

WEEKLY INFORMATION PACKET

TO: Mayor Will Toor and Members of City Council

FROM: Ron Secrist, City Manager
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DATE: February 27, 2002

SUBJECT: Response to Concerns Raised by Patrick Murphy

On December 4 of last year Boulder resident Patrick Murphy submitted a report to City Council regarding the impact of dogs in the Mt. Sanitas area. His report expressed concerns covering these primary issues:

1. the failure of dog guardians to pick up their dog's excrement
2. dog excrement contributes to the higher fecal coliform counts in Boulder Creek and is a more general potential health risk
3. dogs have trampled vegetation leading to the invasion of non native weed species including jointed goat grass
4. dog activity caused land disturbances has caused accelerated erosion in some areas
5. the majority of dog guardians using the area do not abide by City regulations associated with dogs on public lands

Failure of guardians to pick up their dogs' excrement

Section 6-1-18, "Removal of Animal Excrement Required," B.R.C. 1981, requires that dog guardians immediately pick up all fecal matter left by their animal and dispose of it in a covered receptacle.

Mr. Murphy's assertion that many users at Mt. Sanitas fail to comply with this ordinance is correct. Staff has been aware of this issue and this past summer began a concentrated effort to address the problem of dog waste (as well as other dog issues) at Mt. Sanitas. Starting in July, staff began an extensive trail head education program aimed at helping users understand the environmental values and impacts underlying City dog regulations. Primary efforts of the program focused on waste removal and voice and sight control. Between July and January nearly 11,000 citizens were contacted by Education/Outreach and Ranger staff. Approximately one-half of these contacts were specifically with dog guardians. OSMP staff was present at Mt. Sanitas for some portion of almost every day for six months during 2001.

At the conclusion of this educational effort several press releases were issued to inform Mt. Sanitas users that more stringent enforcement of dog regulations, particularly excrement pick up, would begin in January of 2002. Ranger staff is currently assigned to make at least two trips each day through Mt. Sanitas and other areas where there are similar problems.

Over the last month there has been a significant improvement in compliance with waste removal regulations. Mr. Murphy has acknowledged this improvement. While there has been a significant improvement in compliance, the failure of some users to remove their dog's excrement remains an issue at Mt. Sanitas.

Impacts of dog excrement on Boulder Creek

In order to explore Mr. Murphy's concern that increased coliform levels in Boulder Creek may be related to dog excrement, Public Works Director for Utilities, Ned Williams, and Water Quality Coordinator Chris Rudkin were consulted. Both concurred that there is no way of knowing whether or how much dog excrement on Mt. Sanitas contributes to the elevated fecal coliform levels downstream in Boulder Creek. They contend there are simply too many point sources contributing to elevated counts to allow identification of any particular one as more of a problem than another. Both acknowledge that animal waste

certainly contributes to pollution problems. While dogs may well have an impact on city water quality, Williams and Rudkin also point out that ducks and geese using the creek as well as raccoons living in the storm sewers and around the creek are likely significant and more direct contributors. The contribution of dog feces to high fecal coliform counts in Boulder Creek is certainly suggestive but not conclusive.

Dog waste and human health

Mr. Murphy suggests that dog feces is a risk to human health. Dog feces, like that of any creature, can represent some level of risk to humans. The Boulder County Health Department and John Poppy, an epidemiologist with the State of Colorado provided the department with information regarding health risks associated with dog excrement. In general, there are two common risks to humans:

1. Enteric or general gastro intestinal disease. The two most common forms of this infection are Giardia and Salmonella both of which cause gastro intestinal distress most common manifested as diarrhea. According to the epidemiologist, John Poppy, these diseases are not uncommon and highly treatable when serious enough to require medical attention. The symptoms are sometimes mild enough that the victim does not seek medical assistance. These diseases are most commonly transmitted from person to person. Unless there is a large outbreak it is almost impossible to identify the source of these diseases.
2. Toxocariasis or contraction of parasitic roundworms. Roundworm eggs are often found in dog feces and anyone who fails to take reasonable precautions after coming in contact with such feces runs some risk for contracting these parasites. In the usual case victims are not aware that they have this disease, humans are not appropriate hosts, the worms generally die without significant harm and no medical treatment is required. Neither the State nor County impose any reporting requirements on this disease.

