

One Billion Pounds: Planning to Cut Food Waste in Half by 2030

MAP Conference – September 27, 2024



MAKE FOOD
NOT WASTE

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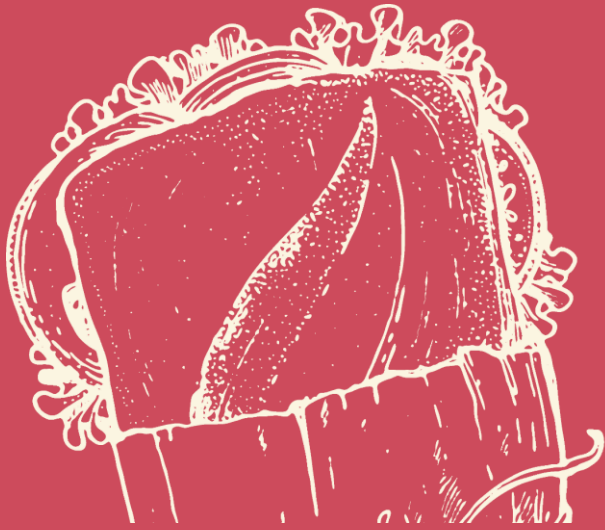


PRESENTERS



➤ Presenters

- Stephanie Osborn, AICP, Planning Consultant at Giffels Webster, Project Manager for the Southfield Food Waste Elimination Project, Make Food Not Waste board member
- Matt Naud, Resource Recycling Systems, Make Food Not Waste Board President
- Alex Bollin, Planner, City of Southfield



WHO'S IN THE ROOM?



- Have heard about the issue of food waste?
- Are you representing a city or township? A county? A planning consulting firm?
- Work in a community that has created a sustainability plan?
- Has a program to divert food waste from landfills?
- Likes to eat?



AGENDA

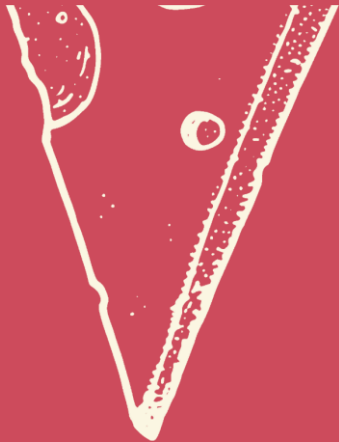


➤ Agenda

- Overview of the state's food waste goal
- Planning to eliminate food waste in Southfield
- Lessons in planning for sustainability
- Q&A



FOOD WASTE



- **Food waste** is food that is not ultimately consumed by humans and is sent to a landfill, such as plate waste, spoiled food, or peels and rinds considered inedible
- Food waste can be
 - **Prevented** via behavior change, upcycling, and donation
 - **Diverted** to composting or digestion facilities



THE ISSUE OF FOOD WASTE

- **38%** of food supply goes to waste
- Average person wastes **1 pound of food per day**
- Food = 25% of landfills, **58% of landfill emissions**
- Michigan landfills more than **2 billion pounds** of food each year
- 11.4% of Michiganders face **food insecurity**

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MICHIGAN ENVIRONMENT GOVERNMENT

Michigan leads nation in toxic methane emissions from landfills

Our landfills emit enough methane to equal 11 million metric tons of carbon dioxide, resulting in more waste per capita than any other state

By Chrystal Blair, Michigan News Connection

Jul 31, 2024 at 9:02 am

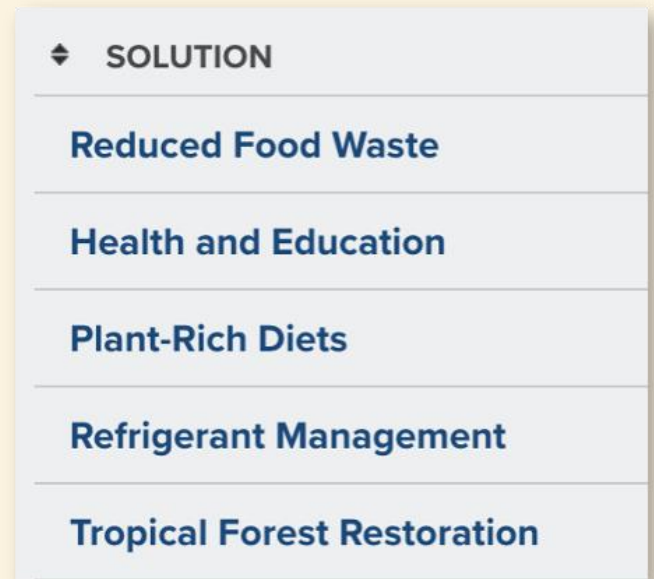
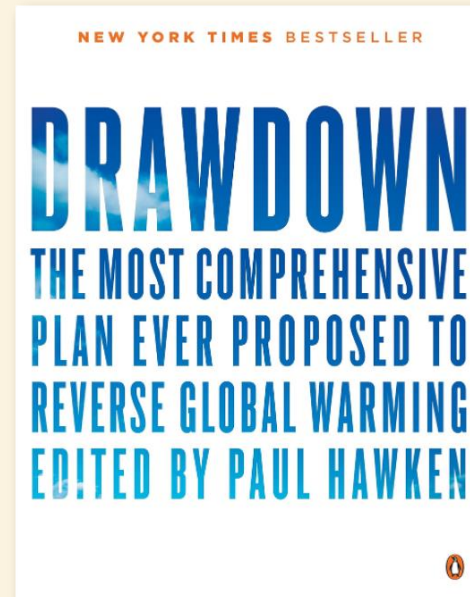


