

Scoop to Win – A Survey of Dog Waste  
in the Nisqually Reach and Henderson Inlet Shellfish Protection Districts



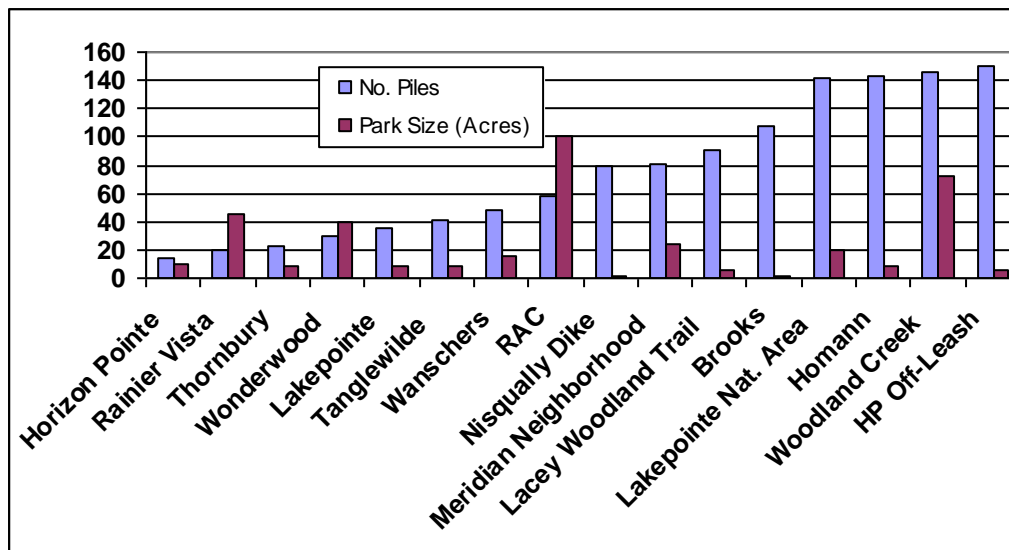
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## 1.0 Summary

In October, 2011, Pacific Shellfish Institute (PSI) conducted Scoop to Win, a pet waste education campaign designed to educate citizens about the impact of dog waste on water quality in urbanized environments. The goals of the campaign were to evaluate the presence and distribution of dog waste, conduct outreach, identify problem areas, and create fun incentives for citizens to clean up after their pets. Towards this end, volunteers flagged individual poop piles, weighed and removed feces, and distributed raffle tickets to responsible dog owners.

During the 1-month campaign, PSI performed outreach at 16 locations within the Henderson Inlet/Nisqually Shellfish Protection Districts. One to two individuals surveyed each site for 1 ½ to 2 hours focusing attention primarily on trails, sidewalks, tree bases, park perimeters and fence lines. Several transects were performed across large fields, but these areas were typically not covered. In total, staff removed over 1200 piles of dog poop totaling more than 125 pounds.



Results indicate that dog waste is present in significant quantities at many parks throughout the Shellfish Protection Districts. Pet waste was most often observed in official and unofficial off-leash areas, along trails, sidewalks, fence lines, and park access points (particularly forested). Dog waste stations were well utilized, but their presence did not guarantee compliance. Playgrounds and ball fields in well-populated parks were generally clean, especially large facilities such as the RAC and Rainier Vista. Installation of dog waste stations, signage, and continued outreach is highly recommended at select locations. Increasing the number of official off-leash dog parks may also result in better management of dog waste.

The Scoop to Win campaign was partially funded by 2010 Shellfish Protection Funds approved by the Henderson Inlet and Nisqually Reach SPD Committee, Thurston Conservation District, and Thurston County Commissioners.

## 2.0 Background

In 2000, the Washington Department of Health (WDOH) downgraded 74 acres of commercial shellfish beds in Nisqually Reach from *conditionally approved* to *restricted* because fecal coliform bacteria levels failed to meet water quality standards. In 2001, the WDOH reclassified 240 acres in Henderson Inlet from *approved* to *conditionally approved*, a status which results in automatic five-day closures of commercial shellfish beds after heavy rainfall events. These actions led to the formation of the Henderson Inlet and Nisqually Reach Shellfish Protection Districts (SPD) (Figure 1). A SPD Committee was formed, comprising 11 stakeholders who make recommendations to address pollution sources from stormwater, septic systems, pet waste and farm animals. The SPD Committee, Thurston Conservation District, and County Commissioners approved a number of actions to improve water quality, which included outreach and education, septic system repairs, and stormwater upgrades. The combined efforts of state and local agencies, non-profit organizations and individual citizens, resulted in significant water quality improvements. In 2010, the WDOH upgraded Henderson Inlet's conditionally approved status, lifting harvest restrictions.

