



MINNEAPOLIS FOOD SYSTEM: WASTE DISPOSAL



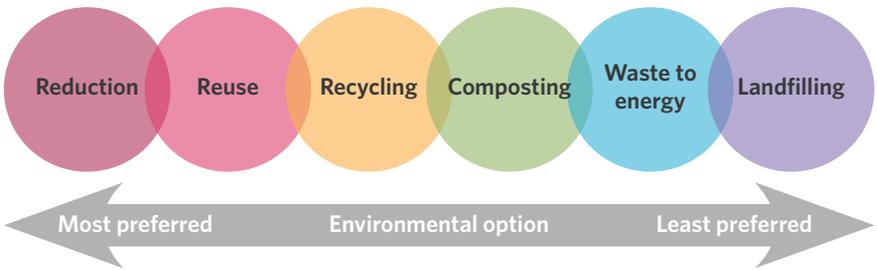
The most prevalent item in Minneapolis trash is from the food system.* Reducing the overall amount of waste generated from the food system through composting and recycling is an important step in creating a healthy, sustainable food system.



What is food system waste disposal?

Disposal of end products from food system activities includes what is left over after each part of the food system — organic matter from food production; packaging from processing and distribution; and unused food and food byproducts (bones, scraps, compost, and left overs) from consumption.

Minnesota Waste Hierarchy



Adapted from: Metropolitan Solid Waste Management Policy Plan, Minn. Pollution Control Agency (2017), <https://www.pca.state.mn.us/sites/default/files/w-sw7-21.pdf>.

Minnesota Solid Waste Management Hierarchy

MINN. STAT. § 115A.02 (2016) Minn. R. 7035.0300 (2015).

Solid waste is garbage, refuse, sludge, and other waste materials from industrial, commercial, and agricultural operations and community activities. Minnesota's hierarchy for solid waste management protects public health, land, air, water, and other natural resources.

Legal Structure

Minnesota state law creates the framework for managing solid waste and specifies how certain waste must be handled. Counties must have a solid waste management plan and policies that are consistent with state law. Cities may also regulate solid waste management activities and are responsible for the everyday garbage collection within the city.

State

MINN. STAT. § 115A.48 (2016).

The Minnesota Pollution Control Agency (MPCA) regulates composting, recycling, and solid waste in Minnesota. MPCA assists the development of facilities and services needed to provide adequate, stable, and reliable markets for recyclable materials, solid waste suitable for land application, and compost generated in the state.

County

MINN. STAT. § 115A.46 (2016); MINN. R. 9215.0530 (2009).

Minnesota counties have the primary responsibility for recycling and solid waste management within the county's borders. Each county is required to implement a waste management plan approved by the MPCA. The waste management plan must include provisions for waste reduction as well as recycling. A county may delegate its waste management responsibility to another entity, such as a city or township, if certain funding requirements are met.

City

MINN. STAT. §§ 115A.46, 115A.941, 473.811 (2016).

Minnesota cities are allowed to regulate the disposal of sewage, garbage, and other refuse generated within the city. However, cities cannot implement waste management activities inconsistent with an MPCA-approved county waste management plan.



Waste Reduction and Reuse

MINN. STAT. § 115A.03 (2016).

Waste reduction is achieved by preventing the creation of waste or reducing the amount of toxic materials found in waste. Waste reduction includes reusing a product; increasing the lifespan of a product; reducing material or the toxicity of material in packaging; and changing consumption habits. Reducing waste in the food system is primarily achieved through recycling and composting.

Public Education

MINN. STAT. §§ 115A.072, 115A.074 (2016).

The MPCA must provide environmental and waste management education programs that include waste reduction and reuse components. The MPCA must also develop educational materials about waste reduction and reuse efforts that can be adapted by counties and cities to meet their solid waste management program needs.

Food and Beverage Packaging

MINNEAPOLIS, MINN., CODE § 204.30 (2017); MINN. R. 4626.0020 (2007).