A CLIMATE SOLUTION



➤ Reducing food waste = **pulling the emergency break** on climate change

- Tangible
- Doable
- Cost-effective





**A
SOLUTION**



➤ **So many other benefits to reducing food waste!**

- Saves landfill space
- Reduces emissions from transporting food
- Reduces methane emissions from decomposition in landfills
- Uses resources (water, nutrients, soil, labor) as intended for food
- Greater household savings leading to reduced food insecurity



A **SOLUTION**



➤ **And there's more!**

- Increases ability to retain moisture in soil → reduced flooding and erosion; reduced need for watering
- Increased nutrients in soil → higher nutrient food
- Saves money by reducing need for fertilizers
- Starts a conversation on sustainable and mindful consumption and waste management
- Opens the door to other sustainability practices

GOVERNMENT GOALS



United Nations

International Day of Awareness on Food Loss and Waste Reduction
29 September

U.S. 2030 Food Loss and Waste Reduction Goal

On September 16, 2015, the U.S. Department of Agriculture (USDA) and EPA announced the U.S. 2030 Food Loss and Waste Reduction goal, the first-ever domestic goal to reduce food loss and waste. The goal seeks to cut food loss and waste in half by the year 2030.

USDA & EPA

What is SDG Target 12.3?

Target 12.3 of the United Nations' Sustainable Development Goals calls on the world to "halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses" by 2030.

United Nations

Food Waste Recovery

Cutting food waste in half by 2030, is one of the key recommendations for Michigan to achieving carbon neutrality.

Key Strategies

- **Buy clean, buy Michigan** – Strengthen public and private-sector procurement programs to favor the use of low-carbon and circular-economy products and identify opportunities to support disadvantaged businesses in procurement. Encourage the production and purchase of materials made by Michigan workers.
- **Recycling and waste** – Triple the state's recycling rate to 45 percent and cut food loss and waste in half by 2030. Expand on efforts like 'Next Cycle' to develop markets for recycled materials.

EGLE

MI Healthy Climate Plan



PROJECT BACKGROUND



- **Objective**
 - Identify how to prevent, rescue, share, and divert all food waste in a city
 - Create model for other Michigan cities
- **Pilot study** authorized by Southfield City Council in December 2023, funded by EGLE Pollution Prevention Program



PROJECT BACKGROUND



CRAIN'S LIST

Nonprofits & Philanthropy

A Detroit nonprofit wants to eliminate all of Southfield's food waste. That's 15K tons.

By Anna Fifelski

[Reprints](#) [Share](#)



Credit: Make Food Not Waste.

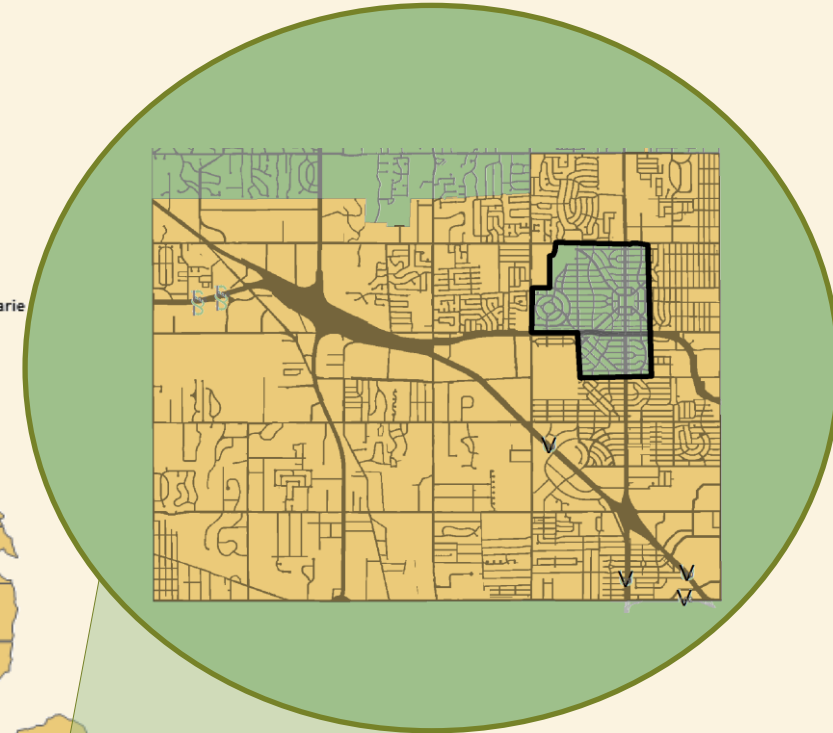
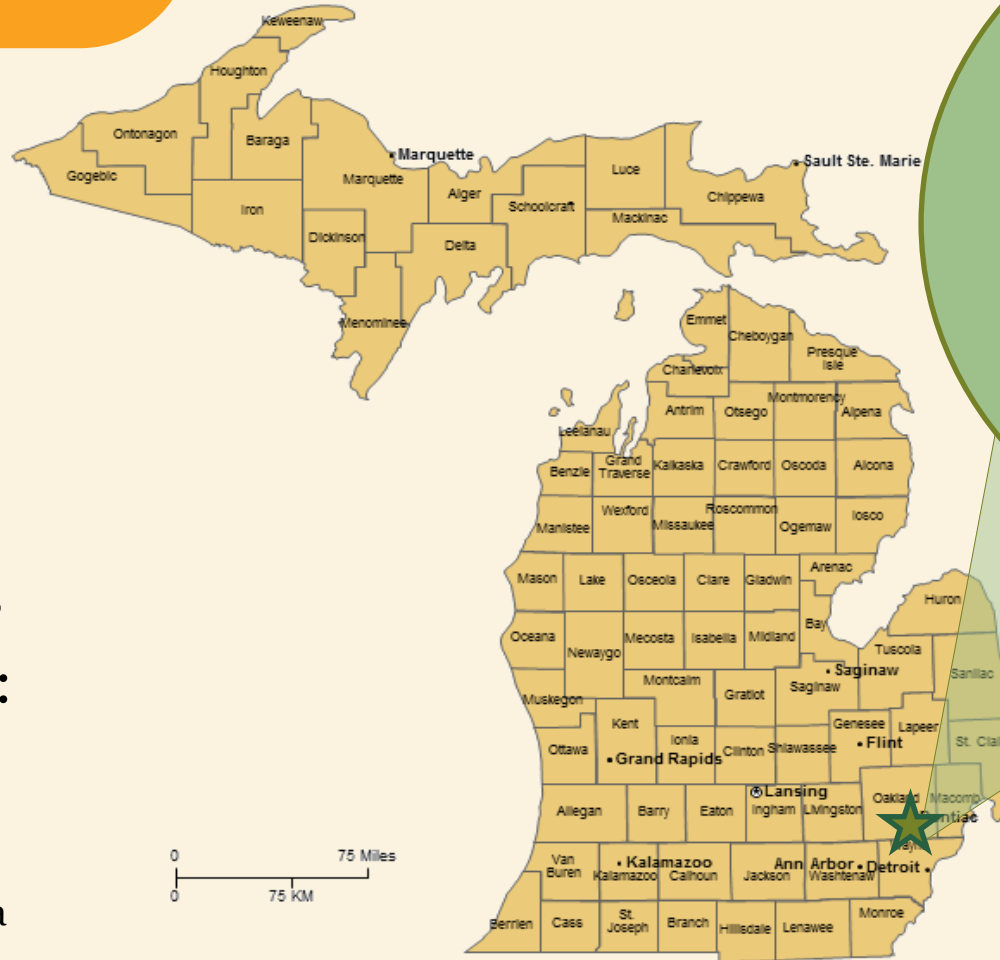
Make Food Not Waste's last community feast was held in Eastern Market Shed 5 in 2019.

