2003 Visitor Plan Advisory Committee

Report to the City of Boulder
Open Space Board of Trustees

June 25, 2003

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1. <u>EXECUTIVE SUMMARY</u>

In January, 2003, the Open Space Board of Trustees (OSBT) appointed a second Visitor Plan Advisory Committee (VPAC), to build on the work of the first Visitor Plan Advisory Committee (VPAC-1 1999-2000). The mission of the second VPAC was to recommend strategies -- with public input and with a view to a 10-year timeframe – that would preserve high-quality visitor experiences, while minimizing impacts on natural, cultural, and agricultural resources. Specifically, our tasks were to:

1. Establish a shared understanding of the current situation.
2. Identify significant critical concerns.
3. Develop strategies and evaluate benefit and feasibility.
4. Summarize the findings of tasks 1-3 in a report to the OSBT.

Honored to continue Boulder's long tradition of land stewardship, we tried to represent the whole community, while hearing many knowledgeable -- often conflicting -- views. The public wants to preserve resources (natural, agricultural, cultural) and continue to enjoy passive recreation at historic or increased levels. We heard from many people who feel tremendous pride and ownership in these public lands. We appreciate their input. We consider this report part of a larger project, the development of the Open Space and Mountain Parks Visitor Master Plan. The Visitor Master Plan is a work-in-progress, which will be developed and refined through future public hearings.

1.1.<u>Process and Public Input</u>
We met nine times (February – June), took two field trips, and invited extensive public input, gaining valuable historical knowledge and expert opinions. We received a large body of well-informed, web-based public input through a website developed for this project. (www.visitorplan.com). We held two public forums specifically to invite comments on (1) the condition analysis and (2) possible strategies.

1.2.<u>Summary of Tasks</u>
1.2.1. Tasks 1 & 2: Shared Understanding of the Situation & Identifying Critical Concerns
We developed a shared understanding and identified critical concerns through field trips and by reviewing and discussing extensive, in-depth information and analysis, including:

- Products from Open Space and Mountain Parks (OSMP) (e.g., VPAC-1 Report, OSMP Condition Analysis, Trail Assessment and Prioritization Report, and many excerpts from various expert and scientific studies).
- Products from peer organizations (e.g., Jefferson County Open Space documents, "Planning Trails with Wildlife in Mind" from Colorado State Parks task force).
- Products from citizen groups (e.g., Boulder County Nature Association, Boulder Area Trails Coalition, Friends Interested in Dogs and Open Space, etc).
- Dozens of comments from engaged citizens who enjoy and care about OSMP lands.

Much of this material can be viewed at www.visitorplan.com.

We examined the current condition of five planning targets by evaluating a number of factors for each target. We found that there was room for meaningful improvement in key factors for each of the planning targets.

We also looked toward the future and identified these critical trends: increasing numbers of visitors, a growing number of recreational activities and inadequate (and reduced) OSMP funding for maintenance and management.

The condition analysis and trends analysis revealed areas for potential improvement. In all cases some human activity or lack of maintenance is responsible for creating unacceptable conditions. The following are the highest ranked critical concerns for VPAC:

- Behaviors of some dog guardians
- Limited maintenance
- Walking off trails (undesignated trail creation)
- Limited public dialogue & lack of trust in public process
- Walking off tread (braiding/widening)
- Concentrated high visitor use
- Inappropriate trail design, construction or maintenance
- Behaviors of some cyclists

1.2.2. Tasks 3 & 4: Develop Strategies, Evaluate Benefit and Feasibility, and Report to OSBT

We developed the following five objectives, and we recommended strategies, striving to incorporate both public input and a large amount of information from staff and other sources.

1. **Reduce conflicts between visitors and natural, cultural, and agricultural resources**
   Strategy: Management Zoning
   Sensitive & Protected Zone
   Natural Zone
   Passive Recreation Zone
2. **Reduce conflicts among visitors**
   Strategies:
   Increase enforcement of existing rules, especially at popular trailheads
   Popularize peer education and multi-use trail etiquette
   Manage dog and bike conflicts through management zoning
   Consider other strategy ideas such as "Voice and Sight Control" licenses
3. **Engender stewardship and encourage habitat restoration.**
   Strategies
   Construct properly designed trials that engender stewardship
   Expand and target education and outreach
   Improve Signs at trailheads and along trails
   Link trails to spread out use and avoid concentrations of user impacts.
   Develop the Habitat Restoration Program

4. **Maintain and improve visitor trails and other infrastructure**

Strategy:
Develop and implement trail and other infrastructure plans using the Trails Assessment and Prioritization Report as a starting point

5. **Improve the quality of public discourse to refine, implement, and monitor the effectiveness of the Visitor Master Plan and to deepen public trust in the process**
Strategies:
Ensure public input on management zone configuration
Specify management intent and zoning at time of purchase
Appoint a Passive Recreation Coordinator
Appoint staff liaisons with community groups
Hold public forums with Open Space Board of Trustees
Use trailheads for education about process and decisions

We recommend the Management Zoning Strategy to balance needs for resource preservation and high-quality visitor experiences. We offer criteria and suggestions for allowable visitor uses for each zone. We do not recommend specific zones for specific properties because we believe that must be done only after careful analysis backed by credible science, to the extent practical and possible. We expect that the public will have extensive and useful comments on implementation of the zoning proposal once zones are proposed for specific areas.

In addition to our recommendations, we developed several supporting ideas that we believe should be considered, including:
- Funding (finding additional funds for management and maintenance)
- Regional Approach (collaborating with other public land agencies)
- Demonstration Projects (first testing some strategies on a small scale)
- Monitoring (evaluating effectiveness of strategies to inform future decisions)

We were honored to help OSMP in planning for long-term preservation of both visitor experiences and precious resources on public lands.

Visitor Plan Advisory Committee, January - June 2003:

Bruce Drogsvold	Chuck Kipp
Ken Foelske	Leslie Pizzi
Beverly Gholson	Kevin Reardon
Janet Graaff	Richard L. Reynolds
Greg Hayes	Anita Stansbury
Mike Hughes	Barbara Taylor
Linda Jourgensen	Peggy Wrenn

2. INTRODUCTION

2.1.Background

It is fun to imagine what the Boulder area looked like 200 years ago in its unspoiled natural state. Imagine Boulder Creek with the giant cottonwoods along its banks, the crystal clear water flowing out onto the Great Plains, the rays of sunlight streaming through the riparian shadows. Imagine the packs of wolves, the lone grizzly bear, the giant herds of elk and buffalo passing through. Imagine the deep dark canyons with their cool fresh air and perfect silence. Imagine the tall prairie grass dancing in the summer breeze, the lazy eagle circling the Flatirons, the haunting vastness, and the grand and lonely vistas.

Thanks to a tradition of more than 100 years of land preservation by the early citizens of Boulder, we don't have to imagine what it must have been like. We can walk out our back doors today and enjoy much of what once was.

