

AN EMERGING BLUEPRINT FOR A FOOD WASTE FREE COMMUNITY

REPORT FROM THE 2016 "FATE OF THE PLATE" COMMUNITY DISCUSSION

MISSOULA, MONTANA



PREPARED BY:

I. Introduction

Home ReSource convened the “Fate of the Plate” on March 10, 2016 with a simple intention: to begin a community conversation to reduce food waste and increase composting in Missoula, Montana. As a nonprofit building materials reuse center with a mission to reduce waste and build a vibrant and sustainable local economy, we felt compelled to bring people together to discuss an important low-hanging fruit of waste reduction in our community: wasted food. Why? Because food waste is excessive, expensive, and environmentally harmful. Addressing this issue can put food and money back into our communities, improve food security, save the energy embodied in food, and reduce social and environmental impacts wrought by the 133 billion pounds of food wasted every year in the United States.

More than 40 stakeholders from local restaurants, nonprofit organizations, governmental agencies, and city government joined concerned citizens for two hours to eat, drink, and discuss. After a brief introduction to establish a shared context of the problems of food waste, participants split up into eight facilitated discussion groups in an effort to capture existing knowledge and to tap the community imagination around reducing food waste and increasing

composting. The groups discussed what is happening now and what barriers exist – real and perceived – around reducing food waste and keeping food out of the landfill through composting and other means. The groups also brainstormed the policies, programs, and activities they believed were components of a Food Waste Free community and generated a list of priority ideas.

This report is part vision, part catalog, and part workbook. We call it *An Emerging Blueprint for a Food Waste Free Community* and hope people fill in the blanks and continue to build upon the good work already being done in this community. We believe this report provides a rough yet detailed sketch of Missoula’s existing efforts and highlights opportunities to do more.

We recognize this report is just the beginning. We look to our great community to rise to the challenge of reducing food waste and keeping food out of the landfill through advocacy, action, art, or whichever means speaks to your heart. In the end, we hope this document is a catalyst that helps propel Missoula toward becoming a Food Waste Free community.

II. Summary & Community Recommendations

One month before the Fate of the Plate, Missoula City Council passed a Zero Waste Resolution, which set a goal to reduce Missoula’s municipal solid waste stream by 90% by 2050 with interim goals along the way. We began the Fate of the Plate discussion with the assumptions that reducing food waste and increasing composting are necessary steps toward achieving the

goals set out in the Resolution and are issues critical to the sustainability of our community. What we learned from the discussion supported our assumptions. The conversation confirmed that working to reduce food waste connects us to a complex system including food and agricultural policy, hunger, disposal, land use, transportation, education, ecology, and more. The vision that

emerged is of a system where people, policies, programs, resources, and infrastructures intentionally align in a manner that is sensible, equitable, economical, and respectful of the environmental footprint of our consumption.

Recommendations

1. Adopt two interrelated community goals:

Prevent food waste – **UPSTREAM GOAL**

Keep food out of the landfill – **DOWNSTREAM GOAL**

2. Identify leadership

Dedicated leadership is necessary at two scales:

1. Community leadership to keep people engaged in dialogue and working collaboratively toward comprehensive solutions, and;
2. Individual and organizational leadership in specific sectors to actively identify and implement solutions.

3. Collaborate

An Emerging Blueprint

The Fate of the Plate discussion generated a wealth of ideas that together articulated an emerging blueprint for a Food Waste Free community. The foundation of this emerging blueprint are six key ingredients that were revealed by the numerous strategic priorities and concrete activities captured during the discussion.

Our hope is that this blueprint will reveal existing structures, identify opportunities, and guide actions for the people of Missoula to engage with, explore, and act upon to make the Garden City a Food Waste Free community.

Based on the importance of this issue for our community's sustainability and waste reduction goals, we offer the following recommendations to the Missoula community.

Identify existing and potential synergies between public and private entities; Build relationships to create the intentional alignment necessary to achieve the goals.

4. Prioritize

For each goal, prioritize opportunities that can create early wins based on feasibility, ease of implementation, and possible impact. For example, interest is high around the **UPSTREAM GOAL** of food recovery and around the **DOWNSTREAM GOAL** of establishing a citywide composting facility for food scraps.

5. Ensure equity

Throughout the process, strive for solutions that increase access to local food and waste reduction opportunities for all while creating local jobs that support a Food Waste Free community.