SOUTHFIELD

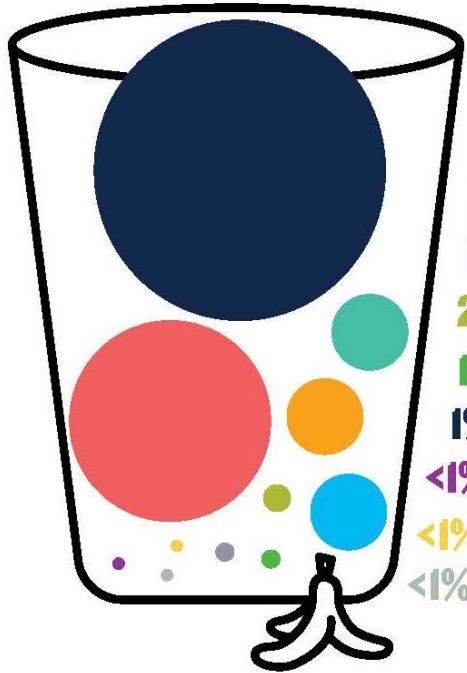


- Oakland County
- 26.6 Square Miles
- >10,000 Businesses
- Daytime Population:
>175,000
- Population: 76,618*

*based on July 2020 SEMCOG data

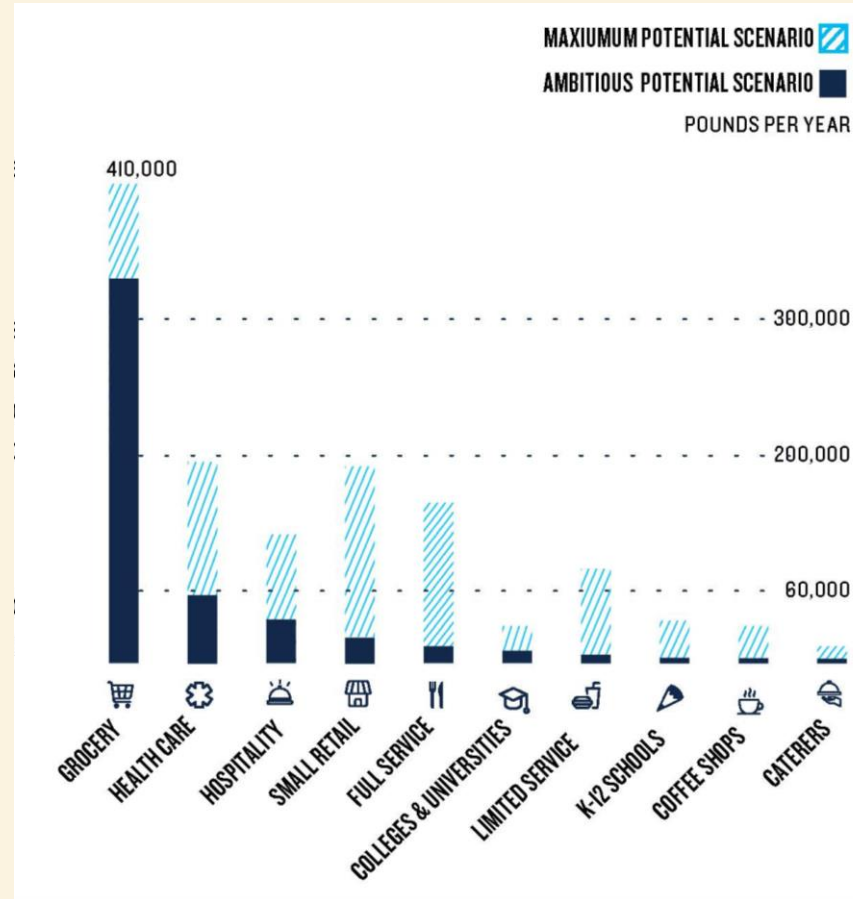


FOOD WASTE AND RESCUE POTENTIAL



- 46%** RESIDENTIAL
- 35%** RESTAURANTS
- 5%** HEALTHCARE
- 5%** HOSPITALITY
- 5%** GROCERS & MARKETS
- 2%** COLLEGES & UNIVERSITIES
- 1%** K-12 SCHOOLS
- 1%** MANUFACTURING & PROCESSORS
- <1%** EVENTS & RECREATION
- <1%** WHOLESALERS & DISTRIBUTORS
- <1%** CORRECTIONAL FACILITIES

The residential sector generates nearly **7,000 tons** of food waste **per year**.



Donation of **surplus food** can help meet the immediate needs of **those facing food insecurity**.

KEY FACTS

- 9%** food insecurity in Southfield
- 15K** tons of food waste in Southfield
- 40%** of all food in the U.S. is wasted
- \$4.4M** of unmet meals in Southfield
- \$3.8M** value of food rescue potential in Southfield
- 8%** of global greenhouse gas emissions come from food waste

NRDC

FOOD MATTERS

MAKE FOOD NOT WASTE

CONTRIBUTORS



Project Lead



City Support



Additional Support





CONTRIBUTORS





METHODS



- **Project team**
 - 3 convenings
 - 2 workshops: Blue sky thinking + logistics
 - Additional meetings, emails
- Resident and business **survey**
- Draft **writing** and review

KEY LEARNINGS

- Survey of people **who live and work** in Southfield (534 respondents)
 - **86%** would participate in curbside compost collection
 - **47%** willing to pay up to **\$20/month** for service
- Interviews with **food-based businesses** (30 restaurants, 3 grocery stores)
 - High interest in **compost** collection
 - Request for more information on **donating** food
 - See opportunities to **engage staff**

KEY LEARNINGS

- Community engagement, food rescue, compost collection **providers exist**
- **National best practices** exist for many plan components
- **Multi-family** compost collection best practices lacking
- Change in waste hauling service **prevented cost estimating** for curbside collection

POTENTIAL BENEFITS

- **Preventing** food waste has greatest effect
 - Residents: **\$38 million** in financial savings if consume all edible, purchased food
 - Restaurants: **\$1.5 million** in food costs savings
- More diversion = **more results**
 - 100% diversion prevents **20,000 tons** of emissions, **\$3.8 million** in social cost
 - 50% diversion prevents **10,000 tons** of emissions, **\$1.9 million** in social cost

