



Open Space and Mountain Parks (OSMP) Department

Eldorado Mountain / Doudy Draw Trail Study Area (TSA) Plan

December 8, 2006

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Open Space and Mountain Parks (OSMP) Department Eldorado Mountain / Doudy Draw Trail Study Area (TSA) Plan

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Guidance from the Visitor Master Plan

Guidance for the Eldorado Mountain / Doudy Draw Trail Study Area (TSA) Plan is provided by the Visitor Master Plan (April 2005). The Visitor Master Plan (VMP) sets goals that establish an overall framework for providing visitor services and protecting resources.

To achieve these goals, plan initiatives and management strategies were identified. Completing Trail Study Area Plans throughout the OSMP system was one of the strategies to provide a quality visitor experience while protecting natural and cultural resources. Trail Study Area planning involves assessing visitor access and resource protection needs and developing proposals for new sustainable trails and improvements, management activities for specific recreational activities, and special resource protection measures.

The Trail Study Area planning process includes the following steps:

- Inventory and assess natural, cultural, and recreational resources
- Assess existing visitor access and use patterns
- Identify desired visitor destinations, connections, and activities
- Identify and evaluate alternatives for trails, management activities, and resource protection
- Select the most desirable and feasible alternatives
- Adopt and implement the plan
- Monitor results and modify trail improvements and management activities as needed

Natural, cultural and recreational resources were inventoried by OSMP staff and detailed in the Eldorado Mountain / Doudy Draw Trail Study Area Inventory Report (February 2006). This report also presented information on visitor access and use patterns and identified desired destinations, connections and activities in the TSA.

OSMP staff, community groups, and interested members of the public identified alternatives for trails, management activities, and resource protection. The results of this process are presented in the Eldorado Mountain / Doudy Draw Trail Study Area Alternatives Report (May 2006). Both of these documents are available on the OSMP website.

The Eldorado Mountain / Doudy Draw Trail Study Area Plan presents recommendations for trails, recreational activities, and resource protection measures.

The Eldorado Mountain / Doudy Draw Trail Study Area (TSA) includes two Management Areas defined in the Visitor Master Plan. The Eldorado Mountain / Doudy Draw Trail Study Area Plan Map (Map 1) shows Visitor Master Plan management area designations, subareas used for inventory, analysis, and organization of the plan recommendations, and other public lands adjacent to the TSA.

The management areas and respective acreages include:

- Doudy Draw Natural Area (the area west of State Highway 93 and east of the Denver Water Department canal)—2,126 acres
 - Community Ditch Subarea (739 acres)
 - Flatirons Vista Subarea (809 acres)
 - Doudy Draw / Spring Brook Subarea (578 acres)
- Eldorado Mountain Habitat Conservation Area (the area west of the Denver Water Department canal)—1,033 acres
- Total area for the Eldorado Mountain / Doudy Draw Trail Study Area—3159 acres

Plan Vision for the Eldorado Mountain / Doudy Draw Trail Study Area

The Eldorado Mountain-Doudy Draw area is a part of the Great Plains grassland-Rocky Mountain foothills ecotone. This transition area from the high plains prairies to foothills forests is extremely valuable in Colorado. The natural diversity found here has attracted and supported hundreds of plants and animals as well as human inhabitants over many millennia. As more and more of Colorado's mountain front is lost to development, these foothills prairies and forests are more threatened and rare.

The Eldorado Mountain-Doudy Draw area is on the “wilder” end of the natural lands continuum found on Open Space and Mountain Parks lands. The Trail Study Area Plan for this area proposes to preserve a sense of “wildness.” The vision for this area is to maintain viable habitats for the native plants and animals in the area to live and for visitors to this special place to appreciate and enjoy.

This plan for the future of the Eldorado Mountain / Doudy Draw Trail Study Area charts out how opportunities will be enhanced for both recreational activities and resource protection. Constructing physically and environmentally sustainable trails can provide travel opportunities that visitors enjoy while allowing the natural ecosystem conditions and processes to be preserved and restored. In some cases, limitations on visitor travel and activities are necessary to adequately protect the high-quality resources.

The key to simultaneously enhancing visitor access and protecting resources is to provide a continuum of visitor opportunities and resource protection, where higher levels of recreational use are allowed in areas where visitor use impacts can be minimized, and where more limited visitor opportunities are provided in areas with higher ecological values. The intended use, design, and alignment of trails are matched to the specific setting. These details are critical to providing a quality visitor experience and protecting the most vulnerable resources needing a higher level of protection. With proper planning, both natural ecosystems and recreational opportunities can be sustained over the long term.

