

## **MI HEALTHY CLIMATE PLAN**

### **Recommended Food Loss and Waste Reduction Strategies**

As the state of Michigan works to become climate neutral by 2050, food loss and waste reduction (FLWR) initiatives represent a powerful path forward. Project Drawdown has rated food waste reduction the top solution to address climate change<sup>1</sup>. Great Lakes states Ohio, Illinois and Wisconsin, are already taking bold steps to reduce the amount of food that is sent to landfills and Michigan has an opportunity to provide real leadership in this area. In support of the Michigan Council on Climate Solutions, Michigan nonprofits Make Food Not Waste, Food Rescue US-Detroit, and FoodPLUS Detroit, in conjunction with statewide stakeholders, have identified achievable solutions related to legislation, incentives, and public-private partnerships for state leadership on the issue as part of a comprehensive climate strategy.

According to ReFED, a US data-driven food waste reduction nonprofit, 35% of all food in the U.S. went uneaten or unsold in 2019<sup>2</sup>. This percentage is staggering, and yet does not capture the full extent of landfilled organic material. Edible, nutritious food, including an estimated 10 million tons of unharvested farm produce and manufacturing byproducts, such as juice pulp and spent grain, are not included in these estimates. As a country we landfill enough food to feed 2.5 times the number of people living in the U.S., and yet 12.5% of Americans are food insecure. This rate holds true for Michigan where overall 1 in 8 residents and 1 in 7 children face food insecurity. Counties with more than 15% of the population facing food insecurity are: Gogebic, Houghton, Baraga, Schoolcraft, Luce, Mackinac, Chippewa, Cheboygan, Muskegon, Lake, Mecosta, Isabella, Clare, Roscommon, Saginaw, Genesee, Ingram, Berrien and Wayne<sup>3</sup>.

#### **A Climate Issue**

Our “wasted” food is responsible for 10% of the US’s greenhouse gas emissions<sup>4</sup>. In addition to methane produced in landfills, food loss and waste drains our water, land, transportation, storage and human resources. While the reasons food loss and waste occur are complex, many tools exist to address the issue. As the state of Michigan experiences increased effects from climate change and moves toward climate neutrality, FLWR must be part of our actions.

#### **A Food Security Issue**

According to Feeding America<sup>5</sup>, 1 in 8 Michigan residents face food insecurity. Children experience higher rates, with 1 in 7 Michigan children experiencing this lack of access. Further, rates of food insecurity rose during the pandemic. Feeding America reports that almost every county in the U.S. experienced an increase in food insecurity, with Michigan rates rising everywhere in the state, particularly in northern and eastern areas. Lack of access to healthy

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<sup>1</sup> <https://www.drawdown.org/solutions/table-of-solutions>

<sup>2</sup> <https://refed.com/>

<sup>3</sup> <https://michiganadvance.com/2019/11/28/more-than-1-3m-michiganders-are-battling-hunger/>

<sup>4</sup> [https://www.fint.awsassets.panda.org/downloads/driven\\_to\\_waste\\_summary.pdf](https://www.fint.awsassets.panda.org/downloads/driven_to_waste_summary.pdf)

<sup>5</sup> <https://www.feedingamerica.org/hunger-in-america/michigan>

food on a regular basis is related to significant chronic health issues including diabetes and high blood pressure. In children, the effects can include delayed cognitive development, asthma, anemia, and behavioral problems. At the same time, the state of Michigan landfilled 884k tons of food in 2019, enough for each Michigan resident facing food insecurity to consume 4 pounds of food every day.

Extreme unplanned health and weather events dramatically affect food security. As noted in the Michigan Food Security Council Initial Report in October 2020<sup>6</sup>, COVID-19 intensified the need for emergency food and for supply chain infrastructure that could adapt to changing market conditions. Food businesses that face disruption aren't always able to redirect food to people who need it, resulting in wasted food. As major climate-related events continue to occur with greater frequency, vulnerable Michigan residents risk additional harm.

