FAUNTLEROY
WATERSHED
COUNCIL

2008 PET-WASTE STUDY

SUMMARY

In 2004, students at KapKa Cooperative Primary School completed a baseline study of pet waste in Fauntleroy Park, headwaters of Fauntleroy Creek in central Puget Sound. In that study, students counted fecal deposits along a popular dog-walking trail over a 12-month period and installed "put-and-take" bag dispensers at major park entrances.

For the 2007-08 term, Kapka again partnered with the Fauntleroy Watershed Council to do a followup, surveying the same trail segment over the course of the school year. The kindergarten, first-, and second-grade students found an average of 11 deposits per survey in two areas of concentration: near the S.W. Barton Street entrance at the north end of the trail segment and in a large clearing several yards down the trail. A scattering of deposits were found near the southern end of the trail segment.

BACKGROUND

Fauntleroy Park is a 28-acre natural area that shelters the headwaters of Fauntleroy Creek. Several spring- and runoff-fed tributaries merge at the western boundary of the city park into one channel that carries flow year-round into Fauntleroy Cove in central Puget Sound. The park's location in a residential neighborhood and its network of trails makes it a popular place to walk dogs. Although not an off-leash park, casual observation indicates that at least half of dog walkers let their pets roam off leash.

Based on several years of water-quality monitoring near the mouth of the creek, the State Department of Ecology determined in 2004 that levels of fecal coliform bacteria in the creek are above what the state allows in freshwater. Although these bacteria are not usually pathogenic themselves, they occur in association with bacteria and viruses that are health hazards, thus serving as indicators of the potential for pathogens in the water.

In urban settings, pet waste is typically a significant source of these bacteria. In the Fauntleroy watershed, rainfall washes pet waste into the creek, which conveys the bacteria to Puget Sound. Prior to this student study, no one had documented just how much pet waste was available to contaminate creek tributaries, all of which are located in Fauntleroy Park. In 2007, Ecology, Seattle Public Utilities, and the watershed council began gathering and analyzing data about the "total maximum daily load" of fecal coliform bacteria in the creek and assessing potential sources. Data from the students' 2004 study factored into that assessment. Findings from this followup study confirmed the need for more and better outreach to pet owners as part of a water-quality improvement plan aimed at bacteria reduction.

OBJECTIVES

Study objectives took into account both scientific questions and learning opportunities:

- Document the prevalence of dog feces along a segment of trail.
- Engage dog walkers encountered along the trail about what researchers were doing and why.
- Apply findings to how state and city agencies and the community work to reduce fecal coliform bacteria in the creek and Puget Sound.
- Recognize student contributions to what is known about pet waste as a source of fecal coliform contamination.

METHODOLOGY

The 600-foot segment of trail is frequented by dog walkers accessing the park from four entrances. The well-maintained trail is easily and safely passable year-round by young children in about 20 minutes each way. Half the segment of trail is flat and half is hilly. Teams of 4-5 children walked the trail looking for fecal deposits on the trail and to either side, using vegetation to set natural boundaries. This choice gave us confidence that the waste was from dogs (as opposed to coyotes or other animals).

Teams came every four to six weeks, from October through March. To reduce the likelihood of double counting, a parent volunteer removed fecal deposits as they were counted. Many of KapKa's 37 students participated in one of the five surveys. When they encountered dog walkers on the trail, the students were not shy about saying what they were doing and why.

Students marked deposit locations on a field map as they did each survey, recording as well the date and team-member names. Back at school, each team transferred its deposit locations to a large version of the map, using colored dots. The large map and deposit counts informed the students' final report.

At the May meeting of the watershed council, the parent volunteer led seven students through a report of what they did and what they found. Several other parents were present, as were watershed residents, and representatives of the State Department of Ecology and Seattle Public Utilities.

STUDENT FINDINGS

Findings from this follow-up study compare to 2004 as follows:

YEAR	HIGH	LOW	AVERAGE	PRIMARY LOCATIONS
2004	30	4	14	Concentrations near entrances off Barton Street and the alley behind houses on Barton, the large clearing, and near the big bridge
2008	13	7	11	Concentrations near the Barton Street entrance and the large clearing

As in 2008, pet waste was more plentiful where the trail is flat than where it is hilly.

OBSERVATIONS

- Dog owners still have room for improved stewardship. Compliance with scoop law has improved but is far from universal in the park.
- Subsequent to the last survey, Cub Scouts installed more fell limbs at the trail edge in the large clearing to further define the trail and discourage dog walkers and their pets from leaving the trail. This enhanced barrier should reduce off-trail fecal deposits in this area.

Sinang Lee presents Ecology's trophy to KapKa students as parents look on.

- Primary students again proved to be an excellent match for this study. They knew dog poop when they saw it and they were eagle-eyed, finding many deposits that the adults missed.
- The adults involved - especially parent coordinator Pat Neff - shared the students' enthusiasm during the study and their report to the watershed council, where they received a certification of appreciation and unique trophy from Ecology. As she put it, "The KapKa parent community, the teachers, as well as the children all learned from having this study be part of our curriculum."
- This study report has been shared with Ecology and Seattle Public Utilities to inform further efforts to reduce fecal coliform bacteria in the creek.