

POLICY BRIEFING: Pet Waste Composting

Scope of Problem

According to U.S. Census Bureau Minneapolis has around 182,419 households and a total population estimate of 425,096 residents. Using these numbers, and the [American Veterinary Medical Association recommended formulas](#) for determining the number of pets living in a community, Minneapolis Animal Care & Control found the following estimated numbers of dogs and cats in Minneapolis:

- 1) Number of dog-owning households ~ 70,049; **Number of dogs ~ 112,078.**
- 2) Number of cat-owning households ~ 46,334; **Number of cats ~ 83,403.**

The widely accepted estimate is that dogs create on average .75 pounds of waste per day. In Minneapolis, this would equate to 84,058.5 pounds of dog waste per day, and 30,681,352.5 pounds per year, or **roughly 15,340.7 tons of dog waste annually.**

In the April/May 2022 City of Minneapolis Capture Rate Study, pet waste and bedding comprised 8.8% of items in garbage carts (the second highest item).¹ It is worth noting that this may be a higher percentage than normal, as this is a time during the year where many dog owners are cleaning up thawing waste from over the winter.

In 2016 in Hennepin County, pet waste comprised 4.9% of material by weight collected in trash collection.² And pet waste was the largest garbage contaminant found in Minneapolis organics carts in 2022 at 1.6%.³

Pet Waste as a Pollutant: Water & Air

Pet waste is considered a nonpoint-source water pollutant⁴, significantly contributing to bacteria, nutrients, and oxygen demanding substances in urban runoff, which can then be carried down storm drains.⁵ Pets, especially dogs, contribute to source water contamination, with watershed studies showing 20⁶ to 30%⁷ of bacteria in water samples are from dogs. Contaminated water can be unsafe for swimming, boating, fishing, and other recreational water activities. Untreated waste running into storm sewers ends up in rivers, wetlands,

¹ [City of Minneapolis 2022 Capture Rate Study](#).

² Hennepin County. (2016). [Sorting out our waste problem Insights from Hennepin County's waste sort](#).

³ City of Minneapolis Public Works. (August 2022). [Residential Waste Characterization and Capture Rate Study](#).

⁴ Minnesota Pollution Control Agency. [Water quality initiatives](#).

⁵ United States Environmental Protection Agency. (1999). [Preliminary Data Summary of Urban Storm Water Best Management Practices](#).

⁶ United States Environmental Protection Agency. (July 2001). [Source Water Protection Practices Bulletin Managing Pet and Wildlife Waste to Prevent Contamination of Drinking Water](#).

⁷ Watson, Traci. (June 6, 2002). [Dog waste poses threat to water](#). USA Today.

and ponds can also lead to algae blooms⁸ and contribute to hypoxia in water bodies reducing aquatic life.⁹ In addition, like all animal waste, as it decomposes it creates methane¹⁰, a greenhouse gas which is “25 times as potent as carbon dioxide at trapping heat in the atmosphere.”¹¹ Pet waste can also cause air pollution, distributing fecal bacteria in the air, especially in wintertime.¹²

Health Concerns

Pet waste contains many pathogens which can infect humans if ingested, including Cryptosporidium, Giardia lamblia, E. Coli, and Salmonella. Symptoms of these include skin sores, chest pain, diarrhea, and in extreme cases can cause serious illness and fatalities. In addition to these pathogens, dog and cat waste frequently contains roundworms and other parasites. Severe infections in humans can cause fevers, bronchitis, asthma, or vision problems.¹³

Large-Scale Pet Waste Composting Examples

We could not find any examples of municipal pet waste composting within Minnesota, and information from the Minneapolis Solid Waste and Recycling Division seemed to confirm this. However, there are many examples of large-scale pet waste composting throughout the country and in Canada. They are grouped based on the type of program.

