Public Outreach Best Practices

Cliff Notes

1. **Identify what you want changed.** Stakeholder group crafts vision, SMART goals (specific, measurable, achievable, relevant, and time-based goals), and objectives that will help meet the mission.

2. **Define target audiences.** Target audience as narrowly as possible to the individuals or groups whose action or behavior change will be the most important to helping you achieve your goal. A well-chosen influencer could provide more leverage than a large group.

3. **Listen to and understand what motivates behavior for each of these audiences.** Frame it in a way that doesn’t feel like a sacrifice, attack a current behavior, or threaten how an audience sees itself and its values. Look at any research on your target audience behavior that helps point to successful strategies and outcomes.

4. **Create an outreach strategy.** Use compelling messages for EACH audience that define a clear, actionable, and achievable call to action. Define how message will be delivered and who will deliver it.

5. **Test the message.** Conduct a focus group to determine if the message and strategy is something that will motivate your particular audience before you roll out.

6. **Implement.**

7. **Monitor and evaluate effectiveness.** Are you on track to achieve overarching goals and objectives? If not, what are things that need to change to enhance effectiveness?
Dogs Poop Alot

- According to some estimates, the average dog creates approximately 1/2 to 3/4 pound of poo each day, 274 pounds per year. 100 dogs can produce more than 500 pounds of waste per week.
- With 90% of trails open to dogs, Boulder, CO Open Space and Mountain Parks estimates 30 tons (75% of the allowable freight weight of one semi-truck) of dog waste left behind on their 45,000 acres of land (150 miles of trails).
- WAG for MCOSD’s 16,000 acres (250 miles of trail, maybe 95% of trails open to dogs) would be 11 tons of dog waste left behind.

Bad for Environment, Waterways

- One pile of poop can take 3-months to up to a year to fully decompose depending on conditions.
- Not native to the environment
- Some studies have traced 20 to 30 percent of the bacteria in water samples from urban watersheds to dog waste.
- Excess nutrients, such as nitrogen and phosphorous, create environmental conditions that can produce algal blooms in waterways which, in turn, can cause oxygen depletion & fish mortality (EPA 2005).
- Just 2-3 days of waste from 100 dogs can contribute enough bacteria, nitrogen and phosphorous to close 20 miles of a bay-watershed to swimming and shellfishing, according to EPA.
- Excess nitrogen from dog poo can spread nitrogen-loving weeds at expense of native plants.
- USA Today article (2002) states that some studies put dogs third or fourth on the list of contributors to bacteria in contaminated waters.

Health Impacts to Humans and Wildlife

- Regulated by EPA as raw sewage.
- Dog poo can harbor lots of viruses, bacteria and parasites — including harmful pathogens like E. coli, giardia, and salmonella.
- The EPA estimates that a single gram contains an estimated 23 million fecal coliform bacteria.
- DNA testing indicates dog waste is a significant source of bacteria (such as e. coli) contamination in streams.

Visitor Experience Impacts

- Visual impacts from poop and bags
- Stepping in poop!
Who walks their dog in the preserves?

In the United States, 63% of pet owners consider their pets to be family members. People who walk or run their dog in preserves as opposed to neighborhood streets are motivated by love for his/her dog paired with desire to be outdoors (without traffic) and/or a desire for increased fitness/reduced stress. Commercial dog walkers do it as part of their jobs.
How many people walk dogs in parks and preserves?
MCP Visitor Use Study Excerpts

- Survey respondents suggested facility and service improvements that could reduce some of the most frequently mentioned issues.
  - Suggestions that might fit into this realm of low level change include improvements in trail surface conditions, better enforcement of existing policies on dogs and bicycles, better maintenance of restrooms, control of dogs on trails, and more off-lease dog areas.

- Most visitors did not have any suggestions for improvement, but of those who did the most common were: Improve trail, better enforcement or new user policies, better maintenance, control of dogs or more off-lease dog areas, new facilities, and better signs/maps.

- The majority of respondents did not have a serious issue about the park site, but for those who did the most commonly mentioned serious issues at that park site were: Dogs off leash (15%), speeding bikes (14%), dog waste (12%) and lack of information about fragile plant and animal habitats (9%)

- Focus group and survey results indicated there are some conflicts across four different user groups: Equestrians, mountain bikers, dog owners and hikers. Additional management strategies, policies or staff/volunteers dedicated to reducing these conflicts seems warranted.

- As a way to reduce trail conflicts, many focus group members suggested MCP should better educate park users on trail etiquette, sharing the trail, and positive communication with other visitors.

- Offer more off-lease dog walking opportunities, where appropriate, because there is strong year-round demand for this. An example of this demand is over half of winter visitors to McInnis Park where there for dog walking.
How many people walk dogs in parks and preserves?
MCP Visitor Use Study Excerpts

Table 21: Top primary reasons for visiting all parks, all paths and all preserves