### A Financial Issue

By investing in resources that go unused, the Michigan food system wastes critical dollars that could be invested in productive initiatives. The average household of four wastes \$1600 on uneaten produce alone<sup>7</sup> each year. Our businesses, including restaurants and food service, farms, retail operations and food distributors, do not recoup their investments as much as they could and our schools spend critical funds on food that goes uneaten.

### Federal and State Actions

Initiatives at the federal and state level are underway to support the nationwide goal of halving food waste by 2030. This goal, tied to the UN's Sustainable Development Goal 12.3, was outlined in September 2015. Most recently, the Zero Food Waste Act and COMPOST Act were introduced in the House and Senate in July 2021. The Zero Food Waste Act would provide EPA funding for planning, measurement and reduction initiatives to municipal, state and tribal governments. The COMPOST Act would add composting as a conservation act for USDA conservation programs and provide USDA funding to municipal, state and tribal governments to support compost projects. This legislation followed the US Food Loss and Waste Action Plan<sup>8</sup> that was submitted to President Biden and Congress in April 2021 by ReFED, the World Wildlife Fund, the Natural Resources Defense Council (NRDC), and Harvard Food Law and Policy Clinic (FLPC). This plan called for 5 key action steps at the federal level: Invest in the infrastructure to measure, rescue, recycle, and prevent organic waste from entering landfills and incinerators; Expand incentives to institutionalize surplus food donation and strengthen regional supply chains; Assert the US Government's leadership on FLW globally and domestically; Educate and activate consumers via private and public food waste behavior change campaigns; and Require a national date labeling standard.

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<sup>6</sup> [https://www.michigan.gov/documents/mdhhs/FSC\\_Initial\\_Report\\_v6\\_712638\\_7.pdf](https://www.michigan.gov/documents/mdhhs/FSC_Initial_Report_v6_712638_7.pdf)

<sup>7</sup>

<https://www.rts.com/resources/guides/food-waste-america/#:~:text=According%20to%20the%20nonprofit%20organization,%241%2C600%20a%20year%20in%20produce.>

<sup>8</sup> <https://foodwasteactionplan.org/>

The Great Lakes Food Waste Policy Gap Analysis and Inventory report prepared for NRDC by the Center for EcoTechnology, in collaboration with the Harvard Law School Food Law and Policy Clinic and BioCycle Connect, LLC demonstrates current policy strength in Illinois, Michigan, Ohio, and Wisconsin for certain strategies presented in this document. The corresponding strength indicator will be noted within each strategy section. The importance of including this information is to highlight opportunities for Michigan to take a leadership position in climate policy for the Great Lakes states.

Michigan is considered strong only in food safety policies for share tables in schools<sup>9</sup>. By comparison, Ohio offers bold food donation liability protections, food safety policies for share tables in schools, and plans for targeting solid waste. Wisconsin has strong food safety policies for share tables in schools and plans targeting solid waste. Illinois has strong food systems planning and plans targeting solid waste. Outside the region, California, Connecticut, Rhode Island, Vermont, New Jersey, Maryland, the District of Columbia and Massachusetts have enacted organic waste bans and waste recycling laws. These allow Michigan to learn from and build upon existing policies rather than having to create policies from the ground up.