Key Ingredients for a Food Waste Free Community

- **Localization**
- **Engaged & Educated Citizenry**
- **Supportive Policies**
- **Supportive Programs**
- **Integrated Infrastructure & Land Use**
- **Comprehensive & Collaborative Network**

III. Blueprint for a Food Waste Free Community

In this section, short descriptions flesh out the intended **OUTCOME** of each key ingredient, provide context, and/or summarize key points. Simple charts organize priority ideas (**PRIORITIES**) by **UPSTREAM** or **DOWNSTREAM** goals. We matched data collected during the discussion to each priority to provide context as to the

extent to which the idea is in action in our community (**STATUS**), who is implementing it and what implementation looks like (**ACTIONS**), real and perceived **BARRIERS**, and **OPPORTUNITIES**. For the purposes of this report, we will refer to all priority ideas identified by the discussion participants as “priorities.”¹

Localization

OUTCOME: By supporting our local food shed and a local food economy, we reduce waste from spoilage in transport, redirect edible food to animals, and return carbon and nutrients back to local soils. Missoula has a strong local culture that embraces everything from food to beverages to four-oh-six shirts. Our community could build upon existing actions and develop new opportunities.

GOAL: UPSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Consumers buy local	Widespread, room for expansion	<ul style="list-style-type: none"> • Farmers’ Markets Double Snap Dollars program • Community Supported Agriculture (CSA) Programs (Garden City Harvest, WMGC, Harlequin Produce, Missoula Grain & Vegetable Co., Lower Crossing Farm, etc.) • Local purveyors of meat & dairy (Diamond Bar Meats, Lifeline Farms, Bitterroot Bison, Cloven Hoof, etc.) 	<ul style="list-style-type: none"> • Locally-produced food can be expensive compared to mass-produced food, which is abundant and relatively inexpensive 	<ul style="list-style-type: none"> • Build more networks to connect consumers with local food producers • Grow gourmet mushrooms in spent brewers grains prior to use as animal feed • Expand local sourcing in restaurant sector, particularly for meats • Big buyers support the food shed we want • Buyers use Forward Contracting to support local farms

¹ Please note that some priorities, barriers, and opportunities are followed by a number in parentheses, which indicates the number of break-out groups that identified this as a priority, barrier, or opportunity. No number means it was identified by one group only. In some cases, we added priorities that participants identified as components of a food waste free

community yet were omitted from the final list of priority ideas. We added those priorities in retrospect because, based on our analysis of all of the discussion data, we deemed them to be key elements of the blueprint. We matched barriers and opportunities with priorities as made sense to us.

		<ul style="list-style-type: none"> • Restaurants buy/use whole animals 		
Redirect discards to animal feed	Limited	<ul style="list-style-type: none"> • Cows/Pigs – barley waste as feed (Big Sky Brewing feeds 600 cows; Big Sky HS Ag Dept pigs also fed spent brewers grains) • Goats/Pigs – non-edible food (Food Bank Refeed program sends what they can't use) • Chickens – veggie scraps as feed (Freedom Gardens) 	<ul style="list-style-type: none"> • USDA regulation restricts feeding animals with off-site food 	<ul style="list-style-type: none"> • Divert more food waste streams to animal feed

GOAL: DOWNSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Return composted food scraps to local soils	Limited	<ul style="list-style-type: none"> • Institutions <ul style="list-style-type: none"> ○ UM Dining Somat system pulps and dehydrates all food scraps from the Food Zoo; used as compost feedstock at PEAS Farm; saves transportation, Somat system reduces grey water by recycling water • Restaurants & Food Businesses <ul style="list-style-type: none"> ○ Restaurant food scraps to compost (Romaine's, Scotty's Table, Burns St. Bistro Thurs Night dinners) ○ Coffee grounds composting • Farm & Farmers <ul style="list-style-type: none"> ○ Farmers Market - growers take produce back to farm (produce only) ○ Compost collection for CSA customers (Missoula Grain & Vegetable Co.) • Home & Office <ul style="list-style-type: none"> ○ Backyard composting ○ Office composting (Home ReSource & MUD) ○ Residential compost collection (i.e. Recycling) 	<ul style="list-style-type: none"> • Attempts to install Earth Tub in-vessel composting systems at Hellgate and Sentinel High Schools have both failed due to resistance from administration and facilities operators; need maintenance & scale to operate properly 	<ul style="list-style-type: none"> • Educate community leaders about the benefits of compost in soil health, carbon sequestration, climate change mitigation, remediation, and restoration to build support for actions that lead to more composting

Engaged & Educated Citizenry

OUTCOME: People understand why it is important and how to reduce food waste and compost. Everyone knows how to be creative with and appreciate food and how to cook, preserve, repurpose, and use produce “ends.” A Community Food Waste Reduction Coordinator could help coalesce educational efforts, identify and assist with implementation of viable policies and programs, and direct available resources.

