

Food Waste: A Serious Environmental Offender

By [Make Food Not Waste](#)

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Food waste reduction is [identified as the third most impactful solution to climate change](#).¹ Across the food system, this global threat squanders water, land, labor, fossil fuels, fertilizer, nutrients, seed, and financial capital. Over [20% of Michigan's gross product is associated with the agri-food system](#),² making food waste a Michigan issue. However, regionally, nationally, and internationally, food waste is often overlooked in the discussion of sustainability and climate change.

Economy

The US throws away enormous financial resources due to food waste:

- ◆ Approximately [\\$165 billion](#)³ are wasted in the US due to food waste, annually.
- ◆ The average US family of four spends [\\$1300 to \\$2200 per year](#)³ on wasted food.
- ◆ Approximately [40% of the food produced](#)³ in the US is wasted.

Reducing food waste offers job creation opportunities as new and existing food-related businesses:

- ◆ Realize profits by creating efficiencies in the food system.
- ◆ Innovate to create businesses to reduce food waste.

Public Health

Food waste is a terrible contributor to greenhouse gas (GHG) emissions:

- ◆ As food waste decomposes, it [releases the powerful GHG methane](#).³
- ◆ The elimination of food waste could prevent the release of [70 billion tons of GHG](#).¹

As decomposing nutrients contaminate the atmosphere with GHG, approximately [2 billion people](#)⁵ across the globe struggle with food insecurity:

- ◆ In some areas of Michigan, food insecurity impacts [1 in 5, overall](#),⁶ and approaches [1 in 4](#)⁷ for children.
- ◆ Michigan is also home to [one of the most food insecure counties in the US](#).⁸
- ◆ On average, approximately [1 person in 7](#),⁹ and [1 child in 6](#)¹⁰ struggles with food insecurity in Michigan.

As a state with such a strong agri-food sector, Michigan has both great opportunity and huge responsibility to impact climate change through the reduction of food waste.

Energy

As food is wasted across all areas of the food system, the energy used to produce that food is also wasted; from fuel for farming and transportation to refrigeration, processing, and cooking.

- ◆ The US loses approximately [10% of the national energy budget](#)³ to food waste.

Natural Resources

The US squanders enormous amounts of natural resources on wasted food:

- ◆ 21% of water used in agriculture⁴
- ◆ [19% of cropland](#)⁴
- ◆ [18% of farming fertilizer](#)⁴
- ◆ Food waste is the [number one contributor to landfills](#).³

As Michigan is a state with a large agri-food system, resources lost to food waste mean lost Michigan resources.

Forms of Food Waste

The problem of food waste takes many forms. Across every aspect of the food system, perfectly edible, delicious, nutritious food is wasted. During the growing cycle, wasted food may be misshapen, large, small, or simply overproduced. Perfectly edible food is also damaged in transit, or may be discarded by grocers far before the product is actually spoiled. Consumers may overbuy, misunderstand date labeling, unintentionally mistreat, or lose interest in and waste food. Finally, food nutrients are wasted in landfills, rather than nourishing the soil through compost.

Existing Solutions

While the problem of food waste is incredibly pervasive internationally, excellent resources do exist to support food waste reduction. In the State of Michigan, programs such as the [Michigan Agricultural Surplus System](#)¹¹ offers resources for Michigan food banks to purchase B-grade produce from Michigan farmers. Legislation can also play a key role. In California, legislation passed in October 2019, [Assembly Bill No. 827](#),¹² requires food service establishments such as mall food courts to provide customers with bins and educational signage for organic waste such as food waste. New York City provides [infrastructure](#)¹³ and [supporting legislation](#)¹⁴ to capture organic material for residents, schools, businesses, and nonprofits. In 2016, France became the first country in the world to pass legislation that fines grocers of a certain size who discard unused food. Not only does this encourage the reduction of food waste, according to the [2018 annual report](#)¹⁵ of the association of French food banks, food donations by food businesses are up substantially since the law was passed.

Opportunities

Food waste reduction is essential to Michigan's sustainability strategy. Food waste has enormous potential to reduce GHG, particularly since Michigan is a strong agri-food state. These facts combine to create powerful potential for change through action.

Food waste reduction is also strategic from a financial perspective. New and existing food-related businesses can realize profits by creating efficiencies in the food system to cut down on waste. [Food waste reduction businesses](#)¹⁶ are also a potential growth industry.

Opportunities definitely exist for additional legislation to support food waste reduction. Legislation could provide food waste incentives or penalties. Education for food donors regarding [existing legislation that protects them from liability](#)¹⁷ would also be beneficial. As well, it is important that community planning seriously considers supporting infrastructure to collect compostable materials to reduce GHG and enrich soil.

The UN FAO also suggests that educating consumers is one very important way to address food waste. Organizations that fight food waste offer [resources](#)¹⁸ for consumers that range from planning meals and eating leftovers to understanding date labels, using kitchen scraps, and composting. Consumers' understanding and action on all these fronts are needed to reduce food waste.

Key Resources

Organizations fighting food waste include:

[Make Food Not Waste](#)¹⁹

www.makefoodnotwaste.org

Detroit-based Make Food Not Waste provides resources for state and regional food waste questions.

[ReFED](#)²⁰

www.refed.com

[Save the Food](#)²¹

www.savethefood.com

[Project Drawdown](#)²²

www.drawdown.org

[National Resource Defense Council](#)²³

www.nrdc.org

[United Nations Food and Agriculture Organization](#)²⁴

www.fao.org

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