Continued growth pressures along the Front Range have made Boulder's Open Space and Mountain Parks (OSMP) rare and even more treasured today, as so many other areas have succumbed to development. The OSMP lands contain some of the richest biodiversity of plant and animal life in the State of Colorado. There are more than 800 different species of plants and an amazing 90 different mammal species. Some of these species are found only in this area. That variety exists because this area is a meeting place of two large and distinctly different habitats, the Great Plains and the Rocky Mountains. Our OSMP properties contain not only a mix of plant and animal life found in both habitat types but also unique plants and animals that thrive at the meeting place of the two habitats. We have an ecotonal system (the meeting of the two different habitats) that has been largely protected and therefore remains intact to a greater or lesser degree, all of which impart ecological importance to these lands on and near the Front Range.

Over the past century, the numbers of people visiting OSMP for outdoor recreation have increased steadily, rising with population growth. The Boulder Open Space and Mountain Parks have become a regional recreational destination. We've experienced an increase in the number of users which is related to the growing popularity of outdoor recreation, increasing numbers of recreational activities, and increased availability of maps and information describing Boulder as a recreational destination. In 1980, there were an estimated 250,000 visits to OSMP lands; in 2002 the estimates exceeded 3.5 million visits.

Passive recreational opportunities on OSMP lands contribute greatly to Boulder's extraordinarily high quality of life. We have 131 miles of trail and some tens of thousands of acres preserved as open space. Hikers, mountain bikers, rock climbers, horseback riders, hang gliders, birdwatchers, and dog guardians are just some of the different types of visitors using these trails. As time goes by, more and more people come from all around to enjoy the phenomenal natural, recreational, and spiritual pleasures of Open Space and Mountain Parks.

Our activities and experiences on OSMP land -- walking in nature, smelling wild plants, exercising, breathing fresh air, and more -- are vitally important to all of us. We treasure our "visitor experience", a far understated phrase for our activities and direct, unique experiences of

ecological connections. Seeing wildflowers bloom, watching birds soar, sitting on warm boulders, watching children play in creeks and ponds, hiking, running, riding, gliding, playing with our dogs--we find enormous value in these experiences. We share the responsibility of stewardship to preserve these wonders and opportunities, so that future generations may enjoy and value what we appreciate today.

Increasing visitations require that we become more active and proactive managing our open spaces. We must carefully preserve – for the long term -- both high quality "visitor experiences" for Boulder citizens, as well as the natural, cultural, agricultural, and historical resource values of these precious lands.

This Visitor Master Plan recommends strategies to preserve high quality "visitor experiences" today and in the future, while preserving high quality environments for the wild ones who were here before us. With a ten-year planning horizon, we've explicitly predicated our work on the City of Boulder Charter's list of Open Space purposes (adopted by the voters in the 1980s), as directed by OSBT. We provide the appropriate excerpt from the City of Boulder charter for your convenience:

"Open Space land shall be acquired, maintained, preserved, retained, and used only for the following purposes:

- **Preservation or restoration of natural areas characterized by or including terrain, geologic formations, flora, or fauna that is unusual, spectacular, historically important, scientifically valuable, or unique, or that represent outstanding or rare examples of native species;**
- **Preservation of water resources in their natural or traditional state, scenic areas or vistas, wildlife habitats, or fragile ecosystems;**
- **Preservation of land for passive recreation use, such as hiking, photography or nature studies, and if specifically designated, bicycling, horseback riding, or fishing;**
- **Preservation of agricultural uses and land suitable for agricultural production;**
- **Utilization of land for shaping the development of the city, limiting urban sprawl and disciplining growth;**
- **Utilization of non-urban land for spatial definition of urban areas;**
- **Utilization of land to prevent encroachment on floodplains; and**
- **Preservation of land for its aesthetic or passive recreational value and its contribution to the quality of life of the community. "**

2.2. The First Visitor Plan Advisory Committee: Goals & Guidance for the Visitor Master Plan

Strategic planning to manage visitor use on OSMP lands began many years ago. As early as 1975, Boulder's City Council endorsed a set of policies for managing the "mountain backdrop." In the 1990's, the Open Space Department completed two Area Management Plans, which addressed a range of management issues including visitor use. In 1998, the OSBT authorized the Open Space Department to prepare a Visitor Master Plan. In 1999, VPAC-1 was formed and they delivered their report to the OSBT in 2000. Boulder Mountain Parks, then a division of the City of Boulder Parks and Recreation Department, completed the *Boulder Mountain Parks Resource Protection and Visitor Use Plan* in 1999.

 In 2000, when Open Space and Mountain Parks were merged, OSBT adopted the *Boulder Mountain Parks Resource Protection and Visitor Use Plan* and accepted the report of VPAC-1. VPAC-1 developed the following goals for the Visitor Master Plan:

1. Maintain or enhance the quality of visitor experience for passive recreational activities.
2. Ensure that passive recreational activities and facilities are compatible with long-term protection of natural, agricultural, and cultural resources.
3. Partner with the community in passive recreation decision-making and stewardship efforts.

In addition to establishing the goals for the Visitor Master Plan, VPAC-1 also offered guidance for the development of specific policies, as follows:

*   Visitors should be welcomed to enjoy OSMP lands in a manner that preserves the quality of their experience and the natural environment.
*   The Visitor Master Plan is predicated upon and must conform to the existing Open Space Charter.
*   When making decisions regarding recreational issues, staff should use fair and objective criteria and the best available information.
*   Passive recreational use of OSMP should not create *significant adverse impacts* to the environment.
*   The community must understand the need for management actions, support them, and be instrumental in making them work.
*   Educational efforts, such as the "Leave No Trace" program, will be explored before more restrictive techniques are considered.
*   Where there is a reasonable doubt about the nature of potential impacts, or where all other considerations are equal, preference will be given to protecting the environment. If impacts are not clearly understood, a cautious approach should be used and priority should be given to protecting natural value s..

2.3.The Second Visitor Plan Advisory Committee – This Report

In January, 2003, the Open Space Board of Trustees appointed us to serve on the second Visitor Plan Advisory Committee (VPAC). We were asked to make recommendations to the OSBT on management strategies that would improve the quality of the visitor experience or reduce visitor impacts to natural, cultural, and agricultural resources. Specifically the VPAC was charged with four tasks:

1. Establish a shared understanding of the situation
2. Identify significant critical concerns
3. Develop strategies and evaluate benefit and feasibility
4. Summarize the findings of tasks 1-3 in a report to the OSBT

VPAC recognizes that we inherit a long and proud tradition of land stewardship and that we live in a community with a tremendous love and pride for this land. We were honored to work on behalf of this tradition. We hope that our efforts will benefit the continued stewardship of the land and provide some clear and sensible solutions to maintain and enhance the visitor experience and at the same time preserve our treasured resource for future generations.

