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City of Boulder
Open Space and Mountain Parks

Voice and Sight Tag Program Evaluation



Voice and Sight Tag Program Evaluation

SUMMARY

Background

The Voice and Sight (Tag) Program was included in the 2005 City of Boulder Open Space and Mountain Parks Visitor Master Plan (VMP) (City of Boulder 2005) as a trial program to increase awareness of the requirements of voice and sight control and proper dog management etiquette. The VMP predicted that better awareness of the requirements would increase the level of compliance and decrease dog-related conflicts and resource impacts. The Tag Program was initiated in 2006.



From March, 2011 through the first quarter of 2012, the Boulder City Council identified and prioritized several “overarching issues” about the long-term sustainability of Open Space Mountain Parks (OSMP) resources. Many of these issues are associated with the VMP. Evaluating the Tag Program was one of these council-identified issues. The purposes of this evaluation are to explore background information on the implementation of the program, to identify areas for improvement, and describe potential changes in management to enhance the program.

Key Issues and Program Enhancement Options

The results of multi-year monitoring of the Tag Program identified two related key issues. Rates of dog-related conflict did not decrease and dog guardians need to improve their ability to use voice commands to control their dogs. After several conversations with the Open Space Board of Trustees (OSBT), OSMP staff has revised the Tag Program goal and objectives to improve focus on these issues. The evaluation analyzes nine options for possible program enhancement. The options are evaluated with regard to their benefit—that is the degree they achieve the program objectives as well as their feasibility, and cost. OSMP will make recommendations to the OSBT and City Council after community members have had the opportunity to comment on the potential enhancement options and staff’s evaluation.

Potential Tag Program Enhancement Options

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| <ol style="list-style-type: none"> 1) Require proof of vaccinations for dogs participating in the Tag Program 2) Require testing/demonstration of dog and guardian to comply with Tag Program requirements 3) Require attendance at an information session, skills demonstration, and/or skill class 4) Require successful completion of an online voice and sight control test 5) Provide education, outreach, training and/or support peer to peer outreach (a range of options to be considered) | <ol style="list-style-type: none"> 6) Modify consequences for violations (a range of options to be considered) 7) Only allow voice and sight control in trail corridors 8) Establish residency requirements for participation in the Tag Program 9) Administrative changes (a range of options to be considered) |
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How to Use this Document

The evaluation includes information on policy guidance relevant to the development of the Tag Program, how the program was implemented, monitoring results, assessments of key issues, revised program goal and objectives, an analysis of nine options, and a discussion of the potentially most effective options.

The following sections cover specific areas of potential interest.

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PURPOSE OF THE EVALUATION

At its March 30, 2011 meeting, Boulder City Council identified “overarching issues” concerning the long-term sustainability of Open Space Mountain Parks (OSMP) resources. City Council selected overarching issues with relevance to long-term and sustainable management of OSMP resources and community services. Many of these issues are associated with the 2005 City of Boulder Open Space and Mountain Parks Visitor Master Plan (City of Boulder 2005). A review of the Voice and Sight Tag (Tag) Program was one of the council-identified issues.

The Tag Program was included in the Visitor Master Plan (VMP) as a trial program with the purpose of increasing awareness of the requirements of voice and sight control and proper dog management etiquette. The VMP predicted that better awareness of the requirements would increase the level of compliance resulting in a decrease of dog-related conflicts and resource impacts. The Tag Program was initiated in 2006 and has remained largely unchanged since then.

The review and discussion of the overarching issues provide an opportunity for City Council, the Open Space Board of Trustees (OSBT), the community, and staff to discuss how to ensure the long-term sustainability of OSMP resources and high-quality visitor services. The Tag Program evaluation provides background information and management options for staff and members of the community to evaluate. This evaluation will be used to develop recommendations to the OSBT and City Council. Staff has identified nine options for possible program enhancement based upon community input, discussions with the OSBT and the results of effectiveness monitoring and staff’s own review of the program. These nine options are evaluated with regard to their benefit—that is the degree they achieve the program objectives, as well as their feasibility, and cost. OSMP will make recommendations to the OSBT and City Council after community members have had the opportunity to comment on the potential enhancement options and staff’s evaluation.

The evaluation will address the following questions:

“What aspects of the Tag Program are important to improve?”

“How can the goal and the objectives of the Tag Program be revised to guide the recommendation of program enhancements?”

“Which program enhancements may be more effective at achieving Tag Program goal and objectives while also sustaining ecological systems and high-quality visitor experiences?”



BACKGROUND

History of Voice and Sight Control and the Tag Program

The trails and lands of OSMP have long been a favorite destination for individuals wishing to recreate with their dogs. The popularity of OSMP for dog guardians and their canine companions is due, at least in part, to the opportunity for dog guardians to allow their dogs to be off leash according to voice and sight control requirements.

In an effort to improve the understanding of voice and sight control, and thereby increase compliance with voice and sight rules, Friends Interested in Dogs and Open Space (FIDOS) proposed the creation of an educational video that would “depict realistic and enforceable dog management behaviors” (FIDOS 2005). The video, which was to be viewed by all dog guardians wishing to visit OSMP with their dogs off leash, was intended to establish a shared understanding of what voice and sight control means and of the expectations of dog behavior while dogs are off leash. A recommendation for developing a voice and sight tag program was included in the VMP. Working together, OSMP and members of the community developed the Tag Program. The city produced a video to explain and demonstrate voice and sight control requirements and good dog control etiquette. All dog guardians who wish to visit OSMP lands with their dogs under voice and sight control are required to first watch the video and register in the program. OSMP launched the Tag Program in the summer of 2006 (Figure 1).

Tag Program Timeline

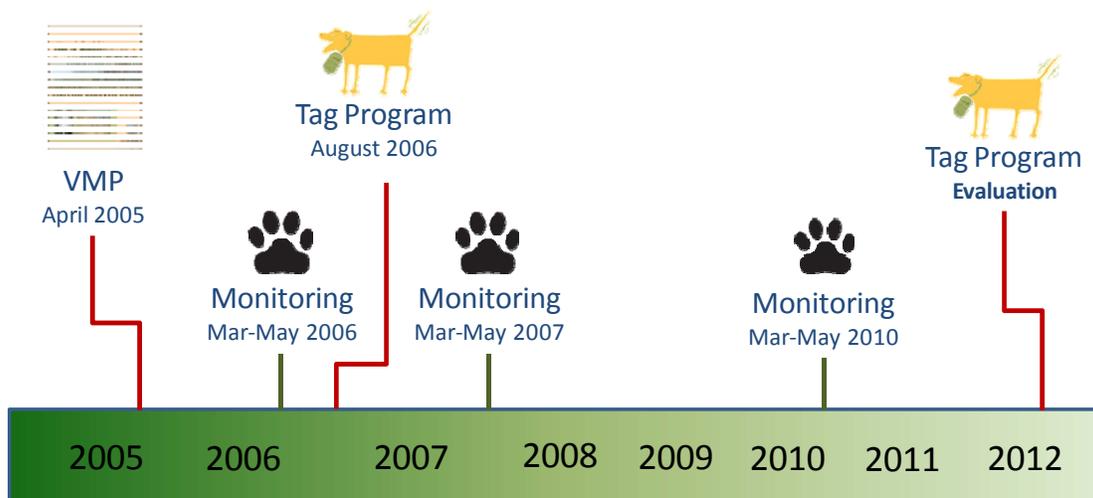


Figure 1: Tag Program Timeline

Policy Guidance

Boulder’s City Charter, the Boulder Valley Comprehensive Plan, and the Open Space Long Range Management Policies establish the broad vision, overarching goals and priorities for OSMP (Figure 2). The VMP describes policies and strategies to deliver a high-quality visitor experience and sustainable facilities in a manner consistent with the conservation of natural and cultural resources. Other plans including resource management plans and trails study area plans provide additional management direction. Together these plans set forth a comprehensive set of priorities, describe the on-the-ground actions, acquisition priorities and policies that focus the vision, and make it real.

The VMP provides policy direction, management strategies, measures of success and funding approaches to achieve the goals of enhancing the visitor experience, improving access, and protecting natural and cultural resources. The VMP identified key problems or areas of improvement and strategies to address them. For improving the visitor experience and safety there was room for improvement in reducing unwanted dog encounters and conflict with other visitors and increasing compliance with dog regulations. Additionally, for improving resource protection, the VMP identified the need to reduce impacts from off-leash dog activity in sensitive habitats and productive agricultural areas. The VMP recommended specific strategies related to voice and sight control that became components of the Tag Program (Tables 1 and 2).

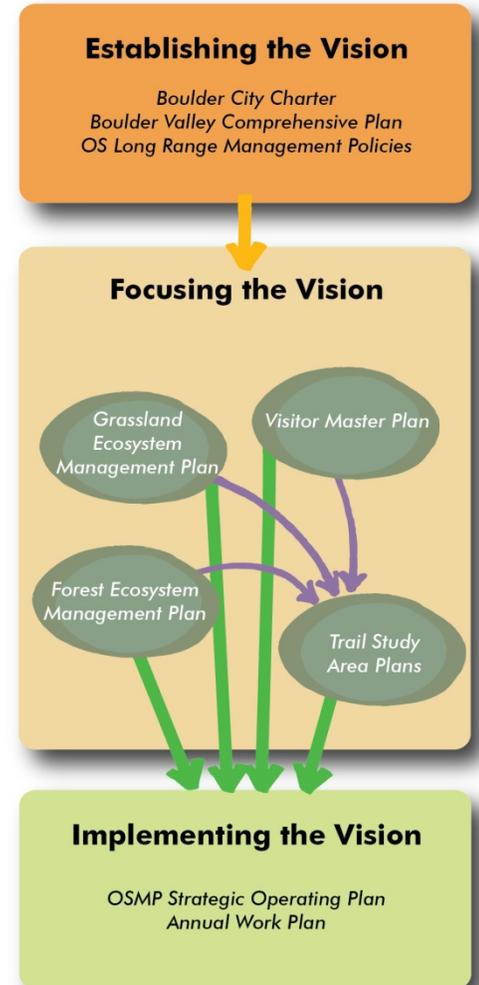


Figure 2: OSMP Plan Relationships

Table 1: Visitor Master Plan Strategies Relevant to The Voice and Sight Tag Program***Education and Outreach Initiative—***

Dog Voice and Sight Video and Tag Program. Implement a dog voice and sight video education and tag program that would be required for all dog guardians who wish to take advantage of voice and sight control privileges. The video will depict realistic and enforceable dog management behaviors to meet the voice-and-sight dog management regulations. Upon completing the video education requirement and agreeing to keep their dogs under control, dog guardians will be issued a highly visible tag that must be worn by all off-leash dogs; without this evidence dogs would be required to be on leash. This voice-and-sight control tag requirement will be phased in. (VMP p. 37)

Safety and Enforcement Initiative—

Dog Management Regulation Enforcement. Focus enforcement on compliance with dog regulations for leash control, voice and sight control, and waste removal. This involves prioritizing patrol areas, placing educational and regulatory signs, and making trailhead and trail ranger contacts. If necessary, revise voice-and-sight control regulations to improve clarity and enforceability. (VMP p. 38)

Dog Management Compliance Studies. Develop an information base to assess the status of dog management, fill key gaps in knowledge about the impacts of dogs, and evaluate the effectiveness of dog management projects and programs.

Develop service standards for dog management regarding overall level of compliance. (VMP p. 38)

Dog Voice-and-Sight Education and Certification. Implement a dog voice and sight certification system, which would be voluntary except for repeat offenders who want to regain voice and sight privileges. Open Space and Mountain Parks would collaboratively determine the standards and work with the Boulder Valley Humane Society, dog trainers, other qualified providers, and others to implement the program. (VMP p. 38)¹

Graduated Fines for Dog Management Violations. Establish a graduated system of fines for violations for both dog voice and sight offenses and dog waste pick-up offenses. Penalties would escalate from less to more severe fines, loss of voice and sight privilege, and banning individual dogs, and may involve community service requirements if imposed by the court. (VMP p. 38)

Recreation Opportunities Initiative—

Preservation of Voice and Sight Opportunities. Implement a dog voice-and-sight control demonstration project for selected trails, in collaboration with Friends Interested in Dogs and Open Space (FIDOS) and others. Initial pilot studies include Big Bluestem/South Boulder Creek Trail and Sage Trail.² (VMP p. 40)

¹ A pilot Voice and Sight Evaluation Test was developed with the Boulder Valley Humane Society but not implemented.

² A demonstration project was not implemented on Big Bluestem or South Boulder Creek Trail. Decisions about dog access were made in the West Trail Study Area Plan. A demonstration project has also not been completed for the Sage Trail which will be determined by the North Trail Study Area Plan.

Table 2: VMP dog management strategies for management areas (City of Boulder 2005; p. 53)

Passive Recreation Area	Natural Area	Agricultural Area	Habitat Conservation Area
<ul style="list-style-type: none"> • Visitors are strongly encouraged to keep dogs on trail. • Dog management is predominantly voice and sight control. • The following may be implemented: <ul style="list-style-type: none"> ○ Dogs on leash, ○ Dogs prohibited, ○ Seasonal dog regulations 	<ul style="list-style-type: none"> • Visitors are strongly encouraged to keep dogs on trail. • Dog management is predominantly voice and sight control. • The following may be implemented: <ul style="list-style-type: none"> ○ Dogs on leash, ○ Dogs prohibited, ○ Seasonal dog regulations 	<ul style="list-style-type: none"> • Visitors are strongly encouraged to keep dogs on trail. • Dog management is predominantly voice and sight control. • The following may be implemented: <ul style="list-style-type: none"> ○ Dogs on leash, ○ Dogs on-corridor, voice and sight control, ○ Dogs prohibited, ○ Seasonal dog regulations 	<ul style="list-style-type: none"> • Dogs are required to be on trail, • Exception: <ul style="list-style-type: none"> ○ on-corridor, voice and sight control • Dog management is predominantly on leash. • The following may be implemented: <ul style="list-style-type: none"> ○ Dogs on leash, ○ Dogs on-corridor voice and sight control, ○ Dogs prohibited, ○ Seasonal dog regulations

Tag Program Goals, Objectives, and Performance Measures

The VMP provided the original policy and management direction for implementation of the Tag Program. The goal of the program is to:

Increase the proportion of dog guardians visiting OSMP with their dogs who have control over their dogs as required by applicable regulations.

The program's objectives are to:

1. Improve understanding of voice and sight control.
2. Improve compliance with dog control rules.
3. Increase OSMP outreach to and education of the public with respect to voice and sight control.
4. Decrease conflict involving dogs on OSMP properties.

The monitoring and performance measures section of the VMP establishes service delivery standards. Standards related to the Tag Program in the VMP include compliance with dog control requirements and the proportion of guardians with off leash dogs participating in the Tag Program (Table 3).

Table 3: Visitor Master Plan Monitoring Measures and Performance Standard

Monitoring Measure	Frequency and Timing of Monitoring	Proposed Standard
Compliance with dog control and excrement removal requirements (VMP p. 60)	Annual For 1-3 years	90%
Percent of dogs off leash "participating" in dog management video/tag program (VMP p. 60)	Annual On-going	90%

INFORMATION ABOUT THE VOICE AND SIGHT TAG PROGRAM

Voice and Sight Control Opportunities on OSMP

Approximately 90 percent of OSMP's trails allow dogs. Of the 131 miles of trail that allow dogs, 68 percent afford visitors the opportunity to recreate with dogs off leash in accordance with the voice and sight rules. The City of Boulder Parks and Recreation Department also has trails near Boulder Reservoir that allow voice and sight control and are included in the Tag Program.