### Recommended Strategies

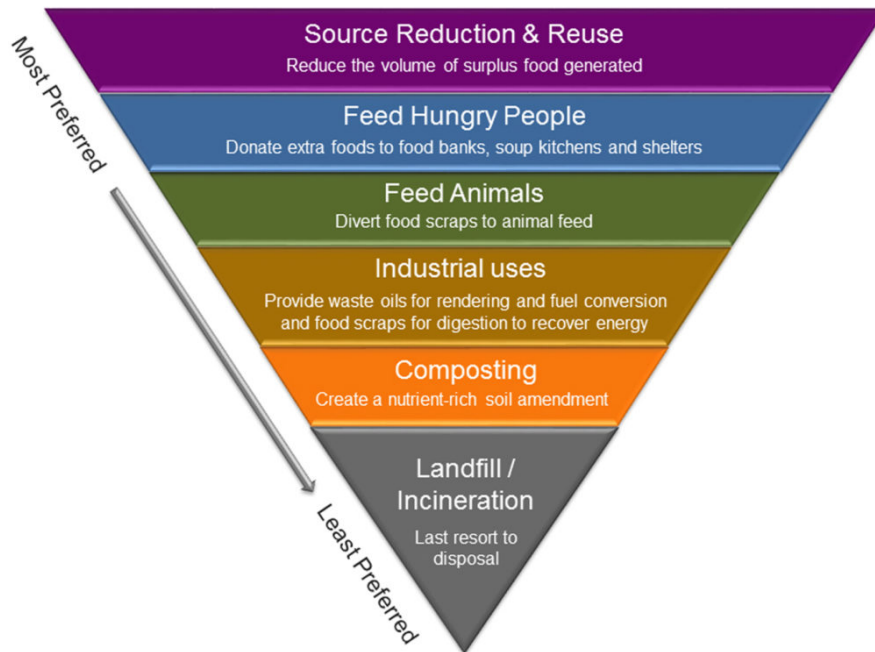
Mitigating the effects of climate change through food loss and waste reduction is critical and achievable. The recommended FLWR strategies represent a high-level look at effective ways to address this at the state level through policy, incentives, public-private partnerships and education campaigns. The strategies emphasize actions that deliver a positive net economic return and significant savings in greenhouse gas (GHG) emissions, and are balanced across source reduction, rescue and recycling methods.

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<sup>9</sup> <https://www.nrdc.org/sites/default/files/great-lakes-food-waste-policy-gap-report.pdf>



## Food Recovery Hierarchy



The following strategies are recommended:

### Policy Strategies

- Provide additional food donation liability protection
- Incorporate food waste strategies in schools
- Address date labels

### Incentive, Public-Private Partnership and Education Campaign Strategies

- Support adoption of model compost procurement policy
- Support education of food service professionals in food waste reduction
- Support consumer education and behavior change
- Address food loss on farms
- Provide state tax credits beyond the current limited federal tax deductions for food rescue
- Provide additional grants and incentives

### Cross-Section Strategies:

- Create the environment needed to change behavior to reduce food waste through diversion from landfills

## STRATEGIES: POLICY

### Provide additional food donation liability protection

Research conducted by the Food Waste Reduction Alliance<sup>10</sup> points to the fear of liability as a major barrier to food donation. Michigan provides liability protection<sup>11</sup> beyond the federal Bill Emerson Good Samaritan Act, providing liability protection for food donors and food recovery organizations and includes a presumption of good faith. The current law does not offer liability protections for food donated directly to needy individuals.

While liability protection education is critical, additional protections can support an increase in food donations. Other states offer examples including: Ohio--covers donations made directly to individuals, allows distributors to charge a small fee for donated food, and explicitly notes that a presumption of liability does not arise merely because a sell-by date has passed; Wisconsin--protects nonprofits that charge end users for food at a low cost; New Hampshire--protects food donors that donate directly to a "needy individual"; Oregon--eliminates compliance with packaging or labeling laws as a condition of liability protection.

CET Michigan Policy Strength Indicator: Moderate Policy
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#### Actions:

- Provide liability protection for certain direct donations made by food businesses directly to those in need.
- Provide explicit liability protection when donors provide food products past a quality-based date.
- Issue clarifying guidance addressing the explicit liability protection for donations sold at a low price by distributing nonprofits.

#### The Impact:

Net Economic Impact and Amount of GHG Saved are to be determined.