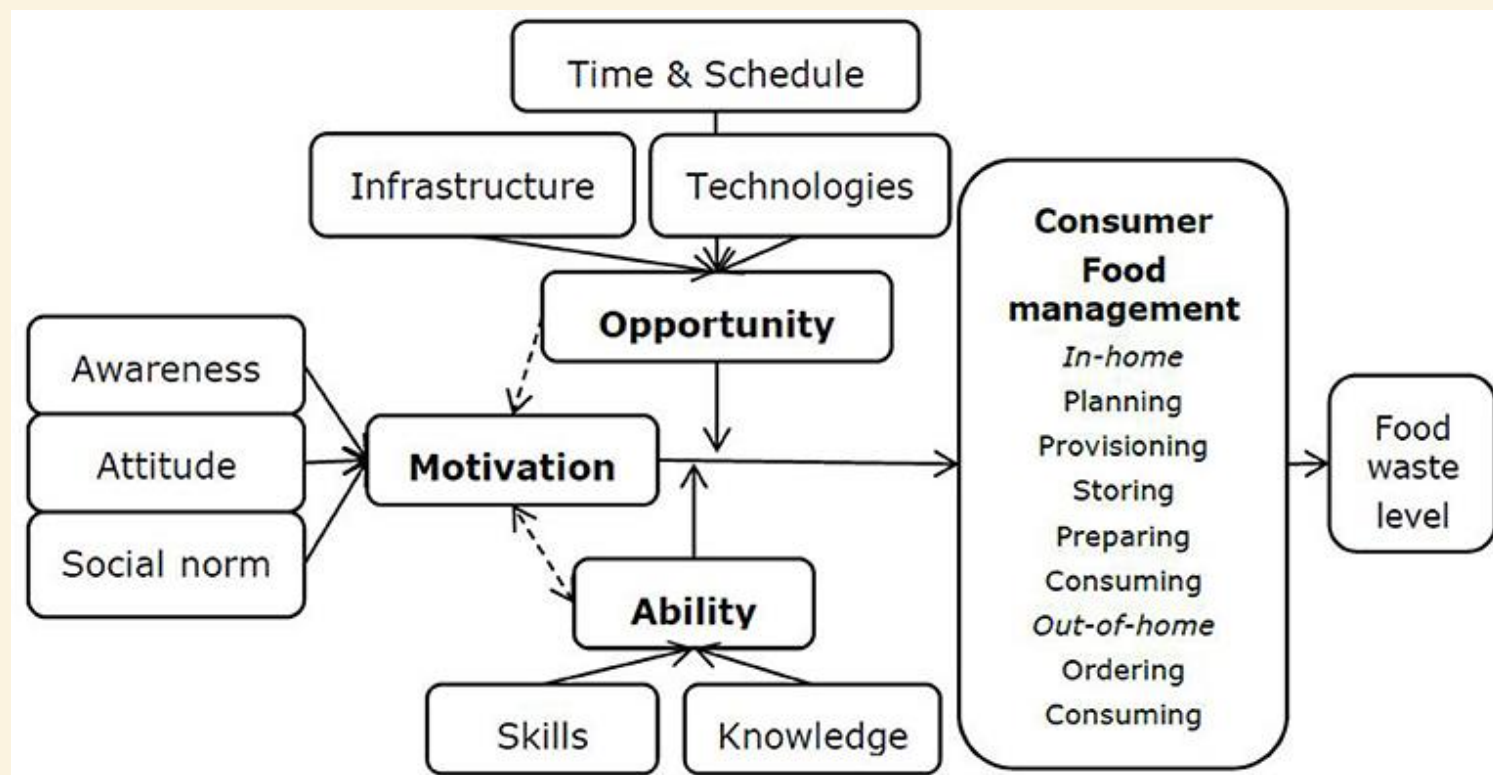
PLAN HIGHLIGHTS

- Follows the **EPA's guidance** on Prevention -> Rescue -> Composting



PLAN HIGHLIGHTS

- Uses the Motivation-Ability-
Opportunity **behavior**
change framework



(Van Dooren, Mensink, Eversteijn, & Schriegen, 2019)

PLAN HIGHLIGHTS

- Outlines **action steps and associated costs** to reach residents, businesses, schools/institutions, and other sites
- Describes role of **City of Southfield**



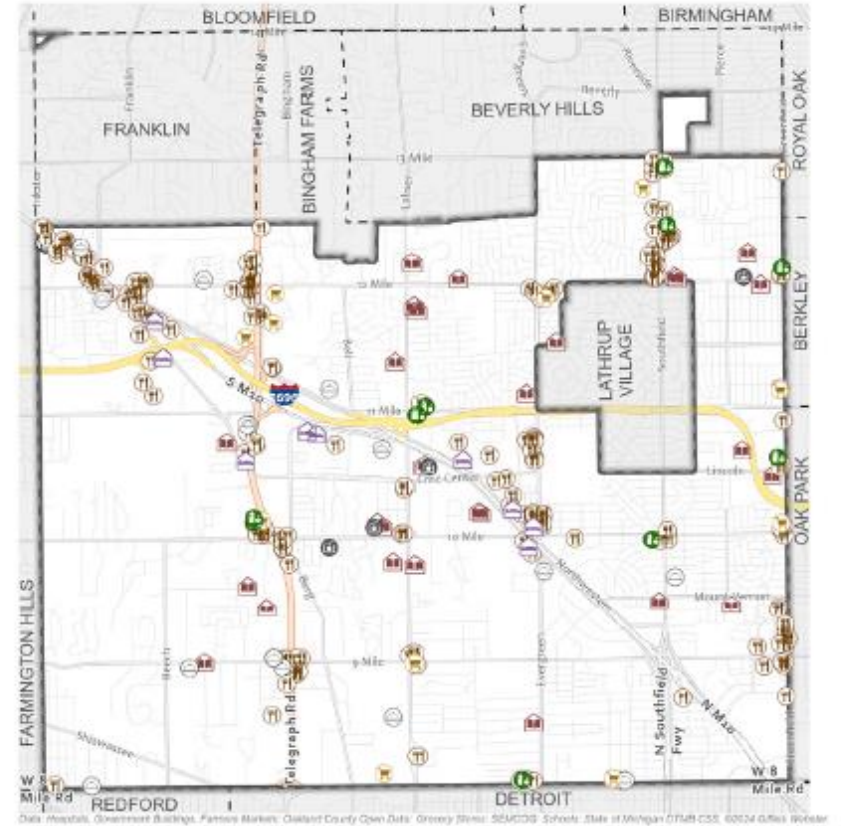
Southfield Community Feast, April 2024



**A
Blueprint
to
Zero Food Waste
in
Southfield**

**MAKE FOOD
NOT WASTE**

MAP 4. Food Access: Southfield



- | | |
|---------------------|--------------------|
| Restaurants | Grocery |
| Banquet or Catering | Limited Assortment |
| Hotel | Party |
| Restaurant | Supermarket |
| School or Church | |
| Shared Kitchen | |

**FOOD ACCESS
SOUTHFIELD**



TABLE 3. Timing of Activities: Supporting Strategies

Strategy	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
01 Communication campaigns												
01.A Overall campaign: Creating a culture of zero food waste in Southfield												
01.A.1 Promote the campaign website and online resource hub via mailers sent to residences and businesses												
Design materials												
Mail materials												
01.A.2 Promote the campaign through the city newsletter												
Develop and share material												
01.A.3 Promote the campaign through social media												
Develop and share material												
01.A.4 Promote the campaign through the press												
01.A.5 Promote local champions												
Identify local champions												
Train local champions												
01.A.6 Create ways for people to make a public commitment to address food waste												
Create and print yard signs, flags, and door signs												
Create online pledge												
Promote pledge												
Distribute signs and flags												
01.A.7 Host a citywide food waste summit												
Planning												
Promotion												
Event												
01.B Household prevention communication campaign												
01.B.1 Promote the prevention campaign via mailers												
Design, print, and label materials												
Mail materials												
01.B.2 Promote the campaign through the city newsletter												
Develop and share material												
01.B.3 Promote the campaign through social media												
Develop and share material												
01.B.4 Promote the campaign through the press												

The following strategies will set the stage and support the strategies used to address food waste by the various generators in the city:

01 Communication campaigns

This strategy includes a broad communications campaign focused on raising awareness and motivating action, followed by materials for various food waste prevention and diversion strategies across groupings of food waste generators: residents, food-based businesses, schools, offices, and public facilities and events.