Minneapolis adopted the “Green to Go: Environmentally Acceptable Packaging Ordinance” in 2017. This ordinance requires food and beverages prepared for immediate consumption and to-go use reusable, recyclable, or compostable packaging. This type of packaging makes up a significant portion of the waste in Minneapolis. Further, the use of plastic packaging continues to increase. The Green to Go ordinance was passed to reduce the disposal of environmentally unfriendly waste.

Q: Who must comply with the Green to Go ordinance?

A: Any food establishment that provides food prepared for immediate consumption must comply with the ordinance. In Minneapolis, a food establishment is an operation that stores, prepares, packages, and serves food or relinquishes possession of food to a consumer through a delivery service. Food establishments include restaurants, grocery stores, convenience stores, vending machines, and food service operations within a school, hospital, or nursing home. Food establishments do not include wholesale food processors or manufacturers.

Q: What is environmentally friendly packaging?

A: The Minneapolis Green to Go ordinance describes environmentally acceptable packaging as reusable, returnable, recyclable, and compostable. Reusable and returnable packaging includes food and beverage containers that can be refilled at a retail location or reused at least once. Recyclable packaging can be separated from solid waste for recycling. Compostable packaging can be separated from solid waste during collection for the purpose of composting. Addition-

ally, packaging will only be considered environmentally friendly when the food establishment provides consumers with an opportunity to recycle, compost and appropriately manage compostable plastics.

Q: What other ways can the amount of harmful packaging be reduced?

A: Individuals can reduce the amount of harmful packaging they use by making smarter purchases. Buying non-perishable products in larger sizes is a good way to reduce the amount of packaging, resulting in less waste. Perishable products should be properly stored to ensure the product does not spoil. Proper storage prevents the need to re-buy the products. Products that are packaged in single servings, such as microwave dinners, soups, and beverages, should be avoided.*

Clean

Gleaning is the collection of excess fresh foods from farms, gardens, farmers' markets, grocers, restaurants, state and county fairs, or any other source.

Reuse

Reuse extends the life of a product to keep it out of the waste stream. Reuse includes using products more than once with little to no processing; repairing products to use them longer; sharing or renting products; and selling or donating products to others. Re-using products reduces waste, saves natural resources, conserves energy, and prevents pollution. Many items in the food system waste stream can be reused, including some plastic and glass food and beverage containers, paper and plastic bags, and other items.



Landfill Disposal

MINN. STAT. § 115A.03 (2016); MINN. R. 7035.1590 (2006).

Some food system waste may need to be disposed in a landfill if other strategies — waste reduction and reuse, composting, recycling, and resource recovery - cannot be used due to the type of waste material. Minneapolis food system waste that could end in a landfill includes some metal and plastic containers, glass dishes, Styrofoam packaging, and paper lined ice cream containers.

Reducing Landfill Waste

MINN. STAT. §§ 297H.03, 473.843, 473.848 (2016);
HENNEPIN CNTY., ORD. 15 (1995).

Minnesota restricts the disposal of solid waste that goes to a landfill. Solid waste from the metropolitan area is not allowed to be sent to a waste disposal facility unless the waste has been certified by a county as unprocessable or the waste has been transferred to the

disposal facility from a resource recovery facility, no other resource recovery facility is capable of processing the waste, and the waste has been certified as unprocessable by the operator of the resource recovery facility.

Both Minnesota and Hennepin County impose taxes and fees on the collection, transportation, processing, and disposal of solid waste. Additionally, Minnesota charges a solid waste landfill fee on the operators of a solid waste disposal facility. These charges discourage the amount of solid waste that enters the landfill.

*Additional Sources

- *When Good Food Goes Bad*, Minnesota Pollution Control Agency: <https://www.pca.state.mn.us/featured/when-good-food-goes-bad>
- *West Metro Briefs: Hennepin County Study Finds Plenty of Food Waste in Minneapolis Trash*, Star Tribune: <http://www.startribune.com/west-metro-briefs-hennepin-county-study-finds-plenty-of-food-waste-in-minneapolis-trash/403082626>
- *Be a Zero Hero*, Minneapolis, MN: <http://www.ci.minneapolis.mn.us/solid-waste/WasteReduction/index.htm>
- *Let's Glean!*, U.S. Department of Agriculture: https://www.usda.gov/sites/default/files/documents/usda_gleaning_toolkit.pdf
- *Why reUSE?*, ReUSE MN: <https://www.reusemn.org/about/why-reuse>
- *Choose to Reuse*, Hennepin County MN: <http://www.hennepin.us/choose-to-reuse>

Recycling

MINNEAPOLIS, MINN.,
CODE § 225.05
(2017).

