

Date: October 22, 2018

To:

All Members of the Heather Gardens Foundation Committee

Ms. Bonnie McMullen, Chair

Ms. Debbie DeMello

Ms. Jeanne Hizer

Ms. Blanche McKinney

Ms. Janet Redcross

Ms. Mavis Richardson

Mr. Bill Riley

Ms. Kathy Tirone

also:

Mr. Craig Baldwin

Mr. Calvin White

From: Marsha Bengen, Janet Arce, David Faris; HG Green Team Members

Re: Request for Funding

Earlier this year the Heather Gardens Green Team received a grant from the City of Aurora's 2018 Neighborhood Beautification Grant Program. This was the Green Team's third consecutive award from the City's annual competition.

The funding received this year allowed the Green Team to introduce a three-month pilot project at HG. Our experiment began on August 1 and will come to its three-month conclusion on October 31. The project has explored a program to compost dog waste and convert the waste to potting soil and compost for garden use. The alternative is sending the waste in plastic bags to a landfill.

We believe - and several indicators appear to support this belief- that the trial project has been a success and deserves to continue:

a. — resident enthusiasm has been remarkable; we wrote the grant application in hopes of enlisting 50 dog owners to participate; currently we have 80 owners registered, with 95 dogs;

b — a participant survey administered in late August elicited highly positive responses; please see a copy of this questionnaire (following later) with participants' collective responses indicated in red;

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c. — early fears that compost collection bins would suffer notable contamination from plastic poop bags or other trash did not come to pass.

Monitors who checked each bin twice a week from mid-August through September found high levels of correct disposal of used compostable bags and *little* contamination; documentation is available on request. We are grateful both to participants in the trial program and to other residents and visitors who respected the purpose of the compost collection bins.

Mr. Craig Baldwin recommended that we approach the Foundation Committee to seek a continuation of funding. Mr. Calvin White, who has followed our project with interest, seconded Mr. Baldwin's suggestion.

Succeeding pages include:

- a. - two brief descriptions of the dog poop composting program (covering 3 pages and 2 pages) for those who may not be familiar with the process.
- b. - a copy of a questionnaire for participants, completed in August 2018, with respondents' collected responses indicated by percentage in red print (2 pages).
- c. — cost calculations for each new compost collection station, with:
 - *one-time installation costs* (a bin, a set of identifying labels, and a cable lock to attach the bin to an existing pole-type dog waste station; 1 page) and
 - *ongoing maintenance costs* (calculated for a four-week period and covering bin liner bags, collection and transfer of composting material by the Pet Scoop Company, and compostable Bio Bags, figured for 100 dogs for one month / four weeks; 2 additional pages).
- d. - a sheet showing some examples of cost projections (1 page)
- e. — and finally, 2 spreadsheets (1 page each) presenting costs for onetime installation expenses and continuing monthly and annualized maintenance expenses under 2 sets of assumptions
 - one calling for 6 additional compost collection sites, providing for a total of 16 locations (currently there are 10 composting collection locations);

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— and one calling for 16 additional sites = 26 total; this number would add a compost bin at all 26 existing pole-type waste stations on the HG grounds.

Note. Additional Collection Sites. We are requesting funds to continue the dog waste composting program that has been the focus of a recent and (we believe) successful three-month trial program here at HG. We are also seeking an extension of the program to include at six additional sites for collection of compostable dog waste.

The only significant recommendation for change we have received from trial program participants is an expressed need for more collection stations.

I leather Gardens is a physically large community, covering almost 200 acres. Even a relatively few additional composting waste stations could make a notable difference in the ease of participation for what we hope will be ever-increasing numbers of dog owners engaged in the program. The coming of winter months, with likely periods of snow and icy conditions, also makes increased collection sites desirable.

Marsha Bengen

Janet Arce

David E. Faris

A PROGRAM FOR COMPOSTING DOG WASTE AT HEATHER GARDENS:

DESCRIPTION OF A TRIAL PILOT PROJECT

Introduction. One may readily run across (not literally, we will hope) uncollected dog waste on the carefully maintained grounds that form a pleasing amenity for many residents and visitors at Heather Gardens. The problem of un-scooped dog poop persists despite frequent reminders and pleas to dog-owners to "clean up" after their pets. Equally, the problem persists despite the convenient presence of 26 dog waste collection stations spaced near residences along the perimeter walkway surrounding the HG community and along the walkway that borders much of the HG 9-hole golf course.