Regional Off-Leash Opportunities

Most neighboring open space and park lands require dogs to be leashed in almost all areas where dogs are allowed. A few exceptions exist:

- A small fenced area of the city of Louisville's Davidson Mesa open space property.
- The city of Westminster's four hundred acre Westminster Hill dog park which includes a trail.
- The west lake at Twin Lakes managed by Boulder County Parks and Open Space.
- Parts of the city of Longmont's Button Rock Preserve.
- Jefferson County Parks and Open Space has a 100 acre off-leash area with a trail at Elk Meadow Park near Evergreen.

A majority of off-leash dog opportunities in or nearby urban areas are specially designed dog parks isolated by fences from other visitor activities.

Benefits of Voice and Sight Control

Generally, dog guardians consider the privilege of having dogs off-leash and under voice and sight control a major motivator for their visits to OSMP. As indicated above, most communities do not provide extensive natural areas where dogs can accompany their guardians off leash. Guardians mostly view this as one of the factors contributing to their (and their dogs') quality of life. Staff is frequently told that the voice and sight option is an important factor for the choice to live in or near Boulder. Examples of the benefits of voice and sight control:

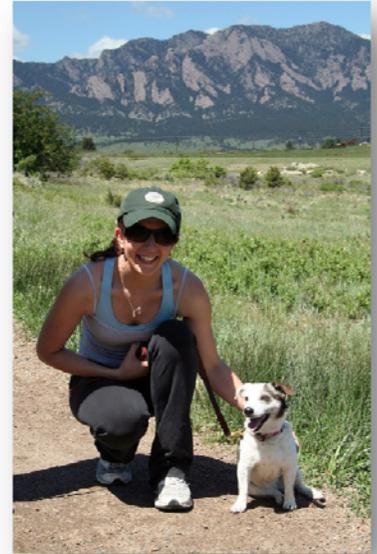


- Creates an incentive for guardians to develop and maintain behaviors in their dogs that are compatible with dogs being good community citizens;
- Provides health benefits to dog guardians because walking dogs encourages active exercise;
- Contributes to the health and happiness of dogs as they enjoy exercise and play not possible while leashed;
- Provides an option for guardians to enjoy their activities on OSMP and control their dogs unfettered by holding a leash;
- Creates dog socialization opportunities supporting positive and acceptable behaviors around other dogs and people;
- Guardian safety and protection resulting from the presence of a dog;

- Promotes guardian safety when trail conditions make managing a leashed dog difficult; and
- Reduces some aggressive dog-on-dog behaviors which may occur when dogs are leashed.

Tag Program Participation and Residency

Approximately 32,000 participants³ from 18,000 households have registered in the Tag Program from its start through 2011. During the same period, just over 29,000 tags have been distributed. The number of participants in the program has grown at a relatively steady rate, adding about 4,000 participants annually after the initial year, when approximately 10,000 participants registered. As of the end of 2011, 43 percent of the households in the Tag Program are registered to mailing addresses within the City of Boulder and 57 percent are registered to addresses outside city limits⁴.



Resident and Visitor Survey Information on Dog Management

Visitor and Resident Survey Information

Recent surveys suggest that many OSMP visitors, including many Boulder residents, take advantage of the off-leash dog walking opportunities on OSMP lands. Approximately one third of all OSMP visitors are accompanied by at least one dog (Vaske *et al.* 2009). When asked specifically about off-leash dog walking, more than half (59 %) of Boulder residents who have walked a dog on OSMP lands in the past 12 months said they did so with their dogs off leash (National Research Center 2010). Most Boulder residents who have walked a dog on OSMP lands in the past 12 months stated they were equally likely to visit OSMP areas where dogs are required to remain on leash as they were to visit areas where dogs are allowed off leash. Of those residents who stated they were more likely to visit one area or the other (i.e. leashed areas vs. off-leash areas), more than twice the number of respondents said they were more likely to visit areas where dogs are allowed off leash compared to those who said they were more likely to visit areas where dogs are required to remain leashed (National Research Center 2010).

Of the dog-walkers who walk their dogs off leash, nearly all (93 %) are aware of the Tag Program. Half of those surveyed who had heard of the Tag Program reported that there was no change in understanding about voice and sight control as a result of the Tag Program. The other half reported either a “somewhat” or “much better” understanding of the Tag Program (National Research Center 2010).

In responding to a question regarding conflicts between various uses of OSMP, a majority of all respondents (not just dog walkers) felt that dogs *on leash* had no effect on their experience and

³ Each participant in the program is associated with a single household. And each household has one address. A household may be comprised of one or more participants.

⁴ OSMP did not establish a process for updating participant information or renewing tags when the program was established. Consequently, it is likely that some registered participants, households and tags are no longer active. Therefore the number of participants and households registered, or tags issued, may not reflect the actual number of participants currently active in the program.

nearly a third (29 %) responded that dogs on leash made their experience more pleasant. However, only one fifth (20 %) found dogs *off leash* made their experience more pleasant while 44 percent felt *off leash* dogs made their experience less pleasant. When asked about conflicts involving dogs and the impact of the Tag Program, nearly half (45 %) felt there was less conflict while slightly more than half (55 %) felt there was either no change or more conflict. When asked about potential management actions to address visitor conflict, 74 percent thought requiring dogs to be on or near trails was “somewhat appropriate” or “very appropriate”. Additionally, respondents felt the following actions were somewhat or very appropriate: enforcing existing regulations more vigorously (66 %), certifying dog obedience before allowing voice and sight control (65%), and establishing more dogs on-leash areas (59%) (National Research Center 2010).

Visitation Information

A visitation study conducted between June 1, 2004 and May 31, 2005 resulted in an estimate of 4.68 million annual person visits to OSMP (Vaske *et al.* 2009). The study also estimated the number of dog visits based on the person visit estimate and survey responses to questions regarding the number of dogs visitors reported they had with them. The average number of dogs reported per person visit was 1.44 dogs. This average number of dogs per person visit combined with an estimated annual number of person visits with dogs resulted in an annual estimate of 1.8 million dog visits to OSMP (Vaske *et al.* 2009).

Tag Program Costs and Revenues

Tag Program Implementation Costs

Implementation costs are expenses associated with the development and launch of the Tag Program (Table 4). It does not include on-going administration costs or expenses associated with modifications made to the Website and database after implementation. Estimates of staff time are likely to be underestimates.

Table 4: Tag Program Implementation Expenditures

Item	Expense
Website and record management system	\$26,000 ⁵
Video production and video streaming	\$10,700
Public computer kiosks	\$3,800
Brochure and consultant services (12,500 brochures)	\$5,000
Advertisements and community outreach events	\$5,800
Tag inventory (10,000 tags)	\$800
Signs and dog information stations	\$15,000
PayPal account	\$700
TOTAL Program Equipment and Material Costs	\$67,800

⁵ The expense reported does not include a \$50,000 expenditure for the development of a handheld field computer system to track dog guardians’ participation in the Tag Program and violations that was not implemented due to technical difficulties.

OSMP Community Outreach staff logged over 2,000 hours in outreach efforts associated with rolling out the Tag Program. Similarly, OSMP's Ranger/Naturalists focused over 3,000 hours of their time on the Tag Program, with most of that spent making educational contacts with visitors immediately following the program's start. Over 50 individual staff members devoted at least some time to the development and implementation of the Tag Program. In total, OSMP staff spent nearly **7,500** hours, or the equivalent of 3.5 full time positions (FTEs), on tasks directly related to the Tag Program in 2006, it was the most labor intensive project of the year. By comparison, in 2006, staff spent approximately 6,300 hours on trail maintenance, 5,200 hours on development of the Eldorado Mountain and Doudy Draw Trail Study Area Plan, and 1,500 hours on development and implementation of the HCA Off-Trail Permit Program.

Ongoing Operating Costs

The daily and ongoing operation of the Tag Program requires materials, contracted services (for billing) and staffing for the, handling and mailing of tags as well as the tracking and accounting of tags and transactions (Table 5).

Table 5: Tag Program On-going Expenditures (annual)

Item	Expense
Materials and Services	Cost (\$)
Tags (4,000)	\$400
Postage, paper, envelopes	\$2400
PayPal online transactions	\$650
Total	\$3,450
Staff Time	Hours/week
Administrative	8 hrs
Finance	11 hrs
Total Annual Staff Time	988 hours (.5 FTE)⁶

Revenues

Fees collected from the Tag Program registration and the purchase of tags from the program's start through December 2011 total approximately \$361,000. After the initial launch year (2006), annual revenues have averaged about \$52,000 with considerable consistency from year to year (Table 6).

Table 6: Tag Program Annual Revenue (2006-2011)

	Year					
	2006*	2007	2008	2009	2010	2011
Total Revenues	\$102,736	\$55,566	\$49,492	\$54,295	\$49,464	\$49,712

*2006 Revenue generated primarily from August through December

⁶ Time does not include staffing for enforcement, education and outreach, sign maintenance, office calls and front desk services.

Tag Program Enforcement

There are two related but fundamentally different compliance and enforcement aspects to the Tag Program. The first aspect is compliance and enforcement of dogs off leash and under the requirements of voice and sight control in areas that allow voice and sight control. The second aspect is related to the requirement that any off-leash dog must have a voice and sight control tag displayed to indicate participation in the program. The Boulder Revised Code 1981 (B.R.C.) sections related to dog control on OSMP are available in [Appendix A](#).

The Tag Program did not change any of the pre-existing regulatory requirements for dog management including the behavioral requirements of voice and sight control. For example, the requirements that dogs must come and stay with the guardian immediately upon command or that dogs must be within sight of the guardian pre-date the program and were not changed upon its initiation.



One objective of the Tag Program was to reduce the likelihood that dog guardians would be unaware of, or unclear about voice and sight control requirements. Every program participant is required to watch a video describing acceptable voice and sight control and commit to managing his/her dog in a manner consistent with the video. The purpose of linking the video with a pledge of good dog management is to place the responsibility upon the guardian to comply with the program's requirements.

The Tag Program aided rangers' ability to more strictly enforce observed violations of voice and sight control. Guardians' explanations of being unaware or unclear about the requirements of the Tag Program would be at odds with the commitments they had made in order to obtain a tag. However, even with the video and clear expectations about voice and sight control, violations occurred.

The second compliance and enforcement aspect of the Tag Program is related to the requirement that any off-leash dog must have a voice and sight control tag (Green Tag) displayed. The focus of enforcement is to ensure that guardians register in the program and have tags displayed on their dogs. Rangers still encounter guardians with off-leash dogs who claim that they are unaware of the Tag Program. To promote program participation, guardians who received a violation for not having tags, were offered a reduction in the fine after providing proof of registration in the program.

The number and type of violations for which rangers issue a summons is an *indication* of the violations encountered. However, tallies of the violations issued by rangers alone are not adequate to quantify the number of violations occurring or to estimate compliance levels. One of the reasons that summons information is not a reliable measure of compliance is that the number and types of violations charged by rangers vary with the level of ranger patrol, staffing levels and patrol priorities. In addition, rangers do not always issue a summons for all observed violations.

Despite these limitations, a summary of dog violations charged by rangers can provide information about the degree to which enforcement resulting in a summons was employed as a management strategy. Information about dog-related violations from 2005 through 2011 is available in Table 7. Approximately 73 percent of all violations issued by rangers are dog-related.

Table 7: Ranger Issued Dog Violations (2005 -2011)

Year	Voice and Sight Control and Off Leash Dog Violations B.R.C. 6-1-16	Voice and Sight Evidence Tag Required B.R.C. 6-13-2	Aggressive Animal Prohibited B.R.C. 6-1-20	Failure to Protect Wildlife B.R.C. 8-3-5	Failure to Remove Excrement B.R.C. 6-1-18	Dog Prohibited or Seasonal Leash B.R.C. 8-3-3	Total OSMP Violations	Dog Related as % of Total Violations
2005	309	0	14	16	7	54	547	73%
2006	220	55	5	7	4	81	525	71%
2007	327	234	9	13	6	57	765	84%
2008	223	194	6	12	1	61	637	78%
2009	342	172	10	9	2	65	847	71%
2010	236	95	7	13	2	52	659	61%
2011	246	141	6	16	8	59	687	69%
TOTAL	1,903	891	57	86	30	429	4,667	73%

VOICE AND SIGHT TAG PROGRAM ACHIEVEMENTS AND KEY ISSUES

Summary of Tag Program Monitoring Results

Observational monitoring was conducted before, immediately after, and then again almost four years after the start of the Tag Program. Staff monitored changes in compliance with dog control rules and the incidence of dog-related conflict at 25 locations (City of Boulder 2011). Staff also used observational monitoring to estimate dog guardian compliance with excrement removal regulations and rates of participation in the Tag Program. In a separate monitoring effort, staff conducted brief interviews with dog guardians to evaluate compliance with leash possession rules.

During the observational monitoring, staff studied three components of voice and sight control:

1. Whether a visitor party (an individual guardian or group of guardians travelling together) was using voice and sight control to manage more than two dogs off-leash per guardian,
2. Whether all dogs in the visitor party were within the guardian's sight, and
3. Whether all dogs in the visitor party responded appropriately to the guardian's commands.



Staff designed the monitoring to measure a *change* in compliance with dog-related regulations over time rather than actual compliance rates for an entire visit. Compliance rates reported refer only to the compliance observed *while the party was in the observation zone*. Given the size of the observation zones, staff observed only approximately 4-5 minutes of a visitor party's trip. The percentages in Table 8 reflect a visitor party's compliance during what is likely to be a relatively small part of his/her visit.

The monitoring results indicate that the program achieved some but not all of its objectives (Table 8). The full monitoring report is available on the [OSMP Website](#). Appendix C provides a summary of the monitoring project's findings. Appendix D provides information about the impediments and barriers to improving compliance.

Table 8: Findings of the Voice and Sight Tag Program Monitoring Project. Row shading indicates an area where the program objectives were not achieved.

Corresponding Objective	Monitoring Finding	Objective Met?
Improve understanding of voice and sight control.	Some visitors reported an improved understanding of the voice and sight rules because of the program ⁷ .	YES
Improve compliance with dog control rules. (90% compliance)	Variable (see components below)	
• Dogs must be in sight	Approximately 86 percent of the visitor parties complied in 2006. This percentage increased to 92 percent in 2007 and 95 percent in 2010.	YES
• Dog must come when called (voice control)	Slightly less than 65 percent were successful ⁸ in 2006 and 2007. The percentage of visitor parties who were successful dropped to approximately 56 percent in 2010.	NO
• No more than two dogs per guardian under voice and sight control	Prior to the Tag Program, only six percent of the visitor parties with more than two dogs per guardian complied with this requirement. After the Tag Program, the percentage increased to about 40 percent.	YES (however rates of compliance remain below 50%)
• Leash possession requirement	Nearly 93 percent of the observed and/or interviewed dog guardians had a leash for each dog.	YES
Increase OSMP outreach to and education of the public with respect to voice and sight control.	OSMP increased its voice and sight control outreach to visitors ⁹ .	YES
Decrease conflict involving dogs on OSMP properties	There was a statistically significant reduction in the percentage of visitor parties that participated in at least one conflictive behavior immediately after the tag program began. By 2010, the incidence of conflictive behaviors returned to the pre-program level.	NO
Ninety percent of dogs off leash will be participating in the Voice and Sight Tag Program	Most (86%) off leash dogs on OSMP had a green tag visibly displayed.	NO (however rates of compliance are close to VMP standard)

⁷ Results derived from the 2010 OSMP Resident Survey.

⁸ Visitor parties were considered in compliance with this requirement if the dog(s) responded within **two** calls to the “come” or “here” commands or having its/their name(s) called by the guardian.

⁹ Results derived from time-tracking records.

Staff recommends that changes to the Tag Program should focus on the objectives where the Tag Program did not achieve its objectives with an emphasis upon the reduction of conflictive behaviors by dogs, and compliance with the requirement that dogs come when called.