Recycling is the process of preparing, collecting, and reusing recyclable materials as raw materials in the manufacturing process.

Recycling reduces the amount of waste from the food system. Food system activities generate many items that can be recycled — from plastic bottles and containers, to aluminum and tin cans, paper products, and other packaging items. Recycling opportunities are available at both the household and commercial level. Minneapolis ordinances, county codes, and state laws regulate many aspects of recycling in the city.

Q: What are the benefits of recycling?

A: Recycling has a significant environmental and economic value. Approximately 75% of Minnesota trash is composed of paper, plastic, metal, glass, organics, and other recyclable material. That material is the equivalent of roughly 1.2 million tons of recyclable material, worth \$285 million, thrown away each year. Recycling saves natural energy and resources, creates jobs, and improves the economy.*



Q: What can be recycled?

MINNEAPOLIS, MINN., CODE § 224.40 (2017).

A: Recyclable materials are items of garbage that have been cleaned so as not to cause health or nuisance problems for purposes of transportation, processing, and remanufacturing.

Food system recyclable items that can be placed in Minneapolis recycling bins include:*

- Rinsed milk cartons, juice boxes, and soup, broth, and wine cartons;
- Rinsed food and beverage cans, aluminum foil, and pie tins;
- Paper products;
- Rinsed glass bottles and jars;
- Plastic: rinsed bottles and jugs, cups and containers, and clear packing; and
- Cardboard.

Recycling Plastic Bags

Plastic bags cannot be recycled. Recycling may be collected in plastic bags, however, the recyclables must be dumped out into the recycling cart and the plastic bag placed into the garbage. Clean and dry plastic bags can also be brought to participating retail and grocery stores for recycling.*

Plastic Bag Prohibition — MINNEAPOLIS, MINN., Code § 225.920, 225.930 (2017).

Minneapolis passed a new ordinance prohibiting single-use plastic bags which takes effect June 1, 2017. This ordinance states that no retail establishment, including department and grocery stores, shall provide single-use plastic bags to any customer. The ordinance also prohibits these retail establishments from providing paper bags that cannot be recycled.

Q: What cannot be recycled?

A: The following items are prohibited from being recycled:*

- Paper and Styrofoam egg cartons;
- Paper ice cream tubs and coffee cups; and
- Drinking glasses, window glass, ceramics, and mirrors.

Q: Can apartment, condo, and townhouse residents participate in recycling programs?

MINNEAPOLIS, MINN., CODE § 225.780 (2017).

A: All property owners and associations are required to provide residents with the opportunity to recycle. Clearly labeled recycling containers and posted instructions in common areas can increase resident participation in recycling. Residents can increase participation in recycling by becoming their building's recycling advocate. Many property owners will provide incentives such as a rent credit or preferred parking space to become a recycling advocate. A recycling advocate can help by putting up recycling posters, creating a lobby display, monitoring recycling areas, and answering neighbors' questions about recycling.*

*Additional Sources

- *Recycling at Your Business*, MN Pollution Control Agency: <https://www.pca.state.mn.us/waste/recycling-your-business>
- *Minneapolis Recycles*, Minneapolis, MN: http://www.ci.minneapolis.mn.us/solid-waste/recycling/solid-waste_recycling
- *Apartment and Townhouse Recycling*, Hennepin County, MN: <http://www.hennepin.us/apartmentsrecycle>
- *Frequently Asked Questions About 311*, Minneapolis, MN: http://www.minneapolismn.gov/311/311_minneapolis311faqs



Compost

MINNEAPOLIS, MINN., CODE § 244.770(a) (2017).