The most common reasons for composting pet waste given throughout most of the cited examples below include the following:

- 1) Diverting the waste from taking up space in landfills/achieving their net zero waste goals.
- 2) Less pollution plastic from dog waste bags.¹⁴ Especially as biodegradable and compostable bags do not compost in the landfill.¹⁵
- 3) Reducing water and air pollution, and the release of methane.
- 4) Creating nutrient rich compost to be used within the city.

Dog Parks/Trails

- 1) *Battery Park City, NY* – Piloted the program at 3 dog parks in 2019.¹⁶ In a 2021 update, it was working well, except people occasionally put plastic bags into the dog waste bins, if able, they pick out some, but if there’s too much contamination, then that entire batch gets thrown away. They provide newspapers and pooper scoopers at the parks and empty the bins into an [Earth Cube composter](#) onsite. When that gets full, they transport it to another site for the compost to cure or “cook.” The program requires similar city

⁸ Chhith, Alex. (March 6, 2023). [Doggie doo-doo guide: when to flush, bag or call a professional](#). *Star Tribune*.

⁹ Pacific Shellfish Institute. [Pet Waste: What’s the problem?](#)

¹⁰ Coren, Stanley. (October 7, 2010). [Dog Poop and the Environment: Art and Power](#). *Psychology Today*.

¹¹ United States Environmental Protection Agency. [Importance of Methane](#).

¹² Sundberg, Maureen. (March 17, 2015). [The Scoop on Dog Waste](#). *Ecological Landscape Alliance*.

¹³ United States Environmental Protection Agency. (July 2001). [Source Water Protection Practices Bulletin Managing Pet and Wildlife Waste to Prevent Contamination of Drinking Water](#).

¹⁴ Mai, L., Zeng, E., & Zeng, E. Y. (2022). Dog poop bags: A non-negligible source of plastic pollution. *Environmental Pollution*, 292, 118355.

¹⁵ Freinkel, Susan. (April 10, 2014). [The Poop Problem: What To Do With 10 Million Tons of Dog Waste](#). *Live Science*.

¹⁶ Battery Park City Authority. [Dog Waste Compost Application](#).

personnel that picking up regular park or street trash does.¹⁷ By March of 2023, they had collected over 5,700 pounds of dog waste, the program has been increasingly adopted around the city, and they consider it a success.¹⁸

- 2) *Brooklyn, NY* – At the Marsha P. Johnson State Park (East River State Park) Dog Run, beginning in 2016 the program provided pooper scoopers, paper bags, and designated compost bins within the park. Park staff handle the entire composting process on site. It cost the State Parks Office about \$2,000 for the bins, scoops, and signage.¹⁹ In a 2023 update, they discussed the annual cost of providing paper bags less than \$100 per year. The costliest aspect is testing the compost for safety. They test every batch at least once if not 2-3 times, but they've never had an unsafe batch. They average 5-6 pounds of waste per day, totaling about 2000 pounds annually.²⁰
- 3) *Ithaca, NY* – They began the pilot program in 2009 at the Allan H. Treman Marine State Park. They partnered with local company Cayuga Compost and in 18 months, they composted about 12 tons of dog waste. The project was financed through donations and cost about \$5,000 annually – \$1,000 to Cayuga Compost and \$4,000 for the 50,000 compostable bags stocked in the dispensers.²¹ The program still exists in 2023.²²
- 4) *San Francisco, CA* – They wanted to pilot a program in 2016 at a dog park and planned on partnering with a company called BioBag. BioBag would have provided compostable dog bags, bins, and a pickup service.²³ There is evidence that complications with regulations and end processing prevented this program from initiating operations, but we could not confirm.²⁴
- 5) *Boulder, CO* – They created the Open Space & Mountain Parks pilot program in 2014 at 3 trail locations.²⁵ It appears they have expanded to further trails, but details are not provided.
- 6) *Lafayette, CO* – They contracted with PetScoop for a pilot program at a dog park April 2019. Using compostable bags provided at the park and separate dog waste bins, they collected 300 pounds of waste in 4 days. Some small issues included 20 pounds being in non-compostable bags, 1 pound was trash, and some dog waste was thrown into recycling containers.²⁶
- 7) *Denali National Park, AK* – The park has been composting dog waste from its kennel since 1980.²⁷
- 8) *Whistler, Canada* – They launched their Pick Up Protocol (PUP)²⁸ in 2014 at two dog parks. Using vegetable-based compostable bags and special bins, the waste is composted at a local facility, which is much closer than the landfill they were using in Washington State.²⁹