GOAL: UPSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Education/engagement of consumers	Limited	<ul style="list-style-type: none"> Health Department messaging equates reducing waste with community health Food preservation workshops (MUD) Zero Waste Missoula <ul style="list-style-type: none"> Engaging community in conversation 	<ul style="list-style-type: none"> We live in a “throw-away” culture where trash goes out of sight, out of mind Lack of “upstream” thinking Lack of knowledge and education about food use to reduce food waste and composting Lack of funding for a Community Food Waste Reduction Coordinator 	<ul style="list-style-type: none"> Generate and implement school curriculums (2) Form education group ala Missoula in Motion dedicated to reducing food waste through awareness building and incentives Community Food Waste Reduction Coordinator position created and funded Creatively educate at public events Educate around perceptions of expiration dates
Teach everyone to cook	Limited	<ul style="list-style-type: none"> Food preservation workshops (MUD) Good Food Store classes 	<ul style="list-style-type: none"> Time & interest 	<ul style="list-style-type: none"> Expand all-ages opportunities to learn techniques to reduce food waste

Supportive Policies

OUTCOME: Local businesses, institutions, and government have policies and procedures that guide community practices and behaviors toward our goals. Reducing food waste becomes the norm and it is easy for everyone to do their part. Our community could adopt policies that guide our practices and behaviors toward our goals. Research on best practices from other communities would make ideal pursuits for Missoula’s academic community.

GOAL: UPSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
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Change policy around expiration dates (2)	No activity	<ul style="list-style-type: none"> No current known actions 	<ul style="list-style-type: none"> Dates are arbitrary Misconception/lack of knowledge - Is it OK to feed children post-dated food? Social service orgs won't accept donations of expired food 	<ul style="list-style-type: none"> Research best practices from other communities; identify existing legislation and regulations
Food Waste Free schools/hospitals/institutions	Limited	<ul style="list-style-type: none"> Trayless dining @ UM Food Zoo cut post-consumer food waste by 62% 	<ul style="list-style-type: none"> Large volume of food waste – St. Patrick Hospital 	<ul style="list-style-type: none"> Research best practices from other communities
Political will exists to reduce food waste	Unknown	<ul style="list-style-type: none"> No current known actions 	<ul style="list-style-type: none"> Policies/regulations are designed to protect against exceptional circumstances 	<ul style="list-style-type: none"> Outreach to elected officials in state and local government
Regulations drive & incentivize desired outcome <ul style="list-style-type: none"> Food outlets required to donate excess or post-dated food for redistribution (2) Relaxed regulations on donations and animal feed All households required to donate uneaten food 	No activity	<ul style="list-style-type: none"> No current known actions 	<ul style="list-style-type: none"> Catering industry generates significant food waste (2) 	<ul style="list-style-type: none"> Research best practices from other communities; identify existing legislation and regulations

GOAL: DOWNSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Food Waste Free schools/hospitals/institutions	Very limited	<ul style="list-style-type: none"> Trayless dining @ UM Food Zoo cut post-consumer waste by 62% 	<ul style="list-style-type: none"> Large volume of food waste – St. Patrick Hospital 	<ul style="list-style-type: none"> Compost collection service able to meet institutional needs
All households required to compost, à la Seattle and SF, CA	No activity	<ul style="list-style-type: none"> No current known actions 	<ul style="list-style-type: none"> Stigma exists – yuck factor, attracts pests 	<ul style="list-style-type: none"> Research best practices from other communities
Policies to encourage waste reduction	No activity	<ul style="list-style-type: none"> No current known actions 	<ul style="list-style-type: none"> Disposal behaviors are hard to change 	<ul style="list-style-type: none"> Implement Pay As You Throw trash collection fee structure to create incentive to reduce
Landfill ban on compostables	No activity	<ul style="list-style-type: none"> No current known actions 	<ul style="list-style-type: none"> Regulation and monitoring of disposal 	<ul style="list-style-type: none"> Research other communities for efficacy of landfill ban

Supportive Programs

OUTCOME: Food businesses and institutions have formalized, efficient programs and processes for keeping edible food out of the waste stream. According to the Missoula Food Bank, one in six people in Missoula face the threat of hunger in their daily lives. Ironically, food is abundant in our community. Our community could expand programs that redirect edible food to hungry people and address food security while reducing food waste.