Any disease can develop into a serious risk and contamination from any source should be addressed appropriately.

Soil disturbance caused by dogs contribute to the growth of invasive weeds

Almost any significant soil disturbances such as the construction of a trail, the development of an undesignated trail or any other disturbance corridor can provide access to non-native, invasive weeds. OSMP regularly addresses weed issues along designated trails as well as those developed by users taking short cuts or simply walking off the trail, with or without dogs. As a rule soil disturbances of any sort provide a setting for opportunistic weed species.

Mt. Sanitas area certainly has its share of problems with weeds although it is not significantly different from other areas. The area was mapped for non-native noxious weeds last year and that data is currently being entered into the department's GIS database.

The existence and spread of invasive, non-native weeds is a significant problem on nearly all land owned by the city of Boulder, Open Space/Mountain Parks and, in fact, on most of the public lands in this country.

These species are a threat because under favorable conditions they can out-compete native plants, threaten rare and sensitive species, replace wildlife food and nesting plants and change typical fire patterns. There are between six and seven thousand acres of invasive weeds on OSMP and overall weed management issues are considered among the most significant facing the department.

Beyond soil disturbances other excessive dog impacts may contribute to the development of invasive weeds. Dog feces contain a high level of nitrogen. Conversely, soils in the Boulder area are generally low in nitrogen content and native plants have adapted to and thrived under these nitrogen poor conditions. It is certainly possible that the introduction of increased nitrogen levels (from dog feces) could provide a competitive advantage to non-native plants that have developed under and prefer nitrogen rich conditions.

The department has not studied the correlation between dog waste and the spread of weeds. Available information concerning the nitrogen advantage provided by dog waste is certainly suggestive.

Dog disturbance caused erosion

Any significant disturbance will leave soil susceptible to erosion. Soil denuded of vegetation by any means will have a higher likelihood and rate of erosion than soil held in place by vegetation. In the Sanitas area dogs off trail have caused or contributed to the removal of ground cover in a number of areas. In some cases it appears that dogs have developed trails of their own, in or around areas where humans are unlikely to travel. Many of these areas show signs of erosion

The majority of dog guardians using the Sanitas area do not obey city dog regulations

There is no doubt many people using the Sanitas area do not abide by the requirement to remove dog excrement. Although the last six months of concentrated education has helped and conditions are much improved, a brief walk through the area makes it clear that a problem remains. While failure to remove excrement is the most obvious of dog rule violations, other issues, including more than two dogs off leash is also a problem at Sanitas and other popular areas.

City Council asked that in addition to addressing Mr. Murphy's specific points, staff also discuss dog issues in comparison to overall management issues.

The most significant issue facing OSMP is by far the increasing number of visitors who come to our public lands each year. Current estimates indicate that nearly four million people will visit OSMP during 2002. In comparison, Rocky Mountain National Park has only slightly over three million visitors each year. However, Rocky Mountain National Park covers 265,770 acres, which is nearly seven times larger than Open Space and Mountain Parks.

More specifically than just the number of visitors are the impacts of continually increasing off trail use by visitors and dogs. The issue of dog excrement is only one of a number of dog impacts on OSMP. The impact of dogs is related to the number and frequency of animal visits. In some areas, including Mt. Sanitas, Marshall Mesa, Dowdy Draw and S. Mesa Trailhead, impacts are significant. Impacts include trail braiding and widening, disturbed soil and vegetation, development of dog "social trails," and the disturbance or displacement of native wildlife. Recent studies on Open Space and Mountain Parks lands by wildlife biologists at Colorado State University show that dog activity in grasslands and forest savannas produces a significant "trail effect" (disturbance) on ground nesting birds of 25m to 50m on either side of the trail. When dogs are allowed off trail this area of disturbance increases.

Dog management associated with significant increases in overall visitor use is certainly among the most significant management issues the dept will face over the next several years.

This memo attempts to respond to all of the issues raised by Mr. Murphy. If there are questions or additional information is required, please contact Mike Patton or Jim Crain at ext. 2000.