



Composting at Scale in an Urban Environment: The Community Approach

Kompost Kids - Transforming Soil. Transforming Lives. Transforming our Communities.



Welcome

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Our mission is to educate the public, individuals, businesses and institutions about the benefits of compost and to reclaim organic materials from landfills to create soil for community-based agriculture projects.

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Outline

I. Introduction

II. Our Story

Building a community compost network

Negotiating regulatory obstacles

Beyond community composting

III. Questions





Programs

Community Compost Program

We collect preconsumer organic waste (coffee grounds and kitchen scraps) from area restaurants and businesses. We then use composting to turn this into soil for urban agriculture.

Community Education and Outreach

We offer workshops and other programming geared towards education in the benefits and how-to's of composting.

Giving Back

The Kompost Kids mission includes providing donated and discounted compost/soil products to qualifying community gardens in the Milwaukee area.

Recent garden/compost site launches include Bradley Tech High School, We Grow Greens youth mentoring program, and the Scooter Foundation.

Kompost Kids Inc. is a an all-volunteer organization and a 501(c)3 nonprofit.

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What is composting?

Using the natural process of decay to change organic wastes into a valuable humus-like material called compost



Grass clippings



Food scraps



Leaves

Compost



We view compost as the crucial component of
a sustainable local food economy.

Compost builds on local food production and
fosters local disposal and soil regeneration.



We've got a waste problem in the U.S.

- Various estimates put the amount of compostable material heading to landfills between 20 and 40 percent of total municipal solid waste.
- Our landfills are nearing capacity and it gets more and more expensive to bury trash.
- Organic material decomposing in a landfill environment emits methane, a greenhouse gas over 20 times more potent than carbon dioxide.
- We can do better . . . by composting as much as possible, as locally as possible.



Compost Ingredients

WHAT'S IN

- Fruit and vegetable scraps
- Baked goods, including bread
- Rice, grains, and pasta
- Paper towels/napkins
- Tea leaves/bags
- Coffee grounds and filters
- Egg shells
- Shredded nonglossy paper
- Fireplace ash
- Grass clippings, leaves, light brush
- Nondiseased plants & trimmings

WHAT'S OUT

- Fish and shellfish
- Bones, fat, grease, oils
- All dairy products, cheese
- Weeds
- Diseased plants
- Large branches, roots, etc.
- Dog, cat, and other pet waste
- Plants sprayed with pesticides
- Coal or charcoal ash
- Yard trimmings treated with pesticides

Community Compost Program

What is community composting?

When a group of people, neighbors, friends share a composting site or location. Resources such as tools, raw materials, and even labor can be shared within the group, along with the soil that is created.



The Community Approach

- Effective community composting relies on a unique blend of **infrastructure and human resources**.
- The Kompost Kids' model
 - deploys a decentralized network of couriers, volunteers, and site workers
 - actively diverts organic waste from the landfill-bound stream; and
 - partners with community garden properties to convert it into a usable soil amendment.
- An active community compost network **leverages a strong garden presence** and outreach by:
 - *launching* new gardens, supplying *emerging* gardens with compost
 - *educating* garden tenants; and
 - *advocating* for local food production - alongside local disposal - as a crucial element in urban development and sustainability.

Why Community Composting?

There is no municipal food waste compost program currently offered in Milwaukee

- Quality compost can be expensive and difficult to obtain in small quantities.
- 25% of landfill is organic material that can be composted; landfills almost at capacity.
- The more sites, the easier it is for people to compost.
- Nitrogen-rich sources creates compost faster; carbon-rich sources abundant in urban setting.
- Reduces carbon footprint and empowers community.
- Local disposal - like local food production and commerce - is ethical, sustainable, and economical.

