
Grassroots Climate Action for Reducing Methane Emissions from Landfills

*Prepared by the
Local Landfill Working Group
for the RE-AMP Network*



About RE-AMP and the Partners on This Project

RE-AMP is a network of more than 130 organizations with the shared goal of equitably eliminating greenhouse gas emissions in the Midwest by 2050. A number of RE-AMP members and close allies collaborated on this project, especially: Ecology Center, Industrious Labs, the Harvard Food Law & Policy Law Clinic, Michigan Chapter of the Sierra Club, the Minnesota Environmental Justice Table, SEEDS Ecology and Education Centers, and the West Michigan Sustainable Business Forum.

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The following pages outline a potential path forward for grassroots climate organizations and their peers to reduce methane emissions from landfills in the Midwest. The RE-AMP network exists to connect a wide diversity of people, spread information and resources quickly, and align strategies to maximize collective impact. Although its north star goal is to equitably eliminate greenhouse gas emissions in the Midwest by 2050, true north is the network's commitment to a systems thinking approach that leverages the power of collaboration with organizations who know their communities best.

There is substantial opportunity to recruit additional allies as this work intersects with grassroots and grasstops efforts to improve food access, food sovereignty, nature-based stormwater infrastructure, regenerative agriculture, and/or recycling access. To identify these opportunities, primary and secondary research was conducted through outreach to the RE-AMP network, web research and other means, seeking efforts to promote extended producer responsibility or industry-led solutions, community-based composting initiatives, environmental justice campaigns opposing landfills or incinerators, food waste education and advocacy, local or regional recycling improvement organizing, or any other planning or advocacy effort to reduce landfill emissions.

Although far from exhaustive, we have identified stories of current grassroots and grasstop efforts currently happening within the network or adjacent to it that could be accelerated or replicated through RE-AMP's coordination.

This document contains two parts:

- **Local Solutions:** An outline of opportunities to reduce methane emissions from landfills in the Midwest organized according to their emissions potential, potential to improve public health and equity, and achievability. This is the “what” and “why”.
- **Power Map:** A collection of stories from within and adjacent to the network organized by shared interest and approaches. This is the “who”, “where”, “when” and “how”. At least one example from each RE-AMP state has been included.

Local Solutions: Action Opportunities for Grassroots Initiatives

The Working Group identified solutions that are currently being deployed at the local level in the Midwest, and organized them according to their potential for local-scale organizing and advocacy. Our research [can be reviewed here](#).

HIGHLY ACHIEVABLE, HIGH-IMPACT SOLUTIONS:

We reviewed the greenhouse gas reduction potential for a range of actions, and we crossreferenced those actions with the type of capacity Midwestern communities have. From this analysis, we selected four types of local action that we think are particularly salient.

- **Community-scale composting:** Small-scale organics recycling operations led by neighborhoods, families, small and micro-scale businesses, and non-profit organizations. These facilities manage under 1,000 cubic yards of compost annually, and are commonly located in or near neighborhoods, often adjacent to urban agriculture. Many of these are BIPOC-led. Operations will benefit through support from grassroots advocacy to encourage appropriate zoning and regulation, funding, and technical resources. Predominantly grassroots organizations themselves, community compost operations have demonstrated sympathies to climate action, as highlighted in the Power Map section to follow.
- **Food-waste prevention (retail/residential):** Behavior change education, regulation and incentivized practices in grocery stores and their supply chains to discourage households from purchasing or cooking food products that they do not use, and to use what they have. Easily attainable through educational programs and advocacy for improved labeling and packaging standards.
- **Food rescue and recovery:** Diverse in scope and scale, food recovery practices ensure that surplus food is retained for human consumption. This could include secondary, discount and resale applications or markets, as well as reprocessing and “upcycle” kitchens, but is most commonly associated with the charitable food system. Grassroots actions could advance education on liability protections, access to funding and resources, and technical support, as well as intersectional dialogues on food sovereignty and the failings of the charitable food system. There is an enormous community of diverse stakeholders, RE-AMP will have little difficulty identifying allies.
- **Sustainable Materials Management Planning:** Every Midwest state requires cities and/or counties to develop some type of solid waste management or materials management plan. These are typically updated on three to five-year intervals, and there is some opportunity for improved grassroots involvement to advance emissions reduction. In Michigan, considered the weakest of the Great Lakes for solid waste management planning, a long-overdue update to its solid waste law is requiring all of its 83 counties to begin a three-year planning process to create comprehensive sustainable management plans. This is a generational opportunity for grassroots organizations to impact equitable emissions reductions from landfills.

