THE WASTING OF FOOD



http://www.oregon.gov/deq/mm/Pages/foodwastestrategy.aspx

EXTENDING THE LIFESPAN OF PRODUCTS



https://www.oregon.gov/deq/mm/wpcampaigns/Pages/textiles.aspx

ENVIRONMENTAL PRODUCT DECLARATIONS FOR CONCRETE

OCAPA

EPD "Nutrition" Label

Your Building Product

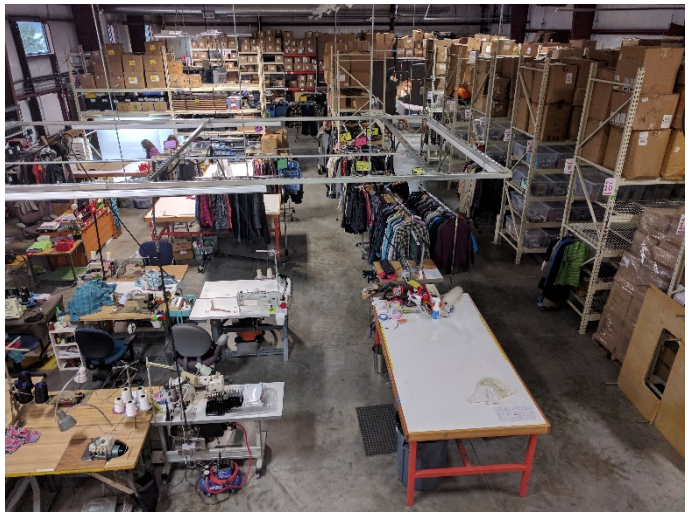
Amount per Unit

LCA IMACT MEASURES	TOTAL
Primary Energy (MJ)	12.4
Global Warming Potential (kg CO^2 eq)	0.96
Ozone Depletion (kg CFC- 11 eq)	1.80E-08
Acidification Potential (mol H^+ eq)	0.93
Eutrophication Potential (kg N- eq)	6.43E-04
Photo-Oxidant Creation Potential (kg O3 eq)	0.121

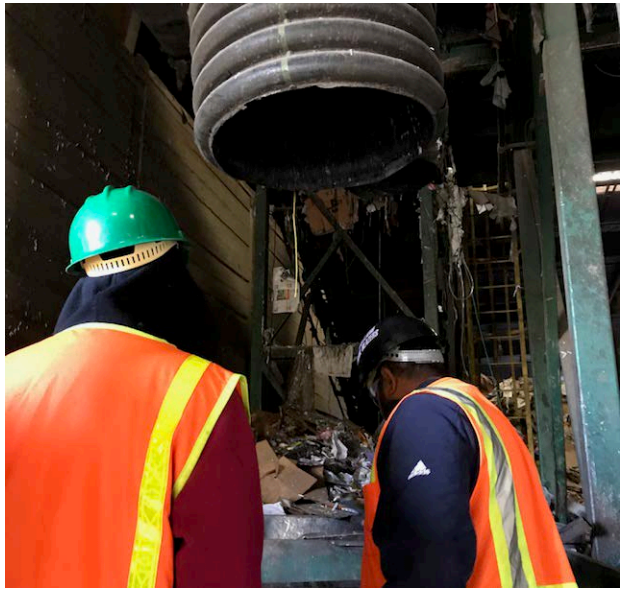
Your Product's Ingredients: Listed Here

http://www.ocapa.net/oregon-concrete-epds

REUSE AND REPAIR



OREGON'S MATERIAL RECOVERY SYSTEMS



THANK YOU

Elaine Blatt
Oregon DEQ
blatt.elaine@deq.state.or.us

SOLID WASTE MANAGEMENT

In

DESCHUTES COUNTY

STATE LAW DESIGNATES LOCAL GOVERNMENTS AS THE RESPONSIBLE PARTY FOR PROPER MANAGEMENT OF SOLID WASTE IN THEIR BORDERS

- The Department of Environmental Quality (DEQ) is the regulating authority
  - Ensures compliance at permitted facilities
  - Ensures compliance with opportunity to recycle laws
- The County owns, operates, and holds the DEQ permits for all disposal facilities and administers franchised collection in unincorporated areas of the County.
- The City administers franchised collection within its borders
- State law dictates recycling requirements
  - County must provide collection of recyclables at all disposal sites.
  - Cities have a variety of requirements/options listed in state law for providing the opportunity to recycle in their city

SOLID WASTE MANAGEMENT PLANNING

- It is critical that cities and the county work together to effectively manage solid waste.
- County has and will continue to make significant investments in disposal infrastructure and needs assurances that waste flows to those facilities in order to pay for them.
- There are agreements between the city and county directing waste to county approved facilities.
- Decisions that the city makes can have impacts on disposal facilities
- Consistency between the County and each City is important

CURRENT PLAN DEVELOPMENT STATUS

- Knott landfill is expected to be full by 2029
- The need to determine future disposal triggered the planning effort
  - New landfill in County
  - Long haul to existing landfill
  - Conversion technology to extract energy from waste prior to landfilling
- Plan will look at entire system to insure all aspects are working together.