OSBT Feedback and Key Issues

The OSBT held a study session on January 11, 2012 to discuss a range of possible enhancements for the Tag Program. OSBT members discussed problems with the Tag Program that they considered most important (Table 9). The OSBT emphasized the need to reduce conflict and improve voice control, but did not identify the rate of Tag Program participation as an important area for improvement. The OSBT’s areas for improvement are the basis for the goals and objectives for enhancements to the program.

Table 9: Areas for Tag Program Improvement identified by the Open Space Board of Trustees

Compliance, Safety and Awareness Oriented
<ul style="list-style-type: none"> ➤ City of Boulder spent a significant amount of time and resources on the program and compliance with voice and sight control is not increasing. Lack of compliance with: <ul style="list-style-type: none"> • excrement removal • keeping dogs on leash where required • voice and sight control requirements ➤ Compliance objectives established in the Visitor Master Plan have not been achieved. ➤ Penalties for noncompliance may not be sufficient or matched to the nature of the violation. ➤ Lack of fairness for people who do control/manage their dogs well when there are guardians with poor control. ➤ There is no proof of vaccination (or license) currently required for all dogs. Identified by City Council as an important change to integrate into the Tag Program. ➤ There is no demonstration of capability or testing that dog guardian and dog have the ability to conform to voice and sight rules. ➤ There is no accountability that guardians have actually watched the video. ➤ Unable to adequately track the individual dogs and guardians actively participating in the Tag Program along with regulation violations. ➤ Improve the ability of Tag Program participant information to be available to staff in the field.
Community Oriented
<ul style="list-style-type: none"> ➤ Improve communication with all OSMP visitors and dog guardians about opportunities and issues. ➤ City Council’s interest in the program is reflecting concerns heard from the community.
Long-Term Sustainability
<ul style="list-style-type: none"> ➤ Impact to resources and drawing connections with relevant research and monitoring done by staff.

REVISED VOICE AND SIGHT TAG PROGRAM GOAL AND OBJECTIVES

The original program goal of increasing dog regulation compliance remains appropriate. Based upon input from the OSBT and City Council, staff recommends adding to the goal language ensuring dogs on OSMP have current rabies vaccinations.

Revised Goal:

The Voice and Sight Tag Program will increase the proportion of dog guardians visiting OSMP who have control over their dogs as required by applicable regulations including proof of current dog rabies vaccinations to maintain a safe, high-quality visitor experience for all and the conservation of natural resources.



Recommended Revised Tag Program Objectives:

Original Tag Program objectives are shown with an asterisk (*).

Compliance, Safety and Awareness Oriented

1. Improve compliance with dog regulations and voice and sight control rules to achieve the performance standards established in the Visitor Master Plan.*
2. Improve understanding of the requirements and expectations of voice and sight control.*
3. Increase OSMP outreach to and education of the public with respect to training opportunities for guardians to build recall and obedience skills with their dogs.
4. Increase the proportion of dogs on OSMP that have proof of rabies vaccinations.

Community Oriented

5. Decrease conflict involving dogs on OSMP properties.*
6. Instill a sense of responsibility that voice and sight is a privilege and a partnership among the City of Boulder, dog guardians and other community members.
7. Minimize new complexities for dog guardians and simplify requirements when possible.
8. Strive to set program fees at a level likely to encourage (or at least not discourage) dog guardian participation and where revenues are likely to recoup the city's administrative costs.
9. Maintain a program that is effective and is appreciated by dog guardians and other members of the community.

Long-Term Sustainability

10. Integrate into the Tag Program strategies that achieve the goals, objectives and performance standards of OSMP's management plans including but not limited to the Visitor Master Plan, the Grassland Management Plan, and the Forest Ecosystem Management Plan.
11. Decrease natural resource impacts caused by off-leash dogs.

VOICE AND SIGHT TAG PROGRAM ENHANCEMENT OPTIONS

Program Enhancement Options

A range of potential modifications and enhancements to the Tag Program have been suggested by community members, stakeholder groups, City Council, the OSBT, and staff. At their December 14, 2011 meeting, OSBT members discussed the results of voice and sight monitoring and asked community groups¹⁰ to recommend improvements for the Tag Program.

The OSBT and staff held study sessions on January 11, 2012 and March 14, 2012 to discuss issues and deficiencies in the program, objectives for improving the Tag Program, and possible enhancements to be evaluated. The outcome of these discussions was nine enhancement options for further consideration (Table 10).

¹⁰ Friends Interested in Dogs and Open Space (FIDOS), Friends of Boulder Open Space (FOBOS), and the Humane Society of the Boulder Valley.

Table 10: Tag Program Enhancement Options [options marked with an asterisk (*) may be mutually exclusive]

1) Require proof of vaccinations (e.g., vaccination number, City of Boulder dog license)
2) Require testing/demonstration of dog and guardian to comply with Tag Program requirements*
3) Require attendance at an information session, skills demonstration, and/or skill class*
4) Require successful completion of an online voice and sight control test
5) Provide education, outreach, training and/or support peer-to-peer outreach (a range of options to be considered):
<ul style="list-style-type: none"> • Provide training programs <ul style="list-style-type: none"> • Increase outreach/education about training opportunities • Support peer to peer programs • Adopt a trail program • Dog ambassador program • Revise the video • Create refresher videos • Send instructive communication emails to participants • Provide trainer walks for new guardians • Improve signs • Palm cards for explaining requirements • Implement a “gold tag” dog training incentive program • Increase outreach and education to visitors without dogs about voice and sight control and what to expect • Provide areas on OSMP where voice and sight control training is allowed
6) Modify consequences for violations
<ul style="list-style-type: none"> • Revocation of privileges after one violation and require testing to reinstate privileges • Increase fines • Require community service or training
7) Only allow voice and sight control in trail corridors
8) Establish residency requirements for participation in the Tag Program
<ol style="list-style-type: none"> a. City of Boulder b. Boulder County
9) Administrative Changes
<ul style="list-style-type: none"> • Set differential fees, with a lower cost for City of Boulder residents • Require periodic renewal of Tag Program participation • Increase participation costs to fund program enhancements

Description of Program Enhancement Options

1. **Require proof of vaccinations**—This option adds a requirement that guardians must verify proof of current rabies vaccination for each dog registered in the Tag Program. This option would require that dogs, in addition to tags and guardians, be registered in the Tag Program database and tags must be associated with individual dogs.
2. **Require testing/demonstration of dog and guardian to comply with Tag Program requirements**—This option requires that all guardians and dogs interested in participating in the Tag Program must successfully complete a voice and sight control performance evaluation test prior to registering in the Tag Program.
3. **Require attendance at an information session, skills demonstration, and/or skill class**—This option would require that guardians and dogs participating in the Tag Program first attend a session which could include information about the Tag Program and voice and sight control requirements, training opportunities, training techniques, skill and training demonstrations, and practice time with dogs. Successful completion of the session or class would be required in order to register in the Tag Program.
4. **Require successful completion of an online voice and sight control test**—This option would require that each participant in the Tag Program successfully complete an online multiple choice test about voice and sight control in order to register in the Tag Program.
5. **Provide education, outreach, training and/or support peer-to-peer outreach**—This option includes a range of potential education, outreach, training and peer to peer outreach actions that can be undertaken by OSMP, dog training organizations, dog trainers, community groups, and individual dog guardians.
6. **Modify consequences for violations**— This option includes a range of potential consequences that can be applied to dog guardians who are found to have committed voice and sight control and/or dog-related violations.
7. **Only allow voice and sight control in trail corridors**—Under this option, voice and sight control would be limited to designated trails and requires that dogs managed under voice and sight control remain within a defined trail corridor¹¹.
8. **Establish residency requirements for participation in the Tag Program**—This option requires that Tag Program participants be either residents of: a) the City of Boulder or b) Boulder County. Approximately 57 percent of the visitors to OSMP are from the City of Boulder and 81 percent from Boulder County (Vaske 2008).
9. **Administrative Changes** —This option includes a range of potential administrative changes to the program including increasing participation costs to cover program operation costs, maintaining differential fees for City of Boulder residents and non-residents and the periodic renewal of registration for people and dogs participating in the Tag Program.

¹¹ A trail corridor width has not been defined for this option. A twenty foot area along both sides of the trail is the corridor width for trails in Habitat Conservation Areas that allow voice and sight control.

EVALUATION OF OPTIONS

Evaluation Factors

The evaluation of strategies is based upon consideration of three factors—benefit, feasibility and cost. The components of each factor are summarized in Table 11.

Table 11: Tag Program Option Evaluation Factors

Benefit	Feasibility <i>(Implementation, Enforcement, and Community Acceptability)</i>	Cost
<ul style="list-style-type: none"> • Contribution toward one or more objective • Degree, scope and scale of outcome • Duration of outcome • Leverages other actions 	<ul style="list-style-type: none"> • Ease of implementation (“do-ability”) • Experience and skills available • Enforceability • Appeal to motivation of community members 	<ul style="list-style-type: none"> • One-time, up-front costs • Annual staffing • Annual materials and supplies

Benefit (Higher “Benefit” is preferable)

- To what degree does the strategy contribute toward achieving one or more of the Tag Program objectives?
- How many objectives or issues does the strategy address?
- How long lasting is the strategy?
- Will the strategy leverage other strategies?

Feasibility (Higher “Feasibility” is preferable)

Implementation Feasibility

- How easily can the strategy be implemented?
- Are staff members, community partners, or contractors with proven talent and relevant experience available to implement the strategy?
- Does the strategy appeal to public officials whose involvement is critical to implementing the strategy?

Enforcement Feasibility

- How easily can the strategy be enforced with the existing ranger service level?
- Can rangers easily observe compliant versus noncompliant behaviors or requirements?
- Does enforcement require new or complex record keeping systems?

Community Acceptability

- Does the strategy appeal to community members, stakeholder groups, and potential community partner organizations whose involvement is critical to implementing the strategy?
- Are requirements fair and services equitable?

Costs (Lower “Cost” is preferable)

- How much are the up-front or one-time costs to implement the strategy?
- How much are reoccurring annual costs to maintain the strategy?
- How much staff time is required to implement and maintain the strategy?
- Looking ten years into the future, what is the cumulative cost of the strategy?

Rating Tag Program Enhancement Options

Each Tag Program enhancement option is assigned a rating of “Green,” “Yellow” or “Red” depending on the relative ability of each option to benefit program objectives, the feasibility of implementing the change and costs (Table 11). Feasibility is comprised of implementation, enforcement and community acceptability which are each individually rated and then combined for an overall feasibility rating. Additional information on how strategies are rated is available in [Appendix D](#).

Table 11: Tag Program Option Rating Symbols

Benefit & Feasibility: High Cost: Low	Benefit & Feasibility: Moderate Cost: Moderate	Benefit & Feasibility: Low Cost: High
		

Based upon the combined evaluation of the benefit, feasibility and cost of implementing an option, an overall rating is assigned for the nine enhancement options. Each of the options is discussed using a summary rating diagram shown in Figure 3, followed by a brief synopsis of the analysis. Details for the analysis of each option are available in [Appendix E](#).

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
Example						

Figure 3: Tag Program Option Evaluation Summary Diagram

Enhancement Options and Program Objectives

The analysis of benefits for the different program enhancement options is largely based on how well a strategy aligns with a particular objective or improves conditions for a range of objectives. The option of requiring proof of vaccination before participation in the Tag Program is an example of an enhancement that is directed at one specific objective of increasing the number of dogs on OSMP with verified rabies vaccinations. Actions related to increasing outreach and education on the other hand may improve the effectiveness of the Tag Program across multiple

objectives. A comparison of how the various options relate to the new program objectives is shown in Table 12.

Three Tag Program enhancement options (Education, Violation Consequences, and Administrative Changes) contain a range of potential strategies to implement the option. It is possible to consider all or only some of the strategies within these three enhancement options. An analysis of each of the strategies for the Education, Violation Consequence and Administrative Change options is included in Appendices F, G, and H. Each of the strategies is rated for benefit, cost, and feasibility with the same green, yellow, red ratings used for evaluating the main options. The education option includes an additional assessment (not rated) about whether there is expertise, capacity, or a role for the community in implementing the strategy or if a strategy is best implemented by OSMP.

Table 12: Tag Program Enhancement Options and Objectives

Tag Program Enhancement Options	Tag Program Objectives										
	Compliance, Safety and Awareness Oriented					Community Oriented					Long-Term Sustainability
	1. Improve compliance	2. Improve understanding of voice and sight control	3. Increase OSMP outreach about training opportunities	4. Proof of rabies vaccinations	5. Decrease conflict involving dogs on OSMP	6. Voice and sight control is a privilege and partnership	7. Minimize new complexities and simplify requirements	8. Keep program costs effective and reasonable	9. Maintain a program that achieves its goal	10. Integrate OSMP's management plans	11. Decrease natural resource impacts
1) Require proof of vaccinations (e.g., City of Boulder dog license)				●					●	●	
2) Require testing/demonstration of dog and guardian to comply with Tag Program requirements*	●	●	●		●	●			●	●	●
3) Require attendance at an information session, skill demonstration, and/or skill class*	●	●	●		●	●			●	●	
4) Require successful completion of an online voice and sight control test		●	●					●	●		
5) Provide education, outreach, training and/or support peer to peer outreach (a range of options to be considered)	●	●	●		●	●	●	●	●	●	
6) Modify consequences for violations (a range of options to be considered)	●				●	●			●		
7) Only allow voice and sight control in trail corridors										●	●
8) Establish City of Boulder or Boulder County residency requirement for participation in the Tag Program					●						●
9) Administrative Changes (a range of options to be considered)		●	●					●			

* Implementation of only one of these options may be appropriate

Evaluation of Tag Program Enhancement Options

1) Require proof of vaccinations (e.g., vaccination number, City of Boulder dog license)

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
1) Require proof of vaccinations						

Overall

- This is the only option addressing the objective for increasing the proof of rabies vaccinations. It increases safety of dogs and visitors by reinforcing requirements that all off-leash dogs have rabies vaccinations.
- Boulder County law and nearly every local municipality require dogs to be vaccinated for rabies.
- This option requires a new or significant revision of the Tag Program online registration and record-keeping system to include both dog and guardian registration and track compliance with proof of vaccination requirement.
- Tag Program participation and/or dog registration will need to be renewed with vaccination renewal (1-3 years).
- Enforcement of this requirement would be similar to existing Tag Program enforcement as long as it is accomplished when enforcing other dog regulations and not as a stand-alone enforcement responsibility.
- An increase in public safety and dog welfare provides an overall community benefit and reinforces existing county and City of Boulder vaccination requirements. It is likely to have a high level of community acceptance.
- There would be a new one-time cost for a new or revised registration process and record management system. Likely to require contracted services and several months of software programming after staff has detailed new requirements. If the Tag Program is combined with the City of Boulder’s dog license program, other city departments may contribute funds towards record system development costs. Costs would likely exceed \$50,000.