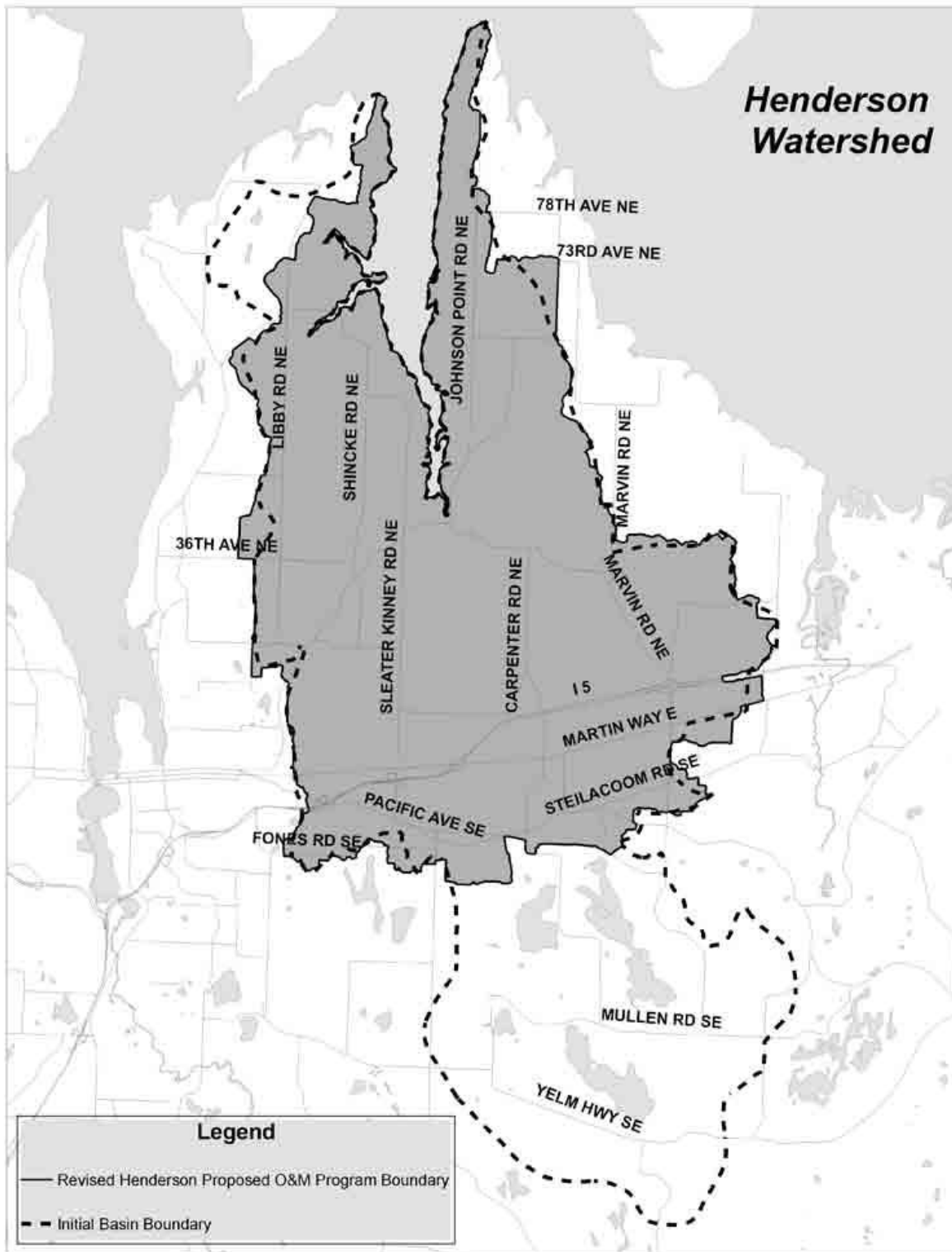
As human population growth continues, it is more important than ever to maintain efforts to protect water quality. To this end, Pacific Shellfish Institute (PSI) has performed outreach and education related to bacterial pollution to citizens living in the Henderson and Nisqually Inlet watersheds. The Scoop to Win campaign is one of several community events partially funded by 2010 Shellfish Protection Funds.

## 3.0 Survey Methods

Throughout the month of October, 2011, PSI conducted Scoop to Win, a pet waste education campaign designed to educate citizens about the impact of dog waste on water quality in urbanized environments. The goals of the campaign were to evaluate the presence and distribution of dog waste, conduct outreach, identify problem areas, and create fun incentives for citizens to clean up after their pets. To meet these goals, volunteers flagged individual poop piles, weighed and removed feces, and distributed raffle tickets to responsible dog owners.

During the 1-month campaign, PSI performed outreach at 16 locations within the Henderson Inlet and Nisqually SPDs. Site selection was based on recommendations by citizens, Lacey Parks and Recreation maintenance staff, Stream Team employees and SPD committee members. At each site, 1-2 individuals flagged and scooped dog poop piles for 1½-2 hours focusing attention primarily on trails, sidewalks, tree bases, park perimeters and fence lines. Several transects were performed across large fields, but these areas were typically not covered. Information was recorded regarding presence of pet waste stations and stormwater features, dog use, number and weight of poop piles collected, compliance rates, and other noteworthy comments. Raffle tickets were distributed to individuals actively cleaning up after their pets, or in possession of full poop bags. Two raffle tickets were offered to individuals claiming to, or in the process of, cleaning up another owner's dog poop. Educational outreach was performed during each visit.