<table>
<thead>
<tr>
<th>Primary Reason</th>
<th>Phase II Percent</th>
<th>Phase I Percent</th>
<th>Total Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>All parks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature, land, views</td>
<td>28.6</td>
<td>20.4</td>
<td>24.5</td>
</tr>
<tr>
<td>Hike, walk</td>
<td>21.6</td>
<td>16.3</td>
<td>19.0</td>
</tr>
<tr>
<td>Walk dog</td>
<td>11.9</td>
<td>8.8</td>
<td>10.4</td>
</tr>
<tr>
<td>Bicycle, bike park</td>
<td>4.8</td>
<td>11.4</td>
<td>8.1</td>
</tr>
<tr>
<td>Children’s playground</td>
<td>6.2</td>
<td>2.1</td>
<td>4.2</td>
</tr>
<tr>
<td>All Preserves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hike, walk</td>
<td>40.3</td>
<td>31.9</td>
<td>36.1</td>
</tr>
<tr>
<td>Nature, land, views</td>
<td>33.2</td>
<td>28.5</td>
<td>30.1</td>
</tr>
<tr>
<td>Walk dog</td>
<td>8.4</td>
<td>10.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Exercise</td>
<td>9.8</td>
<td>6.3</td>
<td>7.9</td>
</tr>
<tr>
<td>Biking</td>
<td>3.4</td>
<td>9.2</td>
<td>6.3</td>
</tr>
<tr>
<td>All Paths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature, land, views</td>
<td>43.7</td>
<td>22.0</td>
<td>32.9</td>
</tr>
<tr>
<td>Hike, walk</td>
<td>29.9</td>
<td>25.3</td>
<td>27.6</td>
</tr>
<tr>
<td>Biking</td>
<td>5.7</td>
<td>20.3</td>
<td>13.0</td>
</tr>
<tr>
<td>Walk dog</td>
<td>8.2</td>
<td>14.1</td>
<td>11.7</td>
</tr>
<tr>
<td>Exercise</td>
<td>4.6</td>
<td>6.3</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Note: Total count for all sites = 22.6% participated in dog walking and 11.9% was primary reason.

Table 22: Respondent dog walking by park, path and preserve

<table>
<thead>
<tr>
<th>Park/Preserve/Path</th>
<th>Phase I was Reason For Visit (%)</th>
<th>Phase II was Reason For Visit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>McNee Ranch Park</td>
<td>4.5</td>
<td>4.4</td>
</tr>
<tr>
<td>Stafford Lake Park</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Nicasio Park</td>
<td>50.8</td>
<td>50.8</td>
</tr>
<tr>
<td>Paradise Beach Park</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Crenshale (New Brown) Park</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Lagoon Park</td>
<td>24.2</td>
<td>24.2</td>
</tr>
<tr>
<td>Coste Mata Park</td>
<td>20.5</td>
<td>20.5</td>
</tr>
<tr>
<td>Mill Valley/Bayville Park</td>
<td>7.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Agate Beach</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Pt. Reyes Park</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Puddio Park</td>
<td>19.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Indian Valley Preserve</td>
<td>13.4</td>
<td>13.4</td>
</tr>
<tr>
<td>Cascade Canyon Preserve</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Inahsah Tea Party</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gary Giacomini Preserve</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Ring Mountain Reserve</td>
<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Mount Baldy</td>
<td>9.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Table 23: What caused you to feel dissatisfied with other park users (write-in), phase II

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict with dogs</td>
<td>2</td>
</tr>
<tr>
<td>Speeding bicyclists</td>
<td>1</td>
</tr>
<tr>
<td>Not enough parking</td>
<td>1</td>
</tr>
<tr>
<td>Playing loud music</td>
<td>1</td>
</tr>
<tr>
<td>Not enough swing sets at playground</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Only 1.4% of respondents were dissatisfied or very dissatisfied with other park users.

D. Comparison of visitors to all parks, all preserves and all paths

Table 56: Comparison of 2015 and 2017 select respondent visitation and activity participation data at parks, preserves and paths, phases I and II

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed intercept surveys</td>
<td>339 (252)</td>
<td>711 (435)</td>
<td>239 (255)</td>
</tr>
<tr>
<td>Alone in travel group (percent)</td>
<td>31.6 (20.4)</td>
<td>41.6 (42.7)</td>
<td>59.0 (83.2)</td>
</tr>
<tr>
<td>Participation – Walk/hike (percent)</td>
<td>70.8 (66.2)</td>
<td>67.5 (78.8)</td>
<td>75.2 (47.4)</td>
</tr>
<tr>
<td>Participation – Relax outdoors (percent)</td>
<td>56.0 (36.9)</td>
<td>54.5 (30.6)</td>
<td>49.5 (36.0)</td>
</tr>
<tr>
<td>Participation – Enjoy views (percent)</td>
<td>36.3 (36.2)</td>
<td>54.0 (40.9)</td>
<td>46.0 (83.2)</td>
</tr>
<tr>
<td>Participation – Nature walk (percent)</td>
<td>32.7 (30.9)</td>
<td>55.6 (47.1)</td>
<td>25.0 (21.1)</td>
</tr>
<tr>
<td>Participation – Explore outdoors (percent)</td>
<td>32.1 (36.9)</td>
<td>47.6 (32.4)</td>
<td>29.5 (21.1)</td>
</tr>
<tr>
<td>Participation – Being with family and friends (percent)</td>
<td>38.5 (32.4)</td>
<td>34.3 (30.9)</td>
<td>26.1 (21.1)</td>
</tr>
<tr>
<td>Participation – Walk dog(s) (percent)</td>
<td>25.4 (15.9)</td>
<td>28.2 (29.4)</td>
<td>36.2 (19.5)</td>
</tr>
</tbody>
</table>
How many people walk dogs in parks and preserves?
MCP Visitor Use Study Excerpts

Visitor Use Study Take-aways:

- Surprisingly, only about 17-20% of MCP visitors list dog walking as most frequent land-based activity.
- Key recommendation of survey is to offer more off-leash dog walking opportunities.
- Most visitors didn’t suggest improvements, but some did mention more enforcement on dogs, more control of dogs on trail, more off-leash dog areas, and dog waste.
- Dog poo is potentially a big problem at many parks, particularly since they are close to water bodies—McInnis (35-50% of users are dog walkers), Creekside (20%), Lagoon Park (23-24%), MVS Path (8-30%), Agate Beach (6-34%), Pueblo (20-36%).
- Dog poo may be a bigger problem at some preserves (Indian Valley at 13-43% of users) than others (Gary Giacomini 0%)
Only about 60% of dog owners pick up after their pets, according to surveys.