2) Require testing/demonstration of dog and guardian to comply with Tag Program requirements

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
2) Require testing or demonstration						

Overall

- It improves conditions for a majority of the objectives and is the best option to increase regulation compliance. The most effective option to increase voice control and compliance with most voice and sight control requirements.
- An improvement in voice control and dog management skills is likely to significantly reduce undesirable off-leash dog behavior that impacts natural resources and causes conflict with other visitors and dogs.
- The testing process would allow for guardians to have questions answered, provide clarification about requirements and offer recommendations for training.
- This option leverages other strategies by encouraging guardians to be more aware of voice and sight control and dog control requirements. It creates a meaningful incentive for guardians to assess voice and sight control skills and seek out training. It also increases consequences if privileges are lost.
- An evaluation test, testing process, and administration oversight would need to be developed as a new component of the Tag Program. A pilot evaluation test has previously been developed with the Boulder Valley Humane Society.
- This option requires a new or significant revision of the Tag Program online registration and record-keeping system to include both dog and guardian registration and proof of completion of skill test.
- The testing requirement would need to be phased in to alleviate the initial high demand for testing as the requirement is put into place.
- The improvement in dog regulation compliance is likely to significantly reduce infractions and reliance on ranger enforcement.
- It is likely to be supported by community members who believe greater responsibility is needed and voice and sight control skills should be demonstrated and required before dogs are allowed off leash. Nearly two-thirds of Boulder residents support this strategy (National Research Center 2010).
- The increased difficulty in demonstrating voice and sight control skills, higher program costs, and reduced convenience in access to voice and sight privileges will be of significant concern for some community members.

- There will be significant up-front costs which are likely to exceed \$50,000. Costs for providing testing could be funded by a cost recovery fee.

3) Require attendance at an information session, skills demonstration, and/or skill class

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
3) Require information session						

Overall

- This option may improve conditions for a majority of the objectives. It encourages guardians to be more aware of voice and sight control rules and dog control requirements, which may translate to improved compliance and a reduction in conflict.
- It may create an incentive to improve voice control and dog management skills that reduce undesirable off-leash dog behavior that impacts natural resources and causes conflict with other visitors and dogs.
- The class would allow participants to have questions answered, provide clarification about Tag Program requirements and offer recommendations for training.
- It leverages other strategies by encouraging guardians to be more aware of voice and sight control and dog control requirements and creates an incentive for guardians to more knowledgeably assess voice and sight control skills and seek out training if needed.
- The content for a demonstration and skill class would need to be developed and the class organized and managed as a new component of the Tag Program.
- Adding a class requires revisions to the Tag Program registration and record keeping system to track required participation in the class.
- Changing the Tag Program to add a required class would need to be phased in to alleviate the initial high demand for attending the class as the requirement is put into place.
- This approach may be perceived by dog guardians as less onerous than a testing requirement; however the benefit of the class and inconvenience of requiring the class will be a concern.
- May concern community members seeking improved compliance and less conflict as a less direct and effective option for improving conditions.
- The up-front costs are likely not to exceed \$50,000. Costs of information session/class could be funded by a fee charged for participating in the session/class.

4) Require successful completion of an online voice and sight control test

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
4) Online Test						

Overall

- The online test increases the likelihood that participants will watch the Tag Program video to increase awareness of voice and sight control requirements.
- Would require modification of the existing online registration system to add the test and check answers.
- Adding the online test is unlikely to change or differ from existing enforcement.
- It promotes improved awareness of Tag Program requirements with minimal inconvenience and changes from the existing process.
- This option is unlikely to be controversial; however unless this strategy is implemented with others, also less likely to change current conditions. The lack of change in current conditions may concern community members seeking improved compliance and less conflict.
- The software updates to integrate the test into the registration process and add a pass/fail procedure are likely to cost less than \$25,000.

5) Provide education, outreach, training and/or support peer-to-peer outreach (a range of options to be considered)

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
5) Education and outreach						

Overall

- Education and outreach can leverage and impact nearly every objective.
- Education, by creating greater awareness, may modestly reduce undesirable dog behavior that impacts natural resources and causes conflict with other visitor activities.
- Education and training can improve situational awareness resulting in guardians keeping their dogs on leash or proactively using verbal or other control techniques to manage dog behaviors in challenging situations.
- Extensive education and outreach has occurred increasing awareness of voice and sight control with modest improvement in some aspects of compliance. There has not been a reduction in conflict. Education strategies alone are unlikely to adequately influence guardian behavioral changes to address the most critical or challenging dog control behaviors contributing to compliance issues and conflict.
- This option promotes positive actions and behaviors and encourages personal responsibility and awareness.
- Extensive outreach and education about the Tag Program has occurred and staff and community expertise and opportunities are available.
- Community stakeholder outreach and education efforts could be enhanced to supplement staff efforts.
- Additional education and outreach is unlikely to result in any enforcement changes.
- It promotes improved compliance and better dog management in a supportive and non-punitive way that is broadly supported by the community.
- As a stand-alone option, it is less likely to change current conditions which may concern community members seeking improved compliance and less conflict.
- Additional education and outreach requires greater staff resources to develop education and outreach materials and programs including education programs, training information, signs, and support for peer-to-peer outreach efforts.
- Depending on the extent and scale of efforts, the continuation of current levels of education and outreach with the addition of some new strategies is likely to cost less than \$50,000.

6) Modify consequences for violations

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
6) Violation Consequences						

Overall

- Increasing the consequences for violations may improve compliance and discourage noncompliant behaviors.
- Greater consequences may also modestly reduce undesirable dog behavior that impacts natural resources and causes conflict with other visitor activities.
- Modifying consequences only directly impacts guardians who are charged with violations and is likely a small proportion of the violations that occur.
- This option requires enforcement to be effective. The large trail system and high visitation levels on OSMP make this difficult for rangers to patrol areas frequently.
- Adding additional consequences other than just raising fines may require additional prosecution and court staff to manage the case load for revoking privileges or assigning and tracking that community service or training requirements have been completed. This could be mitigated by moving voice and sight control violations to administrative penalties rather than municipal violations.
- Adjusting fines and requiring community service or training are common practices. The revocation of Tag Program privileges involves complexities and greater coordination and information sharing between OSMP and the courts that would need to be addressed.
- Increasing consequences for violations effects individuals in violation of voice and sight requirements and is likely to be supported broadly by the community. Community support would be more favorable if combined with other options.
- Increased consequences could cause concern for how it impacts accidental or perceived minor violations.
- Increasing the potential for more revocations and community service or training requirements will require additional prosecution and court resources.
- The implementation of higher fines has only minimal cost impacts. The revocation and community service consequences however may increase costs for additional prosecution and court staffing and resources. Likely to be less than \$50,000.

7) Only allow voice and sight control in trail corridors

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
7) Trail Corridors						

Overall

- Allowing voice and sight control only along trail corridors directly reduces off-trail natural resource impacts associated with off-leash dogs in all areas without trails.
- This option concentrates voice and sight control along trail corridors which may increase visitor conflicts.
- The option could be combined and leveraged with other strategies that more directly improve compliance and reduce conflict.
- A system-wide change related to dog control requires the removal or replacement of all voice and sight control regulation signs on OSMP. This is a substantial number of signs.
- It will be very difficult for rangers to effectively enforce this requirement along neighborhood and urban area boundaries where off-trail access is common and dispersed and in remote areas.
- Individuals who enjoy off-trail activities such as climbing, bouldering, hiking, orienteering and nature study with their dogs under voice and sight control will lose this privilege and not support this option.
- Neighbors that access OSMP from locations other than a designated trail and who participate in the Tag Program may be less supportive of this option.
- Extensive sign changes and increasing temporary staff to replace signs.
- Costs to implement this option are primarily one-time and not ongoing, however increases in temporary staffing along with new signs and education is likely to cost over \$50,000.

8) Establish residency requirements for participation in the Tag Program

Enhancement Option	Benefits	Feasibility			Costs	OVERALL
		Implementation	Enforcement	Community Acceptability		
8) Residency						

Overall

- Adding residency requirements reduces the number of guardians and dogs participating in the Tag Program and may contribute to less visitor conflict and natural resource impacts.
- The residency requirement may encourage other communities/governmental entities with open space and park lands to provide additional off-leash dog walking opportunities.
- Tag Program registration and record system changes would be needed to validate residency. Automatic geocoding of addresses would be technically difficult and require technology expertise.
- Rangers would have difficulty in the field validating if a guardian is a City of Boulder or Boulder County resident. Information or databases accessible to rangers in the field to verify residency by information is not available.
- Many neighborhoods adjacent to OSMP are not within the City of Boulder.
- Limiting Tag Program privileges to only City of Boulder residents will cause significant concern to the 57% of the Tag Program participants who are not residents.
- Residents of cities or counties that won't have access to the Tag Program are likely to have concerns about City of Boulder residents having access to services their communities provide.
- Software updates are one-time and up-front. Potential administrative cost increases involved with residency verification and loss of revenue due to lower participation levels is ongoing. Likely to cost less than \$50,000.

9) Administrative Changes

Enhancement Option	Benefits	Feasibility			Costs	Overall
		Implementation	Enforcement	Community Acceptability		
1) Administrative						

Overall

- Administrative changes are most effective if combined with other strategies.
- Adding a periodic renewal will increase the frequency for which required components of the program are updated or renewed.
- The adjustment of fees requires only minor modifications to the existing program and is easy to implement.
- Administrative changes will not change Tag Program enforcement.
- Adding a periodic renewal is likely to promote better program awareness in a non-punitive way and be broadly supported.
- An increase in registration fees and/or periodic renewal may cause some financial burden concerns.
- Administrative changes are unlikely to be controversial, however unless this strategy is implemented with others, also less likely to change current conditions which may concern some community members.
- This option would require registration software updates to manage the annual renewal. This is likely a one-time cost that will be less than \$50,000.

COMPARISON OF TAG PROGRAM ENHANCEMENT OPTIONS

Comparison of Options

The nine enhancement options vary in the ways they contribute to the objectives of the Tag Program, the long-term sustainability of OSMP resources, and by implementation feasibility and cost. The following summary of the option analysis (Table 13 and Figure 4) compare the nine options.

Table 13: Evaluation Summary of Tag Program Enhancement Options

Option	Benefit	Feasibility	Cost	Overall
Proof of Vaccination	Moderate	Moderate	High	⬢
Skill Demonstration and Testing	High	Moderate	High	⬢
Information Session or Class	High	High	Moderate	⬢
Online Test	Moderate	High	Moderate	⬢
Education and Training	Moderate	High	Moderate	⬢
Consequences for Violations	Moderate	Moderate	Moderate	⬢
Trail Corridor	Moderate	Moderate	High	⬢
Residency	Moderate	Moderate	Moderate	⬢
Administrative Changes	Moderate	High	Moderate	⬢

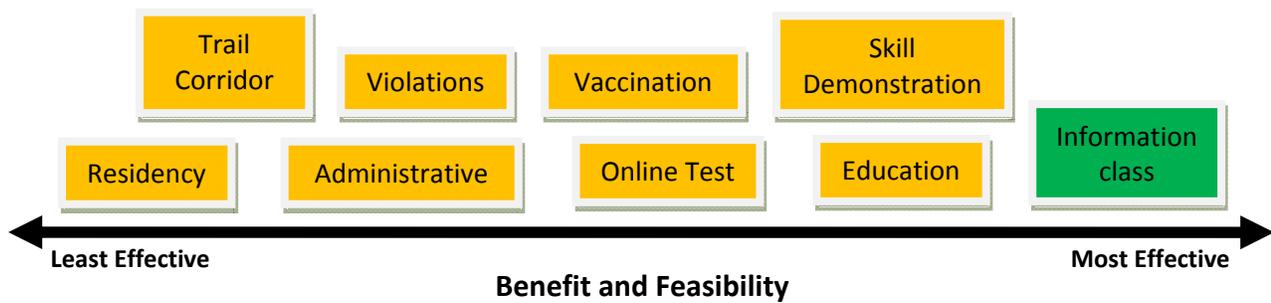


Figure 4: Comparison Summary of Enhancement Options

Meeting Program Objectives and Sustaining OSMP Resources

The key question for comparing the options is:

“Which program enhancements may be more effective at achieving Tag Program goal and objectives while also sustaining ecological systems and high-quality visitor experiences?”

No single enhancement would achieve the program’s goal and objectives. A comprehensive approach to improving the Tag Program will require a multi-pronged management approach. The actions selected should include those that either verify the ability or increase the capability of guardians to understand and reliably exercise voice and sight skills. It will also be important to ensure that appropriate sanctions are in place to discourage noncompliance by those who are incapable of meeting the requirements of voice and sight control, but would like to visit OSMP with their dogs off-leash. The package of strategies will also need to include specific actions to address the goal of requiring current rabies vaccination in order to participate in the Tag Program.

Improving awareness and compliance

Three options are likely to have the most effective benefit to improve conditions for objectives related to improving Tag Program awareness and compliance. The three options are:

- ◆ *Require testing/demonstration of guardian and dog capabilities,*
- ◆ *Require attendance at an information/demonstration class, and*
- ◆ *Education and outreach.*

Requiring skill testing for participation in the Tag Program is the most effective means of ensuring and sustaining regulatory compliance, and reducing dog-related, off-leash behaviors that cause conflicts and impact natural resources.



The Tag Program was founded on the premise that awareness and understanding of voice and sight control would result in higher compliance and less conflict. Monitoring of the program’s effectiveness indicates that while compliance with some elements of voice and sight control regulations did indeed improve, compliance with other elements did not change. Most importantly, there has been no improvement in guardians’ ability to use voice control to manage their dogs. This ability is central to the idea and practice of voice and sight control.

Reliance on guardian self assessment and affirmation that they will properly manage dogs under voice and sight control has been shown to be an ineffective way to ensure off-leash control. Consequently, natural resources and the quality of visitors’ experiences on OSMP are both vulnerable to degradation by dogs not under control of their guardians.

The strategies of requiring attendance at an information session and implementing an assortment of education and outreach strategies may increase awareness of the voice and sight requirements, but still rely on the guardian to assess and determine his/her own voice and sight control capabilities. There is little reason to believe these techniques would increase a guardian's ability to objectively assess skills and seek out training for skill deficiencies.

Requiring that guardians attend information sessions may increase the benefit of the voice and sight video because there is greater certainty that the guardian has actually watched it. There would also be a greater opportunity for conversation among trainers and prospective Tag Program participants about requirements, training tools, and challenges likely to be encountered on OSMP. Required class attendance may provide an incentive for some guardians to assess their capabilities and enroll in training classes so they can meet the requirements of voice and sight control.

Education can continue to be implemented with the Tag Program either as a supplement to required training or testing or instead of those strategies. Some education actions may be best implemented by OSMP while others are more appropriately implemented by community groups and organizations to take advantage of peer relationships and professional expertise. Staff considers the following education strategies most well suited for OSMP implementation:



- Increase outreach/education about training opportunities
- Improve clarity and information on signs
- Support peer-to-peer outreach and education programs
- Palm cards for explaining requirements
- Revise and update the voice and sight video
- Implement a "gold tag" dog training incentive program
- Create refresher videos on requirements, etiquette or issues
- Increase outreach and education to visitors without dogs about voice and sight control and what to expect
- Send instructive educational information emails to Tag Program participants
- Provide areas on OSMP where voice and sight control training is allowed

Sanctions to Encourage Compliance

Staff considers consequences for noncompliance as an important component of a successful strategies package to achieve the program goal. Existing sanctions include escalating fines and the potential loss of voice and sight control privileges for repeat offenders. The first violation fine amount is currently set at \$50. This may not be an adequate deterrent, especially if there is greater desire for OSMP visitors to comply with the Tag Program regulations. Increasing the consequences for first violation may be the most feasible and cost effective approach to ensure participation in the Tag Program. Higher fines, community service requirements or the possibility of loss of off-leash privileges after a first offense may provide sufficient motivation for visitors to control their dogs and abide by dog management regulations. If strategies other than increasing fines are pursued, it is likely to be expensive, complicated, and will

require the cooperation of other city departments such as the City's Attorney Office and the Municipal Court.

Ensuring Public Safety through Proof of Vaccinations

Existing Boulder County regulations require that all dogs in the county are vaccinated for rabies. Additionally, the City of Boulder and nearly all other municipalities in Boulder County and in the Denver Metro area require dogs to be vaccinated and licensed. Therefore it is unlikely that adding a requirement that all dogs on OSMP have proof of rabies vaccination will affect many people who are in compliance with animal control regulations where they live. Establishing this requirement will reduce the likelihood of a visitor being bitten by an unvaccinated dog, or being unsure if a biting dog had been vaccinated. This option would require changes to the Tag Program database and a periodic renewal of registration in the Voice and Sight Tag Program.