Compost is organic matter (grass clippings, leaves, and vegetable food scraps) that has decomposed into a rich soil conditioner. Composting is a microbial process that converts plant materials to a usable organic soil amendment or mulch. Composting can be thought of as a way of 'recycling' organic materials.

There are many different types of composting units but all composting requires four basic ingredients to create the proper environment for decomposition by the microorganisms:



Source: Home Composting, Bag to Earth: <http://bagtoearth.com/us/households/6874-2>

Compostable materials from the food system include plant and vegetable matter, meat scraps and bones, pizza boxes, paper food wrappers, and other items.

Composting provides many benefits to the food system by creating healthier soil for growing food. Compost improves drainage and aeration of soil, provides nutrients from organic matter, and helps soil retain moisture which reduces drought damage to plants. Composting also keeps soil from crusting on top, helping seeds to sprout.*

While composting can be done almost anywhere, from backyard to large-scale composting facilities, Minneapolis ordinances regulate many aspects of composting including the size and location of

composting sites, what materials can be composted, and where different materials can be composted.

Backyard and Small Composting Sites

MINNEAPOLIS, MINN., CODE § 244.770 (2017); MINN. R. 7035.0300 (2015).

Minneapolis regulates small compost sites differently than larger compost sites. Minneapolis allows for small composting sites in backyards and other places such as community gardens, universities, apartment buildings, and other commercial properties. Small compost sites allow community settings to provide composting services without the solid waste facility permit required for large-scale compost facilities. Material from individual and multiple households, community places, and businesses is allowed to be composted in the same location. A small compost site must not create nuisance conditions or endanger public health and the environment. Additionally, compost containers on small compost sites must be designed so that seepage will not run off into streets, storm sewers, drainage ditches, streams, or lakes.

Minneapolis ordinances create categories of small compost sites as follows:

A backyard compost site is a type of small compost site that is on a lot with a residential structure. Backyard compost sites cannot exceed 15 cubic yards.

Small compost sites on lots without residential structures are regulated based on lot size. For lots under 10,000 square feet, the maximum size allowed for a small compost site is 25 cubic yards. For lots over 10,000 square feet, the maximum size allowed is 120 cubic yards.

Q: What items can be included as part of small site and backyard composting in Minneapolis?

A: A backyard compost site can be used to compost food scraps, garden waste, weeds, lawn cuttings, leaves, and yard debris from a single family or household. At the same time, Minneapolis prohibits certain materials from backyard compost piles, including, but not limited to: meats, fats, oils, grease, bones, whole eggs, dairy products, human or pet waste, pesticides, herbicides, and noxious weeds.

Q: What materials are needed for a small site or backyard compost bin?

A: The only tools required for backyard composting are “a pitchfork or shovel to turn the compost, a bucket or hose to water the compost, and a compost bin.” Minneapolis requires backyard composting to be done in a compost bin because compost piles without bins become unsightly and cannot generate enough heat to safely decompose organic material.

Type of Container

MINNEAPOLIS, MINN., CODE § 244.770(b) (2017).

Composting must be conducted within a covered container, enclosed on all vertical sides. The container must be made of durable material and maintained in a structurally sound manner. If wood is used in the construction of a compost container, the wood must be free of rot.

Location of Compost Bins

MINNEAPOLIS, MINN., CODE § 244.770(d) (2017).

Compost bins cannot be placed in any front or side yard or closer than one foot from the rear property line. In addition, containers

cannot be closer than 20 feet from any habitable building on adjacent properties.

An ideal location for a compost bin is an area where partial shading will keep compost from drying out too quickly. Placing the bin under the edge of a roof, where rainwater may run off and over-water the compost, should be avoided.*

Q: How is compost used?