01.A Overall campaign: Creating a culture of zero food waste in Southfield

Completely eliminating food waste in Southfield will require everyone, everywhere, all the time, to prevent food waste and divert it from landfills. An overarching communication campaign that raises awareness of the issue and motivates everyone to participate is needed. This campaign will set the stage for the initiative and will be seen throughout the city via the city's website and social media platforms, in the press, and on signs in retail stores. It will also be seen at events with neighborhood ambassadors and a citywide summit.

In order to develop a strong communications campaign for this project, the team reviewed other food waste reduction campaigns, conducted surveys with Southfield residents and businesses, and interviewed campaign managers from other areas in the U.S. The Work Department's report of these findings and the survey results can be found on [Appendix E](#).

The resulting program name is "Every Bit Counts." This title underscores that eliminating food waste requires everyone's participation as well as all of the solutions from prevention to organics recycling. Online, information about "Every Bit Counts" will live on [the MFNW website](#) and will include general information about the initiative and the need to prevent and divert food waste. A sub-page for Southfield-specific resources will be linked on the Every Bit Counts web page and will be accessible by visiting [SouthfieldCounts.org](#). As more cities are brought into Every Bit Counts, sub-pages for those cities (i.e. [DearbornCounts.org](#), [CantonCounts.org](#), etc) will have resources and information specific to those jurisdictions.

With this foundation in place, the program will have an outreach campaign that will change over time. The initial campaign, created by Modish Creative Co., is titled "Dumb Problem. Easy Solution." The campaign rests on the following concepts:

- Food waste is considered by many to be the "world's dumbest environmental problem" because landfilled food waste causes significant harm while being relatively easy to avoid.
- People seek entertainment, often tuning out messages that feel moralizing, negative, or overly educational.

The "Dumb Problem. Easy Solution." campaign takes a humorous approach to draw people into the issue and encourage them to become involved.



An example billboard for the initial communication campaign, "Dumb Problem. Easy Solution."

Year 1

TABLE 10. Budgets: Supporting Strategies, Year 1

Strategy	Cost	Responsible Party
01 Communication campaigns		
01.A Overall campaign: Creating a culture of zero food waste in Southfield		
Design fee for all year 1 materials (mailers, yard and door signs, etc.)	\$15,000	Design Firm
01.A.1 Promote the campaign website and online resource hub via mailers sent to residences and businesses		
Design, print, label, and mail materials	\$32,667	Mailing House
Google ad spend	\$7,200	Project Manager
01.A.2 Promote the campaign through the city newsletter		
Develop and share material	Included	Design Firm, Project Manager
01.A.3 Promote the campaign through social media		
Develop and share material	Included	Design Firm, Project Manager
01.A.4 Promote the campaign through the press		
Labor	Included	City Communications, Project Manager
Southfield newspaper ad	\$6,798	City Communications, Project Manager
01.A.5 Promote local champions		
Identify local champions	Included	Residential Coordinator
Train local champions (pre-created social media toolkits, resources)	Included	Residential Coordinator
01.A.6 Create ways for people to make a public commitment to address food waste		
Design yard and door signs	Included	Design Firm
Print yard signs	\$34,000	Residential Coordinator
Print signs for apartment doors	\$1,530	Residential Coordinator
Create online pledge	Included	Residential Coordinator
Promote pledge	Included	Residential Coordinator
Distribute signs	Included	Residential Coordinator