GOAL: UPSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Food recovery programs with a focus on grocery stores (3)	Limited	<ul style="list-style-type: none"> • Donation of edible food <ul style="list-style-type: none"> ○ Grocery stores (Good Food Store, Missoula Fresh Market), other food businesses donate food to nonprofits that address food security (Food Bank, Poverello Center) ○ Property managers request departing tenants leave behind shelf-stable food to be collected and delivered to the Food Bank by staff (Summit Property Management) • Salvaging edible food <ul style="list-style-type: none"> ○ Gleaners salvage discarded food from grocery stores while fresh (Blue Sky Stewardship) ○ Ugly vegetables grab bag (Garden City Harvest) 	<ul style="list-style-type: none"> • Logistics of food recovery collection programs 	<ul style="list-style-type: none"> • Expand food recovery programs in general • Replicate property management food recovery program • Connect food recovery efforts, particularly of fresh food, to SnackPack Program for MCPS high school students in need • Business to process food for storage when its abundant – freeze, dehydrate, ferment, etc.
Close the loop on waste / hunger	Limited	<ul style="list-style-type: none"> • Redistribution of edible food to hungry people <ul style="list-style-type: none"> ○ Food Bank Grocery Rescue program redistributes post-dated food from grocery stores ○ Food Bank Food Circle program redistributes already prepared food from several businesses • Poverello Center 	<ul style="list-style-type: none"> • Logistics of food redistribution programs 	<ul style="list-style-type: none"> • Expand existing & identify opportunities for new programs
Progressive grocery store policies	Unknown	<ul style="list-style-type: none"> • No current known actions although some may exist 	<ul style="list-style-type: none"> • Requires organizational leadership to implement 	<ul style="list-style-type: none"> • Provide outlet for ugly produce and de-stigmatize “uglies” through marketing

More consumer choices (portion size, sell by weight, bulk buy)	Limited	<ul style="list-style-type: none"> • Offer variable portion sizes (Romaine’s) • Sell by weight (Good Food Store deli) 	<ul style="list-style-type: none"> • People expect giant portions at restaurants • We are forced to buy too much by pre-determined packaging sizes 	<ul style="list-style-type: none"> • Replicate existing actions and identify others to implement
Food is labeled with potential emissions if wasted to raise awareness	No activity	<ul style="list-style-type: none"> • No current known actions 	<ul style="list-style-type: none"> • Leadership and capacity is required to take on this project 	<ul style="list-style-type: none"> • UM student project to develop and help local producers implement at Farmers’ Markets – may be replicable in other communities

Integrated Infrastructure & Land Use

OUTCOME: Development of both upstream and downstream infrastructure creates a multi-faceted, integrated system that makes it easy to reduce food waste and increase composting. Infrastructure could include more space for growing, storing, and distributing food as well as facilities for collecting and composting food scraps.

GOAL: UPSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Communal food processing/storage - dry/fridge/freeze	No activity	<ul style="list-style-type: none"> • No current known actions 	<ul style="list-style-type: none"> • Leadership, resources, and capacity is required to take on this project 	<ul style="list-style-type: none"> • Neighborhood refrigerators based on “Little Free Library” model • Fresh food is abundant during the growing season – farm to freezer • Large-scale value-added food processing center (3)

GOAL: DOWNSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Citywide composting facility for food scraps (5)	No activity	<ul style="list-style-type: none"> • Food scraps compost pilot program between EKO Compost and WalMart • Feasibility study on possible city acquisition of EKO Compost in 	<ul style="list-style-type: none"> • Apartments/lack of space/access to composting • Lack of time/energy to take compost elsewhere myself 	<ul style="list-style-type: none"> • Expand food scraps composting at EKO Compost

