

## HOME

## GARBAGE MAVEN

# On the tail end of animal waste

Biodegradable bags and compost bins are alternatives for some pet owners.

BY SUSAN CARPENTER

With the dogs and cats, the horses and goats, rabbits and, of course, chickens, Los Angeles is a sort of domestic zoo. There are at least 2 million dogs and 3 million cats kept as pets in L.A. County, according to 21st Century Animal Resource & Education Services. Add in lizards and other critters, and it's more than likely domesticated animals outnumber humans.

There's no doubt animals add a lot to their owners' quality of life, but they also contribute something else — poop. Most of it goes to landfills.

Estimates for animal waste are, not surprisingly, difficult to locate. The U.S. Environmental Protection Agency doesn't track it. Nor does L.A.'s Bureau of Sanitation, except for horses, which generate about 25,200 tons of manure annually in L.A.

Extrapolating U.S. Geological Survey figures for the 2.14 million tons of clay

I do not have a dog or a cat. An unfortunate biting incident involving an Afghan greyhound when I was a teenager pretty much swore me off canines. And I opted against replacing my Maine Coon cat after her tragic death in the jaws of a pit bull a few years ago. But a surprising number of readers wrote me after the kickoff to Garbage Maven last month asking: Is there a better way to handle all this waste?

Maybe.

It's against the law in L.A. to leave dog waste on public or private property unless there is consent from the property owner. Violations are punishable with fines of \$20, for not picking it up, and \$1,000 (or imprisonment) for polluting stormwater, which, in addition to common decency, is why so many people pick it up, put it in plastic bags and trash it.

Although letting nature run its course might seem like the most natural option, it isn't, because animal waste contains bacteria. And that bacteria comes with health risks, not only for humans but rivers, lakes and oceans. A study by the Bureau of Sanitation found that 60% of the bacteria in a Marina Del Rey waterway was because of animals, domesticated and feral.



DON KELSEN Los Angeles Times

**THE POOP:** The Doggie Dooley is an in-ground tank that works like a septic system, breaking down dog waste using water and enzymes.

same, perhaps, for dog waste. Many wastewater treatment plants generate methane gas as the waste breaks down and capture that gas to turn it into electricity. As for the leftover solids, they're treated to remove pathogens and transformed into fertilizers spread on farms. At least in

not. The city prefers a black-and-white message.

Although Minamide agreed there was a potential electricity-generation benefit to flushing animal waste, she said a similar benefit exists at landfills, many of which also capture and convert methane gas to electricity. Biodegradable

throw Big Fluff's into my compost bin, where the nitrogen of her waste combines with the carbon of her ripped-up-newspaper and straw bedding, along with the other organic materials in my bin, to make gardener's gold. Many cities, including L.A. and Long Beach, compost horse manure and provide it to gardeners.

It's meat-eating animals that are difficult. Carnivores are more likely to have pathogens that could infect humans, and the two most practical ways to destroy those pathogens are with chemicals or with heat.

Enter the Diva of Dog Doo, a.k.a. Ann Rippey. A resource conservationist with Alaska's Natural Resources Conservation Service, she was tasked with figuring out a way to "effectively handle dog waste," she told me. Her solution was composting, which she did with the help of sled dogs and their mushers.

Mushers' preferred compost bin was hand-built from wire. Their preferred recipe: 2 parts dog waste to 1 part sawdust, by volume. The key was keeping the pile hot — to a pathogen-killing temperature of at least 140 degrees Fahrenheit, preferably 170 degrees. If the poop needs to be transported to be composted, the best options are paper or corn-

human health issues. Composting it would be more complicated and "perhaps not advisable," she said, because cat feces contains different, more harmful pathogens and cats make so little feces owners would "have to be crazy cat ladies" to have enough of it to work.

Sorry, cat lovers. Your most environmentally sound option seems to be nonclay litters made from wheat, corn, pine or newspaper and to throw it in the trash.

After speaking with Rippey, I went back to the drawing board. Rather, the Internet, where I found something called a Doggie Dooley. A sort of Porta-Potty for dog doo, it's an easy-to-install in-ground tank that works like a septic system, breaking down dog waste using water and enzymes.

Even though I do not have a dog, I live near a dog park. I was game to buy a Dooley and conduct a week-long experiment, stocking it with stranger's doo to see whether it worked. Gross, I admit, but I'm a hands-on kind of gal.