Municipal Curbside Pick-Up

- 1) *Nantucket, MA* – Unbagged pet waste goes directly into the regular city compost.³⁰

¹⁷ One Small Step. [How to Dispose of Dog Poop the Green Way.](#)

¹⁸ Murdock, Vanessa. (March 7, 2023). [Battery Park City Authority expands dog waste composting program.](#) CBS New.

¹⁹ FOX 5 New York. (July 13, 2016). [Dog poop composting at park in Brooklyn.](#)

²⁰ Enviro Pet Waste Network. (April 2023). [Marsha P Johnson State Park Dog Run Compost story \(6 years on\).](#)

²¹ Foster, Joanna. [Who Knew? Upcycling the Dog Poop.](#) The New York Times.

²² Harding, Tanner. (August 23, 2023). [Ithaca is for the Dogs: A round-up of some of the best places to take your pup in town.](#) Ithica.com

²³ Morse, Jack. (September 26, 2016). [Sick of Wasting Your Dog's Poo, SF Launches Program to Compost It.](#) SF News.

²⁴ [Enviro Pet Waste Network.](#)

²⁵ [Inside Boulder News.](#) (July 25, 2014).

²⁶ Lafayette City. [Great Bark Dog Park Compost Program.](#)

²⁷ Carpenter, Julie. (August 26, 2012). [The Scoop on Poop.](#) National Park Service.

²⁸ Resort Municipality of Whistler. [Dogs in Whistler.](#)

²⁹ Taylor, Alison. (July 30, 2014). [Dog poop to be part of composter topsoil mix.](#)

³⁰ Town and County of Nantucket. [Nantucket Landfill.](#)

- 2) *Calgary, Canada* – Pet waste must be in a certified compostable bag or paper bag (biodegradable bags are not accepted) but can then be placed directly into the City curbside composting cart.³¹ They also began a pilot program in April 2023 to collect the dog waste at two of their dog parks to bring to their composting facility.³²
- 3) *Nova Scotia, Canada*
 - a. The Municipality of Colchester has been composting pet waste since 1996. It must be unbagged but can then be placed in the regular curbside composting bin.³³
 - b. Cat litter is accepted by Pictou County Solid Waste in their compost carts, but dog waste is still excluded due to people using plastic bags. “We don’t want the problems that can occur with the bags and those ending up in our compost.”³⁴
 - c. The City of Guelph allows kitty litter and pet waste in its composting bin.³⁵

Mixed Municipal Drop-Off, Dog Park, and Curbside Pick-Up

- 1) *Brattleboro, VT* – Their program started in 2011, with a compost dumpster where residents could drop their organic waste, including pet waste, open twice a week for a few hours.³⁶ It has expanded to now be included in curbside compost pick-up.³⁷
- 2) *Toronto, Canada* – In 2021, the City installed dog waste bins in all off-leash dog areas and some parks. To process the program’s organic waste, “the City uses anaerobic digestion, which generates a by-product called biogas. The City, working with Enbridge Gas Inc., has installed infrastructure at the Dufferin Solid Waste Management Facility that allows it to create renewable natural gas (RNG) from Green Bin organics. The new equipment enables the City to take the raw biogas produced from processing Green Bin organics, turn it into RNG and inject it into the natural gas grid for City use.”³⁸ Originally started with 10 bins, they expanded to 38 bins within a few months. The next phase was announced in May of 2022, bringing the total to 100 bins across the city. In addition to these bins around the City, people can put pet waste into their curbside composting bin.³⁹

Composting Drawbacks

While these many examples show municipalities composting dog and/or pet waste in some capacity there are also some sources that indicate composting is not a safe solution for pet waste due to the bacteria.⁴⁰ And according to the Star Tribune⁴¹, the Minnesota Pollution Control Agency “recommends not commercially composting dog poop, placing waste in at-home compost bins or burying it, again because of the spread of diseases and bacteria.”