Drawbacks & Potential Problems

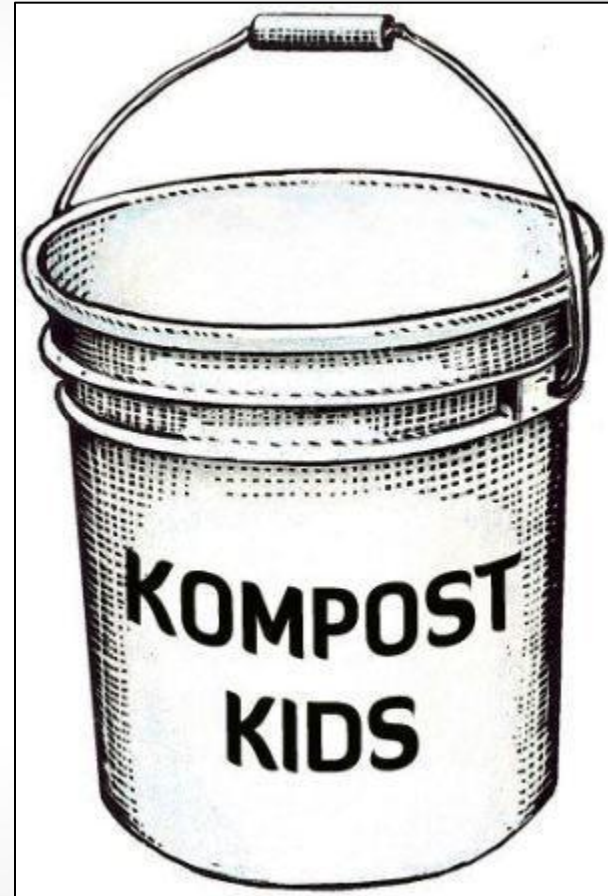
- **Requires reliable, committed, and dedicated volunteers.**
- **Businesses don't immediately recognize the value of composting.**
- **Compost sites require regular maintenance.**
 - Contamination levels can be depressingly high.
 - Signage not often adequate to ensure compliance (brown source use, proper ratios, contribution bin, etc.)
 - Other models: supervised drop-offs, locked bins, specific hours, etc.
- **Individuals and communities have misconceptions and fears about compost piles.**
 - Expect it to smell (and sometimes, it does!)
 - Expect it to attract pests (mice like warm spots to nest in)
- **Cost of compostable bags. Recognizing compostable products in the mix.**
- **A focus on collection and disposal leaves little time and resources for processing and improving the product.**

Collecting Compostables at Home

Select a container with a lid.
Buckets work great. Line bucket
with paper bag.
Put your food residuals in the
compost collector.

Add brown material to reduce any
odor or moisture that may collect
in your container.

Once full, empty it at your nearby
KOMPOST KIDS Inc. Community
Compost Collection site.



“Rules” for a Community Site

- Carry out all trash that cannot be used in the compost piles.
- Only add to the piles designated “Add Here”.
- Cover your contribution with the allocated "brown source"
- Return all tools to the designated area.
- Contribute untreated “brown source” whenever possible (leaves, sawdust, hay, wood chips, and shredded paper).
- Know who the contact is for your community compost site and report any problems promptly.
- Do not add to piles that are designated as “resting”.
- Flip, turn, and stir piles whenever able.
- Most sites are started on “borrowed land,” so be respectful of the surrounding area and neighbors.
- Help organize seasonal work days, especially to empty bins at the end of the fall in preparation for winter.

Managing Community Compost Sites

- **Active regular maintenance, winterizing, repair and expansion projects.**
- **Periodic public turnings for education and volunteer recruitment.**
- **Outreach to garden site leaders in spring and fall for work day information, use of compost, and labor sharing.**
- **Keeping things tidy: Public spaces tend to get trashy. Providing trash bags, receptacles, and tidying up are among the best ways to keep neighbors happy and community supportive.**

Decoding the Alphabet Soup

Regulatory Framework for Composting

How to find out what the rules are and follow them or change them for the better.

- **Federal**
- **State**
- **Local**
- **All the in-betweens**
- **And a few regulatory voids**

Federal and a few in-betweeners

Congress and the Environmental Protection Agency

- Regulations set by Congress, international treaties, EPA
 - Have not legislated on composting specifically
- Enforced and overseen by Environmental Protection Agency (EPA)
 - Primarily interested in composting at facility level.
 - Laws regulating composting process focus on nonpoint pollution
 - <http://www.epa.gov/compost/>

- The US Composting Council is a nonprofit that provides independent certification of compost production methods compostingcouncil.org

There are many regional compacts and other in-betweeners regulating things like water use and conservation

- For Wisconsin, the **Great Lakes Water Compact** plays a conservation role for the watershed and water resources
 - Covers the region around the Lakes including Canada

State Level

Organic materials management is regulated at the State level.

- States have assumed the lead role in regulating composting practices
- Many states have landfill bans on yard waste
- Landfill bans on food waste are less common
- Varies by state from a single agency to many
 - Oversee areas ranging from land use, waste management and water quality to state park systems
 - Issue permit for types of use including composting, waste disposal etc.
 - Most states have local enforcement of environmental protection
- <http://www.epa.gov/wastes/wyl/stateprograms.htm#wi> for a list of state environmental agencies in the United States

State Level

Identify Local Regulations

- Landfilling
- Land Use
- Waste disposal / recycling
- Composting processes
- Watershed management
- Licensing for facilities

Current Regulations: Wisconsin

The Department of Natural Resources (DNR) Regulates Large-Scale Composting.