Digging the hole turned out to be the hardest part. The Dooley is 14 inches in diameter and about a foot deep, but it requires a 4-foot-deep pit for the broken-down waste to wash out of its overflow tube and seep into the ground. The unit

Environmental Protection Agency doesn't track it. Nor does L.A.'s Bureau of Sanitation, except for horses, which generate about 25,200 tons of manure annually in L.A.

Extrapolating U.S. Geological Survey figures for the 2.14 million tons of clay that is mined for use in kitty litters each year and L.A. County's human population of roughly 9.85 million, I estimate at least 50,000 tons of cat litter are sent to L.A. area landfills every year.

As for dogs, the amount of doo they generate varies by animal size, but the average is 274 pounds annually per dog, according to a report from the Natural Resources Conservation Service. In L.A., that's 548 million pounds of dog doo that is wrapped in plastic, tossed in the black bin and trucked to oblivion.

waste contains bacteria. And that bacteria comes with health risks, not only for humans but rivers, lakes and oceans. A study by the Bureau of Sanitation found that 60% of the bacteria in a Marina Del Rey waterway was because of animals, domesticated and feral.

Still, there are alternatives to the routines most pet owners follow. There are several flushable cat litters, but a 2007 provision to California's Fish and Game code prevents cat litter flushing in the state because the *T-gondhii* parasite in cat feces is not eradicated through sewage treatment and kills sea otters. There are also water-soluble, biodegradable dog-poop bags that are billed as toilet friendly.

If humans can flush away their waste, it seems sensible to be able to do the

same, perhaps, for dog waste. Many wastewater treatment plants generate methane gas as the waste breaks down and capture that gas to turn it into electricity. As for the leftover solids, they're treated to remove pathogens and transformed into fertilizers spread on farms. At least in theory, there seems to be some benefit to flushing, rather than trashing, dog poop.

But flushing plastic bags got a mixed reception from the Bureau of Sanitation. According to the Bureau's chief operating officer, Traci Minamide, flushing plastic bags runs the risk of sewer clogs and overflows. Worse, she says, it confuses residents to tell us some things can be flushed, i.e. poop, and other things — kitchen grease and pharmaceuticals among them — can-

not. The city prefers a black-and-white message.

Although Minamide agreed there was a potential electricity-generation benefit to flushing animal waste, she said a similar benefit exists at landfills, many of which also capture and convert methane gas to electricity. Biodegradable bags probably aren't worth the extra money. When sent to the landfill, they aren't likely to break down in the years that a landfill is active and producing methane that is captured.

There had to be a better way.

As mentioned, I do not own a dog. I own a rabbit, which my 8-year-old hoodwinked me into adopting two years ago. Big Fluff is a herbivore, as are goats, cows, horses, chickens and guinea pigs — all of whose waste is compostable. I just

compost bin was hand-built from wire. Their preferred recipe: 2 parts dog waste to 1 part sawdust, by volume.

The key was keeping the pile hot — to a pathogen-killing temperature of at least 140 degrees Fahrenheit, preferably 170 degrees. If the poop needs to be transported to be composted, the best options are paper or corn-based biodegradable plastic bags. A family with 26 sled dogs in Alaska told me they've successfully composted iTunes gift cards and salad containers made from such plastics in their dog doo composter.

Rippy says the system works comfortably with 20 dogs and that people "could probably pull it off with seven or eight."

Sounds great, but who has seven or eight dogs in L.A.? And what about cats? Rippy says cat waste presents more potential

with stranger's doo to see whether it worked. Gross, I admit, but I'm a hands-on kind of gal.

Digging the hole turned out to be the hardest part. The Dooley is 14 inches in diameter and about a foot deep, but it requires a 4-foot-deep pit for the broken-down waste to wash out of its overflow tube and seep into the ground. The unit, once installed, is flush with the ground so it's unobtrusive. Just scoop the poop, drop it in, add water and a sprinkling of enzyme, and presto. You've got ... gunk. And it doesn't smell.

At least it isn't trapped in plastic or headed to a landfill. It didn't prompt me to adopt a dog, but for those who've already got them, the Doggie Dooley seems like a very good solution.

susan.carpenter@latimes.com

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