Non-profits & Private Companies

There are numerous non-profit and private companies who specialize in dog waste removal and composting

³¹ Calgary. [What goes where.](#)

³² Great Ward 9 Neighbourhoods. (April 13, 2023). [Compostable Pet Waste Pilot.](#)

³³ Peddle, Stuart. (January 12, 2018). [The scoop on poop: Is it garbage or compost?](#) Atlantic Canada.

³⁴ Dunn, Carol. (August 1, 2017). [Pictou County Solid Waste says cat litter can go in green bin.](#) Saltwire.

³⁵ City of Guelph. [How to sort garbage and recycling in Guelph.](#)

³⁶ Reformer Staff. (August 8, 2011). [Brattleboro to open compost site.](#) Brattleboro Reformer.

³⁷ Town of Brattleboro. [Recycling, Composting & Trash Disposal.](#)

³⁸ Toronto. [Green Bins in Dogs Off-Leash Areas.](#)

³⁹ Toronto Humane Society. (May 6, 2022). [100 “Dog Poop” Litter Bins Have Been Placed Around Toronto.](#)

⁴⁰ Pacific Shellfish Institute. [Pet Waste: What’s the problem?](#)

⁴¹ Chhith, Alex. (March 6, 2023). [Doggie doo-doo guide: when to flush, bag or call a professional.](#) *Star Tribune.* <https://www.startribune.com/doggie-doo-doo-guide-when-to-flush-bag-or-call-a-professional/600256522/>

around the county. Some have partnered with local municipalities for either specialized pick-up services, or as part of the curbside organic composting. We were unable to locate any pet waste composting companies in Minnesota. For further information, some examples are linked below:

- 1) [Enviro Pet Waste Network](#)
- 2) [EnviroWagg](#) – Boulder, CO
- 3) [Pet Poo Skiddoo](#) – Asheville, NC

Personal Dog Waste Composting Systems

On a smaller scale, there are many recipes/directions (both commercial and DIY systems) for at home dog composting. One example comes from the University of Florida.⁴² Some cities have held demonstration events for safe and effective at-home composting, including dog waste digesters.⁴³ However, it can be hard to reach the needed temperatures to kill off pathogens.⁴⁴

Minneapolis Code of Ordinances, Title 12, Chapter 244, Article VII, 244.770 does currently prohibit backyard composting of pet waste, stating, “*Prohibited compost materials*. The following compostable materials shall not be placed in a backyard composting container: meat, fats, oils, grease, bones, whole eggs, milk or other dairy products, human or pet wastes, pesticides, herbicides, noxious weeds, diseased plant material in which the disease vector cannot be rendered harmless through the composting process, and any other mixed municipal solid waste that may cause a public health risk or create nuisance conditions.”⁴⁵

Current Alternative Disposal: Flushing

The Environmental Protection Agency considers flushing dog waste appropriate,⁴⁶ and it is allowed within the Metropolitan Council's seven-county service area. Cat waste is not allowed due to a specific parasite.⁴⁷ However, other sources discourage flushing pet waste as municipal wastewater treatment facilities are not designed to appropriately process it⁴⁸ and the process uses a lot of chemicals, energy, and water.⁴⁹

In Vancouver, Canada from summer 2016 to September 2019, they collected dog waste from 6 parks, cut the bags open by hand, and sent the contents into the city’s sewage treatment plant. The work was completed by a contracted company, Scooby’s Dog Waste Removal. During that time, they diverted about 25 tons of waste from landfills. Similar programs across Metro Vancouver diverted an additional 125 tons annually.⁵⁰

Current Disposal in Minneapolis

Pet waste is currently predominantly being collected in the general waste, either being sent to a landfill or incinerator. The City contracts with Hennepin County for waste disposal services (LIMS [2022-00065](#)). Currently,

⁴² University of Florida. [Composting Dog Waste](#).