Figure 1. Map of Henderson Inlet SPD. Complete map of Lacey Parks and Facilities available at: <http://www.ci.lacey.wa.us/city-government/city-departments/parks-and-recreation/parks-and-facilities>.

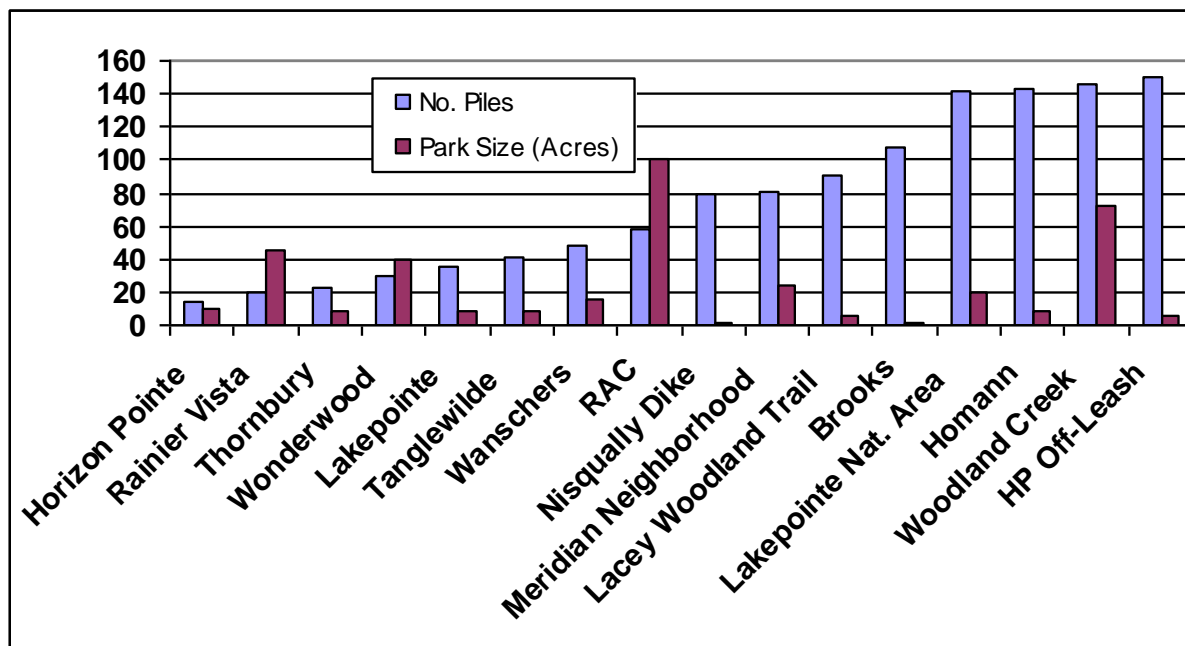


Map courtesy of Thurston County.

#### 4.0 Survey Results

In total, staff removed 1208 piles of dog poop totaling 127 pounds from 16 locations throughout the SPDs (Figure 2). The number of poop piles ranged from 14 to 150 at Horizon Pointe Park and the Hawks Prairie Off-Leash Park respectively. Park size represents the entire acreage of the park and not the amount of ground surveyed. Because dog waste contains 23 million fecal coliform bacteria per gram (Schueler 2000), its removal prevented 1,324,942,232,000 fecal coliform units from potentially entering groundwater, stormdrains, waterways and ultimately Puget Sound. This number is an approximate estimation since each pile varied significantly in terms of light exposure and water content.

Figure 2. Comparison of dog feces collected at 16 locations within the Henderson Inlet and Nisqually Reach SPDs.



Dog owners were observed cleaning up after their pets at 14/16 sites surveyed and it was common to see owners carrying pet waste bags. Playgrounds and ball fields in well-populated parks were generally clean, especially large facilities such as the RAC. Parks including Rainier Vista and Hawks Prairie Off-Leash Park had particularly high compliance rates and individuals expressed a high level of understanding regarding pet waste issues. The most frequent reasons given for cleaning up after pets included 1) keeping parks clean for others, 2) preventing the spread of pathogens to humans and other animals, and 3) preventing bacteria pollution in waterways. One owner reported that dog waste is of particular concern because his dog has become ill from ingesting feces left on the ground at parks.

On the contrary, owners were observed not cleaning up after their pets at 7/16 sites surveyed. In some cases, pet waste posed a potential risk to water quality (Woodland Creek Community Park, Nisqually Dike) and in others, it was more of a human health concern (Homann Park). In all cases, pet waste was aesthetically displeasing. Pet waste was most often observed in official and

unofficial off-leash areas, along trails, sidewalks, fence lines, and park access points (particularly forested). Reasons offered for not cleaning up included 1) it is natural and acts as fertilizer, 2) it is not directly on the trail, and 3) it is gross. One individual commented that she did not clean up because nobody else cleans up at that location.