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<sup>10</sup>

[https://foodwastealliance.org/wp-content/uploads/2020/05/FWRA-Food-Waste-Survey-2016-Report\\_Final.pdf](https://foodwastealliance.org/wp-content/uploads/2020/05/FWRA-Food-Waste-Survey-2016-Report_Final.pdf)

<sup>11</sup>

[http://www.legislature.mi.gov/\(S\(mz5guf1ztsjzp12gdc52c41j\)\)/mileg.aspx?page=GetMCLDocument&objctname=mcl-691-1572](http://www.legislature.mi.gov/(S(mz5guf1ztsjzp12gdc52c41j))/mileg.aspx?page=GetMCLDocument&objctname=mcl-691-1572)

## Incorporate Food Waste Reduction Strategies in Schools

Michigan has approximately 1.5M K-12 students and 3500 K-12 schools<sup>12</sup>. World Wildlife Fund (WWF)<sup>13</sup> estimates that food waste generated in schools is approximately 40 lbs per student per year, which translates to 29k tons (58M lbs) of food waste coming from Michigan's schools. In addition to the environmental benefits of food waste reduction in schools, the system could realize an economic benefit by reinvesting disposal costs into food service to support increased nutritional offerings.

Currently, the state offers guidance on share tables<sup>14</sup> that promotes the sharing of packaged food among students. This supports food waste reduction while increasing food access for students who may have not had enough to eat either from a home-packed or school-supplied meal. Still, additional strategies can help schools make significant strides in waste reduction. Nationally, school districts see a dramatic change in milk waste by implementing dispensers over individual cartons. The Boulder Valley School District in Colorado saw a ~99% reduction in milk waste by switching from individual cartons to dispensers, and Olympia High School in Washington reduced their annual waste collection costs by \$1,970 by switching to dispensers.

CET Michigan Policy Strength Indicator: Strong Policy
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### Actions:

1. Evaluate lunch period length and position related to recess to ensure students have enough time to eat and that recess occurs before lunch.
2. Re-evaluate school lunch regulations set by the USDA to ensure schools innovating on lunch programs are still able to receive reimbursements.
3. Provide incentives to educate students via cafeteria audits, inclusion of food waste information/lessons in curriculum, school visits to local community gardens or farms.
4. Evaluate taste and quality of food in schools.
5. Provide funding for schools to make structural changes such as switching to milk dispensers v. distributing cartons.
6. Encourage more schools to adopt Share Tables where students can leave/take excess packaged food.
7. Connect schools to local composting sites and incentivize the separation and collection of food scraps.
8. Allow students to take surplus food home at the end of the day.

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<sup>12</sup>

[https://ballotpedia.org/Public\\_education\\_in\\_Michigan#:~:text=The%20Michigan%20public%20school%20system,schools%20in%20891%20school%20districts.](https://ballotpedia.org/Public_education_in_Michigan#:~:text=The%20Michigan%20public%20school%20system,schools%20in%20891%20school%20districts.)

<sup>13</sup>

[https://c402277.ssl.cf1.rackcdn.com/publications/1271/files/original/FoodWasteWarriorR\\_CS\\_121819.pdf?1576689275](https://c402277.ssl.cf1.rackcdn.com/publications/1271/files/original/FoodWasteWarriorR_CS_121819.pdf?1576689275)

<sup>14</sup> [https://www.michigan.gov/documents/mde/Admin\\_Memo\\_No\\_7\\_682598\\_7.pdf](https://www.michigan.gov/documents/mde/Admin_Memo_No_7_682598_7.pdf)

- Investigate food waste reduction opportunities at other government institutions and facilities.

The Impact:

According to the ReFED Insights Engine, taking action in incorporating food waste reduction strategies in schools has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$954k</b>	<b>Amount of GHG saved: 25.5k tons (51M lbs)</b>
K-12 education campaigns: \$628k	
K-12 lunch improvements: \$326k	

### Address Date Labels

A lack of consumer understanding of date labels on food is a major contributor to household food waste<sup>15</sup>. Through surveys, researchers have outlined consumer confusion related to food safety and quality when evaluating “sell by,” “best by,” and “use by” dates. Further, consumers report confusion as to the reason behind the dates, with the majority assuming dates are required by federal legislation. These misunderstandings lead to foods, safe to be consumed, being landfilled.