Among the excuses offered by the 40% who don’t pick up: “Because eventually it goes away;” “too much work;” “small dog, small waste;” “it’s in the woods;” or, in a reverse NIMBY: “It’s in my own yard.”

Excerpted from following article by science writer Susan Freinkel (2014):
Who Does and Doesn’t Pick Up Dog Poop in Boulder’s Open Spaces and Mountain Parks?

- Majority (73.5%) immediately picked up their pet’s waste and immediately took all bags for proper disposal.
- 13.7% did not take all of the bags with them.
- 12.7% did not pick up their pet’s waste at all.
- Guardians with dogs on-leash 11% more likely to bag and immediately take pet waste for disposal than guardians with dogs off-leash.
- Dog guardians who did not pick up dog waste were more tolerant of dog waste left in public spaces, and viewed dog waste as “natural waste” and “biodegradable.” Having such views may have allowed these dog guardians to self-justify their behavior. WEBLEY and SIVITER (2000)
- Non compliant dog guardians were more likely to believe that rules requiring dog guardians to pick up dog waste were excessively restrictive. WEBLEY and SIVITER (2000)
- Perceived behavioral control [perception of ease] had more influence on behavioral intentions than either attitudes or norms.
- Behavioral intent directly predicted self-reported behaviors, meaning whether or not a pet guardian thought that behaviors were easy or difficult had a significant impact on their self-reported intent and behavior.
- Most dog guardians believe it is relatively easy to carry an unused waste bag every time they visit OSMP lands, and to always watch their dog(s) to see if and when it defecates.
- However, dog guardians find it slightly more difficult to pick up pet waste when it is off-trail and to carry pet waste with them until they reach a trash or compost receptacle than other best practices.
- 96% of the respondents who provided a response stated that additional trash/compost bins and/or bag dispensers would make them more likely to properly dispose of their dog’s waste during their next visit.


Who Does and Doesn’t Pick Up Dog Poop in Santa Barbara and Hillsborough County, Florida?

- Small dog owners did not pick up their dog waste as often as large dog owners.
- Clear positive correlation between how often participants pick up after their dogs and how harmful they perceive dog waste to be to human health and the environment.

Example of Barriers Cited (Carrollwood Focus Group, 2009)

1. Lack of effort
2. Not knowing what to do
3. Not having supplies
4. The “Ick” factor
5. Not wanting to carry waste
6. Not knowing where to dispose


Hillsborough County Pet Waste Research (2009)
Possible Examples of Target Audience and His/Her Perceptions About Dog Waste

Jogger running with unleashed dog
I’m a 29-year old runner who lives in Corte Madera. I drove to the trailhead this Sunday because I’m training for the San Francisco marathon with a 10-mile run today. My trusty dog Bailey always stays by my side—he loves to run with me! He only leaves my side to go poo. I’m lucky it’s off the trail because there’s no way I’d carry a poo bag banging against my hip for the next 8 miles! If it’s the beginning of the run and we’re right next to the garbage can when he goes, I pick it up and throw it away.

Senior walking leashed dog
I’m a 75-year old retired senior. My dog Maggie is part of my family and I’d do anything for her. I walk her twice a day in Baltimore Canyon on the level fire road, both for exercise and to give Maggie a chance to use the “facilities.” I keep her on leash because she can be a little aggressive with other dogs, and I also don’t want her jumping on anyone with a bad hip. It’s a point of pride with me to try to do the right thing. I always bring a few poop bags with me and pick up, carry out, and dispose of waste at the garbage can at the end of the preserve. It’s the right thing to do and I can’t believe how many people fail to do such an easy thing! I hate seeing poo on the trail. I sometimes even pick up waste from other dogs!

Young mom with leashed dog
I’m a 36-year old mom who gets together with friends after school drop-off to walk our dogs about once per week. Dog poo is totally gross. I pick up my dog poo, especially because my friends are right there watching, but I don’t want to walk with the stinky bag so I place it in a spot where I’ll remember it on our way back. Occasionally I forget to pick it up because we’re so busy chatting, but I’m sure the park ranger will pick it up later.

Nature-loving hiker with unleashed dog
I take my dog Amarok with me everywhere. We live in my sprinter van during our vacations to wilderness areas. We love the freedom of being outside! There is no joy more intense than Amarok getting to run freely. I grew up in Montana and I know a ton about the outdoors. The rules are created by dumb government bureaucrats that don’t actually spend any time outside. I would never consider using plastic bags, which is destroying our planet. Amarok goes poo au naturale as nature intended. He typically goes off trail, far from people, where it biodegrades naturally in the environment.
There are a variety of methods/theories for segmenting audiences and developing an outreach strategy. Determine what has most relevance to your goals.