PRIMARY GOAL OF THE SOLID WASTE MANAGEMENT PLAN

- “To work cooperatively with Cities and service providers to offer citizens and businesses an integrated solid waste management system that delivers quality and cost-effective services while achieving the best use of our resources and reducing waste disposed in landfills.”

PLAN RECOMMENDATIONS SO FAR

1. Residential Yard Waste/Food waste
2. Commercial Food Waste
3. Upgrade organic waste processing facilities
4. Construction & Demolition Debris
5. Focus on Tourism
6. Multifamily Recycling
7. Expand education and promotion

LOCAL WASTE PROGRAMS
BRAD BAILEY, BEND GARBAGE


RETHINKWASTE
DESCHUTES COUNTY


the
environmental
center


DESCHUTES COUNTY
Solid Waste


CASCADE DISPOSAL
We Do What It Takes


GARBAGE
BEND
& RECYCLING


DESCHUTES
DR
RECYCLING


HIGH COUNTRY
HCD
DISPOSAL

RethinkWasteProject.org

RethinkWasteProject.org

RECYCLE SMARTER, NOT MORE

REDUCE : IDEAS & INSPIRATION

40% OF FOOD IN AMERICA IS WASTED

Rethink about it! Start thinking like a food waste warrior. Start planning your meals carefully, buy fewer groceries and learn how to revive would-be throwaways. Another tip? Consider your freezer your new BFF. Get your family in on the mission and watch habits start to change! Learn more on our website.

RethinkWasteProject.org

RETHINKWASTE

REUSE : TIPS & TRICKS

DARE TO REPAIR

Rethink about it! Ripped backpack, busted lawn mover, flickering lamp? Resist the throwaway culture and feel good about becoming a fixer, a mender, a DIY repairer. Check out our website to learn more about renew-it-yourself tips or when you can plug into our next Repair Café.

RethinkWasteProject.org

RETHINKWASTE

RECYCLE : FACTS & FIGURES

10¢ REFUND

Rethink about it! It pays to recycle, especially since the can and bottle deposit in Oregon increased to 10¢ this year. Get the whole family in on it! You'll be doing something good for our community – and your pocketbook. Check out more recycling tips on our website.

RethinkWasteProject.org

RETHINKWASTE

COMPOST : GARBAGE OR GARDEN

JUST ADD WORMS

Rethink about it! Nature is amazing, isn't it? To keep your compost working efficiently, give it a good stir every so often. Or better yet, add worms! Worm composting is great in our high desert climate, whether you compost indoors or in your backyard. Check out our website for more compost ideas.

RethinkWasteProject.org

RETHINKWASTE

RETHINKWASTE DESCHUTES COUNTY

REDUCE | REUSE | RECYCLE | COMPOST | HAZARDOUS WASTE

FIND A RECYCLER OR REUSER

GET STARTED

Not sure what to do with items that aren't collected curbside? Think before you throw anything away. Use the search boxes below to find local businesses that reuse and recycle a wide variety of stuff.

Batteries ▾ | Watch batteries ▾ | Search

--Select--
Auto batteries
Hearing aid batteries
Household alkaline batteries
Rechargeable batteries
Watch batteries

DIS

This database provides numer County residents and businesses to reus sion does not constitute an endorsement of any kind, and we will attempt to keep all listings up to date. Ultimately, we advise contacting the listings to confirm current information.

RETHINKWASTE
DESCHUTES COUNTY
A project of The Environmental Center

Recycle Like Santa

Here's how.

It's estimated that between Thanksgiving and New Year's Day, more than 1 million tons of additional waste is generated EACH WEEK nationwide. And that doesn't even take into account all the waste and resources used upstream, around the world, to create all the new stuff people buy this time of year. Hopefully you've shopped with the earth in mind, **so here's our cheat sheet to help you reuse and recycle at your gift exchange.**

READ MORE

SIGN UP FOR THE CHALLENGE TODAY!

A LITTLE FOOD FOR THOUGHT

Taking the **Rethink Food Waste Challenge** is easy, we promise. We'll help you figure out how much food is really going to waste in your home — and how to make small shifts in how you shop, store, and prepare food, so you can toss less, eat well, and save money. The best part? Take the challenge whenever it works for you!

SAVING FOOD AND SAVING MONEY!

The average person who took the 4-week Deschutes County Rethink Food Waste Challenge reduced their wasted food by 59% from week 1 to week 4. That's a lot of dollars in the pocket!

Sign up at RethinkWasteProject.org/FoodWaste

Join us at the Volcanic Theater Pub on 9/24 for *Wasted! The Story of Food Waste*, produced by Anthony Bourdain.