Currently, Michigan requires dates for last day of sale, but offers no guidance on safety-based dates<sup>16</sup> or permission to donate after the sell by date (except for milk if it is clearly advertised as past the sell by date)<sup>17</sup>. While most states do not have strong policies related to date labels, Michigan has an opportunity to provide leadership by enacting strategies that will decrease consumer confusion.

CET Michigan Policy Strength Indicator: Weak Policy

Actions:

- Provide guidance on donation of food past sell-by date

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<sup>15</sup>  
[https://www.chlpi.org/wp-content/uploads/2013/12/Consumer-Perceptions-on-Date-Labels\\_May-2016.pdf](https://www.chlpi.org/wp-content/uploads/2013/12/Consumer-Perceptions-on-Date-Labels_May-2016.pdf)

<sup>16</sup>  
[http://www.legislature.mi.gov/\(S\(vxhc5zq0eeorvzgghdg1wmdf\)\)/mileg.aspx?page=getobject&objectname=mcl-289-8107](http://www.legislature.mi.gov/(S(vxhc5zq0eeorvzgghdg1wmdf))/mileg.aspx?page=getobject&objectname=mcl-289-8107)

<sup>17</sup>  
[http://www.legislature.mi.gov/\(S\(yqh2pyctd5rky0zbxjzscsf\)\)/mileg.aspx?page=getObject&objectName=mcl-288-539](http://www.legislature.mi.gov/(S(yqh2pyctd5rky0zbxjzscsf))/mileg.aspx?page=getObject&objectName=mcl-288-539)

2. Support consumer education around food safety and date labels, including in charitable food sector
3. Consider eliminating visibility of sell by dates
4. Create two dates: one noting quality and one noting safety

The Impact:

According to the ReFED Insights Engine, taking action in addressing date labels has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$76.1M</b>	<b>Amount of GHG Saved: 18.3k tons (37M lbs)</b>
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**STRATEGIES: INCENTIVE, PUBLIC-PRIVATE PARTNERSHIPS,  
AND EDUCATION CAMPAIGNS**

Support Adoption of Model Compost Procurement Policy

Adopting a model procurement policy can help government and private entities accelerate efforts to divert food scraps from landfills, foster development of compost operations, and increase use of finished compost. To-date, closing the organics recycling loop by requiring compost purchases is an underutilized tool. Creating a model truncates the effort required and provides best practice guidelines.

CET Michigan Policy Strength Indicator: No Policy
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Actions:

1. Develop a model procurement policy\* for Michigan to guide purchase and use of compost in public and private projects
2. Identify and modify laws, regulations, policies, codes, and ordinances to support issuance of a compost procurement policy; also consider waste diversion goals, sustainable procurement goals, and waste management plans
3. Require municipalities, quasi-governmental, and private entities to purchase compost for use in public and private projects in which compost is an appropriate material
4. Require compost use to amend soil in landscaping and construction projects, as well as to provide erosion control and stormwater management in road, highway, and green infrastructure projects
5. Establish compost procurement goals that can be satisfied by using compost in public and private projects



6. Require that compost purchased to comply with the procurement policy be locally sourced
7. Compile annual reports that include volume of compost purchased, sources, end uses, and recommendations to increase purchase of compost
8. Establish a free technical assistance program to help government and private entities to develop procurement policies

#### The Impact:

Net Economic Impact and Amount of GHG Saved are to be determined.

## Support Education of Food Service Professionals in Food Waste Reduction

Consumer-facing food establishments generate a significant amount of landfilled food waste. According to ReFED, Michigan restaurants and food service operations generate 324K tons (648 million pounds) of surplus food annually, primarily because of plate waste<sup>18</sup>. Waste also occurs due to an ongoing concern about liability around donation, which prevents some businesses from sharing food surplus with nonprofit distribution organizations. Further, the lack of composting infrastructure and services makes recycling of organics a challenge.