2.4.Process

We met nine times (February 10, March 3, March 17, April 7, April 22, April 30, May 5, May 19, and June 12) and discussed the final draft of this report during the last meeting. We also took two field trips (March 24 and May 17). Meetings were facilitated by Mike Hughes of RESOLVE. Our report is submitted to the OSBT for their meeting on June 25, 2003. We invited extensive public input, and we deeply value the historical knowledge, expertise, and community good will of everyone who participated.

2.5.Public Input

All of our meetings were open to the public, and noticed in the Daily Camera, and on a website specifically set up for the Visitor Plan Advisory Committee process (www.visitorplan.com). All meetings were well attended both by VPAC members and by a host of very knowledgeable people with an enormous collective understanding of the past and current situation. At each meeting, we reserved 15-30 minutes for their observations and comments. This report has benefited greatly from their participation. We want to thank all participants and the following organizations:

Boulder Area Trails Coalition (BATCO)
Boulder County Horse Association (BCHA)
Boulder County Nature Association (BCNA)
Boulder Off-road Alliance (BOA)
Colorado Native Plant Society (CONPS)
Connection Ecology

Flatirons Climbing Council (FCC)
Friends Interested in Dogs and Open Space (FIDOS)
Our Common Ground
Rocky Mountain Hangliding Association (RMHGA)
Sierra Club

We designed two meetings specifically to receive stakeholders' input. On April 7, VPAC hosted a public forum to gather public and stakeholder comments about the analysis of current conditions. On May 19, more than 100 people attended a meeting to gather comments about potential strategies.

A web-based comment form was also created to gather input for the VPAC. Other comments were dropped off at the OSMP office and received via phone, fax, and through other internet based comment forms offered by the City or the Open Space and Mountain Parks Department. Most materials provided to VPAC by staff were also posted at www.visitorplan.com for access by the public.

The VPAC drafting committee reviewed the public input and communicated with VPAC members to incorporate and balance all discussion and testimony. As this report and its recommendations are a work in progress, we look forward to additional public input as the report is discussed in public meetings of the OSBT, the Planning Board, and ultimately the City Council.

3. **CURRENT CONDITION & CRITICAL CONCERNS: OUR SHARED UNDERSTANDING**

The goals of the Visitor Master Plan echo Boulder's Open Space charter provisions (p. 5), which establish a multiple-use mandate for Open Space and Mountain Parks lands. Managing for multiple, sometimes conflicting uses, is very complex and requires a strategic approach.

VPAC established a shared understanding of the current situation by reviewing identified planning targets, an analysis of current conditions, and key factors that characterize the planning targets. VPAC also examined factors that provide quality to the visitor experience and support sustainability. We further considered the sources of stress that are currently degrading or impairing the planning targets.

3.1.Identified Planning Targets

Based upon a summary of public comment and the results of VPAC-1, staff submitted the following list of planning targets to us:

1. The Visitor Experience
2. The Visitor Infrastructure
3. Ecological Systems
4. Agricultural Operations
5. Cultural Resources

1. The visitor experience is the focus of the Visitor Master Plan. The visitor experience combines aesthetics, conflict, access, safety, and other key factors (see table below). It describes the Open Space and Mountain Parks program's closest and most critical link to visitors.

2. The visitor experience is closely related to the visitor infrastructure. The infrastructure includes the trails, trailheads, parking lots, restrooms, and other facilities that contribute to a high-quality visitor experience and that protect the resources.

3. Ecological systems include a variety of species and communities. Ecological systems include dominant cover types such as prairie grasslands and forests, as well as smaller patches of shrublands, wetlands, aquatic systems, and narrow linear reaches of riparian areas. Nested within each of these ecological systems are smaller patches and habitat types. Prairie grasslands, for example, include wet and dry tallgrass prairie communities, as well as black-tailed prairie dog colonies.

4. Agricultural operations in the Boulder Valley include rangeland, pasture, and hayfield management, and are dominated by cattle grazing with some farming, mostly small grains. Preservation of agricultural operations in the Boulder Valley is one of the charter purposes of Open Space and Mountain Parks.

5. Cultural resources include sites, structures, districts, landscapes, objects, and documents associated with or representative of people, cultures, as well as human activities and events in the past.

3.2. Identifying Key Factors

The key factors for planning targets clearly define or characterize the target, or describe a range of conditions over which that target may vary. Here are key factors for the five planning targets:

Visitor Experience	Visitor Infrastructure
- Aesthetic attractiveness - Crowding - Conflict - Remoteness - Safety - Variety of activities - Access to destination - Level of interpretation	- Physical sustainability - Amount - Engendering stewardship

Ecological Systems	Agricultural Operations	Cultural Resources
- Size/ Abundance - Composition - Landscape Context	- Productivity - Efficiency	- Abundance of Material - Context - Condition

3.3.Assessing Condition Using the Key Factors

Staff rated the key factors as "Very Good", "Good", "Fair" or "Poor".   "Very Good" and "Good" are given when the status of the key factor is acceptable. "Fair" and "Poor" are used to indicate unacceptable status for a key factor.   Key factors rated "Very Good" are those that have reached a self-sustaining, near-optimal condition.   On the other hand, key factors that are rated "Poor" lie below the restoration threshold.

The restoration threshold indicates a level of performance or condition that cannot practically be restored to an acceptable condition. "Fair" is a ranking used to describe an unacceptable state that could be restored to either "Good" or "Very Good."   The table below summarizes our discussions about the current conditions. (See "Open Space and Mountain Parks Condition Analysis" for detailed information on the ratings.)

Target Key Factor	Current Condition
Visitor Experience	**Good**
Aesthetic attractiveness	Fair
Crowding	Good
Conflict	Good
Remoteness	Very Good
Safety	Good
Variety of activities	Good
Access to destination	Good
Visitor Infrastructure	**Fair**
Physical sustainability	Fair
Engendering stewardship	Fair
Natural Systems	**Fair**
Size/Abundance	Fair
Composition	Fair
Landscape Context	Fair
Agricultural Operations	**Good**
Efficiency	Good
Productivity	Good
Cultural Resources	**Good**
Amount	Good
Context	Good
Condition	Good

3.4. Ten-Year Planning Horizon — Trends Affecting Future Conditions

We discussed current conditions and also looked ten years into the future. Major trends affecting the future condition of the land and visitor experience include:

- Increasing numbers of visitors
- A growing number recreational activities
- Inadequate (and reduced) OSMP funding for maintenance and management (especially for enforcement of existing rules).