Supporting Strategies

TABLE 26. Key Performance Indicators by Task: Supporting Strategies

Task	Key Performance Indicators (KPIs)
01 Communication campaigns	
01.A Overall campaign: Creating a culture of zero food waste in Southfield	Development of communication plan and media campaign, Cost, Launch of communication campaign, Number of hits per week on the website and online resource hub, Number of people receiving the city newsletter, Number of social media posts, Number of people liking and sharing the social media posts, Number of grocery and retail stores with the campaign signage, Number of local champions sharing materials, Number of people attending the citywide summit, Number of people making a public commitment, Number of yard/door signs distributed, Evaluations from the summit and survey following the campaign launch showing an increase in awareness of food waste issues, willingness to act to address food waste, and sense of efficacy to act to address food waste
01.B Household prevention communication campaign	Development of household prevention communication plan and media campaign, Cost, Launch of prevention communication campaign, Number of hits per week on the website and online resource hub, Number of people receiving the city newsletter, Number of social media posts, Number of people liking and sharing the social media posts, Number of grocery and retail stores with the campaign signage, Number of local champions sharing materials, Number of people attending the citywide summit, Number of people making a public commitment, Number of yard/door signs distributed, Evaluations from the summit and survey following the campaign launch showing an increase in awareness of ways to prevent food waste, willingness to act to address food waste, and sense of efficacy to act to address food waste, Use of materials in food waste prevention kits, Self-reported food waste prevention
01.C Household diversion communication campaign	Development of household diversion communication plan and media campaign, Cost, Launch of diversion communication campaign, Number of hits per week on the website and online resource hub, Number of people receiving the city newsletter, Number of social media posts, Number of people liking and sharing the social media posts, Number of local champions sharing materials, Number of people making a public commitment, Number of yard/door signs distributed, Survey following the campaign launch showing an increase in awareness of ways to divert food waste, willingness to act to address food waste, and sense of efficacy to act to address food waste, Participation rates in curbside food scrap collection
01.D Prevention and diversion communication campaign for spaces where food is outside of homes	Development of prevention and diversion communication campaign, Cost, Launch of prevention and diversion communication campaign, Number of places hosting lunch and learns/workshops for employees, Number of lunch and learns/workshops hosted, Reported costs savings in food purchasing by food-based businesses, Reported pounds of food diverted from landfills via composting
01.E Maintenance communication campaign	Number of times the campaign is refreshed, Cost, Launch of refreshed campaigns, Number of people receiving the city newsletter, Number of social media posts, Number of people liking and sharing the social media posts, Number of local champions sharing materials, Number of people making a public commitment, Number of yard/door signs distributed, Participation rates in curbside food scrap collection, Self-reported food waste prevention

Model Ordinance on Backyard Composting

The following language is an example ordinance that could be added to Southfield's Code of Ordinances to promote backyard composting while protecting neighbors from nuisances. This language is based on language used in Farmington Hills, Michigan. It should be reviewed by City Council and refined as needed. These standards related to composting could be placed in a new article, Article XI, of Chapter 111 - Nuisances of Title XI - Police Regulations of the city's code or elsewhere as staff and City Council see fit.

Draft Language:

- (1) Purpose. This ordinance is intended to:
 - (a) Protect environmental and public health, safety, comfort, convenience, and the general welfare of citizens of Southfield;
 - (b) Establish powers, duties, rules, regulations, and standards for the location and operation of backyard and small compost sites in residential areas;
 - (c) Promote a program of waste reduction through source separation of organic materials from mixed municipal solid waste;
 - (d) Provide for the administration and enforcement of this ordinance.
- (2) Definitions.
 - (a) "Backyard compost site" means a site no greater than four cubic yards used to compost food scraps, garden wastes, weeds, lawn cuttings, leaves, and prunings from a single family or household
 - (b) "Composting" means the controlled microbial degradation of source separated compostable material to yield a humus-like product or mulch to be used as a soil amendment
 - (c) "Mixed municipal solid waste" means garbage, refuse, and other solid waste from residential, commercial and community activities that the generator of the waste aggregates for collection
 - (d) "Food scraps" means organic material resulting from the handling, preparation, cooking, and consumption of food.
 - (e) "Organic material" means yard waste, food scraps, and compostable material
 - (f) "Yard waste" means garden wastes, leaves, lawn cuttings, non-regulated weeds, shrub and tree waste, prunings, and twigs
- (3) Standards for compost piles in residential areas:
 - (a) Backyard compost sites may accept a combination of yard waste and food scraps that are not meat or dairy.
 - (i) Specifically prohibited items: uncooked meat, fats, oils, grease, bones, whole eggs, milk or other liquid dairy product, human or pet wastes, hazardous waste, herbicides, noxious weeds, and any other mixed municipal solid waste that may cause a public health risk or create nuisance conditions.
 - (b) Location:
 - (i) Compost piles shall not be located within any storm sewer, drainage easement, or water retention basin. Compost piles shall not be located in any front or side yard, or closer than ten (10) feet to any property line.
 - (ii) No compost site shall be located closer than twenty (20) feet to any residential dwelling, except the dwelling on the property on which the site is located.
 - (iii) No compost site may be placed within twenty (20) feet of any body of water or area designated as a 100-year floodplain or state protected wetland.



CITY'S ROLE IN PLANNING

- **Attend** full group meetings and workshops as relevant
- Provide **data and connections**
 - Demographics
 - Budget
 - Departments
 - Community groups
 - Schools
 - Insights
- **Review** draft plan
- **Promote the initiative** via city channels
- **Guide** the plan and team through meetings with municipal leadership



IMPLEMENTATION



➤ **People**

- Local service providers

➤ **Costs**

- Grants for education/training, rescue
- Resident costs TBD with waste hauling negotiations

➤ **Timing**

- 3 years
- Launch as soon as funding available



CITY'S ROLE MOVING FORWARD



- **Promote the campaign** via city channels
- **Lead by example**
 - Engage staff
 - Onsite food scrap collection
 - Use compost on property
- Support **backyard composting**
 - Develop standards and guide
 - Facilitate bulk purchasing of supplies
- **Update site plan reviews** to include food scrap collection
- Require food waste diversion **for events**
 - Develop standards and guide
- Implement a food scrap collection program for **residents**