Forty-five raffle tickets were distributed to individuals cleaning up after their pets. Nine individuals were awarded prizes and offered the following responses to the question, "Why do you clean up after your dog?"

*"Because it's important and it's disgusting to walk in a park full of poop."*

*"I've stepped in other people's dog poop, and it really bothers me...it's inconsiderate."*

*"It's easy. If someone can't take the time to do it, I'll do it...I'm not going to just step over it."*  
(non-dog owner)

*"Dog poop is an environmental issue...if you own a dog, you need to be responsible and clean up after it."*

*"It keeps it nice for the people walking behind me."*

### **Individual Site Results (in order of ascending poop piles)**

**Site Name:** Horizon Pointe Park  
5700 Balustrade Blvd SE  
**Park Size:** 9.5 acres  
**Date:** 9/30/11  
**Time:** 2:00-3:00  
**Participants:** Aimee Christy (PSI), Bryan Johnson (KOMO 4 News)  
**Piles Scooped:** 14  
**Total Weight:** 2 lbs

**Description:** Horizon Pointe is a neighborhood park with features including sub-level soccer fields, playground, picnic shelter, paved trails and sidewalks. Pet waste stations and garbage cans are available. Drainage from the streets runs into large vegetative swales.

**Compliance/Problem Areas:** Poop piles were mostly found along the main sidewalk and unpaved trail along the northern edge of the park. Several piles had been stepped on. All dog owners were observed cleaning up after their dogs. Park maintenance staff noted that pet waste can be a problem at this park at times.

**Conclusions:** The amount of dog waste was not significant during this site visit.

**Site Name:** Rainier Vista Community Park  
5475 45th Avenue SE  
**Park Size:** 46 acres  
**Date:** 10/8/11  
**Time:** 10:30-12:30  
**Participants:** Aimee Christy (PSI)  
**Poop Piles Scooped:** 20  
**Total Weight:** 1 lb

**Description:** Rainier Vista is a well-utilized park with sub-level soccer fields, baseball fields, tennis courts, volleyball, basketball, picnic shelters, a skate park, playground and network of paved trails. The park is surrounded by neighborhoods on most sides and a large vacant field with trails along the south edge. The vacant field was not surveyed. Ball fields are mostly surrounded by vegetative swales. Stormwater ponds exist on the eastern portion of the park. Pet waste stations and garbage cans are numerous.

**Compliance/Problem Areas:** One problem area was located along the paved trail and trees on the southern edge of the park adjacent to the vacant field. This stretch of trail is mostly out-of-view from a majority of park users. Many raffle tickets were distributed at this site and dog owners seemed passionate about cleaning up after their pets.

**Conclusions:** Dog waste was not a problem during this site visit.

**Site Name:** Thornbury Park  
5500 Thornbury Drive SE  
**Park Size:** 9 acres  
**Date:** 10/6/11  
**Time:** 3:00-4:00  
**Participants:** Aimee Christy (PSI)  
**Piles Scooped:** 22  
**Total Weight:** 2 lbs

**Description:** Thornbury is a neighborhood park that includes a grassy field, play equipment, sidewalks and picnic shelter.

**Compliance/Problem Areas:** This site appeared clean. Most poop piles were detected along the sidewalk on the west edge of the park. Dog owners seemed compliant.

**Conclusions:** Dog waste was not a significant problem during this visit.

**Site Name:** Wonderwood Park  
5304 32nd Avenue SE  
**Park Size:** 40 acres  
**Date:** 10/7/11  
**Time:** 12:30-2:00  
**Participants:** Aimee Christy (PSI)  
**Piles Scooped:** 30  
**Total Weight:** 3.5 lbs

**Description:** Wonderwood Park is a mostly wooded park with paved and unpaved trails winding throughout. The park includes features such as baseball fields, tennis courts, basketball court, picnic shelters, and playgrounds. Pet waste stations and garbage cans are present.

**Compliance/Problem Areas:** This park is a popular destination for regular dog walkers. Several individuals mentioned that people often park next to the baseball fields and let their dogs defecate on the fields. No poop piles were found on the fields at this time. Heavy leaf litter made detection difficult along the trails. Most poop piles were flagged near the parking lot on 32<sup>nd</sup> Ave between the basketball court and tennis courts. Several compliant and one non-compliant dog owner was observed.

**Conclusions:** Dog waste was not a significant problem during this visit.

**Site Name:** Lakepointe Park  
6400 Compton Blvd SE  
**Park Size:** 8 acres  
**Date:** 9/30/11  
**Time:** 3:30-4:30  
**Participants:** Aimee Christy (PSI)  
**Piles Scooped:** 36  
**Total Weight:** 2.5 lbs

**Description:** Lakepointe is a neighborhood park with features including a soccer field, baseball diamond, tennis court, playgrounds, paved trails and sidewalks. Pet waste stations and garbage cans are available. Stormwater ponds are present. Fields are sub-level to accommodate runoff.