A: Finished compost can be used as a soil enrichment in vegetable and flower gardens, which helps keep nutrients near the roots of plants. Compost can also be used as mulch around trees, shrubs, or plants. Compost used this way suppresses weeds and reduces soil erosion. Compost also makes a comfortable home for earthworms to break down compost matter and aerate the soil.*

Composting Animal Waste

MINNEAPOLIS, MINN., CODE §§ 63.90; 244.770(f) (2017)

Pet waste is not allowed in backyard composting. It also cannot be placed in the organics recycling cart. However, Minneapolis allows residents with a backyard fowl permit to compost the fowl waste in a way that avoids a public nuisance or health issue.

Using Aquaponics Waste as Compost

MINNEAPOLIS, MINN., CODE §§ 520.160 and 537.110 (2017).

Aquaponics is the combination of growing food or ornamental crops and aquatic species together in a recirculating system without any discharge or exchange of water.

Hydroponics is the growing of food or ornamental crops in a water and fertilizer solution containing the necessary nutrients for plant growth.



Aquaponics systems are usually designed as a closed system through which fish waste is used as a fertilizer for the plants being grown hydroponically without a separate compost system. Instead of having to clean out the fish tank to remove the waste, a tube system is used to cycle the waste-filled water to plants. As the plants take in the nutrients from the fish waste, they also clean the water. The clean water is then cycled back into the fish tank and the process is repeated.* Aquaponics tanks are not allowed to be connected to the city sewer system.

Minneapolis Organics Recycling

Minneapolis Solid Waste and Recycling services provide an organics recycling program to collect organic materials for composting throughout the city. Residents who opt-in to participate are provided with an organics recycling cart to be collected each week alongside garbage carts.*

Q: What organics does Minneapolis accept?

A: Organics accepted in the Minneapolis program include, but are not limited to, all food scraps, most non-recyclable and food-soiled paper, and compostable plastics. Non-compostable materials such as milk cartons, paper ice cream tubs, and non-compostable take-out containers are not allowed to be placed in the organics recycling cart.*

Q: How should organics be prepared for pick up in Minneapolis?

A: Organics must be bagged in a paper or compostable plastic bag and placed inside the organics recycling cart. The cart and its contents cannot weigh more than 200 pounds.





Yard Waste Disposal

MINNEAPOLIS, MINN., CODE §§ 225.05, 225.680 (2017).

Minneapolis Solid Waste and Recycling services allow for the collection of yard waste to be composted. Acceptable yard waste can be placed next to the garbage for collection mid-April through November. Yard waste includes garden waste, leaves, lawn cuttings, weeds, shrub and tree waste, and other plant matter. It is illegal to dispose of yard waste with garbage.

Commercial Composting

MINN. STAT. § 115A.03 (2016); MINN. R. 7035.0300, subd. 19 (2015); MINNEAPOLIS, MINN., CODE § 550.30 (2017).

Commercial compost facilities provide an opportunity to compost many waste materials that would not be allowed in a backyard or small compost site, such as meat, bio-plastics, sanitary products, and paper that is non-recyclable. A commercial compost facility includes all structures and processing equipment used to store incoming waste, the final compost product, and any residual material resulting from the final product. Commercial compost facilities are required to have a solid waste facility permit and must ensure ideal composting conditions through close monitoring. Commercial compost facilities must also test the finished compost to ensure that it is safe and not harmful to the environment. Commercial composting can include facilities that only compost yard waste and those that compost yard waste as well as other organic materials.*

Please note: Requirements for commercial composting differ from backyard and small compost sites. Commercial composting is beyond the scope of this resource and is not discussed in detail here.

*Additional Sources

- *Backyard Composting*, Minneapolis, MN: http://www.ci.minneapolis.mn.us/solid-waste/yardwaste/solid-waste_yard-waste-composting
- *How Fish Waste is Used in an Aquaponics System*, Aquaponics Ideas Online: <http://aquaponicsideasonline.com/how-fish-waste-is-used-in-an-aquaponic-system>
- *What are Organics?*, Minneapolis, MN: <http://minneapolismn.gov/solid-waste/organics/WCMS1P-139182>
- *Compost Facilities*, MN Pollution Control Agency: <https://www.pca.state.mn.us/waste/compost-facilities>



Source: Appetite for Change



**PUBLIC HEALTH
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**APPETITE
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