3.5. Summary of Condition and Trends

The condition analysis helped us appreciate what management strategies are working well and also pointed out problem areas. These problem areas indicated unacceptable conditions or movement toward unacceptable conditions within the Plan's ten-year planning horizon. A target–by-target summary of "what's working" and what needs improvement follows:

3.5.1. Visitor Experience

What's Working
- Widespread access to the places people want to go
- Beautiful vistas
- Ability to visit and traverse a wide variety of natural settings
- Few problems with the visual impact or safety concerns associated with vandalism
- Little unwelcome noise
- Majority of users are courteous and respectful of others and the landscape
- Personal safety not a widespread concern
- Availability of areas that seem remote from the built environment
- Access is provided for a wide variety of activities and challenge levels

Potential Areas for Improvement
- Access for mountain biking
- Access for hang gliding
- Access by equestrians (fenced properties)
- Internal trail connections
- Regional/external trail connections
- Longer continuous trails
- Transit linkages
- Greater accessibility for disabled populations
- Dog excrement
- Visual scarring due to erosion/gullying
- Growing levels of conflict and crowding (cyclists traveling too quickly, conflicts with dogs/guardians, dog-on-dog conflicts, equestrians with dogs and hikers.)
- Dangerous road crossings
- Trail design and placement (e.g., not near roads, subdivisions, in between fences, or under power lines)
- Clarity about trail designation and use (e.g., climbing access)

- Regulations addressing commercial use on OSMP
- Lack of trails to some popular destinations
- Trailhead parking overflow (This area for potential improvement does ***not*** lead us to recommend increased parking capacity.

3.5.2. Visitor Infrastructure
What's Working?
- Many popular trails and trailheads
- Clean restrooms and empty trashbins
- Many trails with high-quality surfaces sustaining heavy, multiple uses, with ongoing maintenance

Potential Areas for Improvement
- Physically unsustainable trails
- Backlog of designated trail improvements
- Proliferation of undesignated (and therefore unmanaged) trails
- Trail designs that do not encourage visitors to stay on trail or behave in manner that supports the physical sustainability of the trails
- Approved but unbuilt trails and trail connections
- Specific plans for appropriate visitor infrastructure (if any) on lands currently closed pending management planning
- Deferred maintenance/insufficient funding levels

3.5.3. Ecological Systems
What's Working?
- Natural systems, plants, and animals provide much of the basis for a visitor experience that is "Open Space and Mountain Parks dependent"
- The enjoyment of natural systems, plants, and animals builds support for the conservation and protection of these areas

Potential Areas for Improvement
- Direct impacts to habitat patches with limited extent or distribution (riparian areas, shrublands, tallgrass prairie, cliff faces, bases of cliffs)
- Killing of individual plants by trampling
- Harassment and killing of wildlife by domestic dogs
- Role of trails/visitors as dispersal mechanism for weeds
- Potential for species displacement with increasing density of trails
- Level of protection from impacts does not correspond to the sensitivity of natural resources

3.5.4. Agricultural Operations
What's Working?
- Agricultural operations provide some of the basis for a visitor experience that is "Open Space and Mountain Parks dependent"
- Enjoyment of agricultural systems builds support for conserving and protecting these areas

Potential Areas for Improvement
- Dogs harassing livestock
- Trampling of crops and hayfields
- Visitors leaving gates open and/or cutting fences and gates

3.5.5. Cultural Resources
What's Working?
- Low levels of vandalism
- Low levels of collection

Potential Areas for Improvement
- Isolated vulnerable sites

3.6. Critical Concerns
The condition analysis revealed many areas for potential improvement. VPAC recognizes that these problem areas vary in terms of their breadth and their levels of impact. In all cases some human activity or lack of maintenance is responsible for creating unacceptable conditions.

We discussed the condition analysis during several meetings and held a public meeting to gather input from interested stakeholders. We accept that there is conflicting research regarding some of the impacts and that the rankings represent averages with spatial variability. For planning purposes, however, we agree with the condition analysis and rankings as shown.

Critical Concerns	Overall Ranking
Behaviors of some dog guardians	High
Limited maintenance	High
Walking off trails (undesignated trail creation)	High
Limited public dialogue & lack of trust in public process	High
Walking off tread (braiding/widening)	Medium
Concentrated high visitor use	Medium
Inappropriate trail design, construction or maintenance	Medium
Behaviors of some cyclists	Medium
Behaviors of some equestrians	Low
Illegal collecting	Low
Insufficient customer demand for transit	Low
Visitors leaving gates open	Low
Vandalism	Low

4. OBJECTIVES & RECOMMENDED STRATEGIES

From our shared understanding of conditions and our analysis of critical concerns, we developed the following five objectives and associated strategies. We recommend that the Open Space Board of Trustees invite extensive public comment on the details of implementation.

4.1. Reduce Conflicts between Visitors and Natural, Cultural, and Agricultural Resources

4.1.1. Strategy: Management Zones
Establish management zones throughout the OSMP land system, sorting lands by the criteria below and assigning them as: *Sensitive and Protected, Natural, or Passive Recreation Zones* (see below).

We recommend a zone management system, because we recognize that different areas offer different natural, agricultural, and cultural resource values, as well as different recreational values. Some resources are more rare, fragile, or sensitive to the impacts of visitor use, whereas others are more common and less vulnerable to those impacts. By protecting and preserving the sensitive resources in some areas, and allowing more intensive visitor use in other areas, OSMP can achieve its multiple purposes stated in the City Charter.

Although VPAC is not identifying specific properties, we recommend that the areas be designed to simplify visitor understanding, increase the likelihood of compliance, and avoid a myriad of complex regulations for small, intermingled areas. Further, we recommend the zones have large acreages and use prominent geographic features or trails as boundaries. We recommend that management zones be implemented based on best currently available research and data, knowledgeable public input, and incremental change sensitive to traditional uses. We believe that management zone implementation discussions should be predicated on an underlying principle of balancing passive recreation access with resource preservation.

The following suggests criteria for classifying lands in appropriate categories, as well as a list of acceptable visitor uses for each zone. Below, we also suggest specific actions and policies, which OSMP could employ to achieve the desired management emphasis in each zone.

4.1.1.1. Sensitive & Protected Zones
Management emphasis
Place highest priority on resource protection and preservation. Provide an opportunity for visitors to have a quiet backcountry experience. Preserve opportunities for people to access relatively undisturbed natural systems.

Criteria (contains one or more of the following characteristics):
- Very high ecological value, such as critical wildlife habitat and/or travel corridors, rare or sensitive plant communities, or unique or fragile geological resources
- Riparian, wetland, and/or aquatic habitat areas
- Agricultural sensitivity or cultural/paleontological sensitivity
- Special education/interpretive areas
- Relatively large, intact ecosystems

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- Very good existing or potentially restorable land conditions

Recommended Management Actions & Policies
Visitor Uses
- Hiking **only**, and on designated trails only
- Scientific Research (off trail access for researchers who obtain a permit from OSMP)

Trails and Other Infrastructure
- Build trails to appropriate destinations consistent with infrastructure improvements (see Objective 4.4)
- Close and reclaim trails consistent with infrastructure improvements (see Objective 4.4)
- Make infrastructure improvements only to enhance protection of sensitive resources
- Restore areas impacted by visitor use

Education & Enforcement
- Limit group size to 15, unless by permit
- Provide guided educational hikes
- Close areas to public access or increase protective regulations seasonally or permanently where needed to protect or restore resources.
- Consider allowing visitation only during the day, if future evidence for excessive disturbance of habitat is related to night visitation
- Monitor resource conditions and visitor activities (See 5.4) for further discussion on Monitoring)