Within the state, there are many active initiatives to implement composting and anaerobic digestion systems. In addition, the State of Michigan Good Samaritan Act<sup>19</sup> limits liability for donors and food recovery organizations who donate in good faith. Still, there is a significant opportunity to drive down volumes of food waste in this sector through public-private partnerships focused on education, training and incentives.

CET Michigan Policy Strength Indicator: No Policy
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#### Actions:

1. Work with the Michigan Restaurant and Lodging Association to offer food waste education to food service operations (removed ServSafe)
2. Incentivize restaurants and food service operations to implement food waste reduction strategies.
3. Work with a certification process for restaurants and food service operations, such as The PLEDGE™ on Food Waste<sup>20</sup>.

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<sup>18</sup>

[https://insights-engine.refed.com/food-waste-monitor?break\\_by=cause&indicator=tons-surplus&sector=foodservice&state=MI&view=detail&year=2019](https://insights-engine.refed.com/food-waste-monitor?break_by=cause&indicator=tons-surplus&sector=foodservice&state=MI&view=detail&year=2019)

<sup>19</sup>

[http://www.legislature.mi.gov/\(S\(gvbvtvfgggsi4pvzjyldgyac\)\)/mileg.aspx?page=getobject&objectname=mcl-Act-136-of-1993](http://www.legislature.mi.gov/(S(gvbvtvfgggsi4pvzjyldgyac))/mileg.aspx?page=getobject&objectname=mcl-Act-136-of-1993)

<sup>20</sup> <https://www.thepledgeonfoodwaste.org/>

4. Distribute food waste reduction educational materials through county health departments and waste haulers to restaurants and food service operations.
5. Offer incentives (removed reference to discount on license) if restaurant and food service operations have a food waste reduction and diversion plan.

The Impact:

According to the ReFED Insights Engine<sup>21</sup>, taking action in educating food service professionals has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$568.3M</b>	<b>Amount of GHG Saved: 134 tons (268k lbs)</b>
Portion sizes: \$220M	Portion sizes: 59.1k tons
Donation education: \$199M	Donation education: 29k tons
Waste tracking: \$98.9M	Waste tracking: 26.6k tons
Use of First-In-First-Out in inventory Management: \$50.4M	Use of First-In-First-Out in inventory Management: 19.2k tons

### Support Consumer Education and Behavior Change

At 40% of all food waste sources, households represent the largest percentage of food waste across the food system in the U.S. In Michigan, this amounted to 937k tons (1.9 billion pounds) of household food waste in 2019<sup>22</sup>. This waste occurs for various reasons including: over-purchasing, lack of meal planning, not consuming leftovers, confusion over date labels, and not storing food properly. In addition to the environmental impact of food waste, it is estimated<sup>23</sup> that a family of four loses \$1600 a year in food that could have been eaten.

In Michigan, there are currently no statewide initiatives to educate consumers and change household food waste behavior. Nationally, states including Minnesota, Oregon, Florida, California, Colorado, Tennessee, Vermont and Virginia have all undertaken some form of food waste prevention resident outreach. Many cities and counties across the country have also undertaken public outreach campaigns. Oregon DEQ is a leader on this topic with a multi-year strategic plan<sup>24</sup> and a Wasted Food Wasted Money household campaign that is set to launch shortly. In just one week, the Florida Food Waste Prevention Week brought in more than 100 partners, hundreds of educators and students, and garnered 1.5 million social media impressions<sup>25</sup>.

<sup>21</sup> <https://insights.refed.com/>

<sup>22</sup>

[https://insights-engine.refed.com/food-waste-monitor?break\\_by=sector&indicator=tons-surplus&state=MI&view=detail&year=2019](https://insights-engine.refed.com/food-waste-monitor?break_by=sector&indicator=tons-surplus&state=MI&view=detail&year=2019)

<sup>23</sup> <https://www.rts.com/resources/guides/food-waste-america/>

<sup>24</sup> <https://www.oregon.gov/deq/mm/wpcampaigns/Pages/commercialfood.aspx>

<sup>25</sup> <https://www.savethefoodfl.com/>

According to ReFED, a national consumer education campaign could divert 1.38 million tons of food waste from landfill and reduce ghg emissions by 7.41M Metric Tons of CO2 equivalent while creating more than 500 jobs and \$618 billion in cost savings.