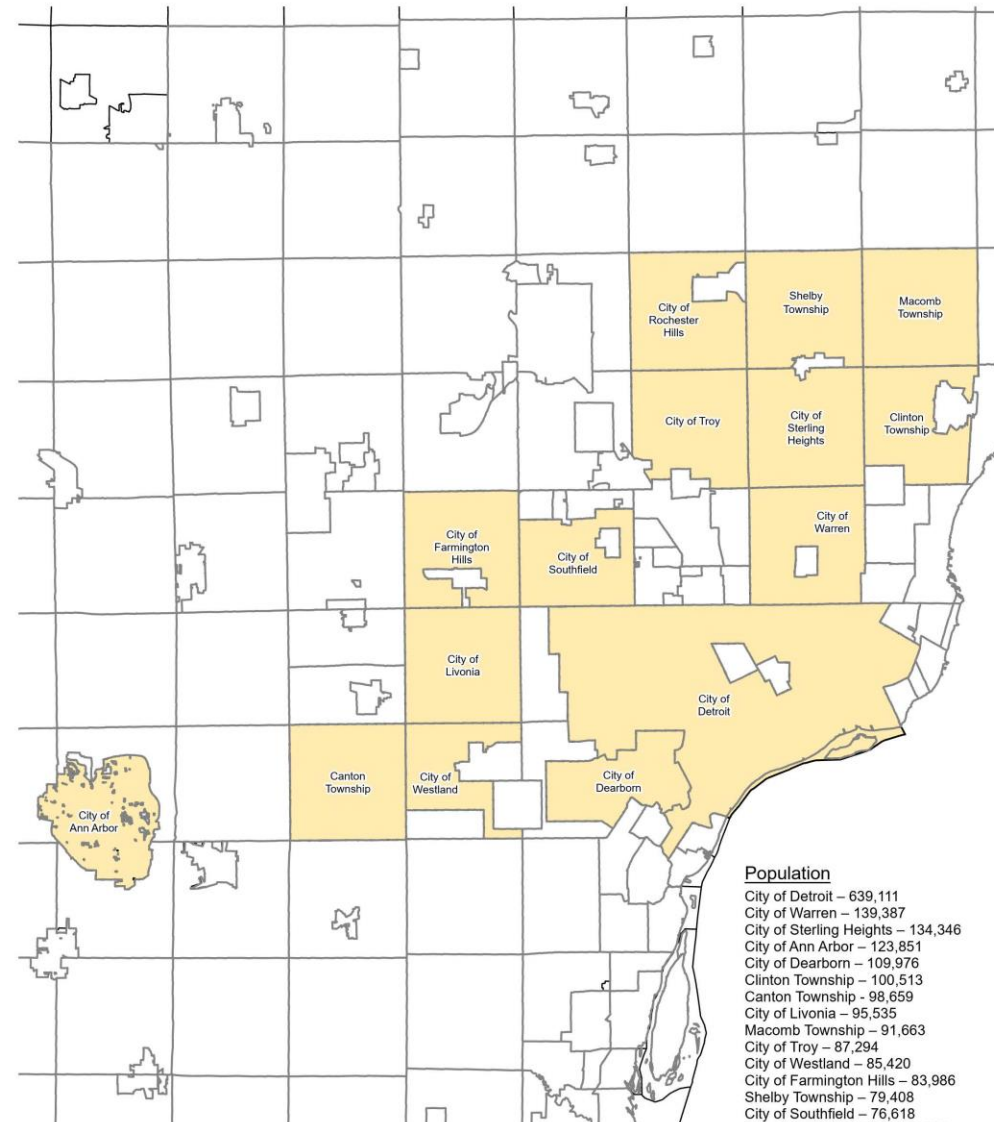


NEXT STEPS



- **Finalize cost estimates**
 - Multi-family residences collection
 - Curbside collection costs
- **Apply for grant funding**
 - Awaiting grant decisions for education and training
 - Seeking additional grant opportunities
- **Submit final blueprint**

14 More Communities to Go!



Population

City of Detroit	– 639,111
City of Warren	– 139,387
City of Sterling Heights	– 134,346
City of Ann Arbor	– 123,851
City of Dearborn	– 109,976
Clinton Township	– 100,513
Canton Township	– 98,659
City of Livonia	– 95,535
Macomb Township	– 91,663
City of Troy	– 87,294
City of Westland	– 85,420
City of Farmington Hills	– 83,986
Shelby Township	– 79,408
City of Southfield	– 76,618
City of Rochester Hills	– 76,300
Total population	– 2,842,067

Data: Population: ACS 2020. Boundaries: State of Michigan, Roads: SEMCOG. ©2024 Giffels Webster.

0 3 6 12 Miles



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CHALLENGES

- **Connecting with and finding support** within the Commercial and Business Community as well as school districts
- Identifying policy that would be **feasible** in the City and **likely to be approved** by elected officials
- Identifying the **most sustainable option** for waste hauling/composting services



Southfield resident on smoothie bike at the Community Feast, April 2024

CHALLENGES

- Fostering **blue-sky thinking**
- Obtaining **specific information** from partners
- **Balancing** community input with expert knowledge



Local experts at the Southfield Community Feast, April 2024



- **Messy and complex** problems and systems
- Be ready to **learn and pivot** tactics as needed
- Get proper **approvals** so you have support
- Identify **dedicated point people** for the project
- **Lean into** existing municipal and community departments, resources, groups



**PREPARING
YOUR
COMMUNITY
FOR
SUSTAINABILITY**

- **Get support from elected officials**
- **Talk up the need for and benefits of action**
 - Find common ground
 - Discuss urgency without creating fear
 - Know the facts
- **Find allies**
 - Staff, departments
 - Community groups
 - Experts
 - County MMP planning



**PREPARING
YOUR
COMMUNITY
FOR
SUSTAINABILITY**



- **Ask for community input**
 - Consider when and where input is needed
 - Share case studies and best practices when asking for feedback
- **Be bold and committed to the goal**

QUESTIONS?





makefoodnotwaste.org

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