Benefits
- Eliminates multi-use conflicts
- Preserves opportunities for solitude and backcountry experience
- Preserves natural resources in a setting with limited human activity

Concerns
- Limits access for all uses other than hiking on trail (dogs, bicyclists, equestrians and climbers)
- May result in crowding on other trails or in other areas
- Areas with seasonal sensitivities should not be overly restricted at other times

4.1.1.2. Natural Zones

Management emphasis

Unlike the sensitive zone, which is focused on preservation, and the passive recreation zone, which is focused on passive recreation; this zone is to be managed as a mosaic of both very high value recreational destinations and also significant sensitive resources. The visitor-use priority is to provide opportunities for recreational activities that can only be enjoyed in unique sites where the topography or setting is right. Similarly, the preservation priority is to protect significant resources uniquely dependent upon sites within this zone. This zone provides some of the best opportunities for the community to actively participate in the stewardship of Open Space and Mountain Parks lands. For example, the climbing community will be encouraged to participate in building sustainable staging areas at the base of popular climbs. Monitoring is a particularly key element of this zone as there is the greatest potential for visitor use impacting sensitive resources.

Criteria (contains one or more of the following characteristics):
- High ecological value
- Good existing or potentially restorable land conditions
- Low intensity dispersed recreation use
- Unique recreational opportunities

Recommended Management Actions & Policies

Visitor Uses
- Hiking
- Scientific research
- Dog walking

Note: The VPAC could not reach consensus on this issue. Some VPAC members recommended the following:
- *Dog walking, with dogs on-leash and the possibility, in some locations, of allowing dogs off-leash under the conditions of the "voice-and-sight regulations"*

Other members recommend the following:
- *Dog walking, with dogs on-leash*
- Climbing where designated*
- Bicycling on designated trails*
- Horseback riding where designated*
- Paragliding/hang gliding where designated*

* Designated areas will be determined with public involvement

Trails and Other Infrastructure
- Build trails to appropriate destinations consistent with infrastructure improvements (see Objective 4.4)
- Close and reclaim trails consistent with infrastructure improvements (see Objective 4.4
- Working with the public, design, build and maintain sustainable access/egress trails which do not impact sensitive resources to climbs and launch sites
- Restore areas degraded by visitor use

- Encourage user groups to take responsibility for maintenance/construction of trails and facilities

Education & Enforcement
- Dog on-leash
- Encourage on-trail travel
- Require on-trail travel in sensitive areas
- Limit group size to 25 unless by permit, with a smaller group size for equestrians.
- Close areas to public access or increase protective regulations seasonally or permanently where needed, to protect or restore resources

Benefits
- Provides opportunities for activities that can only be enjoyed in unique sites while increasing the level of protection for sensitive resources in specific locations
- High potential to engender community-based stewardship

Concerns
- Complex to manage (communicate and enforce)
- Reduces access historically enjoyed by some user groups
- May result in crowding on other trails or in other areas

4.1.1.3. Passive Recreation Zones
Management emphasis
This area provides opportunities for a variety of passive recreational activities while minimizing visitor conflicts. These areas would be managed for sustainable visitor use.

Criteria
- Easily accessible, adjacent to neighborhoods
- Developed recreational areas such as trailheads, picnic shelters, scenic overlooks
- Established patterns of use
- Good diversity of recreational opportunities

Recommended Management Actions & Policies
Visitor Uses
- All passive recreation allowed in OSMP (not all areas are appropriate for all uses)
- Dogs in sight and under voice control with the possibility of some areas with dogs on leash and, to reduce potential visitor conflict, provide some trails with no dog or bike access

Trails and Other Infrastructure
- Provide infrastructure to reduce user conflict and maintain resource integrity, i.e. harden trails at muddy sites, better define trails at trailheads, etc. (see Objective 4.4)
- Improve parking areas for safety and aesthetics
- Improve and construct key trail connections and trails to desirable destinations which do not adversely impact resources

- Provide toilet facilities and trash containers at popular trailheads
- Restore areas degraded by visitor use
- Close and reclaim trails consistent with infrastructure improvements (see Objective 4.4)
- Provide special facilities to accommodate recreational uses such as climbing base platforms, differential trail clearance to support horseback use, access for people with disabilities, wildlife viewing platforms, bird blinds, etc.

Education & Enforcement
- Address crowding with information about other destinations and times of peak use
- Encourage people and pets to stay on designated trails
- Allow dogs off-leash in some areas if under voice and sight control (with the possibility of leash regulations)
- Encourage user groups to take responsibility for maintenance/construction of trails and facilities
- Close areas to public access or increase protective regulations seasonally or permanently where needed to protect or restore resources.
- Limit group size to 25 unless by permit, with a smaller group size for equestrians
- High ranger presence
- Trail head hosts

Benefits
- Welcoming to a wide variety and number of visitors
- Accessible natural areas
- Preserving what is already a high quality visitor experience

Concerns
- Potential for conflicts among users and crowding
- Costs of infrastructure improvements to accommodate future use

4.2.<u>Reduce conflicts among visitors</u>

This objective is closely related to the previous objective of reducing conflicts between visitors and natural, cultural and agricultural resources. We acknowledge that activities leading to some visitor conflicts also have impacts on natural resources that are addressed by the management zone strategy outlined above.

Conflicts among visitors to OSMP are increasing as more people use the land for more different activities (e.g., climbing, mountain biking, hang-gliding, dog walking, nature appreciation, horseback riding, etc.). Available data and public input indicate that a majority of visitor conflicts involve dogs and/or bikes.

The management zone strategy proposes limits on high-impact uses -- such as biking, climbing, horseback riding, and dog walking -- in certain ecologically sensitive areas, and the strategy reserves some areas without dogs or bikes in less sensitive areas. Recognizing that this key recommendation reduces recreational opportunities in some zones, and that this will be unpopular with some, we believe that our 10-year outlook and VPAC-1's guidance urge us to use the "precautionary principle," erring on the side of protecting the resources. We also believe that most people will support this concept once they understand why it's important.

Our strategy recommendations below rely upon effective implementation of management zones. We strongly reiterate that additional, well-managed and defined, meaningful public input is necessary to help define management zone boundaries.