EQUITABLE AND ACHIEVABLE GRASSTOP SOLUTIONS:

In addition to the above, we identified issues that present substantial opportunity for emissions reduction through landfills, but are not ideal opportunities for grassroots action. Although there may be some limited impact from advocacy in support of increased funding or policy improvements, these are solutions that will be led by businesses, institutions and municipalities, with grassroots action most beneficial through support for sustainable materials management and food waste reduction planning (see above).

- Recycling access and infrastructure
 - Extended Producer Responsibility (see Power Map)
 - Commercial food waste prevention
 - Municipal and commercial composting (more than 1,000 cubic yards annually)
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MARGINALLY IMPACTFUL SOLUTIONS:

We also identified work which we support in some cases, but that we did not prioritize, based on what we learned in our analysis. Practices and policies that do offer limited potential for emissions reduction and community improvement, in comparison to those highlighted above, and little to no opportunity for grassroots action. As with the Grasstop Solutions listed above, these could be advanced through materials management or food waste reduction planning.

- Recovery of food scraps as animal feed
 - Biochar (pyrolysis of woody material for soil amendment)
 - Decentralized materials management (eg: small-scale recycling)
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PROBLEMATIC SOLUTIONS:

Practices and policies that in some cases offer potential for methane reduction and the diversion of waste materials from landfills in the Midwest, but due to a variety of issues (eg: impacts to frontline communities, limitations of technology, costs) would not likely be supported through grassroots climate action, and have potential to be branded as “false solutions.”

- Wastewater treatment plant expansions for food waste management
- Waste to energy facilities (eg: incinerators)
- Methane digestion small or large scale
- Landfill methane capture

Among these, landfill gas capture is the most promising, and absolutely should be a priority for statewide and regional advocacy that requires landfills in the Midwest be designed and operated in a manner that ensures methane is captured at the source. However, so-called Renewable Natural Gas is marketed to fossil fuel industries and applications that are adversarial to grassroots climate action. Even as part of a community’s sustainable materials management planning, it is unlikely that community-based organizations would advocate on behalf of these initiatives.

To the extent that advocacy for these solutions is necessary (ie: landfill gas capture), it should be done through state policy and local accountability.

Power Map: Midwest Grassroots Opportunities

The Working Group identified stories from within and adjacent to the network organized by shared interest and approaches, approximately aligned with the solutions outlined in the Action Opportunities section. At least one example from each RE-AMP state has been included

- **Community Compost:** Neighborhood-scale composting integrated with the food sovereignty movement and “good food” systems. Pervasive grassroots efforts are emerging throughout the Midwest, many of these BIPOC-led. Common across all states. A key RE-AMP member, Institute for Local Self Reliance, is one of the nation’s leading advocates for community-scale composting.
- **Extended Producer Responsibility (EPR):** Among many new and emerging initiatives to advance recycling and sustainable materials management throughout the Midwest, Extended Producer Responsibility laws have potential to define how future investments in landfill diversion are managed. Extended producer responsibility requires brand owners (“producers”) to pay for and/or manage recycling systems. Emerging in most states, with Illinois furthest along of the Midwest states.