RETHINKFOODWASTE

A program of The Environmental Center

RethinkWasteProject.org

the environmental center

Denise Rowcroft
denise@envirocenter.org
RethinkWasteProject.org
541.385.6908 x14

CAP BEST PRACTICE THEMES

1. **Waste Hierarchy Approach**

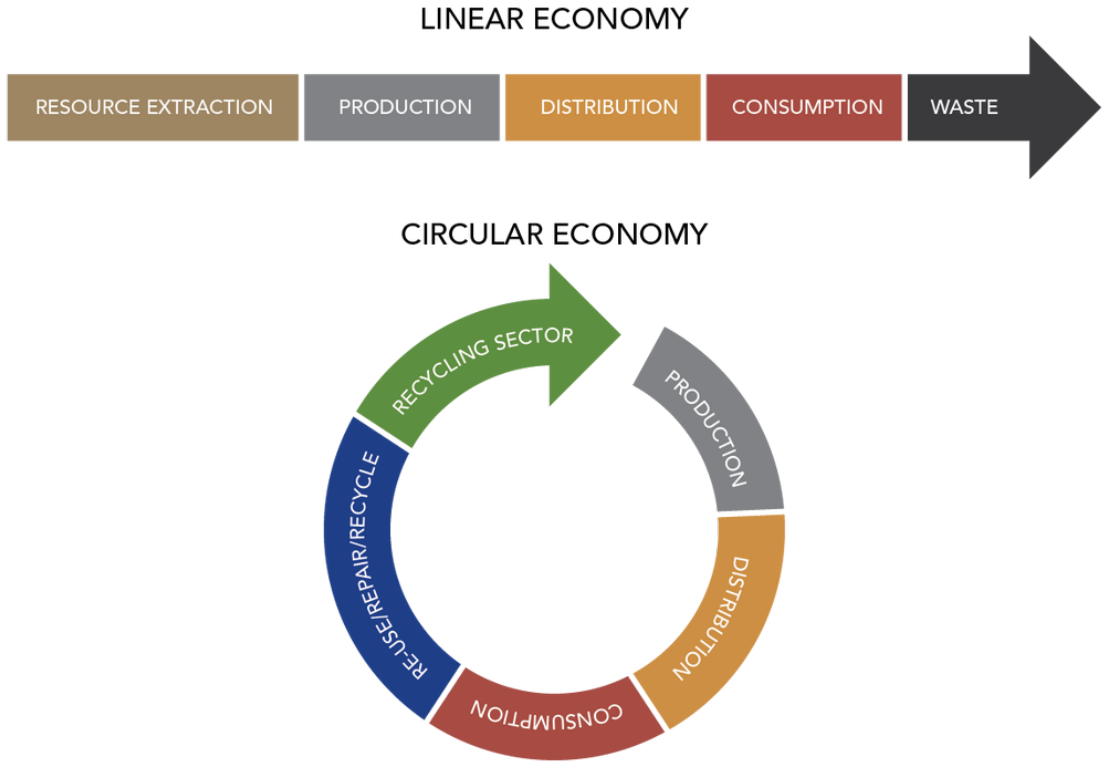
   i.e. education and outreach programs, promoting reuseables, banning styrofoams or plastics

2. **Low Impact Sourcing**

   i.e. promoting local food hubs, city sustainable procurement initiatives,

3. **Circular Economy**

   i.e. EcoDistricts, Innovation Districts centered on re-use, investing in expanded recycling programs



https://nerc.org/news-and-updates/blog/nerc-blog/2015/05/12/materials-management-and-the-circular-economy

WASTE & MATERIALS MANAGEMENT OBJECTIVES, BARRIERS, AND EQUITY CONSIDERATIONS

OBJECTIVES

1. Establish and commit the Bend Community on a path toward zero waste
2. Reduce overall consumption impacts in Bend Community
3. Support and increase diversion of special waste streams
4. Develop special programs to minimize impact of food system
5. Create a comprehensive community waste reduction educational platform
6. Have the public sector lead in waste diversion culture

BARRIERS AND EQUITY CONSIDERATIONS

BARRIERS

- Landfill is cheaper
- Low incentive for businesses
- Recycling infrastructure very limited nationwide (and worldwide)
- Lifecycle perspective not prevalent in businesses and institutions (from manufacturing standpoint or consuming standpoint)
- Lots of externalities that aren't incorporated
- Insufficient education and outreach to all sectors
- Human habits engrained
- Convenience vs. costs/efforts
- Lifespan of landfill

EQUITY CONSIDERATIONS

- Relatively harder for disadvantaged populations to put in the extra time, steps, resources that it takes to divert waste
- Access to information
- Access to transportation, space that is required for recycling or other waste diversion

EXERCISE

- Split into small groups around tables – up to 6 tables total
- Each table should have a facilitator from the CASC or City Staff
- Fill out worksheet with your own ideas on sticky notes
- Provide feedback on:
  - Objectives
  - Barriers
  - Equity Considerations
- Let us know if we missed any objectives
- TIME: 30-45 minutes total

BEFORE NEXT MEETING

- Brainstorm, ask your friends and networks – what actions should we take?
- Review Pre-Meeting Reading Materials to be Posted on CASC website
  - W&MM White Paper
  - CNCA Framework for Long Term Deep Carbon Reduction Planning Waste Systems Chapter
  - City of Aspen Greenhouse Gas Reduction Toolkit Waste and Landfill Chapter

Community Climate Action Plan

CITY OF BEND