Opportunities to Phase in Program Changes and Maintain a Program that Funds Itself

The three administrative changes to the Tag Program evaluated as potential enhancements include: 1) increasing fees to cover the cost of improvements and ongoing management of the Tag Program, 2) retaining a differential fee structure with a lower cost for City of Boulder residents, and 3) adding a periodic renewal requirement.

An increase in fees would be cost effective to implement and provide considerable benefit by offsetting department expenses to enhance and administer the Tag Program. Adding a periodic renewal for participants could assist in the progressive phasing of changes to the program and ensuring current participant and dog information is retained in the program database. The differential fee structure may have less direct benefit to the Tag Program but supports and recognizes that the Tag Program is a unique service provided by the City of Boulder for its residents and that other visitors can enjoy the same level of service but for a slightly higher fee. The fee differential could be used to offset the program costs incurred by serving those who do not reside in the City of Boulder.



Long Term Sustainability and Managing Demand

Enhancement options such as limiting voice and sight control to trail corridors or to City of Boulder or Boulder County residents may have some influence on improving compliance but more directly reduce impacts to natural resources by reducing where dogs can be off leash or the number of guardians participating in the Tag Program. Both of these options are directly related to the broader focus of the "overarching issues" on long-term resource protection and the visitor service capacity of OSMP's land system. As specific improvement options for the Tag Program, these two options may not be most effective for increasing compliance or reducing conflict. However, they are options to consider in the broader context of managing OSMP activities with the goal of improving the long-term sustainability of OSMP resources.

Just as a package of strategies will be necessary to address the Tag Program objectives, it is likely that a package of strategies, some related to dog management, will be needed to provide for long-term sustainability of natural systems trails and other visitor infrastructure as well as the visitor experience.

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Appendix A: Voice and Sight Control and Related Sections of the Boulder Revised Code 1981

Penalties for Voice and Sight Related Violations

Boulder Revised Code 1981 (B.R.C.)	Penalty (Fine) Amount
<p>6-1-16 Dog Running at Large Prohibited—dog off leash and voice and sight requirements (e.g. be able to see the dog’s actions) on both park land or open space.</p>	<p>Penalties for convictions within two years: first conviction maximum—\$50.00 second conviction maximum—\$100.00 third or more conviction minimum—\$200.00</p>
<p>6-13-2 Voice and Sight Control Evidence Tag Required—requires a voice and sight control tag to be lawfully obtained and displayed where voice and sight control allowed.</p>	<p>Penalties for convictions within two years: first conviction maximum—\$50.00 second conviction maximum—\$100.00 third or more conviction minimum—\$200.00</p>
<p>6-13-4 Voice and Sight Control Evidence Tag Requirements—requires applicant to watch the video and applicant agrees to control consistent with voice and sight control requirements.</p>	<p>Bond amount is \$50 which typically equates with the fine amount; however maximum fine could be up to \$1000.00</p>

Boulder Revised Code for OSMP Dog-Related Violations

6-1-16 Dogs Running at Large Prohibited.

(a) No person owning or keeping any dog shall fail to keep the dog on the premises of the guardian or keeper unless the dog is:

- (1) On a leash held by a person, or
 - (2) Within a vehicle or similarly physically confined and without access to passers-by.
- (b) The maximum penalty for a first or second conviction within two years, based on date of violation, is a fine of \$500.00. For a third and each subsequent conviction within two years based upon the date of the first violation, the general penalty provisions of section 5-2-4, "General Penalties," B.R.C. 1981, shall apply. The maximum penalty for a first conviction occurring on land owned by the City and constituting park land or open space land is a fine of \$50.00. For a second conviction within two years, based upon the date of violation, the maximum penalty shall be a fine of \$100.00. For a third and each subsequent conviction, the maximum penalty shall be a fine of not less than \$200.00.

(c) It is an affirmative defense to a charge of violation of this section that the dog was:

- (1)(A) Outside of the corporate limits of the City; or
- (B) Inside the City limits within any of the following areas on land owned by the City and constituting park land or open space land:
- (i) The areas annexed by Ordinance Nos. 4166, 4167, 4177, 4178, 4179, 4180, 4181, 4182, 4183, 4184 and 45777;
- (ii) The following portions of open space land lying along the North Foothills Trail, as that trail is shown on the City's most recent official trails map, which runs north from Lee Hill Road from approximately one mile west of Broadway and turns east to cross U.S. 36: the entire width between the trail fences from Lee Hill Road north and west along the eastern and northern boundary of the area annexed by Ordinance Nos. 4143 and 4163, and, at the end of the trail fencing, the area starting one hundred feet west of the trail and extending east across it to the eastern boundary fence of the land annexed by Ordinance Nos. 4143, 4147, 4163 and 4164, also including the area within one hundred feet northerly of the trail as it goes east toward its juncture with U.S. 36;
- (iii) The part of Heuston Park constituting roughly the eastern one-third of the park and lying west of the base of the slope north and west of the path along the north side of the ditch, as defined by signs and markers erected by the city manager delineating it as a voice (as defined in [Section 6-1-2 "Definitions,"](#) B.R.C. 1981) and sight control area;
- (iv) A parcel of land containing one hundred twenty acres, more or less, in Section 12, T1S R71W of the 6th P.M., as described in the deed recorded February 28, 1973, at reception number 055946, Boulder County records. Said parcel is commonly known as "NCAR Park" and lies north of Bear Creek, east of the North-South centerline of said Section 12, and west of the western boundary of the National Center for Atmospheric Research property; and a portion of the parcel commonly known as "Batchelder" described as: the E $\frac{1}{2}$ of the NE $\frac{1}{4}$ of Section 1, T1S R71W of the 6th P.M. lying outside the boundary of Chautauqua Park. Said parcel is described in the deed recorded May 5, 1898, at Book 206, Page 24, Boulder County records along with a portion of the parcel commonly known as "Austin-Russell" described as the eastern portion of the W $\frac{1}{2}$ of the NE $\frac{1}{4}$ of Section 1, T1S R71W of the 6th P.M., described in the deed recorded April 21, 1903, at Book 270, Page 40, Boulder County records, located within the city limits of Boulder, Colorado; and a parcel of land located in the SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 25, T1S R71W of the 6th P.M., as described in the deed recorded October 11, 1995, at reception number 01554297, Boulder County records. Said parcel is commonly known as "Seventh Day Adventist" along with a parcel of land located in the SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 25, T1S R71W of the 6th P.M., as described in the deed recorded March 9, 2001, at reception number 2126152, Boulder County records. Said parcel is commonly known as "Community Hospital" along with a portion of a parcel commonly known as "Boulder Memorial Hospital" described as that part of the N $\frac{1}{2}$ of the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 25, T1S R71W of the 6th P.M., located N of County Road 52 (Sunshine Road) and including Lot 15, Block 11, Mount Sanitas Heights subdivision, as recorded in the Boulder County records; and Outlot D, Shanahan Ridge Six, a part of the NW $\frac{1}{4}$ of Section 17, T1S R70W of the 6th P.M., as shown on plat recorded July 13, 1977, as Plan File P-6-F-1-21, at reception number 232114, film 969, Boulder County records; and a parcel of land located in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 36, T1N R71W of the 6th P.M., as described in the deed recorded September 13, 1990, at reception number 01063953, Boulder County records. Said parcel is commonly known as "St. Germain" along with a portion of a parcel commonly known as "Moore, Ann & Donald" described as: the northern portion of a parcel in the NE $\frac{1}{4}$ of Section 36, T1N R71W of the 6th P.M., described in the deed recorded April 17, 1987, at reception number 00842349, Boulder County records, located within the city limits of Boulder, Colorado. Said parcel is referred to as "Parcel 8" along with a portion of a parcel commonly known as "Moore, Ann & Donald" described as: the eastern portion of a parcel located in the

NE ¼ of Section 36, T1N R71W of the 6th P.M., described in the deed recorded April 8, 1986, at reception number 00751339, Boulder County records, located within the city limits of Boulder, Colorado. Said parcel is referred to as "Parcel 7" along with a portion of a parcel commonly known as "Overlook" described as: the eastern portion of Tracts 437 and 438 as shown on the Boulder County Assessor parcel map for Section 36, T1N R71W of the 6th P.M., located within the city limits of Boulder, Colorado;

(v) A portion of a parcel of land commonly known as the "NCAR Mesa Site" described as: Parcel 1: the West 650' of the North 260' of the E ½ of the NE ¼ of Section 12, T1S R71W of the 6th P.M., and Parcel 2: the North 260' of the W ½ of the NE ¼ of Section 12, T1S R71W of the 6th P.M. less that portion described in the deed recorded February 28, 1973, at reception number 55946, Boulder County records. Said Parcels 1 and 2 contain a section of the Skunk Canyon Trail, north of Skunk Creek; or

(vi) A portion of a parcel of land commonly known as "Burke II," described as a portion of the E ½ of the SW ¼ of Section 34, T1N R70W of the 6th P.M., as described in the deed recorded February 6, 1980, at reception number 00382786, Boulder County records; and

(2) In an area which had not been posted by the city manager to require a leash; and

(3) Accompanied by a guardian or keeper, provided that the dog is:

(A) Within voice and sight control of such person; and

(B) Visibly wearing a Voice and Sight Control Evidence Tag that has been lawfully obtained pursuant to [chapter 6-13](#), "Voice and Sight Control Evidence Tags," B.R.C. 1981; and

(4) The accompanying guardian or keeper had a leash in such person's immediate possession in a condition to be attached to the dog without undue delay.

(5) This affirmative defense is not applicable if the accompanying guardian or keeper has more than two dogs simultaneously unleashed or unrestrained.

(Ordinance Nos. 4862 (1984); 4879 (1985); 5497 (1992); 5858 (1997); 5890 (1997); 5926 (1997); 5988 (1998); 7443 (2006); 7669 (2009); 7744 (2010))

Definition

"Voice and sight control" means the ability of a guardian or keeper to adequately control a dog by using voice commands and sight commands (such as hand gestures). In order for a guardian or keeper to have voice and sight control over a dog, the guardian or keeper must: (1) be able to see the dog's actions; and (2) be able to prevent the dog from engaging in the following behaviors, using voice and sight commands, without regard to circumstances or distractions:

(a) Charging, chasing or otherwise displaying aggression toward any person or behave toward any person in a manner that a reasonable person would find harassing or disturbing;

(b) Charging, chasing or otherwise displaying aggression toward any dog;

(c) Chasing, harassing or disturbing wildlife or livestock; or

(d) Failing to come to and stay with the guardian or keeper immediately upon command by such person.

6-13-1 Legislative Intent.

The purpose of this chapter is to protect the public health, safety, and general welfare by establishing a requirement and process for dog guardians to obtain a Voice and Sight Control Evidence Tag that

permits the dog to accompany the guardian without a leash held by a person on certain open space and mountain parks lands. Voice and Sight Control Evidence Tags are intended to assure the public that the dog is capable of being adequately controlled by voice and sight commands without a leash held by a person.

6-13-2 Voice and Sight Control Evidence Tag Required.

- (a) In addition to and in conjunction with the requirements of [section 6-1-16](#), "Dogs Running at Large Prohibited," B.R.C. 1981, any dog guardian who desires to accompany a dog without a leash held by a person shall apply for and obtain a Voice and Sight Control Evidence Tag pursuant to the procedures and requirements established by this chapter.
- (b) Any dog guardian who accompanies a dog without a leash held by a person shall cause such dog to wear and visibly display a lawfully obtained and displayed Voice and Sight Control Evidence Tag at all times when the dog is present on open space and mountain parks lands where voice and sight control is permitted under [section 6-1-16](#), "Dogs Running at Large Prohibited," B.R.C. 1981.
- (c) The city manager may promulgate guidelines, forms, or informational materials that are necessary or desirable to assist with implementation of this chapter or its legislative intent.
- (d) The maximum penalty for a first conviction is a fine of \$50.00. For a second conviction within two years, based upon the date of the first violation, the maximum penalty shall be a fine of \$100.00. For a third and each subsequent conviction, within two years based upon the date of the first violation, the maximum penalty shall be a fine of not less than \$200.00.

6-13-3 Voice and Sight Control Evidence Tag Application.

The applicant for a Voice and Sight Control Evidence Tag shall apply on forms furnished by the city manager and pay the fee, if any, prescribed by [section 4-20-60](#), "Voice and Sight Control Evidence Tag Fees," B.R.C. 1981.

6-13-4 Voice and Sight Control Evidence Tag Requirements.

- (a) Before a Voice and Sight Control Evidence Tag shall be issued, the applicant shall certify, under penalty of perjury, the following facts:
- (1) The applicant has watched (or listened to if visually impaired) a video presentation on voice and sight control of a dog, prepared by the city and provided to the applicant by the city or its designated agents; and
 - (2) The applicant agrees to control any dog accompanying the applicant without a leash held by a person on certain open space and mountain parks lands in the manner described in the video presentation on voice and sight control of a dog.

6-13-5 Revocation and Reinstatement of Voice and Sight Control Evidence Tags Upon Violations.

(a) Upon a third conviction for violation of [section 6-1-16](#), "Dogs Running at Large Prohibited," B.R.C. 1981, occurring on land owned by the city and constituting park land or open space land within two years of the date of the first violation, the right to display any Voice and Sight Control Evidence Tag shall be revoked automatically, but may be reinstated through the following procedures:

(1) Payment of a supplemental fee established in subsection 4-20-60(b), B.R.C. 1981, in addition to the fees established by [section 6-13-3](#), "Voice and Sight Control Evidence Tag Application," B.R.C. 1981, and prescribed by subsection 4-20-60(a), B.R.C. 1981, for an initial application (and in addition to any fines imposed under [section 6-1-16](#), "Dogs Running at Large Prohibited," or subsection 6-13-2(d), B.R.C. 1981);

(2) Providing written proof of attendance at a City of Boulder sanctioned and monitored showing of the video presentation on voice and sight control of a dog;

(3) Providing written proof of attendance at and successful completion of a voice and sight control certification course approved by the City of Boulder; and

(4) Certification by the applicant for reinstatement that he or she agrees to control any dog accompanying the guardian without a leash held by a person on certain open space and mountain parks lands in the manner described in the video presentation on voice and sight control of a dog.

Appendix B: Voice and Sight Tag Program Brochure

Appendix C: Summary of Voice and Sight Tag Program Monitoring Results

Summary of Tag Program Monitoring Results

Observational monitoring was conducted before, immediately after, and almost four years after the start of the Tag Program at 25 sites to examine changes in compliance with dog control rules and the incidence of dog-related conflict. Staff also used observational monitoring to estimate dog guardian compliance with excrement removal regulations and rates of participation in the Tag Program. In a separate monitoring effort, staff conducted brief interviews with dog guardians to evaluate compliance with leash possession rules.

Staff designed the monitoring to measure a *change* in compliance with dog-related regulations over time rather than actual compliance rates for an entire visit. Compliance rates reported refer only to the compliance observed *while the party was in the observation zone*. Given the size of the observation zones, staff observed approximately 4-5 minutes of a visitor party's trip.