**Five Common Barriers to Proenvironmental Behaviors**

| Social Norm Barriers | Social norms may support deprecative behaviors. People desire social approval and belongingness, so they are motivated to do what is “socially correct” as defined by their group. Some groups have norms at odds with environmentally responsible behavior. For instance, it may be a social norm to vandalize, litter, or modify campsites inappropriately. Also, when people do not know what to do, they will take their cues from others. Recreationists often get their ideas about what is acceptable from other recreationists. Evidence that other recreationists behave in a particular manner (however inappropriate by resource management standards) may signal to others that the degrading behavior is acceptable. |
| Competing Attitudes Barriers | Some attitudes and values may override proenvironmental attitudes and lead to deprecative behaviors. Research indicates that although most people believe in preserving the natural environment, other competing attitudes and values may dominate. For instance, if an environmentally responsible behavior such as packing one’s trash out of the wilderness is too inconvenient, a pro-convenience attitude may override a proenvironmental one. Campers who gather their own firewood may do so because the cost of firewood is prohibitive. They may care about the environment, but attitudes toward saving money prevail. A motocross rider’s desire to have a challenging experience can override a desire to avoid breaking stated rules. |
| Setting Design Barriers | The design of the physical environment may discourage desirable behaviors or promote undesirable ones. Recycling receptacles may be located too far from campsites. Trash receptacles may not be emptied often enough or are difficult to locate. Toilets may be scarce or locked. Designated trails may be hard to distinguish from undesignated ones. |
| Ignorance and Misinformation Barriers | Lack of knowledge about environmental impacts or how to perform responsible behavior may increase deprecative behavior. Some users may perform degrading environmental behaviors out of ignorance and do not realize that their behavior is a contributor to environmental problems. For instance, recreationists may not know that the collecting of tinder may disturb the ecological balance of some settings, may not realize the damage caused by damming streams, or may not know that cutting their own trails to the water causes erosion. Or, the individual may be inclined to behave in an environmentally responsible fashion but may not know how. For example, s/he may be unsure where to purchase firewood; unclear on how to build safe fires; or may be unfamiliar with waste disposal procedures in the absence of toilets. |
| Bad Habit Barriers | Deprecative behavior may be a routine practice that is automatically performed. People may unthinkingly perform environmentally degrading behaviors out of habit or tradition. This is especially likely when the rules change regarding behavior acceptability. For instance, during fire season, fires may not be permitted for safety reasons. Campers accustomed to having fires may forget about the change of rules. Littering may be a bad habit that a person performs thoughtlessly. Riders may be used to riding where they want and have a hard time sticking to newly designated trails. |
Hendee’s Persuasion Framework: Five Categories of Undesirable Visitor Actions

The potential effectiveness of visitor education is determined in part by the nature of the visitor’s actions. Five general categories of undesirable visitor actions on public lands have been identified:

1. **Careless.** Careless actions are nuisance or thoughtless behaviors, such as littering or picking wildflowers, that are done without full consideration for their effect on other visitors or the resource.  
   **Example:** not paying attention to the dog or forgetting dog bags

2. **Unskilled.** Unskilled actions are inappropriate behaviors that occur when visitors know what they should do, but lack the skills to do so. Examples include the inability to build a low-impact campfire or hang a bear bag.  
   **Example:** not knowing how to pick up droppings

3. **Uninformed.** Uninformed actions result from visitors simply not having the adequate information to select a particular behavior. Visitors that feed wildlife or cut a dead tree for firewood without knowing that these practices violate regulations or recommended practices are examples.  
   **Example:** not knowing that dog waste spreads disease

4. **Unavoidable.** Unavoidable actions are inherent behaviors that occur to some degree regardless of a visitor’s knowledge or experience, such as vegetation trampling and soil compaction along a designated trail.  
   **Example:** dog has diarrhea and it isn’t able to be picked up

5. **Illegal.** Illegal actions are deliberate violations of laws or regulations, such as the theft of archaeological artifacts.  
   **Example:** knowingly walking away from a dog waste deposit

Visitor education can only be expected to effectively address unskilled and uniformed actions, and to a lesser extent, careless actions, as these are more highly related to visitor knowledge and skill level (Hendee et al. 1990; Roggenbuck 1992). There is a lower potential for effectively targeting unavoidable impacts, though one could argue that this is possible by shifting hiking and camping activities to durable surfaces such as bare sand or bedrock where trampling has little effect. **Illegal actions are generally addressed through increased enforcement,** however, communicating the rationale for laws and regulations can encourage higher compliance.

Using Hendee’s typology, dog guardians not picking up after their pet are likely to fall into the careless and illegal categories in which more education would have minimal effect.

Highlighting the findings above, according to a Chesapeake Bay survey, 44% of dog walkers who do not clean up after their dogs indicated they would still refuse to pick up, even if confronted by complaints from neighbors, threatened with fines, or provided with convenient options for retrieving and disposing of waste (Swann 1999).

---


What have others done?

Examples
Several have “marked” poo as an awareness campaign
Poo Pins is coolest. (failed kickstarter campaign in NZ)

PooPins are smaller than a credit card and are made from waterproof and tear-proof Rockstone. Rockstone is made from leftover stone, marble, and tiles from the building industry, which is then recycled to create a biodegradable paper. It is photodegradable, which means it reverts back to a calcium carbonate dust after extended periods in the sun. HOW COOL IS THAT?
Several have “marked” poo as an awareness campaign
Orange spray paint campaign in Corvallis, OR and a “festive” display in England

Parody Article: In a bid to bring some seasonal cheer to outdoor areas in the festive season, Natural England announced ‘Christmas bauble’ style dog shit bags were to go on sale this week.

A spokesman for Natural England, the governing body behind all of England’s areas of outstanding national beauty, said: ‘We have been bothered for many years by the practice of dog walkers leaving plastic bags of shite hung up in trees and shrubs in our parks. A recent campaign to try and dissuade the habit was not all successful so we have taken the alternative approach of embracing and improving the display instead. When these festive bags are hung up in the trees, their festive appearance will bring a real ‘christmas tree’ feel to our parks and woodlands.’