**Compliance/Problem Areas:** Poop piles were found primarily along paved trails and sidewalks. The eastern corner of the park had the highest concentration of poop piles. Many piles were also found on the slope of the western stormwater pond. All observed dog owners were compliant.

**Conclusions:** Dog poop along sidewalks and paved trails suggests that individuals observe their pets defecating and choose to not clean up. This neighborhood might be a good candidate for further outreach efforts (see also Lakepointe Natural Area).

**Site Name:** Tanglewilde  
414 Wildcat Street SE  
**Size:** 9 acres (estimate)  
**Date:** 10/28/11  
**Time:** 12:30-2:15  
**Participants:** Aimee Christy (PSI) & Katie Klaniecki (AmeriCorps-Water Resources Assistant)  
**Poop Piles Scooped:** 41  
**Total Weight:** 6.5 lbs

**Description:** Tanglewilde is a neighborhood park with grassy fields, playground, tennis court and adjacent community pool. The park is surrounded by single family homes on all sides. Pet waste signage and garbage cans were present, but no pet waste station.



**Compliance/Problem Areas:** No problem areas were detected. One compliant dog walker was observed and had a strong understanding of urban pet waste issues.

**Conclusions:** Dog waste was not a problem during this visit.

**Photo:** Aimee Christy and Katie Klaniecki next to sign that reads, "Dogs must be on a leash at all times. Owners are responsible for pet waste pick up."

**Site Name:** Wanschers Community Park  
2606 Hicks Lake Road SE  
**Park Size:** 16 acres  
**Date:** 10/7/11  
**Time:** 2:15-3:30  
**Participants:** Aimee Christy (PSI)  
**Piles Scooped:** 48  
**Total Weight:** 4 lbs

**Description:** This mostly forested park is located on the shores of Hicks Lake and includes grassy play areas, picnic tables, trails, and fishing. Pet waste stations and garbage cans are present.

**Compliance/Problem Areas:** Poop piles were dispersed lightly along the trails. Two problem areas were identified: one approximately 25 feet northwest of the pet waste station and another on a grassy slope adjacent to Hicks Lake. Two dog walking parties were observed – one was noncompliant.

**Conclusions:** Pet waste was detected along banks of Hicks Lake. Increased park use during warmer summer months may increase the amount of poop piles detected.



**Photo:** Thirteen flagged poop piles on slope along Hicks Lake.

**Site Name:** Lacey Regional Athletic Complex (RAC)  
8345 Steilacoom Road SE  
**Park Size:** 100 acres – soccer fields and baseball diamonds were not surveyed  
**Date:** 10/5/11  
**Time:** 12:45-2:30  
**Participants:** Aimee Christy (PSI)  
**Piles Scooped:** 58  
**Total Weight:** 4 lbs

**Description:** This large sports complex includes 6 soccer fields, baseball fields, picnic shelters, 3 playgrounds, paved and unpaved trails, and natural forested areas. Pet waste stations and garbage cans are numerous.

**Compliance/Problem Areas:** A majority of the piles were found along a short, forested trail connecting the RAC to a neighborhood along Steilacoom Road SE and 8<sup>th</sup> Court SE. Pet waste odor was detected along this segment. A cluster of 20 piles were found just beyond the goal of Soccer Field #2. All observed dog owners were compliant.

**Conclusions:** Given the size of the complex, dog waste does not appear to be a problem at this site.

**Site Name:** Nisqually Dike  
10220 Martin Way E  
**Size:** 1 acre based on .25 mile x 20 ft = 26,400 feet squared  
**Date:** 10/14/11  
**Time:** 10:30-11:45  
**Participants:** Aimee Christy (PSI)  
**Poop Piles Scooped:** 80  
**Total Weight:** 7 lbs

**Description:** This site includes an unpaved trail spanning the length of a dike along McAllister Creek that flows into the Nisqually Delta. The dike is bordered by I-5 and the Nisqually Plaza RV Park to the north and two service stations, restaurant, and tavern to the south. The dike is maintained by the Nisqually Plaza RV Park and equipped with a pet waste station, signage, and garbage receptacle. Long grass and blackberry bushes line the edge of the trail with shrubs and small trees along the banks of McAllister Creek.

Studies completed by the WDOH and the Nisqually tribe determined that McAllister Creek was found to significantly influence water quality along the Nisqually Reach.

**Compliance/Problem Areas:** Despite the pet waste station, many piles of dog poop were observed along the dike. Several piles were removed from the sloping banks of McAllister Creek. The park owner expressed extreme frustration regarding the issue and reported that compliance is a constant battle between him and his tenants. Several dog owners were observed using the trail after eating at the nearby restaurant. The area is also used by dog owners purchasing gas at the adjacent stations.