The Green Team here proposes a pilot project that may, we hope, give dog- owners incentives to show increased compliance in fulfilling their responsibility to^ pick up and dispose of dog waste after Fido or Fiona has completed his or her "business."

General Description. Our Pilot Program would engage Heather Gardens in a new manner of dealing with dog poop. Present techniques, locally available, allow unwanted canine waste to receive re-processing for productive future use. Yes, that's possible. Really. Dog poop can now undergo composting and emerge (at the other end, so to say) as marketable dog-potty potting soil.

The pilot project we propose would provide special dog waste collection bags to HG dog-owners who register their pets. In what way are the "special" waste collection bags special? For one thing, they'd be designed for the use they'd undergo (few er unwanted surprises). For another, they'd be FREE. And if those features are not enough, they'd give dog-owners the satisfaction of knowing that their dogs' excreta would not soon find its way in a plastic bag, placed within a second plastic bag, and then deposited on a sheet of thick plastic in a landfill, where all that darned plastic would just remain ... and remain ... and remain, for decades, maybe centuries. Rather, true recycling - yes, even for dog doo - would occur.

How the Program Would Work.

1. **Number of Participants.** The Pilot Program would accept the first 50 HG dog-owners who enlist their dogs. There would need to be advance publicity and education about the Program, and a registration process would need to be worked out.
2. **Duration of the Trial Project.** Three months. Specifically, August, September, and October 2018.
3. **Compostable Dog Waste Collection Bags.** Entrants to the Program would receive a monthly allotment of compostable dog waste collection bags, with renewal of the allotment for each of the months of the pilot project period.
4. **Collection of Filled Bags.** Compostable bags would require new disposal containers separate from the 26 existing HG stations that would continue to collect dog waste in non-recyclable plastic bags. We recommend having ten sites where Program participants could dispose of compostable waste bags after use.

Desirable: (1) Place each new “compostable” collection container side-by-side with one of the 26 existing “plastic bags” pole sites. By offering a forced choice — “Is my bag compostable or not compostable?” - this pairing process would decrease the risk of mixing /contaminating plastic and compostable bags.

(2) Use decals to make clear that the added containers are ONLY for collection of COMPOSTABLE bags.
5. **Transfer of Compostable Bags to the Composting Site.** Twice weekly HG Roads and Grounds Staff collect waste deposited in the 26 existing “pole” waste sites. They would now also collect materials from the ten “compostable” collection sites, taking care to keep liner bags of compostable waste separate from liner bags with waste in plastic bags. Staff would transfer the compostable materials to a “central” collection container located behind the HG Maintenance Structure. The locally owned Pet Scoop Company would provide the central 32- gallon container. Pet Scoop personnel would also collect the gathered compostable materials once weekly and transfer the materials to the EnviroWagg LLC composting facility in Longmont, CO.

Important Note.

The Heather Gardens Green Team will present this Pilot Project in its application for a grant from the City of Aurora's 2018 Neighborhood Beautification Grant Program. The Green Team has won City grants in 2016 and 2017 for recycling projects. We will be trying for a third consecutive award in this year's competition.

We have worked with Mr. Jeff Owens, Supervisor, HG Roads and Grounds Department, in developing our grant proposal this year.

Green Team members who are preparing and will oversee the operation of this year's grant project, if approved:

Marsha Bengen, Primary Project Coordinator;

David Paris, Second Project Coordinator and Grant Writer (also writer of this summary description);
and

Janet Arce, who has admirably filled in for a Third Project Coordinator who had to drop out because of illness and multiple family stresses.

Itinerary for HG Dog Poop from Starting Point to Composting Site

1. The Pet Scoop Company of Denver will set in place, at no expense to HG, a "central*" collection bin at a Heather Gardens designated site (likely the HG Maintenance Bldg). This bin will hold compostable dog waste bags only.
2. At the same time, more or less, Heather Gardens will place 10 new collection containers with lids at sites on the HG grounds chosen by the HG Roads and Grounds Department.

Bold labels will identify these 10 new containers as appropriate for collection ONLY of dog waste deposited in COMPOSTABLE dog poop bags.