“The DNR regulates sites that compost yard materials or food scraps if the facilities have more than 50 cubic yards of material on-site at any time.”

- No single Kompost Kids location has this volume of material.
- **“Source-separated compostable material”** means compostable materials separated from non-compostable material at the point of generation for use in composting and kept separate from municipal solid waste Performance Standards” – Sites 50-5,000 yards
 - Locational Criteria (for new or expanding facilities)
 - Minimum Operating & Design Standards
 - Monitoring and Recordkeeping
- Temperature monitoring and controls
- Stormwater / runoff protections

***DNR also has a recycling work group
that reviews and sets policy.***

Some other inbetweeners

County governments and local or regional utilities and commissions

- County Government
 - May have land-use regulations
 - Do not usually work on ecological issues
- Utilities
 - Water or sewerage districts
 - Energy utilities may affect bioreactor regulations
- Other

Regional - South Eastern WI

The Metro Milwaukee Sewerage District (MMSD) regulates watershed issues and industrial waste.

Regional Green Infrastructure Plan (Phase I)

- Storm water reduction plan includes widespread use of soil amendments to decrease sewer loads and improve soil infiltration.
- Goal: "Capture the equivalent of the first 0.5 inch of rainfall from impervious surfaces with green infrastructure."
- Quantities of Green Infrastructure Planned to meet 2035 vision in the Lake Michigan Direct Drainage: 200 average city blocks with soil amendments. - Other watersheds will have significantly higher goals.
- Soil amendments are a comparatively cheap investment in watershed infrastructure.

Also relevant:

- They also use an aerobic microbial process at the Milorganite facility.
- They do not regulate home or small-scale composting.

Municipal Regulations

Cities regulate waste disposal and recycling requirements for residents and often business and other institutions

- Definition of Solid Waste
 - Frequently includes organic waste as solid waste and thus requires that it be landfilled
- Definition of Composting
 - Often restricted to yard waste
- Licensing of recycling or composting facilities not regulated elsewhere
- Zoning laws / land use
- Waste management policy implementation
 - Residential - often by density
 - Commercial
 - Industrial etc.



City of Milwaukee: Now

The City of Milwaukee's current regulations do not allow for community composting of food waste.

SOLID WASTE categories: “**Garbage** is all waste, animal, fish, fowl, fruit, or vegetable matter incident to and resulting from the use, preparation and storage of food for human consumption, including spoiled food.”

COMPOSTING means the controlled biological reduction of **yard waste** to humus. “

- “Compost piles shall consist primarily of yard waste.”
- Limits bin size and design
- Bins must be located 20 feet from habitable structures

Community Gardens are subject to a new set of regulations allowing for “garden waste” and some food waste in bins.

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City of Milwaukee: Proposed

The City of Milwaukee recently reevaluated a large portion of ordinance and zoning for urban agriculture

Milwaukee developed new rules for community gardens and urban farms. Composting is allowed although food waste is still classed as solid waste.

COMPOSTING regulations developed based on other city models

- Affects mid-sized facilities; below the State threshold but larger than home or garden-scale
- Would allow for food waste composting
- Restricted by zoning to industrial sites
- Would require a permit

In the absence of ordinance, we operate in a regulatory void.

The Milwaukee Common Council recently passed resolution to evaluate the feasibility of residential composting.

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Seal of Testing Assurance (STA)

- Compost testing, labeling, and information disclosure program designed to give you the information you need to get the maximum benefit from the use of compost.
 - pH
 - soluble salts
 - nutrient content
 - moisture content
 - organic matter content
 - maturity
 - stability
 - pathogens (Fecal Coliform or Salmonella)
 - trace metals



**US Composting
Council**

*Seal of Testing
Assurance®*

Consumer Compost Use Program

The Consumer Compost Use Program will clearly identify the types of uses that a compost product will be good for. Those uses are:



www.compostingcouncil.org

Beyond Community Composting

Community composting has its limits:

- 1. Often relies on volunteer time and labor**
- 2. Resources are limited**
- 3. Ensuring a viable product and customer base amidst competition**
- 4. Market immaturities**
- 5. Lack of regulatory or legal support**
- 6. Demand for diversion often outstrips nonprofit/volunteer capacity**



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What comes next?

Postconsumer pilot

Crowd-sourced map

"0" waste festival

Residential pilot



Contact Us

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