**Conclusions:** Pet waste is a water quality concern at this location due to the large volume of feces in close proximity to McAllister Creek. Long grass may protect the waterway, but also serves as an attractive place for dogs to defecate. Increased signage, distribution of fliers, native plant enhancement, and additional outreach is recommended at this site.

**Photos:** Pet waste along McAllister Creek (left) and proximity of dike to nearby gas stations, restaurant, and tavern (right).



**Site Name:** Meridian Neighborhood Park (William Ives Trail not surveyed)  
8855 Campus Glen Drive NE  
**Size:** 24 acres  
**Date:** 10/22/11  
**Time:** 10:00-12:00  
**Participants:** Aimee Christy (PSI)  
**Poop Piles Scooped:** 81  
**Total Weight:** 16.5 lbs (lots of big dog poop)

**Description:** Meridian Park is a neighborhood park featuring a playground, paved and unpaved trails, basketball court and large grassy field. In addition to the main parking lot, the park is accessed by wooded trails from the east and south. Pet waste stations and garbage cans are available at this site.

**Compliance/Problem Areas:** Most of the dog waste was detected around the perimeter of the grassy field. The field is frequently used as an unofficial off-leash area for dogs. Poop piles in this region were notably large in size. Pet waste was also observed in higher concentrations along the wooded access trail from the east. Playground areas were clean. A group of dog walkers expressed shock at the number of poop bags left abandoned on the edge of the paved walking trails along Campus Glen Drive NE and Willamette Drive NE.

**Conclusions:** Dog waste found along wooded trails and perimeter of grassy fields suggests that owners find it unnecessary to clean up their pet's waste if it is in a "natural" environment. Urban parks, however, attract high volumes of visitors that utilize both created and natural spaces. Throughout the campaign, children, mushroom enthusiasts, birders, and dog walkers were observed using these natural spaces both on and off-trail. This was typical at locations including Meridian, Lakepointe Natural Area, Wonderwood, Woodland Creek, and Wanschers Park.

**Site Name:** Lacey Woodland Trail – Section between Homann Park and Woodland Creek Park  
**Size:** 5 acres based on 1 mile x 40 feet = 211,200 feet squared  
**Date:** 10/21/11  
**Time:** 12:00-2:00  
**Participants:** Aimee Christy (PSI) & Katie Klaniecki (AmeriCorps-Water Resources Assistant)  
**Poop Piles Scooped:** 91  
**Total Weight:** 10.5 lbs

**Description:** The Lacey Woodland Trail is an extension of the Olympia Woodland Trail and runs west to east terminating at the Woodland Creek Community Park. No pet waste stations were found on this segment of the trail. Signage and pet waste stations are located on the west end of the Olympia Woodland Trail.

**Compliance/Problem Areas:** A majority of piles flagged were located near access points to Woodland Creek Community Park and the apartment complex on the north edge of Homann.

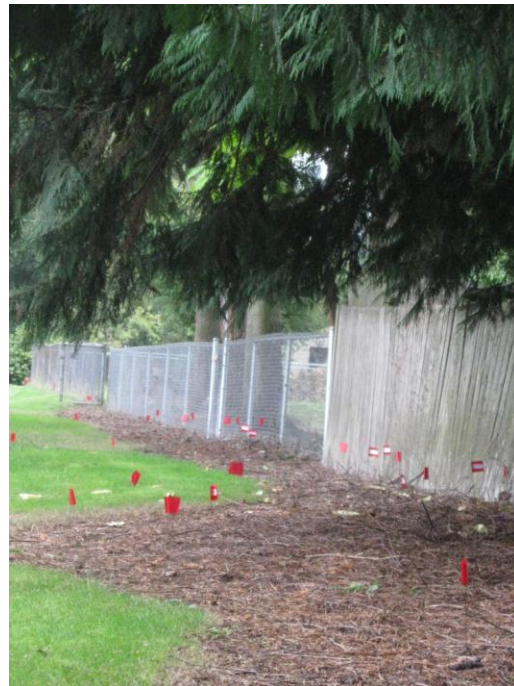
**Conclusions:** Outreach provided to residents of the apartment complex near Homann Park and surrounding neighborhood is recommended.

**Site Name:** Brooks Park  
1313 College Street SE  
**Size:** 1 acre  
**Date:** 10/19/11  
**Time:** 11:00-12:30  
**Participants:** Aimee Christy (PSI)  
**Poop Piles Scooped:** 107  
**Total Weight:** 9 lbs

**Description:** Brooks is a small grassy park nestled between single family homes to the north and south. Backyards back up to the property, many containing fences that open directly to the park. Dogs were observed in several yards. No pet waste station exists at this site.

**Compliance/Problem Areas:** Numerous piles were flagged along the southern fence line both near the parking lot and the access strip to the west. Piles were also detected at the access point on the northwest corner of the park. All dogs observed (3) during the visit were off-leash. The garbage can did not contain any properly disposed of pet waste bags.