⁴³ The Joplin Globe. (November 7, 2016). [Joplin Recycling Center holds events in honor of America Recycles Day](#).

⁴⁴ Freinkel, Susan. (April 10, 2014). [The Poop Problem: What To Do With 10 Million Tons of Dog Waste](#). Live Science.

⁴⁵ [Minneapolis Code of Ordinances, Title 12, Chapter 244, Article VII, 244.770](#).

⁴⁶ Chhith, Alex. (March 6, 2023). [Doggie doo-doo guide: when to flush, bag or call a professional](#). *Star Tribune*.

⁴⁷ National Park Service. National River & Recreation Area Minnesota. [Water Quality Tips](#).

⁴⁸ Pacific Shellfish Institute. [Pet Waste: What’s the problem?](#)

⁴⁹ Freinkel, Susan. (April 10, 2014). [The Poop Problem: What To Do With 10 Million Tons of Dog Waste](#). Live Science.

⁵⁰ Boynton, Sean. (September 11, 2019). [Vancouver looking for new dog poop solution — if only to make this job disappear](#). Global News.

residential waste is brought to the Hennepin Energy Recovery Center (HERC). With potential plans to shut this facility down in the next 5 to 17 years⁵¹&⁵², the county could receive \$26 million in state funding for an organic waste processing project.⁵³ Ensuring this project includes the ability to compost pet waste could be pivotal to curbside pick-up including pet waste.

Composting pet waste could also help the City, County, and Metro area reach the Minnesota Pollution Control Agency's goal of achieving a 75% recycling rate by 2030.⁵⁴

Moving Forward

As shown by the examples, there are numerous options to explore pet waste composting within the City of Minneapolis. However, given the purview of the City, the options would all likely include working with partners.

For example, collaboration would need to occur with the Minneapolis Park and Recreation Board for any programs occurring within dog parks or other City parks. This is a common starting point into dog composting, as these sites are one of the highest concentrations of pet waste by volume. The Minneapolis Division of Solid Waste and Recycling has an MOU with the Minneapolis Parks and Recreation Board for solid waste and recycling services in parks which is set to expire September 21, 2024. With more research and planning, this could possibly provide an opportunity for a pilot program within a new MOU.

The currently accepted organics collected throughout Minneapolis have been processed by Specialized Environmental Technologies, a Waste Management of MN company since 2012. The newest contract with them is in the amount of \$9,000,000, for a five-year period, from Apr 1, 2024, through Mar 31, 2029, for yard waste, organics, fall bunched leaves, and standard street sweepings processing and disposal services (LIMS [2023-00722](#)). They do not compost any pet waste at their facility. Finding a company that does pet waste composting would be necessary before pet waste could be included in a new curbside composting contract.

⁵¹ Hazzard, Andrew. (October 20, 2023). [Hennepin County eyes closure plan for trash incinerator; advocates push for swift action](#). Sahan Journal.

⁵² Kraker, Dan. (September 21, 2023). [Hennepin County wrestles with future of Minneapolis waste incinerator](#). MPR News.

⁵³ Hazzard, Andrew. (May 25, 2023). [Plans to close HERC required before Hennepin County can obtain state funds](#). Sahan Journal.

⁵⁴ Zdechlik, Mark. (June 7, 2023). [The Twin Cities area has a trash problem, state pollution control agency says](#). MPR News.