At one popular New forest location we asked local dog walker, Arthur Harris what he thought of the idea. ‘I think it’s great. The place has a lovely feel to it now’ he said. After Arthur’s Great Dane, Sam, had parked it’s breakfast on a grass verge next to a childrens play area we asked Arthur why he wasn’t using the bags himself. ‘Yeah, well, it’s not on a path is it? And I mean they let the horses shite everywhere don’t they so why should I?’ Luckily an RSPB warden was on hand to sprinkle some red and silver glitter on the “yule log” and adorn it with a two-leaved sprig of holly.
Composting Dog Waste
Countering dislike of using plastic bags while using poo as a valuable resource

Different method for picking up that won’t get on your hands

That unease has helped fuel a booming market in biodegradable dog waste bags. Market leader BioBags sells more than 19 million a year. I’ve seen dog parks stocked with them. Unfortunately, this seemingly green solution can backfire. The bags are designed to be composted, not landfilled. But in the absence of composting programs — I’ll come back to this — many will end up in landfills, where they are more likely to degrade than a conventional plastic bag.

“Anything that goes into the landfill and degrades is worse than something that goes in and doesn’t,” says Jack Macy, commercial zero-waste coordinator for San Francisco’s Department of Environment. A compostable bag of poop that degrades in that circumstance would start producing methane, a potent greenhouse gas.

Dog poop, like many other kinds of manure, can be composted — but rarely is. Even cities with curbside programs that compost food scraps and other organic waste discourage people from putting dog waste in their compost bins, because commercial composting facilities don’t want it. Toronto’s program for composting pet waste (as well as dirty diapers) is a forward-looking exception.

Composting dog waste in a backyard bin can be iffy. It’s hard to achieve the temperatures needed to kill off pathogens, so you should never use composted pet waste on plants you’ll be eating. But commercial composting facilities are required to keep the compost at hot enough temperatures, for a long enough period of time, to get rid of harmful pathogens. If properly treated, the resulting compost is “perfectly safe,” says Will Brinton, president of Woods End Laboratories, a compost research lab in Mount Vernon, Maine.

While a small-scale digestion project at a local dog park would be a useful tool in public education and engagement, other options exist for more comprehensive pet waste management.

Goal: Measure the effectiveness of trailhead education at reducing the amount of dog litter left by dog guardians.

Objectives and hypotheses:

- Measure the change in dog litter before, after, three weeks after and six months after trailhead education activities. We hypothesize that litter levels will decrease during the intervention, but will gradually return to previous levels over time.
- Determine the number of contacts, second contact and refusals there are per hour for a dog guardian education program. We believe that almost all visitors will be receptive to the information and there will be a significant number of second or third contacts.
- Determine which of three signs was thought to be the most effective at changing behavior.

Conclusion:

- Personalized contacts at the trailhead encouraging visitors to pick-up after their pet and to pick up an extra “1 + 1” along with a sign placed at trailhead worked. There was about a two-thirds drop in dog litter piles during the three week educational treatment, carry over, and the long term effect period. Litter levels gradually returning to previous levels did not prove true over a six month time frame. Litter levels remained at reduced levels.
- Most dog walkers were receptive to listening about the program. Of the 441 people contacted with the “1 + 1” pitch, 91% were supportive, with the remaining 9% either being unresponsive or unsupportive.
- The sign with a smiling dog putting a bag in a barrel was the clear favorite.
Hand out swag/pick up kits that makes it easier

Tampa Bay Pooches for the Planet:

“Pooches” Kits were available for neighborhood groups that want to conduct their own pet waste education program. The group can obtain these kits to distribute in their own parks. The Kits include:

1. Portable information station (tent canopy, small table, sandwich board sign)
2. Giveaways such as “Bags on Board” pet waste dispensers that clip to the dog leashes
3. Informational brochures and refrigerator magnets
July 30, 2018

Dear Occupant/Homeowner,

The Board of Directors is planning on instituting a new pet policy in order to ensure the health and safety of our residents, and to ensure the aesthetics of our community. Many of our dog owning residents consistently pick-up after their dog(s). Please know that your efforts are greatly appreciated!

Not all dog owners are this responsible, however, and so the Board has found it necessary to establish a new policy.

This new policy will require that all dogs living at [redacted] participate in a DNA registry managed by Mr. Dog Poop Inc., a national dog DNA lab based in Florida. Please check their website for more information at www.mrdogpoop.com.

The cost of registering each dog will be a one-time fee of $34.95.

Residents will have 30 days in which to give your feedback to the Board regarding this change in policy. You can do so in writing, by email, or personally, by attending the next Board meeting, which is August 20th at 6 PM at the Clubhouse.

Related Resources:
Mr. Dog Poop Inc. www.mrdogpoop.com
Center for Disease Control and Prevention, http://www.cdc.gov/healthypets/pets/dogs.html

Sincerely,

Board of Directors
Poop Posters of the World: The UK (and Australia) does anger, shock, and humor best. Spain has a nice look.
We’re Watching You Posters & Signs. Poop Fairy Signs
Mostly Straight-Forward Regulatory Signs

It’s the law, identify as a good neighbor/responsible/doing the right thing, please pick up
Miscellaneous and/or Portlandia
When nature calls, make sure you pick up.

- Pick up after your pet every single time. Check with your pet store for products that make picking up easy.
- Throw away pet waste in the garbage; never wash it into the gutter or storm drain.
- Carry extra bags in your car, so you are prepared when you clean up with your pet.
- Get involved in a pet group and remind others to pick up after their pets.

More than 157,000 dogs live in Broward County. That’s an on-line only’s worth of new sewage settling in our backyards.

To learn more ways to keep your neighborhood and waters healthy and clean, visit www.waterboards.ca.gov/education.

Printed on recycled paper.

---

IF YOU THINK PICKING UP DOG POOP IS UNPLEASANT, TRY SWIMMING IN IT.

Pet Waste Pollutes Our Rivers, Lakes & Streams

WWW.CLEANWATERCAMPAIGN.COM

The Problem

- Pet waste contains nutrients that cause excessive algae growth in rivers and lakes, upsetting the natural balance.
- Pet waste decays, using up dissolved oxygen and releasing compounds that are harmful to fish and other animals that rely on water.
- Pet waste contains bacteria that can cause disease and other health problems.