CET Michigan Policy Strength Indicator: No Policy
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Action:

1. Create and/or fund, through partnerships, a large scale awareness campaign to promote waste-free habits at home and when eating out.
2. Create and/or fund, through partnerships, a large scale education campaign to promote separation and composting of food scraps at home.

The Impact:

According to the ReFED Insights Engine, taking action in supporting consumer education and behavior change has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$190M</b>
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<b>Amount of GHG Saved: 43k tons (86M lbs)</b>
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## Address Food Loss on Farms

Research shows<sup>26</sup> that roughly 30% of food grown on farms goes unharvested, representing a loss to growers and a waste in land, water, and labor resources. Growers find themselves tilling, rather than harvesting, crops for various reasons including a lack of labor supply, price fluctuations, and limited channels for imperfect fruit and vegetables.

Michigan currently does not offer a tax incentive for farmers to donate to food banks beyond the federal tax credit of the cost of goods sold plus half of the unrealized profit. Citing cost of labor as a key barrier to harvest even with the tax incentives, farmers are also reluctant to host volunteer gleaners on site fearing potential liability issues and property damage.

CET Michigan Policy Strength Indicator: No Policy
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Actions:

1. Support the development of channels for surplus and imperfect produce

<sup>26</sup> <https://www.sciencedirect.com/science/article/pii/S0921344919301296>

2. Create statewide partnership of community organizations to mobilize trained gleaning volunteers
3. Continue to support value-added processing infrastructure at the farm level
4. Support farmers in production planning
5. Offer tax incentives for farmers to donate to food banks beyond the federal tax credit

The Impact:

According to the ReFED Insights Engine, taking action in addressing food loss on farms has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$148.3M</b>	<b>Amount of GHG Saved: 84.2k tons (168M lbs)</b>
Additional channels for surplus and imperfect produce: \$144M	Additional channels for surplus and imperfect produce: 82k tons
Gleaning: \$4.3M	Gleaning: 2.2 tons

Provide state tax credits to restaurants and food service operations beyond the current limited federal tax deductions for food rescue

The federal government allows businesses to deduct up to 15% of their taxable income for food donations. Michigan does not provide additional tax credits, nor does it offer incentives for costs related to processing or transporting donations. Nine states including Missouri, Iowa and Kentucky, offer state level tax credits that aim to assist businesses that support food donations but are not direct food donors. In addition, Washington D.C. and eight states offer tax credits beyond the federal incentive.

CET Michigan Policy Strength Indicator: No Policy
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Actions:

- Offer tax incentives that better offset the costs of food donation, including the cost of transporting donated food.
- Provide tax credits beyond the federal deductions for food donation.

The Impact:

Net Economic Impact and Amount of GHG Saved are to be determined.

## Provide Additional Grants and Incentives

In 2021, Michigan put forward \$8.5M in matching funds to increase recycling rates, including organics diversion projects through the NextCycle Michigan program. Through this investment, start-ups, established businesses, and nonprofits have been able to use funds to create innovative FLWR programs. Additionally, MDARD has provided investment for value-added and food and agriculture processing. Continued appropriation of approved funds in these areas can strengthen the private sector, drive FLWR, and demonstrate leadership within the Great Lakes and nationally. Further, these funds can provide stable funding for end market development, create jobs, and offer opportunities for BIPOC and early career Michigan residents who are interested in sustainability and a circular economy.