At each chosen placement site, the new containers for composting will "pair" (i.e., will be placed together) with an existing pole-type dog waste station and will be attached to the dog waste station. The pole station will continue to receive, as it does now, waste collected in *plastic* bags.
3. Heather Gardens will acquire a supply of compostable waste collection bags from BioBags Americas, Dunedin, FL. HG will also establish an enrollment process for dog-owners wishing to participate in the composting program.
4. Interested dog-owners will register themselves and their pets for the new program. (The program will accept the first 50 residents who apply.)
5. Participants will receive - for free (!!) - 75 compostable dog waste bags for each of the three months of the trial program (August, September, October 2018).
6. THE HEATHER GARDENS DOG WASTE COMPOSTING PROGRAM WILL NOW OFFICIALLY BE NOW UNDER WAY (!!!).
7. Dog poops. Owner scoops poop into a compostable bag. Knots the bag.
8. Owner disposes of the filled compostable bag at one of the 10 established sites for collection of compostable waste only.
9. The HG Maintenance Department twice weekly collects contents from the 10 composting sites and transports these materials to the "central" Pel Scoop collection location.

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10. The Pet Scoop Company collects HG poop compostable waste weekly from the central HG site.
11. Pet Scoop adds HG compost-bag-filled waste to materials collected from other participating Denver locations, then transports these materials (trips every Tuesday and Friday) to the dog-waste composting center maintained by EnviroWAGG, LLC, headquarters in Aurora, composting site in Longmont.
12. At a later point HG dog poop rises Phoenix-like from the composting bin, and becomes part of a bag of dog-potty potting soil marketed by EnviroWAGG.

Prepared by David Paris, Heather Gardens Green Team
revised 10-18-2018



Considering the needs of an older population, we thought it was essential to find a collection bin with an easy-to-lift, back-hinged lid.

The Toter Company does make a smaller (24-gallon) bin in a similar style with back-hinged lid - but only as a special minimum order of 50 units.

The cost is prohibitive for our needs.

The compost collecting bins with 5 labels total: 2 on lid, one on each of 3 sides. We believe 3 labels - two on lid, one on front side - will work equally well.



Installation shots:

To the right: along the golf course walkway

Below: near the recycler dumpster at Parking Structure 4.



HG Green Team Dog Poop Composting Project Questionnaire 1

*/ Results from 62 Questionnaires / Responses Tabulated by Marsha Bengen /
I Note: Because of rounding, some totals may exceed 100% /*

Name _____ Date _____

Building Number _____ OR Residence Area (e.g. CP4, NTH) _____

1. Think back to how you disposed of your dog's poop earlier. In comparison, how difficult do you find the poop composting program? *Choose one:*

21% it's easier

45% it's about the same

31% it's somewhat more difficult

3% it's a lot more difficult

2. How satisfied are you with the dog poop composting program? *Choose one:*

0% not at all; I don't like it

2% it's okay, I guess

31% I like it

68% I think it's great

3. Do you think the poop composting program is worthwhile? *Choose one:*

2% not really

6% I guess so; somewhat

92% oh, definitely

4. If the dog waste composting program would continue at HG on into the future, would you continue to participate? *Choose one:*

0% no

2% maybe

16% probably

85% oh yes, for sure

5. Would you *encourage* your Headier Gardens dog-owner friends to participate in the composting program? *Choose one - or more than one. if applicable:*

2% I would not encourage others to participate in composting.

37% Yes, I would likely recommend the composting program.

48% For sure. I would definitely try to enroll all my friends.

18% Everyone I know with a dog is already participating.

34% I have already encouraged friends to participate.

6. What do you think is *the best thing* about the poop composting program?

Typical responses include: **Environmentally a good idea. Reduces use of plastic. Poop not adding to landfill. Recycling it. Good for the environment. Recycling. Causes awareness. Environmentally worthwhile and practical. The program itself. Recycling. The whole idea is very beneficial. Helping the environment.**

7. What do you find *difficult or disagreeable* about the poop composting program?

42% Nothing difficult or disagreeable

39% More containers / Closer containers

13% Odor, plastic bags in bin, etc 6% No answer

8. How many dogs do you own? _____

On average. about how many compostable poop bags do you use each day?

Costs for Expansion of the Poop Composting Program at Heather Gardens

A. One-Time Costs. Calculations for each additional compost collection station appear below.

One-time installation costs cover bins, labels/decals, and cable locks.