Pet owners are not the only ones affected by pet waste. It can be harmful to our environment as well. It can be harmful to the oceans, lakes, and rivers. It can be harmful to the environment, too. It can be harmful to the environment, too. It can be harmful to the environment, too. It can be harmful to the environment, too. It can be harmful to the environment, too.

Why Should I Pick It Up?

This is a big deal. Pet owners are not the only ones affected by pet waste. It can be harmful to our environment as well. It can be harmful to the oceans, lakes, and rivers. It can be harmful to the environment, too. It can be harmful to the environment, too. It can be harmful to the environment, too. It can be harmful to the environment, too. It can be harmful to the environment, too.

The Good News

- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.

The Bad News

- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.

I want to be a responsible pet owner, but does this mean I have to pick up poop?

The Good News

- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.

The Bad News

Why Should I Pick It Up?

- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.

The Good News

- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.

The Bad News

- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.
- Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment. Pet waste can be easily removed from our environment.

For more information visit www.cleanwatercampaign.com or call:
Doo Good
Pick up dog doo. Protect streams.

Doo Good is more than a nuisance!

It adds up!
Locally there are 90,000 dogs that make 11,700 tons of poop a year.

Doo Gooder
This business is an official community pledging to help spread the word about dog doo.

Prevent Pollution
Pick It Up!

When pet waste is improperly disposed, it can be picked up by stormwater runoff and washed into storm drains or nearby water bodies. Once in the water, it contributes bacteria and nutrients which can negatively impact water quality.

By picking up after your pet, you can help protect our local creeks, wetlands, bay and ocean. Follow the practices below for a cleaner environment:
• Pick up after your pet by sealing its waste in a plastic bag and disposing of it in a trash can.
• Keep your dog on a leash when walking along creeks and wetlands.
• When dogs are allowed on trails, carry plastic bags for their waste and dispose of it in a trash receptacle.
• Never hose pet waste into the storm drain. All storm drains flow directly to local creeks, bays, or the ocean.

Thanks for cleaning up after your pet!

For More Information:
Marin County Stormwater Pollution Prevention Program
www.mcstoppp.org
415-473-6528
485-3363 (Spanish)

If you are a person with a disability and require materials in alternative formats, call 473-4888 (Voice) or 711 (Relay) or email disabilityaccess@marincounty.org

Marin County Campaigns:
• Sewerage Agency of Southern Marin: Free waste bag holders when you take the pledge to “scoop the poop”
• Marin County Stormwater Pollution Prevention Program: Free bookmark

Information Campaigns

Prevent Pollution
Pick It Up!

When pet waste is improperly disposed, it can be picked up by stormwater runoff and washed into storm drains or nearby water bodies. Once in the water, it contributes bacteria and nutrients which can negatively impact water quality.

By picking up after your pet, you can help protect our local creeks, wetlands, bay and ocean. Follow the practices below for a cleaner environment:
• Pick up after your pet by sealing its waste in a plastic bag and disposing of it in a trash can.
• Keep your dog on a leash when walking along creeks and wetlands.
• When dogs are allowed on trails, carry plastic bags for their waste and dispose of it in a trash receptacle.
• Never hose pet waste into the storm drain. All storm drains flow directly to local creeks, bays, or the ocean.

Thanks for cleaning up after your pet!

For More Information:
Marin County Stormwater Pollution Prevention Program
www.mcstoppp.org
415-473-6528
485-3363 (Spanish)

If you are a person with a disability and require materials in alternative formats, call 473-4888 (Voice) or 711 (Relay) or email disabilityaccess@marincounty.org

Marin County Campaigns:
• Sewerage Agency of Southern Marin: Free waste bag holders when you take the pledge to “scoop the poop”
• Marin County Stormwater Pollution Prevention Program: Free bookmark

Information Campaigns

Prevent Pollution
Pick It Up!

When pet waste is improperly disposed, it can be picked up by stormwater runoff and washed into storm drains or nearby water bodies. Once in the water, it contributes bacteria and nutrients which can negatively impact water quality.

By picking up after your pet, you can help protect our local creeks, wetlands, bay and ocean. Follow the practices below for a cleaner environment:
• Pick up after your pet by sealing its waste in a plastic bag and disposing of it in a trash can.
• Keep your dog on a leash when walking along creeks and wetlands.
• When dogs are allowed on trails, carry plastic bags for their waste and dispose of it in a trash receptacle.
• Never hose pet waste into the storm drain. All storm drains flow directly to local creeks, bays, or the ocean.

Thanks for cleaning up after your pet!

For More Information:
Marin County Stormwater Pollution Prevention Program
www.mcstoppp.org
415-473-6528
485-3363 (Spanish)

If you are a person with a disability and require materials in alternative formats, call 473-4888 (Voice) or 711 (Relay) or email disabilityaccess@marincounty.org

Marin County Campaigns:
• Sewerage Agency of Southern Marin: Free waste bag holders when you take the pledge to “scoop the poop”
• Marin County Stormwater Pollution Prevention Program: Free bookmark

Information Campaigns

Prevent Pollution
Pick It Up!

When pet waste is improperly disposed, it can be picked up by stormwater runoff and washed into storm drains or nearby water bodies. Once in the water, it contributes bacteria and nutrients which can negatively impact water quality.

By picking up after your pet, you can help protect our local creeks, wetlands, bay and ocean. Follow the practices below for a cleaner environment:
• Pick up after your pet by sealing its waste in a plastic bag and disposing of it in a trash can.
• Keep your dog on a leash when walking along creeks and wetlands.
• When dogs are allowed on trails, carry plastic bags for their waste and dispose of it in a trash receptacle.
• Never hose pet waste into the storm drain. All storm drains flow directly to local creeks, bays, or the ocean.