- **Food Waste Prevention:** Local coalitions and initiatives organized to prevent food waste through education or other higher-impact food waste solutions (eg: rescue and recovery), typically through public and private partnerships. This is a combination of two Highly Achievable, High-impact Solutions. In practice, local advocacy efforts will be articulated as a combined initiative or plan. Some efforts are underway in all Midwest states. Of special note, Michigan Sustainable Business Forum and Make Food Not Waste have been collaborating on a Food Waste Policy Road Map for Michigan, while the Natural Resources Defense Council has been active in the Midwest through the Food Matters Regional Initiative, through which city representatives network with one another and with local partner organizations to set goals, develop programs, and identify regional strategies that help maximize their resources.
- **Incinerators in EJ Communities:** Local efforts to close waste to energy facilities have been a defining environmental justice in the Midwest. Many grassroots zero waste groups have their roots in these fights.
- **Sustainable Materials Management Planning:** Creation of county or municipal plans to divert waste from landfills, complementary to community climate plans. Most Midwest states have a legal framework to advance this, with Michigan communities now beginning a three-year planning process mandated by a 2023 state law. This will be a generational opportunity for Michigan.

The stories below show real world applications of these local solutions, and the potential to local models that can feed into state policy.

FOOD OF THE NORTH
Moorhead, North Dakota
ISSUE: Food Waste
RE-AMP CONNECTION:
None

ZERO WASTE COALITION
Minneapolis, Minnesota
ISSUE: Incinerator
RE-AMP CONNECTION:
Minnesota EJ Table

ILLINOIS PRODUCT STEWARDSHIP COUNCIL
Chicago, Illinois
ISSUE: EPR
RE-AMP CONNECTION:
NONE

ILLINOIS WASTED FOOD ALLIANCE
Chicago, Illinois
ISSUE: Food Waste
RE-AMP CONNECTION:
Chicago Food Policy Action Council

INSTITUTE FOR LOCAL SELF RELIANCE
Minneapolis, Minnesota
ISSUE: Compost
RE-AMP CONNECTION: ILSR

SEEDS ECOLOGY
Traverse City, Michigan
ISSUE: Planning
RE-AMP CONNECTION:
SEEDS

SODAK COMPOST
Sioux Falls, South Dakota
ISSUE: Compost
RE-AMP CONNECTION:
Dakota Rural Action

SCRAP SOILS
Detroit, Michigan
ISSUE: Compost
RE-AMP CONNECTION:
Adjacent - Detroit Food Policy Council (several)

BUCKET RUCKUS
Stevens Point, Wisconsin
ISSUE: Compost
RE-AMP CONNECTION: MREA

KC FARM SCHOOL AT GIBBS ROAD
Kansas City, Kansas
ISSUE: Compost
RE-AMP CONNECTION: KC Farm School

SAVE MORE THAN FOOD
Columbus, Ohio
ISSUE: Food Waste
RE-AMP CONNECTION:
None

CITY OF MUSCATINE
Muscatine, Iowa
ISSUE: Food Waste
RE-AMP CONNECTION: None

KENT COUNTY SUSTAINABLE BUSINESS PARK
Grand Rapids, Michigan
ISSUE: Planning
RE-AMP CONNECTION:
MiSBF

LYON COUNTY FOOD AND FARM COUNCIL
Emporia, Kansas
ISSUE: Compost
RE-AMP CONNECTION:
Climate + Energy Project

MUSKEGON COUNTY RECYCLING INITIATIVE
Muskegon, Michigan
ISSUE: Planning
RE-AMP CONNECTION:
WMEAC

ILLINOIS PRODUCT STEWARDSHIP COUNCIL

illinoispsc.org

The Illinois Product Stewardship Council is a coalition of public and private entities including local governments, state governments, businesses, environmental groups, NGOs, solid waste agencies, associations, and individuals in Illinois.