1. 32-gallon Toter brand trash bin, with hinged lid.

Source: Home Depot stores, Aurora.

$$\text{\$ } 59.98 + 8\% \text{ tax of } \text{\$ } 4.80 = \text{\$ } 64.78$$

2. Labels, to include 3 total (existing stations have 5 labels per bin).

Source: Fast Signs Company, Aurora.

This company has the content of each sign stored in its computer.

Fast Signs reportedly sets prices according to the amount of decal material used. In that case, the price per bin for labels (2 on lid, 1 on front side of bin, none on other sides of bin) is almost precisely 1/2 of the costs for the 5 labels used on earlier bins. Result:

$$\text{\$ } 13.76 \text{ per bin (tax included)}$$

3. Cable Lock, per bin.

Source: Ace Hardware, Aurora.

$$\text{\$ } 7.20 \text{ (tax included)}$$

Total One-Time Costs per compostable waste collection station:

Bin	64.78
Labels	13.76
Cable Lock	<u>7.20</u>
	85.74

B. Ongoing, Recurrent Costs.

Ongoing, recurrent costs include BioBags, bin liner bags, and collection / transfer of the compostable waste.

Monthly costs for bin liners and collection / transfer fees can be calculated for each collection station. Costs for BioBags depend on the numbers of dogs involved, not the numbers of stations.

1. Bin Liner Bags.

Source: Home Depot stores, Aurora.

Each collection station needs 2 liner bags per week for regular Tuesday and Friday collections = 8 bags per month. Bags are 50-gallon clear plastic (easily grabbed and replaced by a Roads and Grounds staff member).

Box of 50 liner bags = \$ 64.16. **Each** bag = \$ 0.32

8 liners per 4 weeks = 8 x \$ 0.32 = \$ 2.59 / station / month

2. Collection and Transfer Services.

Source: Pet Scoop Company, Denver.

Collection from a Pet Scoop company bin (located behind the HG Maintenance Building), which includes material from all compost stations at Heather Gardens = weekly charge of \$ 35. Costs would be halved if Pet Scoop services occurred every other week, which may be feasible.

Monthly cost per collection station depends on the number of Pet Scoop collection visits. Each visit = \$35, regardless of frequency. Visits may occur on a weekly basis or every other week. Every-other-week collection reduces cost by 50%. Cost does not depend on the number of individual compost bins on the HG grounds.

Cost per Pet Scoop visit, with weekly collection = \$ 35.00

Cost for 4 weeks = 4 x \$ 35.00 = \$140.00

Cost per Pet Scoop visit, with every other week collection = \$35.00

Cost for 4 weeks = 2 x \$ 35.00 = \$70.00

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3. **BioBag Compostable Dog Poop Collection Bags.**

Source: BioBag Americas, Dunedin, FL.

Data collected over a 3-week period from 61 HG owners participating in the IIG composting program indicated that each dog used an average of 1.74 BioBags per day (owners surveyed had 1, 2, or 3 dogs). A safe general assumption would seem to be to predict use of 2 bags / dog / day.

Over a month, 100 dogs would use 6000 BioBags (2 bags / day / dog x 30 days). BioBags charges \$ 119 per case of 2500 compostable bags. There would also be a charge for shipping. Assume shipping at \$15 per case = \$ 134 / case, total cost.

6000 bags would require 2.4 cases of BioBags.

Cost for 100 dogs / month = 2.4 cases x \$ 134 = \$321.60

Monthly cost per each increment of 25 dogs = \$80.40

Everything except the BioBags can be reduced to a "per station" monthly cost. The quantity of BioBags requires a calculation by dog, not by station.

Please see the following page for some brief examples of cost projections for 6 additional compost collection sites. Calculations assume varying assumptions in the numbers of dogs participating and the frequency of Pet Scoop collection visits.

Yet more detailed calculations of expenses appear in following spreadsheets. Again, cost projections reflect differing assumptions: numbers of collection stations, numbers of dogs participating in the composting program, frequency of Pet Scoop collection / transfer visits. The first spreadsheet covers 6 additional compost collection sites. The second spreadsheet covers 16 additional locations.

Some examples of cost projections for continuation
and expansion (6 additional compost collection sites)
of the dog waste composting program at Heather Gardens.