Thanks for cleaning up after your pet!

For More Information:
Marin County Stormwater Pollution Prevention Program
www.mcstoppp.org
415-473-6528
485-3363 (Spanish)

If you are a person with a disability and require materials in alternative formats, call 473-4888 (Voice) or 711 (Relay) or email disabilityaccess@marincounty.org

Marin County Campaigns:
• Sewerage Agency of Southern Marin: Free waste bag holders when you take the pledge to “scoop the poop”
• Marin County Stormwater Pollution Prevention Program: Free bookmark
Message Strategy
Outreach Strategy

Main goal: Get people to pick up and throw their poop away without leaving bags by side of trail

Ancillary goal: Evaluate and measure success of campaign. What outcomes (results, impacts, etc.) do we ultimately seek? What will success look like?

Immediate Need: Waste can messaging and locations

Target Audience:

~26-40% that don’t pick up and put into trash can

• 13.7% that don’t take all of the bags with them
• 12.7% that don’t pick up their pet’s waste at all

~60-74% of people that might be induced to pick up poop of others
**Potential Methods**

- **Change Physical Infrastructure**
  Focus on making it easier. Site dog waste bags and disposal in visible places, in proximity to entrances, and along the trails. Provide convenience and a sense that other visitors are watching (at least near entries). Installation of dog waste stations in locations far enough along the trail that dogs have pooped and people don’t have to carry it too long. Maybe try a pilot hand sanitizer or wipes in a location to see if it helps with ick factor?

- **Education & Public Outreach**
  Focus on outreach that changes the perception of ease (ie, it’s easier than you think!) and providing swag that makes it easier (ie, Bags On Board kits). Educate about the health and environmental hazards of dog waste, which may be particularly helpful for those who can’t stand the plastic. Consider collaboration with Marin Stormwater, environmental organizations, vets, and dog groups to broaden audience. Could create a broader awareness of the problem with “poop call outs” like poo pins or orange spray paint. Providing information at dog adoptions or vets could be a great educational opportunity. Boulder tried a “1 + 1” campaign to call on those who already know it’s important to pick up waste to help with the ones who just won’t do it. Pledge to pick up your poo or offer fun incentives like raffle tickets in a “Scoop to Win” program.

- **Innovative Pilot Projects**
  Maybe long-term, someday, a compost facility and compostable bags to alleviate plastic guilt. Possibly a small-scale compost pilot demonstration project at a key location (McInnis?) with educational materials and outreach. Potentially a pet licensing fee to help with education and maintenance of dog waste stations. Establish a Poop Patrol or Tails on Trails volunteer group to help pick up waste. To enjoy off-leash dog walking in the City of Boulder, owners and their dog must complete a voice and sight control training to receive and subsequently display a valid city V & S program tag.

- **Change Regulations**
  Lengthen the leash zone. Require owners to keep dogs on leash for 1/4 mile (or some appropriate distance) into the preserve so that they notice when dog poops. Require V&S program tags.

- **Enforcement**
  Citations for violations. Maybe rangers could hand out incentives like raffle tickets, dog biscuits, bandanas, or stickers for people they “catch” doing the right thing.

- **Study Which Methods are Effective**
  Get a baseline to measure success. Identify problem locations. Measure A research grants? Hire a social scientist to help understand and research visitor behavior.
Messaging that addresses audience behavior and perceptions

Using Hendee’s Persuasion Framework: Five Categories of Undesirable Visitor Actions

Focus on things we can easily address:

- **Uninformed:** Eventually it goes away, it’s in the woods, dog poop biodegrading is probably better than the use of plastic, it’s fertilizer. Studies say: Dog guardians who did not pick up dog waste were more tolerant of dog waste left in public spaces, and viewed dog waste as “natural waste” and “biodegradable.” Clear positive correlation between how often participants pick up after their dogs and how harmful they perceive dog waste to be to human health and the environment.

  **Messaging:** Here’s how it affects human and environmental health.

- **Careless:** Too much work, lack of effort, not having supplies, not wanting to carry waste. Studies say: Perceived behavioral control [perception of ease] had more influence on behavioral intentions than either attitudes or norms. 96% of the respondents who provided a response stated that additional trash/compost bins and/or bag dispensers would make them more likely to properly dispose of their dog’s waste during their next visit.

  **Messaging:** It’s easy: Scoop it, bag it, trash it.

  **Other Interventions:** Make it easier with more dog waste stations. Could include dog waste stations on map.

- **Unskilled:** Not knowing what to do.

  **Messaging:** Checklist of what to bring, tagline like “Scoop it, bag it, trash it.” Step-by-step guide.

- **Unskilled:** Not knowing where to dispose.

  **Messaging:** Signs along trail stating “dog waste disposal, 5 min ahead.” Trash can graphics that make it very clear.

- **Careless:** Not having supplies.

  **Messaging:** Checklist or messaging about “bring extra bags.” Public outreach where we hand out bag dispenser swag/dog poo kits.

- **Illegal:** The “Ick” factor, don’t care, not a big deal, want less restrictions, not my problem.

  **Messaging:** Messaging about how terrible it is for human health and environment might counteract the force of “ick.” It’s against the law, violators will be cited.

  **Other Interventions:** More enforcement by rangers.

Potentially harder to address:

- It’s far away off-trail, don’t know where it is.
Message & Audience Approaches

**STOP POO-LUTION!**
**BAG IT. TRASH IT.**

Dog poo washes into waterways. This leads to disease-spreading bacteria loads and excess nutrients that cause algae growth.

Use common courtesy. No one wants to step in poo! Pick up your dog’s poo and throw it in the trash.