CET Michigan Policy Strength Indicator: Moderate Policy

### Actions:

1. Create dedicated grant programs to fund initiatives that explicitly focus on food waste reduction, including value-added processing and education
2. Establish a free technical assistance program to help businesses divert organics from the waste stream.
3. As a near-term, incremental option, consider implementing a recognition program to encourage businesses to divert food from the waste stream through donation or other measures. This could come in the form of government recognition, certification, or other encouragement.
4. Support the development of food rescue activity in areas currently lacking resources
5. Direct federal emergency food-related funds to food rescue and/or food rescue infrastructure, such as cold storage and transportation
6. Continue to fund existing grant programs that advance food waste management activity.

### The Impact:

According to the ReFED Insights Engine, providing additional grants and incentives has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$82M</b>	<b>Amount of GHG Saved: 57.2k tons (114M lbs)</b>
Investment in byproduct upcycling: \$82M	Investment in byproduct upcycling: 57.2k tons

## STRATEGIES: CROSS-SECTION

## Create the environment needed to reduce food waste through diversion from landfills

After it is landfilled, food waste, the largest component of landfill waste by weight, emits a significant amount of methane, a powerful greenhouse gas. Landfills are the third-largest source of U.S. methane emissions at 14.1 percent. Increasing Michigan's landfill diversion rate will require investment in collections, processing, and end markets throughout the state. According to the NextCycle gap analysis, approximately 33% of organics currently going to disposal will need to be recaptured for organics processing at compost or anaerobic digestion facilities. This would require processing capacity for an additional 1.12 million tons of organics. Additional capacity can be created in diverse ways, including expanding existing facilities' capacity to accept food waste, as well as increasing community-based and backyard composting statewide.

In Michigan, the current lack of adequate infrastructure and services makes recycling of organics a challenge. Only one (1) percent of organics processed in 2018 was food waste, and only eight of the more than 150 registered centralized compost sites reported accepting any food waste. There are also no statewide initiatives to educate citizens and businesses on the benefits of composting and compost use to foster behavior and practice changes. Improving policy and supporting policy implementation are proven, effective means of achieving food waste reduction. Compelling food waste generators at all scales to explore more sustainable practices like composting and anaerobic digestion will limit the amount of organic waste disposed of in landfills. Implementing short term and medium term strategies will over time position Michigan to include food waste in its ban from landfills.

CET Michigan Policy Strength Indicator:

No Policy (Organics Disposal Bans and Recycling Laws)

Weak Policy (Organics Processing Infrastructure Permitting)

### Actions:

1. Support adoption of enhanced compost policies as proposed in revisions to Part 115 Solid Waste Management legislation
2. Develop the market for finished compost by enacting procurement requirements; also by enacting specifications for organic matter in soils used in commercial development, road construction, demolition backfield, green infrastructure/stormwater management, etc.
3. Support increasing capacity to collect and process food waste at diverse scales; include incentivizing enhanced mapping of compost and anaerobic digestion sites statewide
4. Promote the benefits of composting and compost use through a sustained statewide awareness and education campaign
5. Incentivize collection and reporting of commercial, industrial, community, and home composting data; give preference to market development grant program until state recycling goal achieved; provide technical assistance to support localized, integrated data collection and management

- 6. Establish dedicated infrastructure grant program for community and home composting to engage citizens in developing hyperlocal solutions to recover more organic resources; eliminate barriers to equitable participation (matching funds, reimbursement); give preference to communities disproportionately impacted by and/or more susceptible to impacts of changing climate and weather conditions

The Impact:

According to the ReFED Insights Engine centralized, community and home composting has the potential to achieve the following economic and greenhouse gas emission impacts:

<b>Net Economic Impact: \$52.8M</b>	<b>Amount of GHG saved: 70.9k Tons</b>
Centralized Composting: \$49.4M	4.9K Metric Tons CO2e
Community Composting: \$-1.5M	25K Metric Tons CO2e
Home Composting: \$4.9M	41K Metric Tons CO2e

Additional information:

A toolkit for incorporating food waste in municipal climate action plans.

[Eli-toolkit-incorporating-food-waste.pdf](#)

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