**Photo:** Flagged piles along the southern edge of Brooks Park.



**Conclusions:** Brooks is one of the few Lacey parks without a pet waste station. One to two stations should be installed near the parking lot and western access point. Outreach to surrounding neighborhoods is also recommended. This location has been suggested as a site for a future off-leash park. Conversion *may* improve the amount of un-scooped dog waste via social pressure and site maintenance by organized dog-advocacy groups.

**Site Name:** Lakepointe Natural Area – Private Property  
Compton Blvd SE –eastern edge of development  
**Size:** 20 acres (estimate)  
**Date:** 10/26/11  
**Time:** 1:20-3:20  
**Participants:** Aimee Christy (PSI)  
**Poop Piles Scooped:** 141 (not including dog composting pile - ~30 piles)  
**Total Weight:** 20.5 lbs (not including dog composting pile - ~2 lbs)

**Description:** The Lakepointe Natural Area is a fenced parcel of forested land with a network of unpaved trails and access to Pattison Lake. The fenced area is private property for use by Lakepointe residents and guests only. It is bounded by AmTrak rail lines to the south, Pattison Lake to the east, and single-family homes and condominiums to the northwest. No pet waste stations or garbage cans exist at this site.

**Compliance/Problem Areas:** This site is commonly used as an unofficial off-leash park. Large quantities of pet waste were found along the trail running parallel to the AmTrak rail lines. No piles were seen along the shores of Pattison Lake. Additional problem areas were found in clusters on the west side of the property along trails and under trees. One individual was seen cleaning up after his dog and commented that he picks up when it is directly on the trails, but not in the woods. Two non-compliant owners were observed. Pet waste composting was observed at several locations. One pile of dog poop 1' x 2' x 2' was uncovered equaling approximately 30 piles, or 2 pounds. Rabbit waste mixed with straw was spread around the bases of three trees. Yard waste dumping and littering were also common at this site.

**Conclusions:** Installation of pet waste stations and garbage cans are recommended for this site. While not an official park, this natural area is often used for recreation and dog walking. Similar to other natural areas surveyed, the amount of flagged pet waste suggests that users are comfortable with “dogs pooping in the woods” and do not see this as a concern. The high number of stepped-on poop piles suggests that users do not remain on the trails at all times, however, and are at risk of tracking feces into their cars and homes. Educational outreach regarding pathogens found and transmitted by dog waste is recommended.

**Photos:** Rabbit composting around bases of several trees.



**Site Name:** Homann Park  
1301 Carpenter Road SE  
**Park Size:** 8 acres  
**Date:** 10/12/11  
**Time:** 12:30-3:45  
**Participants:** Aimee Christy (PSI)  
**Poop Piles Scooped:** 143  
**Total Weight:** 13 lbs

**Description:** This neighborhood park is surrounded by an apartment complex and Lacey Woodland Trail to the north, single family homes to the west and south, and commercial development to the east. The park itself is at a lower elevation than the surrounding areas with stormdrains providing drainage for both the park and surrounding neighborhood. The park includes features such as a fenced baseball field, soccer field, running track and playground. Pet waste stations, signage and garbage cans are available.

**Compliance/Problem Areas:** Large quantities of dog waste were found at this location. Three main problem areas were detected along: 1) the fence line just east of the soccer field, 2) the wooded access trail on the northwestern corner, and 3) the west edge of the property adjacent to Glen Mary Lane SE. Many dog walkers were observed –most were compliant and two were not. Several owners used the fenced baseball field as an off-leash area and did not clean up after their dogs. One non-dog owner residing in the apartment complex north of the park informed me that she scoops her yard frequently to protect her small children who often enter her home covered in dog feces. After scooping the poop, she dumps it in the “thorny bushes” nearby. She has urged her property manager to build a fence between the park access trail and her backyard to keep dogs out. Staff from Lacey Parks Maintenance informed me that the current amount of dog waste “is nothing compared to what it is during the summer when the park is more frequently used.” Staff also expressed concern for the home school children that use the soccer field every Friday from 9-1.

**Conclusions:** This park is a good candidate for increased outreach and possibly code enforcement. An additional pet waste station should be placed at the wooded access trail on the northwestern corner of the park. Fliers and additional information should be provided to the apartment manager and neighborhood associations for distribution. One individual recommended that Lacey Elementary be involved in the process in some fashion.



**Photos:** Scoop to Win flags marking approximately 40 poop piles along fence line.

**Site Name:** Woodland Creek Community Park  
6729 Pacific Avenue SE

**Park Size:** 72 acres

**Date:** 9/30/11 and 10/1/11

**Time:** 12:00-1:30 and 12:00-2:00

**Participants:** Aimee Christy, Kristin Rasmussen (PSI), Bryan Johnson (KOMO 4 News)

**Piles Scooped:** 146 (Did not survey the northern half of the park by the lake and playground or the south-eastern portion of the “natural area”)

**Total Weight:** 13 lbs

**Description:** Woodland Creek Park is a large park divided into two main sections: the northern half contains large manicured lawns, picnic areas, paved sidewalks/trails, playground, and natural vegetative buffers. The southern portion contains a foot bridge that crosses Woodland Creek, grassy fields, and trails around the perimeter. The park is accessible at two locations along the Lacey Woodland Trail. Pet waste stations, signage, and garbage cans are available. Native vegetation and a constructed berm buffer the edge of Woodland Creek. Direct access to the creek is possible at several narrow locations.