The mission of the ILPSC is to shift the product waste management system in Illinois from one focused on government-funded and ratepayer-financed waste diversion to one that relies on producer responsibility in order to reduce public costs, increase opportunities for waste minimization and resource recovery, raise recycling rates, and drive improvements in product design that promote environmental sustainability. It facilitated the effort to establish an Extended Producer Responsibility law in Illinois, a priority issue for the Chicago Department of Public Health, which manages the city's recycling efforts.

ILLINOIS WASTED FOOD ALLIANCE

wastedfoodaction.org/action-plan

A diverse set of organizations helping build a unified approach towards reducing wasted food and leveraging it to benefit the Chicagoland region. The coalition collaborates to combat wasted food by creating solutions geared toward the US EPA hierarchy preventing food loss, rescuing/redistributing edible food, and recycling food through composting and other technologies.

The mission of the organization is to develop a working strategy and action platform that makes Illinois a leader in reducing wasted food by connecting and building on current wasted food initiatives, education, and policy in unified ways that holistically promote source reduction; food recovery for hunger relief and other uses; and recovery of food scraps for composting and creating healthy soil. It published an action plan and policy priorities in 2021.

CITY OF MUSCATINE

muscatineiowa.gov/1122/MARRVE

Muscatine is a community with a deep concentration of agribusiness, and through that, a unique relationship with food waste. Among other smaller examples, United Way of Muscatine coordinates a Food Rescue Program that picks up safe food that would otherwise go to waste from the grocery stores and delivers it to the food pantries in Muscatine.

The Muscatine Area Resource Recovery for Vehicles and Energy program receives organic waste and converts it to renewable natural gas that can be used by Compressed Natural Gas vehicles (which it refers to as “carbon negative fuel”). The success of this program has encouraged new investments in upstream food waste initiatives, including a depackaging facility that removes surplus food from paper and plastic packaging, allowing each to be disposed of separately.

LYON COUNTY FOOD AND FARM COUNCIL

Members of Healthier Lyon County, a coalition organized in 2014, have provided information to Lyon County Commissioners annually regarding the county’s health rankings and the Social Determinants of Health. Unfortunately, in Lyon County, Kansas, it is easy to make the connection between the incidence of health issues such as diabetes, high blood pressure and obesity among county residents who lack access to healthy food. The Coalition and community members concluded that there was sufficient need for creating a food policy council that would work to improve food insecurity and related health conditions. A Resolution was presented to the Lyon County Board of County Commissioners for adoption in May 2019 which established the Lyon County Food and Farm Council (LCFFC).

LCFFC was one of several local food policy councils that applied to the RE-AMP Food Policy Council Action Team to support a community compost initiative.

KC FARM SCHOOL AT GIBBS ROAD

kcfarmschool.org

A member of RE-AMP and the RE-AMP Kansas table, this farm is looking to leverage collective action to improve sustainability, reduce emissions and increase resilience. This year hosted [Compost Fest](#), a shared event with [Missouri Organic Recycling](#) that was attended by over 500 people. They have taken advantage of small grants from RE-AMP. KC Farm School is a 14-acre urban farm practicing no-till, regenerative, diversified vegetable production that has an extensive [Sustainability Action Plan](#) developed by its Eco Team committee.

SCRAP SOILS

scrapsoils.com

Scrap Soils is a mission-driven organization dedicated to reducing food waste and harmful greenhouse gas emissions one compost bin at a time. It aims to educate the community on the power of composting and make the process accessible for everyone. A non-profit organization, Scrap Soils collects and composts residential and commercial food waste weekly, focused on compost as a natural fertilizer and carbon sequestration method.

In 2020 it operated for a year as a pilot program, successfully composting 52,000 lbs of food waste from 30 members. It works with the community to ensure a positive shift in the mindset around composting for the state of Michigan, particularly the marginalized populations in Detroit. Although this is a service-based program, its commitment to address climate change suggests that there is potential for advocacy support. Regardless, it is representative of a community of composters in Detroit and similar communities that merit RE-AMP support.