**CITATIONS ISSUED.**

**Audience:** Uninformed and Unskilled

Headline is a call to action that is also a “How to” guide, and it emphasizes how easy it is to pick up your dog’s poo. There is information about the problematic environmental and health issues related to dog waste, a call to courtesy, and an enforcement warning.

**STOP POO-LUTION**

Leaving plastic bags along the trail is littering. Carry it with you and throw it away—it’s the law! **CITATIONS ISSUED.**

**Audience:** Careless and Illegal

Littering and leaving dog waste is illegal per Marin County Parks and MCOSD code.

This sign could be placed in areas where leaving dog waste bags is a persistent problem.

**TWO POOS FOR THE PLANET**

**DOO YOUR NEIGHBOR A FAVOR!**

Sometimes someone forgets a bag, doesn’t see where the poo landed, or don’t consider the impacts of poo.

Help keep our preserves and waterways clean by throwing a bag or picking up and throwing away an extra poo!

**CITATIONS ISSUED.**

**Audience:** Those that Doo & Care

Encourage those who are already picking up their dog’s poo and care about the environmental and visitor impacts of dog poo and the reputation of dog walkers as a whole to help out those who either don’t care or forget their supplies.

**GRAB AN EXTRA BAG**

(Just in case)

**Audience:** Careless and Unskilled

Provide information about how to properly pick up dog poo, which also emphasizes how easy it is to do. Encourage people to take an extra bag so they don’t find themselves without supplies if the dog poops twice.
Dog Waste Sign Family

**Door Decal**
- 4" diameter

**Dog Waste Only Decal**
- 12.4" x 3.4" – 1.5" tall letters (150 pt)

**Bag It Trash It Decal**
- 12.4" x 6.1" – 2" tall letters (194 pt)

**Dog Waste Only Decal**
- 12.4" x 3.4" – 1.5" tall letters (150 pt)

**Dog Waste Only Decal**
- 12.4" x 3.4" – 1.5" tall letters (150 pt)

**Dogi Pot Bag**
- 8.75" x 3.875"

**Bag It Trash it Sign**
- 12" x 16" | 1" rounded corners

**Dogi Pot**
- 12" x 16"

**Grab Extra Bag Decal**
- 12" x 16" | 1" rounded corners

**Dogi Pot Junior**
- 8.25" x 3.875"

**Grab Extra Bag Decal**
- 12" x 16" | 1" rounded corners

**Dog Station Ahead Decal**
- 8.9375" x 8.25"

**Optional Dogi Pot Junior**
- 9.25"

**Optional Alternative Signs**
- 12" x 16" | 1" rounded corners

**Optional Dog Waste Station Wayfinding Post**
- 3.5" x 12.5"

**Optional Alternative Signs**
- 12" x 16" | 1" rounded corners

---

**Use common courtesy. No one wants to step in poo!**

Pick up your dog's poo and throw it in the trash.

Dog poo washes into waterways. This leads to nutrients that cause algae growth.

---

**FOR THE PLANET**

Help keep our preserves and waterways clean by loaning a bag or picking up and throwing away an extra poo!

---

**Special outreach campaign.**

Two poos doesn't see where the poo landed, sometimes someone forgets a bag, or don't consider the impacts of poo. By loaning a bag or picking up and not seeing where the poo landed, sometimes someone forgets a bag, or don't consider the impacts of poo.
Provide Rangers with Dog Waste Education Tools

Dog poo adds up. The average dog produces about one half to three quarters pound of poo each day, or 274 pounds per year. A 2007-2008 estimate concluded that Marin County has at least 60,000 dogs. That means Marin County is producing over 16 million pounds (8,220 tons) per year—that’s a lot of poo! Some of this poo-lution ends up in Marin’s preserves and waterways.

It’s not native to the environment. The majority of pet foods on the market typically contain lower protein and higher carbohydrates than a ncestral diets. And the sheer volume of poop being left behind from so many dogs means that excess nutrients like nitrogen and phosphorous upset the natural balance. This can spread nitrogen-loving weeds at the expense of native plants. When it gets into creeks, streams, and waterways, it acts like algae fertilizer, reducing oxygen levels and hurting fish.

It spreads disease. Dog poo is regulated by the EPA as raw sewage. The EPA estimates that a single gram of dog poo contains 23 million fecal coliform bacteria. It can also harbor viruses and parasites, including Giardia, Salmonella, and Roundworms. Roundworm and nematode eggs from dog poo remain active in the soil long after dog poop has weathered away. DNA testing also indicates that dog waste is a significant source of bacteria contamination in streams. Just 3-3 days of waste from 100 dogs can contribute enough bacteria, nitrogen and phosphorus to close 20 miles of a bay-watershed to swimming and shellfishing.

No one wants to step in poo. Picking up and throwing away your dog’s poo is common courtesy. You can help stop poo-lution by taking these simple steps:

- **Scoop it and Bag it.** Bring extra bags and pick up after your pet every single time. MCOSD provides dog waste stations with free dog waste bags at many preserve entries.
- **Trash it!** Carry out and throw away pet waste in the garbage. Leaving plastic bags along the trail is littering, which is illegal. Never wash pet waste into a stream, gutter, or storm drain.
- **Two Poos for the Planet!** Doo your neighbor a favor! Sometimes someone forgets a bag, doesn’t see where the poo landed, or doesn’t fully consider the impacts of poo. Help keep our preserves and waterways clean by loaning a bag or picking up and throwing away an extra poo or two!

Audience: Careless and Illegal
Hand out poo bag dispensers or bags as well as info cards to educate about why dog waste is an issue.

Audience: Those that Doo & Care
Hand out dog poo dispensers, dog treats, and thank you cards to reward proper disposal.

marincountyparks.org