		progress (<i>UPDATE</i> : Missoula City Council has voted to acquire EKO Compost under the City of Missoula Public Works Department)	<ul style="list-style-type: none"> • Individuals not involved; lack of buy-in • Low priority • No incentive or system for renters to compost • Limited space and labor for downstream management • Lack of food waste composting facilities 	
Curbside compost collection (2) with focus first on large generators of inedible food waste	Limited	<ul style="list-style-type: none"> • Restaurant food scraps collection (Freedom Gardens) • Residential food scraps collection (i.e. Recycling, Missoula Grain and Vegetable Company CSA members) 	<ul style="list-style-type: none"> • Cost of curbside collection service adds to existing garbage collection expense • Stored food waste at businesses is an attractant for pests and gleaners • Restaurant employee buy-in • Lack of private collection service to meet restaurant needs – 2x or more/week • Cost & labor demands of a bike-powered curbside food scraps pick-up service 	<ul style="list-style-type: none"> • Expand curbside compost collection across sectors (5)
Methane capture for energy production (anaerobic digestion) (2)	Very limited	<ul style="list-style-type: none"> • Anaerobic digestion system for farm & greenhouse in construction phase (Blue Sky Stewardship) 	<ul style="list-style-type: none"> • High capital cost 	<ul style="list-style-type: none"> • Research other communities that have invested in anaerobic digestion systems
Community composting sites	Limited	<ul style="list-style-type: none"> • Community garden plot holders can bring kitchen scraps to compost piles at gardens (GCH) 	<ul style="list-style-type: none"> • Compost can be a wildlife attractant, particularly in Bear Zones 	<ul style="list-style-type: none"> • Expand community garden composting options • Fund position for Community Compost Manager

Comprehensive & Collaborative Network

OUTCOME: An integrated network of people actively collaborate – facilitated by technology and shared resources – to ensure edible food is channeled to hungry people and inedible food, food scraps, and other organic discards are returned to the soil.

GOAL: UPSTREAM/DOWNSTREAM

PRIORITIES	STATUS	ACTIONS	BARRIERS	OPPORTUNITIES
Build network to connect stakeholders: <ul style="list-style-type: none"> • Gleaners • Volunteers • Food producers • Institutions • Large-scale food processing facilities • Storage facilities 	Limited	<ul style="list-style-type: none"> • Missoula City Council passed a Zero Waste Resolution in February 2016 	<ul style="list-style-type: none"> • Coordination 	<ul style="list-style-type: none"> • Create online communication system • Develop mutually beneficial partnerships between stakeholders • City Coordinator position created to cultivate network & align resources

A word about Food Packaging

Participants also identified reducing single-use disposable food packaging as a priority that is connected to reducing food waste. Specific ideas included a citywide program for reusable takeout containers (like the ones offered at the Good Food Store) that would include grocery stores and restaurants (3) and clear Health Department policy on takeout packaging that may help alleviate

“greenwashing” in the practice of prepared foods for takeout. Participants also identified a related problem in that currently “compostable” takeout containers and “bioware” utensils are included in the City’s municipal waste stream as they have nowhere to go to be composted.

THE FATE OF THE PLATE WAS FACILITATED BY:

Abby Huseth, Program Associate, Climate Smart Missoula; **Amy Cilimburg**, Director, Climate Smart Missoula; **Becca Boslough**, Former Energy Corps Service Member with Climate Smart Missoula & Home ReSource; **Beth Schenk**, PhD, MHI, RN-BC, Nurse Scientist, Providence St. Patrick Hospital; **Caroline Lauer**, Program Associate, Climate Smart Missoula; **Chase Jones**, Energy Conservation Coordinator, City of Missoula; **Jeremy Drake**, Community Engagement Manager, Home ReSource; **Katie Deuel**, Executive Director, Home ReSource

THANKS TO EVERYONE WHO PARTICIPATED IN THE FATE OF THE PLATE

Please direct any questions or follow up to Jeremy Drake: jeremy@homerresource.org; 406-541-8301.
Additional components of a Food Waste Free community identified during the discussion are available upon request.

THE FATE OF THE PLATE WAS CONVENED BY:



Home ReSource is a building materials reuse center in Missoula that is committed to reducing waste and building a vibrant and sustainable local economy. As a triple-bottom-line nonprofit business, we bring environmental, social, and economic benefits to the community through our retail store and Deconstruction Services as well as our Community Sustainability Programs. Those programs provide educational activities, community Zero Waste support, job skills training, and volunteer opportunities to community members and material donations to school, churches, and organizations.

WITH SUPPORT FROM THESE COMMUNITY PARTNERS:



We are the hub that fosters partnerships and actions to address climate change in our community. We envision a vibrant and resilient Missoula that has a zero carbon footprint and the crucial networks to address future climate-related issues in an equitable way.



Our mission is to lead our community in the effort to conserve and recover all landfill-bound resources in ways that contribute productively to the natural systems and economies of Western Montana.



We envision a prosperous, collaborative community that fulfills the promise of the triple bottom line: a healthy society, economy, and environment.

AND SUPPORT FROM THESE FINE LOCAL BUSINESSES – THANK YOU!
Good Food Store, The Dram Shop, Big Sky Brewing Co., The Loft of Missoula