A statement from the organization:

“As people of color, our board of directors is keenly aware of the negative and perpetual impacts of systemic racism on marginalized demographics. Together, we have diverse professional backgrounds spanning an array of entrepreneurial and corporate projects and entities. We see the vast potential of Detroit to become a green city, reclaiming its own food waste before it reaches the landfill. Working with volunteers and hosting composting classes will allow residents of metro Detroit to remain connected to what’s so special about composting. We want to nurture partnerships with organics companies doing similar or adjacent work in order to close food cycle in Detroit. In the future by providing healthy soil and compost to farmers, we are making an even greater impact by not only minimizing GHG from rotting landfill waste, but also from carbon sequestration through healthier farming practices in Michigan. Because marginalized groups are the ones to be most negatively impacted by the effects of climate change, our Products and services lessen the blow of climate change for those groups.”

SEEDS ECOLOGY & EDUCATION CENTERS

ecoseeds.org

In 2018, four organizations — Bay Area Recycling for Charities (BARC), SEEDS Ecology & Education Centers, Grand Traverse County Resource Recovery, and the Department of Environment, Great Lakes and Energy (EGLE) — formed a cohort to intensively study the regional waste system in Northern Michigan. In 2021 it led a \$150,000 study of how to optimize the organics recycling system in Northern Michigan. The 10-county collaboration is mapping existing bright spots and networks, identifying and prioritizing levers of change and facilitating matchmaking.

The composting feasibility study focused on Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee and Wexford counties. It estimated that organic materials made up as much as one-third of the region's waste stream.

From SEEDS -

“We are looking at the entire value-chain — from the person who tosses out the banana peel to the person who hauls it away to the people who compost it and those who sell it to farmers and gardeners — searching for market-driven mechanisms to build upon what is already working, as well as opportunities that create new triple-bottom-line enterprises.”

KENT COUNTY SUSTAINABLE BUSINESS PARK

reimaginetrash.org/sbp

One of the Midwest's best examples of how proactive materials management planning can reshape a regional paradigm, in 2016 Michigan's third-largest county announced it would not be expanding its landfill when it reached capacity in 2029. Instead, the community set a bold goal to divert 90% of the Kent County-generated trash that goes to landfills by 2030.

Building a Sustainable Business Park to process that material became an essential part of reaching that goal. Instead of using 250 acres slated for future landfill construction to bury waste, it would instead sponsor an industrial park that would process the material into new products. The planned facility will process a significant portion of the 654,000 tons of municipal solid waste being landfilled by local residents and businesses each year. The project required substantial grassroots and grasstop advocacy to establish the no-landfill mandate, access funding, and generate stakeholder support.

MUSKEGON COUNTY RECYCLING INITIATIVE

wmeac.org/2022/09/new-effort-to-kickstart-recycling-in-muskegon-county-gets-state-support/

West Michigan Environmental Action Council, facilitator of the RE-AMP Michigan table, is working to improve residential recycling in Muskegon County through a stakeholder engagement process.

An example of proactive materials management planning, WMEAC said:

“We brought all these folks together in a series of virtual meetings to discuss the current status of recycling in the county, perceived obstacles, and potential opportunities for improvement. We hosted information sessions on state funding opportunities, educational grants, and imminent changes to state law that will aid in strengthening recycling programs at the local level.”

ZERO WASTE COALITION

Coalition of environmental justice advocates working to reduce reliance on incinerator use through coordinated waste reduction strategies in Minneapolis.

INSTITUTE FOR LOCAL SELF RELIANCE

ilsr.org/composting/community-composters

ILSR’s Composting for Community Project is supporting a distributed infrastructure and the growing community composting sector. Through ILSR’s research, networks, and resources, it is documenting the viability of community-scale composting and meeting the need for training, guidance on best management practices, business models, and navigating legal and policy hurdles. The ILSR Co-Executive Director is on the RE-AMP Steering Committee.