**Compliance/Problem Areas:** Woodland Creek has historically been used as an “unofficial” off-leash park, as was the case during the site visit. Several owners were observed not cleaning up after their pets. One individual believed that her dog had pooped in the “designated poop area.” This area, approximately 20 feet south of the foot bridge on the west side of the main trail, contained very high densities of dog waste in relatively close proximity to Woodland Creek. Three piles were found directly on the edge of the creek. Many piles were dispersed throughout the native vegetation plantings and tall grass in this southwest portion of the park. Another problem area was located northeast of the footbridge among the grasses and shrubs. Many properly-disposed-of poop bags were found in the garbage cans.

**Conclusions:** The high volume of dog waste found at this park may pose a risk in terms of human health and water quality. Improvements have been made (i.e. pet waste stations, garbage cans, tall grass, native plant restoration, berm construction) to reduce the amount of fecal coliform entering the creek. Code enforcement is recommended.



**Photo:** Poop piles adjacent to Woodland Creek. Constructed berm depicted in background.

**Site Name:** Hawk's Prairie Off-Leash Park  
**Park Size:** 5 acres  
**Date:** 9/29/11  
**Time:** 12:00-4:00  
**Participants:** Aimee Christy (PSI), John Dodge, Tony (The Olympian), Ann Marie Finan (Thurston County Stream Team)  
**Piles Scooped:** 150  
**Total Weight:** 12 lbs

**Description:** Hawk's Prairie Off-Leash Park is a well utilized facility with a high volume of dogs. The park is completely fenced and equipped with numerous pet waste stations and garbage cans. The park is divided into two sections: one for large dogs and one for small. A 1/3 mile loop trail spans the park perimeter. A separate fenced playground is located on the eastern edge of the property. The site is mostly short lawn, dirt, sand, and gravel. It is not located adjacent to water bodies and appears to have grassy vegetative swales around portions of the property.

**Compliance/Problem Areas:** Many owners were observed cleaning up after their pets and several claimed to pick up other dog's poop as well. A sign at the entrance kiosk encourages individuals to clean up *any* poop that they see since "we all miss a few." Social distraction resulting from the fun, interactive nature of the park may account for the high number of poop piles flagged. The fence line along the far eastern edge of the property had the highest density of piles.

**Conclusions:** Despite the high number of piles flagged, off-leash dog parks may be beneficial in terms of dog waste pollution. Properly sited off-leash parks contain high volumes of dogs in a safe, contained, controlled environment. Cleaning up after pets is the "social norm" at off-leash parks and this behavior is often enforced by other dog owners. Organized dog advocacy groups can also assist with site maintenance and outreach.



**Photo:** Flagged piles along the eastern edge of the fence line at Hawk's Prairie Off-Leash Park.

## 5.0 Recommendations

Based on Scoop to Win surveys, the following actions are recommended.

1. Install pet waste stations, signage and garbage cans at Brooks Park, Lakepointe Natural Area, and the northwest corner of Homann Park.
2. Conduct outreach to neighborhoods and schools in the vicinity of Homann Park and Woodland Creek.
3. Increase code enforcement at Homann Park and Woodland Creek
4. Distribute fliers, increase signage and perform native plant enhancement along the Nisqually Dike.
5. Increase the number of properly-sited off-leash parks throughout the watersheds.

## 6.0 Conclusions

Dog waste has been identified as a source of fecal coliform in shellfish growing areas throughout urbanized watersheds nationwide (Kelsey et al. 2003, 2004; Mallin et al. 2001; VanDolah et al. 2000, Weiskel et al. 1996; White et al. 2000). Studies performed in the Henderson Inlet watershed found that dog waste, while not the only source, was a significant pollution source in Woodland Creek, a more urbanized tributary (TCPH 2002a, TCPH 2002b).

Scoop to Win data supports these studies in that the surveys detected significant quantities of dog waste at various locations within the more urbanized portions of the Henderson Inlet and Nisqually Reach SPDs. *The direct impact of pet waste on water quality or human health cannot be determined from this data.* However, the results clearly indicate that dog feces are concentrated at specific locations throughout the watershed and that many dog owners are not cleaning up after their pets.

Promoting responsible behavior change through outreach and education is important, but does not always result in compliance. Reducing barriers, providing incentives and enforcing codes do not always change behavior. 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). Therefore, in addition to source control, actions must also be taken to prevent bacteria sources from entering waterways.

Infiltration of stormwater in the form of stormwater ponds, rain gardens, and vegetated swales is critical, as well as stringent protection of wetlands and buffers. Together, educational outreach, code enforcement and responsible development will help reduce bacterial pollution into Puget Sound.

## 6.0 Acknowledgements

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