4.2.1.   Strategy: Increase enforcement of existing rules, especially at popular trailheads.
Enforcement is our highest priority for immediate action to reduce conflicts. Public input to VPAC indicates broad agreement that existing rules can and should be far more effective with more ranger presence, more enforcement and stiffer application of fines for infractions (perhaps higher fines). Some believe that additional enforcement alone would eliminate most conflicts. We agree. We therefore recommend:

- Increasing ranger presence in general, especially at trailheads and heavily used areas
- Finding more resources for ranger presence and enforcement, either by reallocating existing resources or identifying new resources
- Investigating City policy changes necessary to capture revenues from tickets and fines issued on OSMP and return them to OSMP to offset enforcement/education costs
- Considering a policy encouraging rangers to give tickets, especially for high-impact infractions

4.2.2. Strategy: Popularize peer education & multi-use trail etiquette through trailhead hosts & "palm cards."

We recommend that OSMP staff work with stakeholders to popularize peer education. One suggestion is to support peer education by developing "palm cards" like the existing one for dog rules. These are quick, tear-off reminders of rules, fines for infractions, and reasons for rules (harmonious multiple use and resource preservation). Good examples have been provided by certain organizations.

As one example, BATCO handout describes yield etiquette (e.g., bikes yield to pedestrians and everyone yields to horses). Such a multi-use "harmony" handout would be a good palm card for Boulder OSMP. Other "palm card" topics might include a climber's handout on seasonal closures, impacts of social trails, and a bicycling handout reminding bicyclists of courteous multi-use etiquette.

We recommend that OSMP staff, with the assistance of user groups and through general publicity, recruit and train volunteer trailhead hosts to greet visitors, alert them to changed rules, and make available copies of the relevant "palm cards." Volunteers would offer information only at trailheads when people are beginning or ending their visit; they would not interrupt people on the trails and would not involve themselves in conflicts. Volunteers would also be trained to report conflicts or violations.

Bike Conflicts

Although we agree with the current prohibition against bikes in steep and fragile terrain and on relatively narrow trails, we also believe that trail connections should be considered, consistent with our other recommendations (zoning and trail infrastructure planning). The "alternate days" strategy below addresses bikes as well as dogs. The areas without dog, bike, and equestrian activities in the passive recreation management zone are also intended to increase safety and to reduce other conflicts with bikes.

Dog Conflicts

To the best of our knowledge, virtually no other public lands around the City of Boulder allow off-leash dogs aside from small, designated "dog parks". This situation causes a concentration of this use on OSMP lands. Based on available data and public input, we note that:

- Many responsible dog guardians and members of Friends Interested in Dogs and Open Space (FIDOS) have been helpful and articulate in expressing the interests of dog guardians. We acknowledge and appreciate the proactive work of FIDOS educating dog guardians about the need to be courteous trail users and good stewards on the OSMP.
- FIDOS reports that regular excrement ("poop") pickups and educational efforts have contributed to a significant increase of people cleaning up after their dogs. This shows the power of education and positive peer influence.
- We appreciate the thoughtful years of work by the former Dog Roundtable group who helped improve the Voice and Sight control standards now adopted as City ordinance. Its efforts to educate dog guardians about the standards are laudable and represent the kind of positive community collaboration and stewardship that we hope to encourage.

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- Responsible dog guardians support more enforcement and many are willing to pay a fee to continue the privilege of off-leash voice and sight control.
- Dog impacts are already unacceptable to many visitors, with the number of dogs and associated impacts increasing as visitation and population rise.
- The implementation of "voice and sight control" is commonly ineffective.
- Current levels of enforcement of dog regulations are inadequate.

4.2.3. Management zone strategy

Using the management zone strategy, we recommend the designation of areas where no dogs are allowed, areas where dogs must be on-leash and on-trail, and areas where dog guardians can continue to enjoy "voice and sight control" (off-leash, on-trail) hiking opportunities. We believe successful implementation of the management zones will require extensive public input, particularly about how, when, and where to restrict dogs. Hence, we further recommend, as part of the management zone strategy, a multi-year, phased plan to:

- Publicize the new zones
- Encourage voluntary peer education
- Reduce current dog impacts
- Make the voice and sight control regulations more enforceable

4.2.4. Evaluate the following strategy ideas

VPAC discussed the following strategies but did not reach consensus. Here are some strategies that might be considered (all gleaned from public input):

Demonstration project: voluntary "voice & sight control" licenses

Public input indicates support for this idea *and a willingness to pay fees* among some dog guardians. These people could be recruited (through advocacy groups) to serve as a "Pilot" test group to formulate details about such licensing. This voluntary opportunity would be widely publicized and marketed through FIDOS, temporary trailhead notices, Humane Society, veterinarians, etc. Currently, very few dog guardians obtain a City dog license because there is virtually no marketing or awareness of the requirement, no enforcement, and effectively no consequence for failing to license a dog. Dog guardians could be invited at appropriate opportunities (e.g., when licensing their dogs, upon graduation from obedience classes, and when visiting a veterinarian) to obtain a voluntary "Voice & Sight Control" license and highly visible tag – with identifying number – to be attached to a dog's collar when on OSMP. The license would be issued only subject to passing a "test" administered by an impartial party demonstrating that dogs and guardians exercise effective Voice and Sight Control.

> This idea is supported by public input to VPAC from dog guardians. Whether voluntary (initially) or mandatory (phased in), dog guardians would:
> - Pay a fee to license their dog with an identifying number,
> - Prove their dog's compliance with voice & sight commands,
> - Sign a dog etiquette "contract," and
> - Receive tools, training, and encouragement to help educate other dog guardians (possibly including "palm cards").

Mandatory "voice and sight control" licenses

When warranted by continued or increased impacts, enact policies to mandate "Voice & Sight Control" licenses for all off-leash dogs. Give warnings, then tickets. Fees and tickets would be quite expensive, but policies would allow "sweat equity" options for folks to give volunteer time in lieu of fees and fines (except in cases of egregious infractions, such as vicious dog attacks resulting in injury).

Higher fees for out-of-county residents

Consider charging higher fees for non-Boulder County residents to obtain a Voice & Sight Control license. If over-crowding creates unacceptable impacts, limit demand by only issuing licenses to Boulder County residents with required Voice & Sight testing. Use licensing and fine revenues to fund dog-related enforcement and education (fees structured like Recreation Center fees, cheaper for City residents).

Repeat offenders

This proposal addresses the problems with the dogs and guardians who threaten the privileges of responsible visitors. Dogs that have been "ticketed" for violating the existing ordinances would lose privileges. For example, after one offense dogs would be required to be leashed; multiple infractions (especially vicious) would result in those dogs being banned from OSMP lands.

Alternate allowed uses on different days.
Conflicts are inherent when dogs and mountain bikes both use the same trails at the same times. Consider enacting rules at over-crowded areas where bikes are allowed only on certain days of the week, while hikers (with or without dogs) are allowed on alternate days. This idea could also be incorporated into rules associated with management zones.

Universally require dogs to be on leash.
As last resort, and through on-going management zone public input process, require dogs to be on leash everywhere except designated dog parks and designated areas where dogs can plunge in water.

4.3. **Engender stewardship among Open Space and Mountain Parks visitors for natural, cultural and agricultural resources.**

VPAC public input meetings yielded thoughtful interest and enthusiasm for this idea, including detailed ideas from many members of the community. This objective relates to all other VPAC objectives, including preserving resources, reducing visitor conflicts, and, especially, improving the quality of public discourse and deepening the public trust in our management policies and practices.