From ILSR:

“Community-scale composters serve an integral and unique role in both the broader composting industry and the sustainable food movement. They are often social innovators and entrepreneurs. Many collect food scraps with bikes. Others employ youth and marginalized individuals. A growing number utilize cooperative ownership structures. They are located at schools, universities, community gardens, farms, and many other places – urban, rural, and suburban. Their distinguishing feature is keeping the process and product as local as possible while engaging the community through participation and education.”

FOOD OF THE NORTH

foodofthenorth.com/about-us-1

Food of the North (formerly Ugly Food of the North) is a Fargo-Moorhead organization that works to celebrate, connect and empower the local food community and beyond. It was formed in August 2015 when three friends decided to host a one-time event to raise awareness about the issue of food waste. They weren't sure what to expect, but over 100 people showed up and wanted to know more. They saw a need for continued conversation around food sustainability, and essentially, kept hosting events. In 2016, they launched the Little Free Garden project, and in 2018, First Fridays.

Today, Food of the North is a non-profit organization that has hosted over 80 unique events, launched multiple community partnerships and is recognized as a driving force for change in the Fargo-Moorhead local food community. Its program, Ugly Food of the North, works to increase awareness of the issue of food waste and provide strategies for people to reduce food waste in their daily lives. It works with a local co-op grocery store and area farmers markets to sell “ugly food” as part of a food waste reduction strategy.

SAVE MORE THAN FOOD

savemorethanfood.org

In order to address the concerning issue of food waste in their community, the Solid Waste Authority of Central Ohio (SWACO) and The Central Ohio Food Waste Initiative came together to create an awareness campaign to share the impact that food waste has on the health of the community, economy, and environment. Lauded as a model program by U.S. EPA and national partners, the campaign and core partners have developed action plans, studies, educational programs, resources and funding mechanisms. It hosts a food rescue working group, composting initiatives, a technology incubator and an awards program.

The group also serves as a hub for national programs to engage with the local community.

SODAK COMPOST

sodakcompost.org

Established in 2022, SoDak Compost is a locally-owned, organic recycling 501c3 nonprofit that offers easy, affordable solutions for Sioux Falls residents to divert their food scraps from the landfill. It works to strengthen the community's connection to the problem of food waste, the potential of food scraps, and the promise of compost.

It is South Dakota's first and only community composting nonprofit, with a mission to create a culture around sustainability and raise awareness of the benefits of recycling surplus food and composting through workshops, community partnerships, and outreach. A relatively new venture, the organization was started by a Brooklyn transplant.

From SoDak:

"We offer solutions for community members and local businesses to divert their food scraps from the landfill, and, instead, use those nutrients to build healthy soil by composting. Together, we are working towards a world where food is never wasted."

BUCKET RUCKUS

bucketruckus.cc

A for-profit organization business that encourages area residents to compost organic waste rather than throwing it in the trash. This service provides a 5-gallon bucket fitted with a screw top lid for easy handling. It is then picked up and swapped with an empty bucket (or biochar/compost) on a weekly or biweekly basis.

The bucket business model is common among community composters in the Midwest and nationally, providing a more appropriate container than the curbside carts used for municipal programs, which accept yard waste. These programs are sometimes managed by workers on bikes.

In this instance, the highlighted organization is not likely to become a RE-AMP member. Although most of the composters highlighted have been community-based organizations, Bucket Ruckus is not. Here, RE-AMP's role would be to support policy and incentives that can ensure that these smaller scale ventures have an ability to flourish.

From Bucket Ruckus:

"That 400,000+ pounds that Bucket Ruckus has diverted from landfill disposal translates roughly into 188,109 pounds of carbon dioxide equivalents (lbs CO₂e). You can also think of it as gallons of gas...that's like 9,598 gallons of gas never having been used. Not only is composting great to reduce our dependence on landfills and mitigate greenhouse gas generation, but it is a great amendment to your soil for growing flowers, vegetables, or just to create a healthier soil ecosystem."