The monitoring results indicate that the program achieved some but not all of its objectives. The monitoring showed that:

- OSMP increased its voice and sight control outreach to visitors.
- Some visitors report an improved understanding of the voice and sight rules because of the program¹².
- Most (86 %) off-leash dogs on OSMP had a green tag visibly displayed.
- Visitor party compliance with the provision of the voice and sight rules requiring that dogs remain within the guardian's field of vision improved each year of the study. Approximately 86 percent of the visitor parties kept their dog(s) within their field of vision in 2006. This percentage increased to 92 percent in 2007 and 95 percent in 2010.
- Few visitor parties had more than two dogs per guardian. However, prior to the Tag Program, compliance with this component of the voice and sight rules was poorest. In 2006, only six percent of the visitor parties with more than two dogs per guardian complied with the requirement that only two dogs per guardian may be managed under voice and sight control. After the Tag Program, the percentage of visitor parties complying with this requirement increased to about 40 percent. This higher level of compliance was maintained in 2010.
- Following implementation of the Tag Program, there was a statistically significant reduction in the percentage of visitor parties that participated in at least one conflictive behavior. This reduction was not maintained, and in 2010, the incidence of conflictive behaviors returned to the pre-program (i.e. 2006) level.
- Of those visitor parties that attempted to use voice control while they were in the observation zone, slightly less than 65 percent were successful¹³ in 2006 and 2007. The percentage of visitor parties who were successful in using voice control dropped to approximately 56 percent in 2010.

¹² Results derived from the 2010 OSMP Resident Survey

- ▶ OSMP also measured compliance with dog excrement removal rules. Compliance with these rules was generally poor with only 46 percent to 63 percent of the visitor parties complying with the rules.

¹³ Visitor parties were considered in compliance with this part of the B.R.C. 1981 or “successful”, if the dog(s) responded within two calls to the “come” or “here” commands or having its/their name(s) called by the guardian.

Appendix D: Barriers to Compliance

Impediments and Barriers to Improving Compliance

In order to improve compliance with voice and sight rules, it would be helpful to understand what barriers to compliance exist for some dog guardians. With the barriers to compliance understood, OSMP, working together with dog guardians and the community, can develop and implement management strategies that reduce or remove these barriers.

The scientific literature examining human dimensions of natural resources has highlighted some of the barriers visitors face in trying to comply with rules and suggest management responses. In trying to understand possible barriers to compliance with the voice and sight rules, it may be useful to draw from frameworks developed from such studies including one developed by Stern (Stern 2000).

Stern's framework identifies four causal factors or variables that influence behavior which can apply to understanding why people may not comply with rules and regulations. The four factors are:

1. **Personal capabilities:** A person's ability to perform the action or behavior
2. **Contextual factors:** Factors, such as regulations or enforcement of those regulations, which may be operating in the environment while a person is performing an action or behavior.
3. **Attitudinal factors:** A person's beliefs and attitudes about a behavior or action as well as any personal norms related to the behavior.
4. **Habit and routine:** A person's standard operating procedure with respect to an action or behavior as well as his or her past history performing or not performing the specific behavior.

Personal capabilities

A significant amount of personal skill and attention is required of dog guardians to manage their dogs using voice control or some other form of off-leash control. Similarly, the dogs themselves must possess a certain level of skill to successfully respond to guardian commands. OSMP's monitoring of the Tag Program indicated that 70 percent of the dog guardians who failed to comply with voice and sight rules while within in the observation zone failed, at least in part, because they did not successfully use voice control to manage their dogs (City of Boulder 2011). This observation suggests that some dog guardians may not have the personal skills necessary to comply with voice and sight rules.

In contrast, no specialized skill is required to comply with some of the other components of the voice and sight rules. Nearly all dog guardians are physically and financially capable of keeping their dogs within view, managing only two off-leash dogs at a given time, and having a leash available for each dog they are managing under voice and sight. Guardians who fail to comply with these components of voice and sight likely do so for reasons other than a lack of personal capabilities.

Contextual factors

Contextual factors that may be relevant are the presence of OSMP Ranger Naturalists, the cost of fines associated with violations, and social norms held by dog guardians and other visitors. The presence of these factors may encourage compliance with voice and sight rules; however, the absence of these factors may serve as a barrier to improving compliance with voice and sight rules.

There are few rangers on patrol relative to the number of acres and relative to the number of visitors on OSMP-managed lands. The infrequent opportunity of encountering a ranger may weaken external pressure dog guardians feel to comply with voice and sight rules.

Similarly, fines may not be large enough to effect compliance. The maximum fine established in the B.R.C. 1981 for violating Dogs Running at Large is \$50 when it is a first offense. The fine increases to \$100 for a second offense within 24 months. Given the general affluence of the Boulder community it is reasonable to question whether a \$50 fine is a strong external factor encouraging compliance with voice and sight rules.

Social norms are a third external factor that could influence dog guardian behavior with respect to compliance with voice and sight rules. A social norm is a social standard held by a group of people, such as dog guardians or visitors to OSMP, which describes expected behavior under specific conditions. The Voice and Sight Tag Program itself attempts to establish a social norm around how dog guardians and their companion animals ought to behave on OSMP-managed lands. The Voice and Sight Tag video is a visual demonstration of some of these norms. Dog guardians' standard for expected behavior may be more lenient than the level of control shown in the video. If this is the case, this social norm would be a barrier to compliance with voice and sight tag rules.

Alternatively, OSMP may have been successful in establishing a social norm proposed in the video, but the norm may simply lack strength. Heywood (2002) suggests the strength of a norm is a function of the obligation to comply with the norm and intensity of any sanctions that occur when the norm is violated. Both are positive relationships; the more strongly obliged a visitor feels to behave in a certain way and/or the higher the intensity of the sanction, the stronger the norm. In his work, Heywood found the norm against littering was strong because visitors felt a strong obligation to dispose of waste properly and would feel ashamed, guilty and/or embarrassed if they did not do so. Shame, guilt and embarrassment are internal, or self-imposed, sanctions. Conversely, cyclists in Heywood's study felt obligated to warn other visitors when they passed, but they did not feel guilty if they didn't warn upon passing (i.e. they lacked an internal sanction). As a result, the norm to warn other visitors that a faster moving cyclist is approaching visitors from behind is a weaker social norm compared to littering.

With respect to voice and sight control, dog guardians may feel obliged to control their dogs, but maybe not to the level of control demonstrated in the video. Additionally, dog guardians may not feel guilty or ashamed if they don't achieve the level of control shown in the video. This lack of obligation and internal sanctions would lead to a weaker, or possibly, ineffective norm. The low probability of encountering an OSMP ranger on a given visit and the relatively low cost of fines for failing to comply with voice and sight rules, both of which are external sanctions, may further reduce the strength of the social norm OSMP hoped to establish.

Attitudinal factors

Closely related to social norms described above as contextual factors are attitudinal factors. Attitudinal factors, which include a person's beliefs and attitudes about a behavior or action as well as any personal norms related to the behavior, can play a significant role in shaping visitor behavior (Marion *et al.*, 2008). In fact, in the absence of strong contextual factors, such as enforcement or steep fines, attitudinal factors are largely responsible for determining visitor behavior (Stern 2000, Williams *et al.*, 2009).

Given this, dog guardians' beliefs and attitudes derived from those beliefs should not be overlooked as potential barriers to compliance with the rules.

Understanding visitors' beliefs, attitudes, and norms and the role these play in shaping visitor behavior has been the subject of extensive research in the human dimensions of natural resources literature. For example, various researchers have explored visitors' attitudes and beliefs behind the reasons visitors travel off-trail in park settings (Hockett *et al.*, 2010, Park *et al.*, 2009). Others have focused on the role visitor attitudes and beliefs play in complying with leash laws on parkland (Nesbitt 2006, Williams *et al.*, 2009). Marion *et al.*, (2008) recently examined attitudes and beliefs behind feeding wildlife in parks where such behavior is prohibited.

Because of its focus on the role of dog guardians' attitudes and beliefs in influencing compliance with dog regulations, the works of Nesbitt (2006) and Williams *et al.*, (2009) may help shed some light on how specific attitudes and beliefs, *if* held by dog guardians visiting OSMP, may shape compliance with voice and sight rules. For example, Williams and others found that dog owners felt less obliged to comply with the leash laws when the owners believed strongly in the benefits of off-leash exercise for their dogs. If some dog guardians visiting OSMP believe the benefits of off-leash recreation outweigh the benefits of maintaining OSMP's recommended level of dog control, their belief may reduce their willingness to exert control over the dogs. Conversely, Williams and others noted dog owners were more likely to feel obliged to leash their dogs if they felt their own dog could negatively impact other visitors or wildlife. If dog guardians visiting OSMP believe their dog could be viewed as threatening or scary, guardians may be more likely to ask other visitors if their dog may approach them, an expectation stated in the Voice and Sight Tag video.

In his work at William B. Umstead Park in North Carolina, Nesbitt (2006) concluded that the most significant motivation influencing park visitors to allow their dogs off leash despite posted leash laws was a perceived justification for why the leash law did not apply to them, in general or under specific conditions. Applying this to voice and sight control on OSMP, some dog guardians *may* believe they should not be required to be able to have their dog respond immediately on their first call. They may believe it is acceptable if their dogs respond to their commands *most* of the time, given the amount of training that would be required to achieve the level of control shown in the Voice and Sight Tag video and the numerous distractions that vie for their dogs' attention on OSMP.

The monitoring described in this document did not include an examination of dog guardians' attitudes or beliefs making it impossible to know whether dog guardians' attitudes and beliefs serve as a barrier to or help encourage compliance with voice and sight rules. It is likely that some beliefs and attitudes held by dog guardians visiting OSMP encourage compliance while others may discourage it. Further exploration of dog guardians' attitudes or beliefs about voice and sight control may provide insight into effective outreach messages and/or management strategies that could be employed to improve voice and sight control.

Habit and routine

Personal habits and/or routines of dog guardians can also serve as a barrier to compliance with voice and sight rules. Dog guardians who walk their dogs on OSMP are frequent visitors to OSMP; about two-thirds of dog guardians who choose to walk their dogs on OSMP do so at least once a week or more. As regular visitors, dog guardians likely have well-developed habits associated with the level of control

they exert over their off-leash dogs. In some cases, the level of control that dog guardians are in the habit of exerting may not fall short of the level of control demonstrated in the Voice and Sight Tag video. If the dog guardian does not perceive a problem with his/her routine way of controlling his/her dog, changing the habit is extremely difficult (Hendee and Dawson 2002). Even if the dog guardian believes she/he should exert the control demonstrated in the video, changing a habit is difficult and can serve as a significant barrier to compliance with voice and sight rules.

Barriers that dog guardians may face when trying to comply with voice and sight rules include limited skills (theirs and/or their dogs), or limited willingness to use their skills, in managing their dogs with voice control, weak or no external pressure, personal beliefs or attitudes, and personal habits or routines. Management attempts to improve visitor compliance with voice and sight rules should address these barriers.

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Appendix E: Option Evaluation Factors

Evaluation Factor Rating

Benefit

High	Moderate	Low
		

Contribution

The degree to which the proposed action, if successfully implemented, will contribute to the achievement of the revised objects of the Tag Program.

High: The action, by itself, achieves one or more objectives or the action makes a substantial contribution towards achieving one or more objectives.

Moderate: The action makes an important contribution towards achieving one or more objectives.

Low: The action makes a relatively small contribution towards achieving one or more objectives.

Duration of Outcome

The degree to which the proposed action, if successfully implemented, is likely to secure a long-lasting outcome.

High: The action, if successfully implemented, is likely to achieve an enduring or relatively long-lasting (e.g., > 7 years) outcome (e.g., sustained high rate of compliance, low level of perceived or experience conflict, improvement in visitor experiences).

Moderate: The action, if successfully implemented, is likely to achieve an outcome of moderate duration (e.g., 3-7 years) or requires renewal or new resources to invigorate the outcome.

Low: The strategy, if successfully implemented, is likely to achieve an outcome with a very short duration (e.g., < 3 years) and improved conditions are unlikely to be sustained without adding resources or the initiation of new actions.

Leverage

The degree to which the proposed action provides leverage for other actions.

High: Immediate, visible, tangible results and high leverage towards other actions.

Moderate: Medium leverage.

Low: No apparent leverage, implementation of the action is unlikely to complement or support other actions.

Feasibility

High	Moderate	Low
		

Ease of Implementation

Proposed actions that are less complex, have been successfully implemented previously and fit within the core competencies of the lead institution and for which funding is accessible have a higher likelihood of success than other actions.

High: Implementing the action is very or relatively straightforward; this type of strategy has been done often before.

Moderate: Implementing the action involves a fair number of complexities, hurdles and/or uncertainties; this type of strategy has rarely been done before.

Low: Implementing the action involves many complexities, hurdles and/or uncertainties; this type of strategy has never been done before.

Expertise, Staffing Capacity, and Institutional Support for Implementation

This factor considers the availability of staff with sufficient time, proven talent, relevant experience and institutional support to implement the proposed action.

High: An individual with sufficient time, relevant experience and institutional support is reasonably available and committed to lead implementation of the strategy.

Moderate: An individual with promising talent and sufficient time is reasonably available but lacks relevant experience or institutional support.

Low: No lead individual currently available.

Enforcement Feasibility

The degree that proposed actions will require enforcement to improve conditions, the complexity of recording keeping systems to track violations and the ability of enforcement personnel (rangers) within existing staffing levels to address and discern legal versus illegal behaviors.

High: Implementing the action does not require high levels of enforcement to ensure compliance or effectiveness and does not require new or untried complex record keeping systems to identify defendants and track violations. Enforcement is similar to existing or familiar enforcement situations. Violations can be easily observed.

Moderate: Implementing the action requires some changes to enforcement or the addition of some new record keeping systems. May require increased enforcement to succeed and some difficulty in easily identifying violations.

Low: Implementing the action requires enforcement to ensure compliance or success or requires complex record keeping systems to track violations and defendants. Enforcement requires rangers to access information to determine if a violation has occurred rather than easily observable behaviors or conditions.

Community Support and Ability to Motivate

The degree to which key constituencies (e.g., stakeholder groups, visitors to OSMP, dog guardians, and public officials and representatives) whose involvement is necessary to implement the proposed action are motivated because the action appeals to these key constituencies.

High: The key constituencies and their motives are well understood and the action is likely to appeal to their key motives.

Moderate: The key constituencies are somewhat understood and the action may appeal to their key motives.

Low: The key constituencies are not well understood and it is uncertain whether the action will appeal to their key motives.

Cost

Low	Moderate	High
		

Total cost of implementing the proposed action, including staff time -- in unrestricted or discretionary dollars (i.e. dollars that might be applied to other purposes)

Costs should be estimated for the time horizon of implementing the action but no longer than 5 years. Cost estimates should be focused on the use of discretionary or unrestricted dollars. The following four factors should be considered, as applicable:

- One-Time Cost -- One-time direct cost, such as the development of new software or equipment.
- Annual Costs -- Labor and maintenance costs. Consider the average number of staff and staff time required to implement the action and the average cost per person per year. Also, consider nonstaff costs such as service agreements, equipment replacement, and additional tasks to incrementally implement the action.
- Number of Years -- Consider the number of years the action will require staff time or annual costs for implementation (maximum of 5 years).