This objective attempts to capture what we believe is our "common ground" -- the intangible but sacred privilege of community stewardship for public lands -- for future generations and ourselves. This objective aims to inspire visitors to become active, informed, and passionate stewards of OSMP resources.

Engendering stewardship means educating people about ecological interdependence, respecting biodiversity, and preserving habitat for current and future generations of humans and other species. This objective seeks to involve the community in adopting trails and preserving particular areas and resources.

We recommend the following strategies to engender stewardship:

4.3.1. Construct properly designed trials that engender stewardship
(See Trails & Infrastructure section below)

4.3.2. Expand and target education and outreach
All the high leverage strategies listed below emphasize "Leave No Trace" behaviors, including sticking to trails, getting muddy or staying out during wet conditions, and packing out trash; trail-sharing etiquette for hikers, dog guardians, equestrians, bicyclists, etc.; habitat-preserving behaviors consistent with "cohabitation," where humans learn to leave animals alone and respect their genuinely critical habitat, while habituating animals to feeling safe with respectful human visitation.

With the above caveats, we recommend the following specific actions:

- Enlist User-Group Volunteers and "Park Hosts". Work with user groups and the community to have regular, well-publicized meetings to raise awareness and to enlist volunteers as "park hosts" at high-use trailheads at peak times. Enlist volunteer naturalists to educate people at trailheads. Enlist volunteers to hand out "palm cards," model behaviors, and educate peers.
- Expand "Adopt-a-Trail" program. Encourage community groups and businesses to "adopt" trails to help with maintenance and stewardship education. Encourage stewardship activities, and reward them with publicity.
- Reach out to CU students, staff, and faculty for education and enforcement.
- Build on Junior Ranger Program success. Encourage adults to volunteer with Junior Rangers. Look for opportunities for Junior Rangers to do outreach through school events that reach both kids and parents (e.g., through City Youth Opportunity Grants).

- Enlist Neighborhood Liaisons. Set up neighborhood liaisons for OSMP near neighborhoods, especially those with organized neighborhood groups. Liaisons would publicize and organize volunteer and stewardship opportunities, such as trash clean-ups or trail hosting on holiday weekends. Coordinate with the City Manager's Office and neighborhood staff.

4.3.3. Improve signs at trailheads and along trails

Many signs need to be redesigned once the Visitor Master Plan is adopted. Signs should indicate management zones, the rules and regulations and penalties for infractions, the reasons for the rules, and special ecological-habitat interpretive information. Ideally, signs should change seasonally and give new information relevant to the season or impacts (e.g., a "report card" on stewardship for that trail area). Special emphasis should be given to "Leave No Trace" and "Get Muddy" messages.

4.3.4. Link trails to spread out use and avoid concentrations of user impacts

(Also see "Regionalism" and "Trails and Infrastructure"). Missing trail linkages are critical to create desirable "loops" and regional connections that could alleviate over-crowding from visitors using cars to access Boulder OSMP. Linkages designed through cooperative regional land management policies could disperse over-concentrated uses and provide a regional rationale for habitat and critical corridor preservation.

4.3.5. Develop the Habitat Restoration Program

VPAC recommends the establishment of the Habitat Restoration Program. We envision neighborhood, business, educational, and club groups working with OSMP to restore degraded lands. The concept is intended to be "low-cost" to the OSMP Department, with the primary item of value—labor—provided by the groups.

Habitat restoration is human activity to restore ecosystems and ecological processes to conditions that existed before undesirable disturbance. Restoration includes managing ecological processes and services that are important for ecosystem integrity and sustainable human use.

In addition to its ecological benefits, habitat restoration projects would bring with them the incomparable resource of people inspired to learn and to make a difference. These projects would provide education and engender stewardship through intensive engagement with OSMP lands.

The concept of habitat restoration projects is an appropriate complement to the valuable "Adopt-a-Trail" program. While "Adopt-a-Trail" focuses on maintaining and improving infrastructure; habitat restoration focuses on improving ecosystem health and public understanding of the services that healthy ecosystems provide. Nevertheless, concepts and goals embodied in Habitat Restoration (such as weed control) would become useful components of the "Adopt-a-Trail" program.

4.4. Maintain and Improve Visitor Trails and Other Infrastructure

Trails and trailheads provide visitor access to Boulder's OSMP. Proper location and siting of trails and trailheads are essential to engender responsible visitor use and a high quality visitor experience. After heavy use and years of impacts, such as the proliferation of social trails, the OSMP trail system needs evaluation and corrective measures. We recommend the development of a long-term plan for trails and trailheads, and a phasing plan to provide for trail linkages, loop systems, and access. The following process provides an ordered method of prioritizing trail systems improvements subject to available funding and public input about cost-benefit trade-offs, timing and priorities.

4.4.1. Trails planning and implementation
- Inventory needs for trail repairs, reroutes, closures, and designations. The existing Trail Inventory and Prioritization Report is a very good start. Review and update following the suggestions below.
- Working with stakeholders, prioritize repairs and new construction using criteria such as safety, erosion/resource impacts, cost, and capacity of trails to withstand increasing visitor use.
- Working with stakeholders, develop a phasing plan to address priorities and identify funding.
- The plan should emphasize maintenance of the existing infrastructure but also invest in the construction of new trails and connections.
- Implement as part of the annual budget process, leveraging other related strategies.
- Evaluate effectiveness of trail repairs, improvements and construction, document issues, methods, and outcomes.
- Propose follow-up actions and budget based upon success and failures

  VPAC acknowledges the invaluable service provided by Junior Rangers to the OSMP Department by maintaining a major portion of OSMP foot trails. The Junior Ranger Program instills a public land stewardship ethic, gets the job done and provides work and learning experiences for local youth.

4.4.2. Trailhead planning and implementation
VPAC sees trailhead redesign as a high leverage strategy to reduce impacts and visitor conflicts while improving sustainability and aesthetics. For VPAC's purposes, trailheads also include the first few hundred yards of the trail.
- Review all existing trailheads for functionality, serviceability, and conditions, and document through existing maps and photographs.
- Rate functional need and requirements of each trailhead.
- Prioritize the trailhead improvements (including funding for trail hardening near trailheads)
  o Develop a phasing plan to address costs and budgets
  o Evaluate effectiveness of trail repairs, improvements and construction, document issues, methods, and outcomes.

4.5. <u>**Improve the quality of public discourse regarding the implementation and refinement of the Visitor Master Plan, to deepen the level of public trust in the process**</u>

Although not included in staff's condition analysis, VPAC sees an important need for more meaningful public discourse, especially since Open Space and Mountain Parks merged. Improved interaction and communication would follow a clear process about how citizens can participate effectively in decision-making that affects visitor use. Currently, individuals and groups can comment very briefly at meetings of the Open Space Board of Trustees or communicate with OSMP staff. This limits communication to specific requests or problems. We urge ongoing opportunities for dialog and meaningful public planning.