All final projections include one-time installation costs for six (6) additional compostable bags collection sites:

6 collection bins	388.68
6 sets of identifying decals	82.56
6 cable locks	<u>41.20</u>
	514.44
<hr/>	
Monthly Costs (4 weeks) for 100 dogs:	
BioBags compostable bags	321.60
Bin liner bags	41.44
Pickup / Transfer: every 2 wks	<u>70.00</u>
	433.04
Annual total (for costs just above)	5629.51
Installation costs / 6 sites	<u>514.44</u>
Total yearly cost 100 dogs	6143.95
<hr/>	
Monthly Costs (4 weeks) for 150 dogs:	
BioBags compostable bags	482.40
Bin liner bags	41.44
Pickup / transfer: weekly	<u>140.00</u>
	663.84
Annual total (for costs just above)	8629.92
Installation costs / 6 sites	<u>514.44</u>
Total yearly cost 150 dogs	9144.36

Proposal One	Six additional compost stations:		16 stations total						
		per month (= 4 weeks) 100 dogs	* annual cost w 52-week adjustment	per month (= 4 weeks) 125 dogs	* annual cost w 52-week adjustment	per month (= 4 weeks) 150 dogs	* annual cost w 52-week adjustment		
One-Time Costs									
6 Collection Bins	388.68								
6 Sets Labels/Decals	82.56								
6 Cable Locks	43.20								
Total	514.44								
Recurring Costs by Month (= 4 weeks); "Year" = 48 weeks									
BioBags		321.60	4180.80	402.00	5226.00	482.40	6271.20		
Bin Liner Bags		41.44	538.72	41.44	538.72	41.44	538.72		
Pick-Up / Transfer: <i>weekly</i>		140.00	1820.00	140.00	1820.00	140.00	1820.00		
Total: w weekly pickup		503.04	6539.52	567.90	7584.72	663.84	8629.92		
Total + one-time costs			7053.96		8099.16		9144.36		
BioBags		321.60	4180.80	402.00	5226.00	482.40	6271.20		
Bin Liner Bags		41.44	538.71	41.44	538.72	41.44	538.72		
Pick-Up / Transfer: <i>every other week</i>		70.00	910.00	70.00	910.00	70.00	910.00		
Total: w pickup 2x / mo		433.04	5629.51	497.90	6674.72	593.84	7719.92		
Total + one-time costs			6143.95		7189.16		8234.36		
* There are 52 weeks in a year. To get accurate annual total, multiply 4-week cost x 12, then add one additional x 4-week cost.									
* Or multiply 4-week costs by 13.									

Proposal Two		Sixteen (16) additional compost stations: 26 stations total Assumption: increased numbers of dogs participating					
assumes greater numbers of dogs / assumes added second Pet Scoop bin		per month (= 4 weeks) 150 dogs	* annual cost w 52-week adjustment	per month (= 4 weeks) 200 dogs	* annual cost w 52-week adjustment	per month (= 4 weeks) 250 dogs	* annual cost w 52-week adjustment
One-Time Costs							
16 Collection Bins	1036.48						
16 Sets Labels	220.16						
16 Cable Locks	115.20						
Total	1371.84						
Recurring Costs by Month (= 4 weeks); "Year" = 48 weeks							
BioBags		482.40	6271.20	643.20	8361.60	804.00	10452.00
Bin Liner Bags		66.73	867.49	66.73	867.49	66.73	867.49
Pick-Up / Transfer:							
<i>weekly</i>		180.00	2340.00	180.00	2340.00	180.00	2340.00
Total: w weekly pickup		729.13	9478.69	889.93	11569.09	1050.73	13659.49
Total + one-time costs			10850.53		12940.93		15031.33
BioBags		482.40	6271.20	643.20	8361.60	804.00	10452.00
Bin Liner Bags		66.73	867.49	66.73	867.49	66.73	867.49
Pick-Up / Transfer:							
<i>every other week</i>		90.00	1170.00	90.00	1170.00	90.00	1170.00
Total: w pickup 2x / mo		639.13	8308.69	779.93	10399.09	960.73	12489.49
Total + one-time costs			9680.53		11770.93		13861.33
* There are 52 weeks in a year. To get accurate annual total, multiply 4-week cost x 12, then add one additional x 4-week cost.							
* Or multiply 4-week costs x 13.							