High: \$50,000-or more

Moderate: \$5,000-\$50,000

Low: up to \$5,000

Appendix F: Evaluation of Tag Program Enhancement Options

Enhancement Option	Benefit <ul style="list-style-type: none"> • Scope and scale of outcome--secure desired outcomes • Contribution--degree of achieving objective • Duration--long-lasting? • Leverage--catalyze other strategies 	Overall Feasibility <ul style="list-style-type: none"> • Implementation • Enforcement • Community Acceptability 	Feasibility			Cost <ul style="list-style-type: none"> • One-time cost • Annual cost • Staff time • Number of years 	Overall
			Implementation <ul style="list-style-type: none"> • Ease of implementation • Institutional support with lead individual 	Enforcement <ul style="list-style-type: none"> • Enforcement Feasibility 	Community Acceptability <ul style="list-style-type: none"> • Ability to motivate key constituencies 		
1) Require proof of vaccinations (e.g., vaccination number, City of Boulder dog license)	 <ul style="list-style-type: none"> • The only option addressing the objective for increasing the proof of rabies vaccinations. Increases safety of dogs and visitors by reinforcing requirements that all off-leash dogs have rabies vaccinations. • Only minimally contributes to one other objective. Does not improve dog regulation or voice and sight control compliance or reduce conflict other than by aiding the verification of rabies vaccination information during a dog bite incident. • Long-lasting result. 		 <ul style="list-style-type: none"> • Requires a new or significant revision of the Tag Program online registration and record keeping software to include both dog and guardian registration and track compliance with vaccination proof requirement. • Tag Program participation and/or dog registration will need to be renewed with vaccination renewal (1 or 3 years). • OSMP would require technology expertise to modify software; services are available. • A new administrative step may be required to confirm proof of vaccination or license. 	 <ul style="list-style-type: none"> • Similar to existing Tag Program enforcement as long as enforcement is accomplished when enforcing other dog regulations and not as a stand-alone enforcement responsibility. • Vaccination tags on dogs would indicate proof of vaccination. 	 <ul style="list-style-type: none"> • Increase in public safety and dog welfare provides an overall community benefit and reinforces existing county and City of Boulder vaccination requirements. High level of community acceptance. • Some public concern for adding requirements or complexity to the Tag Program not specifically associated with improving dog management on OSMP. 	 <ul style="list-style-type: none"> • New one-time cost for new guardian and dog registration online application and record management system for the Tag Program. Likely to require contracted services and several months of programming work after staff has detailed out new requirements. Costs would likely exceed \$50,000. • Potentially ongoing administrative staff costs to verify proof of vaccinations or dog license for new participants. 	
2) Require testing/demonstration of dog and guardian to comply with Tag Program requirements	 <ul style="list-style-type: none"> • Improves conditions for a majority of the objectives and is the best option to increase regulation compliance. The most direct way to increase compliance with voice control and voice and sight control requirements. • Improved voice control and dog management skills likely to significantly reduce undesirable off-leash dog behavior that impacts natural resources and causes conflict with other visitors and dogs. • Greater investment in up-front training and testing will encourage more personal responsibility in program participation. • Long-lasting though initial guardian and dog skill competency may diminish over time without ongoing training or testing. • Leverages other strategies by encouraging guardians to be more aware of voice and sight control and dog control requirements, creates a strong incentive for guardians to assess voice and sight control skills and seek out training, and increases consequences if privileges are lost. 		 <ul style="list-style-type: none"> • An evaluation test, testing process, and administration would have to be developed, organized and managed as a new component of the Tag Program. A pilot evaluation test has previously been developed with the Boulder Valley Humane Society. • Requires a complete and significant revision or entirely new Tag Program registration and record keeping software to include both dog and guardian registration/participation. • OSMP would require technology expertise to modify software. • The City of Boulder does not have the capacity or guardian/dog training expertise to administer the evaluation test. A partner organization would be required with capacity and expertise (e.g. Boulder Valley Humane Society). • The testing requirement would need to be phased in with strategies to alleviate the initial high demand for testing as the requirement is put into place. 	 <ul style="list-style-type: none"> • Dog regulation compliance is likely to significantly increase reducing infractions and a reliance on ranger enforcement. • Fewer dogs and guardians may meet the requirements or elect to participate in Tag Program reducing enforcement time and effort. • There are practical and technical difficulties to verify in the field that the guardian and dog are the tested guardian and dog. 	 <ul style="list-style-type: none"> • Likely to be supported by community members who believe greater responsibility and voice and sight control skills should be demonstrated and required before dogs are allowed off leash. • The greater difficulty in demonstrating voice and sight control skills, higher program costs, and reduced convenience in access to the program are significant concern for some community members. • A resident survey from 2010 (National Research Center 2010) found that 65% of Boulder residents believe testing and certifying dog obedience for voice and sight control is somewhat or very appropriate. 	 <ul style="list-style-type: none"> • Significant up-front costs likely to exceed \$50,000 to: <ul style="list-style-type: none"> — develop relationship and role agreement with partner organization, — develop skill evaluation test, — develop policies and procedures to administer skill test, and — revamp the online registration and guardian and dog record management and reporting system. • Ongoing coordination with partner organization and administrative time to verify test completion for new participants. 	

Enhancement Option	Benefit	Overall Feasibility	Feasibility			Cost	Overall
			Implementation	Enforcement	Community Acceptability		
<p>3) Require attendance at an information session, skills demonstration, and/or skill class</p>	<ul style="list-style-type: none"> • Scope and scale of outcome--secure desired outcomes • Contribution--degree of achieving objective • Duration--long-lasting? • Leverage--catalyze other strategies 	<ul style="list-style-type: none"> • Implementation • Enforcement • Community Acceptability 	<ul style="list-style-type: none"> • Ease of implementation • Institutional support with lead individual 	<ul style="list-style-type: none"> • Enforcement Feasibility 	<ul style="list-style-type: none"> • Ability to motivate key constituencies 	<ul style="list-style-type: none"> • One time cost • Annual cost • Staff time • Number of years 	
<p>3) Require attendance at an information session, skills demonstration, and/or skill class</p>	 <ul style="list-style-type: none"> • Improves conditions for a majority of the objectives. Encourages guardians to be more aware of voice and sight control rules and dog control requirements which may translate to improved compliance with requirements and a reduction in conflict. • May create an incentive to improve voice control and dog management skills that reduce undesirable off-leash dog behavior that impacts natural resources and causes conflict with other visitors and dogs. Class would allow for individual to have questions answered, clarification about requirements and recommendations for training. • Greater investment in up-front education and awareness may encourage more personal responsibility in program participation. • Awareness may diminish over time without ongoing refresher classes. • Leverages other strategies by encouraging guardians to be more aware of voice and sight control and dog control requirements, creates an incentive for guardians to assess voice and sight control skills and seek out training. 		 <ul style="list-style-type: none"> • A demonstration and skill class would need to be developed, organized and managed as a new component of the Tag Program. • Requires some revision to the Tag Program registration and record keeping software to track required participation in the skill/demonstration class. • OSMP would require technology expertise to modify software. • The City of Boulder does not have the capacity or guardian/dog training expertise to offer the demonstration class. A partner organization would be required with capacity and expertise (e.g. Boulder Valley Humane Society). • The testing requirement would need to be phased in with strategies to alleviate the initial high demand for attending the class as the requirement is put into place. 	 <ul style="list-style-type: none"> • Increased awareness of voice and sight control requirements may improve compliance. • Similar to existing Tag Program enforcement. 	 <ul style="list-style-type: none"> • This approach may be perceived by dog guardians as less onerous than a testing requirement, but the benefit and inconvenience of requiring the class will be an issue. • Likely to be supported, but less so than a test, by community members who believe greater responsibility and voice and sight control skills should be understood by dog guardians before dogs are allowed off leash. 	 <ul style="list-style-type: none"> • Substantial up-front costs likely not to exceed \$50,000: <ul style="list-style-type: none"> — develop relationship and role agreement with partner organization, — develop content for skill/demonstration class, and — adjustments to the online registration and guardian record management and reporting system. • Ongoing coordination with partner organization and administrative time to verify class completion for new participants. 	
<p>4) Require successful completion of an online voice and sight control test</p>	 <ul style="list-style-type: none"> • Improves conditions for some of the objectives. • Increases likelihood that participants will watch the video to increase awareness of voice and sight control requirements. • May minimally reduce undesirable dog behavior that impacts natural resources and causes conflict with other visitor activities. 		 <ul style="list-style-type: none"> • Modification to existing online registration system to add the test and check answers. • OSMP would require technology expertise to modify software. 	 <ul style="list-style-type: none"> • No change from existing enforcement 	 <ul style="list-style-type: none"> • Promotes improved awareness of Tag Program requirements with minimal inconvenience and changes from existing process. • Unlikely to be controversial; however, unless this strategy is implemented with others, also less likely to change current conditions which may concern community members seeking improved compliance and less conflict. 	 <ul style="list-style-type: none"> • The software updates to integrate test and pass/fail procedure into online application is likely to be less than \$25,000. 	
<p>5) Provide education, outreach, training and/or support peer-to-peer outreach (a range of options to be considered)</p>	 <ul style="list-style-type: none"> • Impacts nearly every objective. • Encourages greater awareness, understanding and training which may increase skills and result in higher compliance with voice and sight control requirements. • May modestly reduce undesirable dog behavior that impacts natural resources and causes conflict with other visitor activities. Improve situational awareness resulting in guardians keeping their dogs on leash, proactively using verbal commands or control to avoid challenges, or otherwise restrain potentially conflictive dog behaviors. • Promotes positive actions and behaviors and encourages personal responsibility and awareness. Not perceived by the community as punitive or onerous. • Extensive education and outreach has occurred with modest impacts. May not be adequate to leverage the most important or challenging behavioral changes to increase compliance and reduce conflict. • Education requires ongoing message development and staffing to provide outreach and education services. 		 <ul style="list-style-type: none"> • Extensive outreach and education about the Tag Program has occurred and staff and community expertise and opportunities are available. • OSMP has resources to support education and outreach opportunities however the capacity to support or offer dog training opportunities is more limited. Training opportunities would most likely be provided through organizations like the Boulder Valley Humane Society and private trainers. • Community stakeholder groups are available and individual dog guardians are the most appropriate sources for peer-to-peer outreach. • Community stakeholder outreach and education efforts could be enhanced to supplement staff efforts. 	 <ul style="list-style-type: none"> • Increased awareness of voice and sight control requirements may modestly improve compliance. • Similar to existing Tag Program enforcement 	 <ul style="list-style-type: none"> • Promotes improved compliance and better dog management in a supportive and non-punitive way that is broadly supported by the community. • Some community concern likely if improvements to the Tag Program rely only on education and outreach efforts to improve compliance and reduce conflict. Most effective if combined with other strategies. 	 <ul style="list-style-type: none"> • Requires additional staffing capacity to develop education and outreach materials and opportunities including education programs, training information, signs, outreach programs, and support peer-to-peer outreach efforts. • Revising, updating, renewing and changing education, training and outreach materials is an ongoing expense. • Requires ongoing staffing and resources. • Depending on the extent and scale of education and outreach efforts, continuation of current levels of education and outreach with some new strategy initiation is likely to cost less than \$50,000. 	

Enhancement Option	Benefit	Overall Feasibility	Feasibility			Cost	Overall
			Implementation	Enforcement	Community Acceptability		
<p>6) Modify consequences for violations</p>	<ul style="list-style-type: none"> • Scope and scale of outcome--secure desired outcomes • Contribution--degree of achieving objective • Duration--long-lasting? • Leverage--catalyze other strategies 	<ul style="list-style-type: none"> • Implementation • Enforcement • Community Acceptability 	<ul style="list-style-type: none"> • Ease of implementation • Institutional support with lead individual 	<ul style="list-style-type: none"> • Enforcement Feasibility 	<ul style="list-style-type: none"> • Ability to motivate key constituencies 	<ul style="list-style-type: none"> • One time cost • Annual cost • Staff time • Number of years 	
	<ul style="list-style-type: none"> • Will be a deterrent and increase compliance with voice and sight control requirements. • May modestly reduce undesirable dog behavior that impacts natural resources and causes conflict with other visitor activities. • Only directly impacts guardians who are charged with violations, likely a very small proportion of the violations that occur. • Long-lasting for guardians charged with a violation, but lower duration overall. • Provides significant leverage to other options especially requiring a capability test or attending a class to reduce motivation to avoid program participation and "take chances" of being caught by rangers. • Implementing reinstatement capability test provides pilot for a possible future testing program. 		<ul style="list-style-type: none"> • Requires enforcement to be effective. The large trail system and high visitation levels make this difficult for rangers to patrol areas frequently. • Will require additional prosecution and court staff to manage the case load for revoking privileges or assigning community service or training. • Requires some minor modifications to the Tag Program record keeping system to track individuals who have lost their privilege and additional OSMP administrative staff time to update records. • Implementing a reinstatement test has some feasibility issues regarding the development and administration of the test (see testing option above). • Requires significant and ongoing education and outreach to accompany changes to advise dog guardians of consequences. • Adjusting fines and requiring community service or training are common practices. The revocation of Tag Program privileges involves logistics and complexities that would need to be addressed. 	<ul style="list-style-type: none"> • Increased consequence for noncompliance may increase awareness of voice and sight control requirements and improve compliance; however, the effectiveness of this option relies on enforcement which will detract from other ranger services or the enforcement of other issues. • The greater consequence for violations will escalate public concern about "reasonable" enforcement of violations and increase court appearances to avoid or minimize the consequences of conviction. • It is not possible to identify individuals with revoked privileges unless a ranger has a reasons to make an enforcement contact. 	<ul style="list-style-type: none"> • Primarily effects individuals in violation of voice and sight requirements and encourages compliance and likely to be supported broadly by the community. Community support is likely to be more favorable if combined with other options. • Will cause concern for the greater consequences for accidental or perceived minor violations. 	<ul style="list-style-type: none"> • Revocation and requiring community service or training will require additional prosecution and court staffing and resources. • Implementing a reinstatement test requires the cost to develop the test and administer the test (see testing option above) • An atomization of the tracking or violations and revocations would require supplemental record systems development expertise. • Minimal costs to implement only higher fines. 	
<p>7) Only allow voice and sight control in trail corridors</p>							
	<ul style="list-style-type: none"> • Directly reduces off-trail natural resource impacts associated with off-leash dogs in all areas without trails. • Concentrates voice and sight control on trail corridors which may increase visitor conflicts. • Could be combined and leveraged with other strategies that more directly improve compliance and reduce conflict • Ongoing and long-lasting 		<ul style="list-style-type: none"> • OSMP has experience in implementing on-corridor rules and providing community notice through outreach and signs. • A systemwide change related to dog control requires the removal or replacement of all voice and sight control regulation signs on OSMP; a substantial number of signs. 	<ul style="list-style-type: none"> • Very difficult for rangers to effectively enforce along neighborhood and urban area boundaries where off-trail access is common and dispersed or in remote areas. • Can be challenging for rangers to determine if dogs are on or off leash at a distance or in or out of the trail corridor zone. • No change for existing on-trail or in-corridor areas. 	<ul style="list-style-type: none"> • A resident survey completed in 2010 found that 74% of Boulder residents believe requiring dogs to be on or near trails is somewhat or very appropriate to address visitor conflicts and 88% to address impacts to plants and wildlife. • Individuals who enjoy off-trail activities such as climbing, bouldering, hiking, orienteering and nature study with their dogs under voice and sight control will lose this privilege and not support this alternative. • Neighbors that access OSMP from locations other than a designated trail and who participate in the Tag Program may be less supportive of this option. 	<ul style="list-style-type: none"> • Requires extensive education and outreach to provide notice and education about the new requirement which could include increasing temporary staffing resources to provide outreach. • Extensive sign changes and increasing temporary staff to replace signs. • Costs are primarily one-time and not ongoing. 	