We believe that public understanding of OSMP organization and operations is limited and that limited public understanding contributes to lack of stewardship and distrust of the public process. We suggest the following possible strategies to create more meaningful public discussion and to deepen the public trust in how decisions are made.

4.5.1. Management zone configuration
Ensure public input into the determination of the boundaries of the Management Zones.

4.5.2. Management zones and acquisition authorization
Specify the purposes and proposed management zone of new properties when the OSBT is considering an acquisition. The purpose and proposed zoning of new properties shall be articulated in the resolution approved by OSBT and City Council.

4.5.3. Passive Recreation Coordinator
Consider designating a 'Passive Recreation Coordinator' as a central point of contact to coordinate Visitor Master Plan implementation. High and increasing visitation and a myriad of visitor issues warrant assigning a staff person to serve as the central point for public contact and coordinator of staff liaisons.

4.5.4. Staff liaisons
Clarify roles of existing staff as liaisons for community groups. Existing informal staff relationships with user groups are highly productive—consider formalizing such liaison relationships and assigning one staff to each major group.

4.5.5. Public forums
Sponsor public forums to educate the public and address issues related to visitor use of OSMP. Community groups should be encouraged to participate in the planning, publicity and programs, like at the VPAC Open House to discuss the condition analysis.

4.5.6. Trailhead education
Develop opportunities for involving the general public such as trailhead education and Suggestions/Complaints opportunities. Rangers and volunteers at trailheads greet and educate visitors. Provide statistics and communicate the purposes and rationales of the rules. At locations where specific concerns exist, try to get members of an advocacy group to educate visitors (e.g., FIDOS representative greets people with dogs).

5. SUPPORTING IDEAS

The committee identified some recommendations that did not fit easily into the categories listed above. These are not specific strategies so much as "ways of doing business" and are provided to make suggestions about how to increase the capacity of the OSMP program or enhance the effectiveness of management.

5.1. Funding Ideas

Caring for what we have emerges as a major VPAC priority. Recognizing a vital need for more enforcement (ranger presence), more maintenance and more trail planning and construction – both for reclaiming (closing) social trails and for designing and building better trails to desired destinations--we recommend serious efforts, with high staff priority, to evaluate, improve, and implement strategies like these:

- Institute a fee structure including parking fees
- Offer local clubs and businesses "Adopt a Trail" opportunities where sponsors receive visible (but reasonable) recognition. Sponsorship would require accountability (and recognition) for maintaining discrete facilities.
- Initiate an annual "signature" fundraising event called "Open Space Days," (for discussion purposes). Use sophisticated publicity and marketing stressing the urgent need for funding to maintain our OSMP system at a high quality level. Build this event to the level of the Rubber Duck Race at the Boulder Creek Festival (benefiting Expand Program) – involve thousands, give rewards, let them work and get invested. Create "sweat equity" opportunities for entering.
- Explore creating an OSMP foundation (like Boulder Valley Schools Foundation), separate from public and tax revenues, to create a discretionary fund to maintain and preserve and educate stewards. Give grants like BVSF does for groups to adopt, maintain and fix adopted trails. The foundation would explore opportunities to collect donations.

5.2. Regional Approach

Successful open space programs such as the City of Boulder, Boulder County, and Jefferson County could work to encourage other communities to build their own open-space programs and thus provide their citizens with local passive recreational opportunities, thereby reducing the concentration of use on existing open-space systems. Regional collaboration is desirable and we encourage participation in future forums and regional meetings.

5.3. Demonstration projects

VPAC recommends that OSMP test possible broad-scale strategies through smaller pilot projects, before they are applied across the system. This approach will allow the department to focus its resources on techniques with demonstrated effectiveness and public acceptance. Demonstration projects are useful not only for infrastructure improvements, but also for other strategies and objectives, especially to test visitor acceptance, compliance, and education/signage needs.

Announce demonstration projects to the public through print media, posting plans at the physical site, and on a website. Implement solution(s) with a monitoring plan for documentation of

success or failure. In successful demonstration projects, carry solutions forward to other areas of the system or the entire system.

5.4.Monitoring

VPAC believes that rigorous science is crucial to good management decisions and preservation. Managing by zones plan will require a monitoring plan. VPAC endorses the current policies for permitting scientific research on OSMP lands, much of it addressing ecologic issues, and we encourage scientific research that includes monitoring conditions and changes over time.

Specifically, VPAC recommends continuing engagements with university and federal scientists for monitoring. OSMP should continue and enhance partnerships among local schools, research communities, and nearby universities to monitor and assess:

>   (1) health of natural resources,
>   (2) quality of the visitor experience,
>   (3) sustainability of infrastructure given current and projected visitor use,
>   (4) agricultural operations, and
>   (5) cultural resources.
>   Natural resources should be considered by separate ecologic zones, keyed to the management zones described above. Particular attention should focus on forested foothills, prairie grasslands and especially wetlands, riparian areas, and aquatic systems.

>   For each chosen category, a generic methodology can be used to monitor, involving:
>   (1) identification of "Key Factors",
>   (2) observations of "Indicators", which reflect the conditions of the Key Factors,
>   (3) selection of "Methods" which can be used to measure these conditions.

Methods currently used by OSMP staff and many other land-management agencies should be used for consistent measurements over time. As an example, in the forested foothills zone, the health of the ecosystem composition (a Key Factor) can be assessed by measuring the distribution and concentration of invasive, perennial and annual grasses (the Indicator for that Factor) that are measured by quantitative observations along trails and in areas of past grazing (the Method).

For management purposes, monitoring studies should emphasize the interactions among natural conditions, natural resources (physical and ecological), recreational uses, agricultural operations, and cultural resources. Along these lines, an important and challenging element in monitoring includes factoring together changing natural conditions and human impacts that may result in rapid deterioration of resources. An example, drawn from recent events of the severe drought of 2001-2002 followed by the wet fall, late winter, and spring of 2003, shows through qualitative observations (in places) that unabated grazing during the very dry spring of 2002 resulted in decimation of native vegetation. These places have been sites of aggressive invasion by exotic grasses and weeds. Heavy trail use in these areas has exacerbated the plant invasions along pathways.

Monitoring measurements should anticipate the unfolding and interacting impacts of weather/climatic conditions and human activities and describe their varied effects. Monitoring improves our ability to adjust management plans before irreversible or extensive damage occurs. Credible science and impartial research is crucial to convince and educate our public to act as responsible stewards.

Monitoring can help us assess current states or conditions (baselines) and departures from these states and conditions over time. Monitoring should focus on the interacting effects of human activities and natural changes to judge success of visitor management policies. Monitoring is the foundation of adaptive management—adjusting management decisions to changing conditions. As examples, monitoring that demonstrates ecological improvements might lead to additional recreational opportunities in an area, whereas monitoring that demonstrates ecological or land-surface deterioration, whatever the cause, might suggest restrictions of some recreational activities.

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