Enhancement Option	Benefit • Scope and scale of outcome--secure desired outcomes • Contribution--degree of achieving objective • Duration--long-lasting? • Leverage--catalyze other strategies	Feasibility • Implementation • Enforcement • Community Acceptability	Implementation • Ease of implementation • Institutional support with lead individual	Enforcement • Enforcement Feasibility	Community Acceptability • Ability to motivate key constituencies	Cost • One time cost • Annual cost • Staff time • Number of years	Overall
8) Establish residency requirements for participation in the Tag Program	 <ul style="list-style-type: none"> • Reduces the number of visitors and dogs participating in the Tag Program and may contribute to less visitor conflict and natural resource impacts. • The residents of the City of Boulder and Boulder County may have a greater understanding of requirements and put a higher value and responsibility for having off-leash privileges. 		 <ul style="list-style-type: none"> • Proof of residency would either need to be provided to OSMP or software updates to the registration process to automatically validate residency requirement. Automatic geocoding of addresses would be technically difficult and require additional technology expertise. 	 <ul style="list-style-type: none"> • A reduced number of Tag Participants and local awareness may improve compliance. • It will be difficult for rangers to validate if a guardian is a City of Boulder/Boulder County resident. 	 <ul style="list-style-type: none"> • Limiting Tag Program privileges to only City of Boulder residents will cause significant concern to the current participants who are not Boulder residents. Only 45% of Boulder residents feel it is appropriate to charge a fee to visitors who live outside the City, perhaps less would support a service that is restricted only to residents. • Many neighborhoods adjacent to OSMP are not within the City of Boulder. Residents of other cities and unincorporated areas in Boulder County will have fairness concerns about access to services or facilities outside Boulder that Boulder residents aren't restricted access to. 	 <ul style="list-style-type: none"> • Software updates to manage and validate residency requirement or additional administrative staff resources to validate residency. • Reduced participation and revenues for Tag Program. • Software updates are one-time and up front; administrative and loss of revenue is ongoing. 	
9) Administrative Changes Retain a lower cost for City of Boulder residents	 <ul style="list-style-type: none"> • Annual renewal may minimally increase awareness and compliance with voice and sight control. • Options are most effective if combined with other strategies. • Renewal can leverages the frequency for which required components of the program are renewed. • Long lasting • Higher fees and renewal fees increases cost recovery to fund existing and new Tag Program services. • Elevates the personal value for participating in the Tag Program. 		 <ul style="list-style-type: none"> • OSMP has experienced staff that can manage a renewal process. • OSMP would require technology expertise to modify online application and record system to add the renewal component. • Only very minor modification to existing program is required for adjusting fees which are easy to implement. 	 <ul style="list-style-type: none"> • Increased awareness of voice and sight control requirements may modestly improve compliance. • No substantive change to existing Tag Program enforcement. 	 <ul style="list-style-type: none"> • Program renewal likely to promotes improved program awareness in a non-punitive way; broad community support. • Likely broad support for an increase in program costs if associated with added services. • Increase in registration fee and/or an annual renewal may cause some financial burden and equity concerns. • Unlikely to be controversial, however unless this strategy is implemented with others, also less likely to change current conditions which may concern some community members. 	 <ul style="list-style-type: none"> • Software updates to manage annual renewal; one-time cost. • Additional staff time to process and mail renewal tags; ongoing cost. • Cost for supplying yearly tags and tag color change. 	

Appendix G: Evaluation of Education, Training and Outreach Strategies

Description of Education and Outreach Strategies

- 1. Provide training programs**— Offer voice and sight control or related obedience training opportunities where participants can learn and practice techniques with their dogs.
- 2. Increase outreach/education about training opportunities**— Explore options and increase the access to information or reference to training opportunities using OSMP resources such as the department's Website, signs, brochures, and through visitor education and outreach service (rangers, outreach trailhead tables, special event booths).
- 3. Support peer-to-peer outreach and education programs**— Foster within existing volunteer programs such as the Trail Guides program a dog guardian peer-to-peer program and/or work with community stakeholder organizations to foster volunteer peer patrol efforts.
- 4. Adopt-a-Trail Program**— Program proposed by Friends Interested in Dogs and Open Space (FIDOS) where volunteer dog guardians conduct peer to peer outreach on OSMP and provide information to dog guardians that promotes good dog control etiquette and voice and sight control regulation compliance. Volunteers regularly visit a local trail or area.
- 5. Dog ambassador Program**— Similar FIDOS proposed program to the Adopt-a-Trail Program with a larger scale volunteer program.
- 6. Revise and update the voice and sight video**— Update the voice and sight video to reflect any new Tag Program requirements, emphasize the objectives of the program and areas for improvement, and new etiquette themes to reduce conflict.
- 7. Create refresher videos on requirements, etiquette or issues**— Create single theme video messages that emphasize the objectives of the Tag Program, areas for improvement, and etiquette themes to reduce conflict.
- 8. Send instructive educational information emails to participants**— Send Tag Program participants informational email messages with reminders about voice and sight control requirements and etiquette themed messages.
- 9. Provide training walks for new guardians**— Offer educational walks for dog guardians (identify new dog guardians as the intended audience) that provide information about the Tag Program and voice and sight requirements, emphasize challenges that guardians may face with their dogs, recommended etiquette and training.
- 10. Improve clarity and information on signs**— Review existing signs for clarity of message and use of symbols, simplicity, pertinence of information, and gaps in necessary information.
- 11. Palm cards for explaining requirements**— Develop small palm-sized information fliers that can be distributed to visitors with information about the requirements of voice and sight control and the Tag Program.
- 12. Implement a "gold tag" dog training incentive program**— Work with dog training organizations and commercial dog trainers to establish an incentive program where dog

guardians can take a sequence of obedience and related training classes and receive a special “gold tag” indicating the high level of training achieved by the guardian and dog.

- 13. Increase outreach and education to visitors without dogs about voice and sight control and what to expect**—Provide information on signs, the OSMP Website, and through other educational forums for nondog guardians that explains voice and sight control requirements, what to expect in areas where dogs are allowed under voice and sight control, and etiquette suggestions for sharing trails with dogs.
- 14. Provide areas on OSMP where voice and sight control training is allowed**—Designate special sites on OSMP where dogs are allowed off leash for training unleashed dogs so that voice and sight control capabilities can be assessed and areas of weakness addressed through informal or formal training.

Benefit, Cost, and Feasibility Analysis of Education and Outreach Strategies

#	Strategy	Benefits <i>(if OSMP implements)</i>	Cost <i>(if OSMP implements)</i>	Feasibility <i>(if OSMP implements)</i>	Appropriate Strategies for the Community	Appropriate Strategies for OSMP
		<ul style="list-style-type: none"> • Scope and scale of outcome • Contribution--degree increasing understanding and awareness • Duration--long-lasting? • Leverage--catalyze other strategies 	<ul style="list-style-type: none"> • One time cost • Annual cost • Staff time • Number of years 	<ul style="list-style-type: none"> • Ease of implementation • Institutional support with lead individual • Community acceptability 	Something community stakeholders, individuals, or organizations can do or have expertise	OSMP facilities or staff involvement required; community capacity or role limited
1	Provide training programs				Yes	
2	Increase outreach/education about training opportunities				Yes	Yes
3	Support peer to peer outreach and education programs				Yes	Yes
4	Adopt a Trail program				Yes	
5	Dog ambassador program				Yes	
6	Revise and update the voice and sight video					Yes
7	Create refresher videos on requirements, etiquette or issues					Yes
8	Send instructive educational information emails to participants					Yes
9	Provide training walks for new guardians				Yes	
10	Improve clarity and information on signs					Yes
11	Palm cards for explaining requirements					Yes
12	Implement a "gold tag" dog training incentive program				Yes	Yes
13	Increase outreach and education to visitors without dogs about voice and sight control and what to expect				Yes	Yes
14	Provide areas on OSMP where voice and sight control training is allowed					Yes

Education and Outreach Strategies Appropriate for the Community

Provide training programs and *Provide training walks for new guardians*—There are existing organizations, businesses, and private individuals that provide a broad range of dog obedience and specialized behavior training for guardians and dogs. The City of Boulder and OSMP does not have the expertise to provide either specialized or a range of training which would be expensive to provide and create direct competition with community and commercially provided training opportunities.

Adopt a Trail and Dog ambassador programs—Proposed by FIDOS as programs they are working on developing. Both of these peer to peer outreach programs can be sponsored and managed by FIDOS without any partnership from OSMP.

Education and Outreach Strategies Appropriate for the OSMP

Revise and update the voice and sight video and Create refresher videos on requirements, etiquette or issues—As an integral part of the Tag Program OSMP is responsible for the video and would seek input from the community on revising the video content or refresher videos.

Send instructive educational information emails to participants—Tag Program participant information including email addresses is confidential information. OSMP can use provided contact information to disseminate information related to the Tag Program.

Improve clarity and information on signs—OSMP is responsible for the content and maintenance of signs. Community input could be integrated into signs.

Palm cards for explaining requirements—OSMP is responsible for brochures and information distributed about department programs. Community input could be integrated into content for palm cards.

Provide areas on OSMP where voice and sight control training is allowed—The City of Boulder and the OSMP department maintains the authority for codes and regulations that govern dog control.

Education and Outreach Strategies Appropriate for both the Community and OSMP

Increase outreach/education about training opportunities—Both OSMP and various community organizations have resources and opportunities to promote awareness of dog training opportunities.

Support peer to peer outreach and education programs—Several model peer to peer education and outreach programs are managed by community organizations. The OSMP department can partner with organizations willing to comply with the department's volunteer program policies or provide information and training related to OSMP lands, trails, programs and services.

Implement a "gold tag" dog training incentive program—OSMP manages the registration process and distribution of tags for the Tag Program. There are existing organizations, businesses, and private individuals that provide a range of dog training opportunities that could be involved in the incentive program.

Increase outreach and education to visitors without dogs about voice and sight control and what to expect—OSMP is responsible for the content and maintenance of signs, brochures and the department's website where information could be made available. There are additional community organization websites and outreach forums with opportunity to share information on this topic.

Appendix H: Evaluation of Violation Consequence Strategies

Description of Consequence for Violation Strategies

1. **Revocation of privileges after one violation and require testing to reinstate privileges**—The Tag Program currently requires revocation for three violation within two years. This strategy would replace the current policy with revocation after one violation of the city code concerning off leash and voice and sight controlled dogs.

2. **Increase fines for first violation and subsequent violation fines**—Fines associated with off-leash dogs and voice and sight control, failure to have or display a tag, and failure to comply with tag program requirements would be increased from the current established fines.

3. **Require community service or training**—This strategy would require that in addition to or in place of fines, community service or the completion of an approved obedience class could be assessed for convictions of off leash and voice and sight control. Community service or training could be optional for first violation and required for second and subsequent or flagrant violations.

#	Strategy	Benefits	Feasibility	Cost
		<ul style="list-style-type: none"> • Scope and scale of outcome • Contribution--degree increasing understanding and awareness • Duration--long-lasting? • Leverage--catalyze other strategies 	<ul style="list-style-type: none"> • Ease of implementation • Institutional support with lead individual • Community acceptability 	<ul style="list-style-type: none"> • One time cost • Annual cost • Staff time • Number of years
1	Revocation of privileges after one violation and require testing to reinstate privileges			
2	Increase fines for first violation and subsequent violation fines			
3	Require community service or training			

Revocation of privileges after one violation and require testing to reinstate privileges

- **Benefit**—Creates a significant deterrent to avoid violations and not risk the loss of voice and sight control privileges and inconvenience of appearing in court. Requiring successful completion of a voice and sight control capability test to regain privileges would ensure greater ability to comply with voice and sight control requirements. Encourages guardians to understand requirements and carefully assess capabilities to meet requirements or seek dog training to improve skills. Most compatible with capability testing or attendance at an information/skill demonstration class to increase awareness of implications of loss of privilege upon first violation.
- **Feasibility**— Will increase the volume of court appearances and it may not be practical for all offenders to have mandatory court appearances. The additional case load may require additional court and prosecution staff to handle the increased volume of cases. Coordination and communication would be required between the courts and OSMP to track convictions and revocations. Automated communication and notification would make this feasible but doesn't currently exist. Non-automated procedures would likely require additional court and OSMP staffing due to historic volume of violations. If combined with a capability test or requiring attendance at an information/skill demonstration class, the volume of violations is likely to be substantially less and minimize feasibility issues.
- **Cost** —The increase in court appearances, tracking convictions and revocations and communication and coordination between courts and OSMP would require additional staffing and automated communication with attendant costs. Combined with capability test or information class would reduce anticipated costs.

Increase fines for first violation and subsequent violation fines

- **Benefit**—Creates a greater deterrent to avoid violations. Fines help off-set cost of additional services.
- **Feasibility**— Requires an ordinance amendment and is otherwise easy to implement. Will increase the volume of court appearances as higher penalties could translate into more violations being set for trial with a concomitant impact on the prosecution staff and municipal court resources.
- **Cost** —Potential increases in court appearances may require additional prosecution and court staffing resources with some off-set from higher fines.

Require community service or training

- **Benefit**—Creates a greater deterrent to avoid violations. Community service can provide assistance to nonprofit groups and the City of Boulder. Required training can address skill deficiencies that contributed to violation and avoid future violations. Penalty can be aligned and scaled to the nature of the violation.
- **Feasibility**—Will increase the volume of court appearances to determine if community service or training is appropriate for the conviction. Court staff must monitor compliance with community

service. Staff from the agency for whom the offender is providing services must supervise the work performed.

- Cost —Potential increases in court appearances may require additional court staffing resources to manage added compliance with community service or training.

Appendix I: Evaluation of Administrative Change Strategies

Description of Administrative Change Strategies

1. **Set differential fees, with a lower cost for City of Boulder residents**—City of Boulder residents currently pay a lower Tag Program registration fee than non Boulder residents. Boulder residents pay \$15.00 and non residents pay \$18.75. Additional tags are \$5.00 for both. This strategy retains a differential fee structure.
2. **Require periodic renewal of Tag Program participation**—The Tag Program was implemented without any renewal requirement. It is unclear how many active participants are using Tag Program privileges or if contact information is updated and accurate. Requiring a periodic renewal will provide a way to keep current information on participants in the program. Periodic renewal will also provide opportunities for participants to refresh their understanding and commitment to the program and allow OSMP to make adjustments, improvements and modifications to the program on an ongoing basis which may allow the phasing in of new requirements and program enhancements.
3. **Increase participation costs to fund program enhancements**—This strategy requires that modifications and enhancements to the Tag Program are off-set by increased participation fees so that the program pays for itself.

#	Strategy	Benefits	Feasibility	Cost
		<ul style="list-style-type: none"> • Scope and scale of outcome--secure desired outcomes • Contribution--degree of achieving objective • Duration--long-lasting? • Leverage--catalyze other strategies 	<ul style="list-style-type: none"> • Ability to motivate key constituencies • Ease of implementation • Institutional support with lead individual 	<ul style="list-style-type: none"> • One time cost • Annual cost • Staff time • Number of years
1	Set differential fees, with a lower cost for City of Boulder residents			
2	Require periodic renewal of Tag Program participation			
3	Increase participation costs to fund program enhancements			

Set differential fees, with a lower cost for City of Boulder residents

- Benefit— A strategy that allows Tag Program participants who are not residents of the City of Boulder to help provide additional financial support for a community program offered by the City of Boulder for its residents and other community members.
- Feasibility— This strategy is currently in place and can be maintained or adapted to any change made to the tag program. Requires some minor modifications to the online software.
- Cost — Cost is minimal, less than \$5,000.

Require periodic renewal of Tag Program participation

- Benefit—A periodic renewal could leverage other strategies including education and outreach strategies, renewal of vaccination information, testing or class attendance requirements, and ensure that information about participants is kept current. Renewal will also increase revenues to provide additional funds to support maintenance and improvements to the Tag Program.
- Feasibility— Modifications to existing software are required for participants to sign up or renew their registration. OSMP would require technology expertise to modify software.
- Cost — Technology expertise likely to cost less than \$5,000.

Increase participation costs to fund program enhancements

- Benefit—Increase in registration fees will increase cost recovery for Tag Program maintenance and improvements.
- Feasibility— Minor modifications to existing software are required and would likely be done by the City's information and technology staff.
- Cost — Cost is minimal, less than \$5,000.