Trail Study Area Planning Goals

Visitor Experience / Recreational Opportunity Goals

- Provide high-quality visitor experiences based on a continuum of:
 - Degree of naturalness--from highly natural to more human-modified environments.
 - Ease of visitor access--from remote to close-in areas relative to where developed access points are.
 - Level of visitor use--from remote, low-use areas to easily accessed, higher-use areas.
 - Level of facility development--from minimal facilities designed for low-use levels to highly-developed facilities designed for high-use levels.
- Provide recreational opportunities for pedestrians, equestrians, bicyclists, dog walkers, paragliders / hang gliders and people with mobility impairment.
- Provide educational / interpretive opportunities for the Trail Study Area for natural and cultural resources and low-impact visitor techniques.

Visitor Facility Goals

- Locate, design, and manage trails and facilities that are physically and environmentally sustainable.
- Provide trails to major destinations, trail connections, and loop trail opportunities where appropriate.
- Provide additional vehicle parking at some locations.
- Close inappropriate undesignated trails.

Resource Protection Goals

- Protect rare, imperiled, and highly-vulnerable resources.
- Maintain and restore the high quality and natural diversity of plant and wildlife habitats.
- Prevent the spread of invasive weeds.
- Stabilize, protect and interpret cultural and historic resources.

Planning Context for the Trail Study Area

The Eldorado Mountain / Doudy Draw Trail Study Area contains exceptional ecological values that result from:

- A diverse mix of overlapping habitats and ecosystems that occur in the transition zone between the Great Plains and the Rocky Mountains, which supports a high level of diversity of plant and animal species and communities.
- Relatively intact ecosystems, including the large habitat blocks that are penetrated by few if any roads or trails.

- The larger landscape of protected public lands that are physically connected to the Trail Study Area and allow wildlife to travel unencumbered by barriers (from the high peaks to the plains).

The TSA offers opportunities for quality visitor experiences because of the combination of:

- A rich mix of different ecosystems that provides many different types of experiences; visitors can learn about and appreciate these ecosystems as they experience them.
- The high elevation gain from the prairie to the mountain peaks, which provides a diverse range of recreational opportunities and challenges.
- The feeling of remoteness (due to location and varied terrain).

Opportunities exist to enhance visitor access in the Trail Study Area by providing new sustainable trails to popular destinations and to lessen the impact of current visitor use on natural and cultural resources by eliminating undesignated trails and implementing special protection measures.

The Land: Cultural History and Natural Values

The Eldorado Mountain / Doudy Draw Trail Study Area has a rich cultural history. Aboriginal tribes lived in and roamed through the area prior to European settlement. Railroads, mining, farming, ranching, and rock climbing activities over the last 150 years have left a legacy that continues to the present. Archeologists and historians have identified many individual cultural sites in the TSA. Management actions are needed to protect and stabilize the cultural resources. Opportunities exist to interpret the cultural resources in the TSA to provide visitors with an understanding of history and an appreciation of how the human presence has changed over time.

Historical human use has left a legacy that continues today. However, current ecological conditions in the Eldorado Mountain / Doudy Draw Trail Study Area support many high-value habitat areas, rare native plant communities, and several threatened plant and animal species. The Trail Study Area is a diverse transitional area between the foothills and the plains. As such the area has high habitat values for birds and mammals. The wide expanse of continuous habitat is large and intact enough to support a large suite of wildlife species, some of which are sensitive to human presence and impacts and require large areas of habitat.

In the TSA the large matrix of forest, woodland, and grassland habitats connected by riparian corridors is able to support wide-ranging species such as elk, black bears, and mountain lions. Relatively rare butterflies associated with montane / foothill habitats and tallgrass habitats utilize this area.

The TSA includes extensive and diverse north-facing shrub communities along Doudy Draw and Bull Gulch, forest meadows and outwash mesa tops with xeric tallgrass, and riparian areas for Doudy Draw, Spring Brook, and other drainages. The area also includes several pockets of forest interior habitat and mature forest, which harbor wildlife species dependent on these rare habitats (such as northern goshawk, flammulated owl, and hairy woodpeckers).

The grasslands in the TSA are part of the largest complex of native grassland habitat in Boulder County and provide habitat for grassland nesting birds, wintering elk, hunting raptors, and many other species. The TSA also includes a large active prairie dog colony, which is part of a designated Prairie Dog Habitat Conservation Area.

Unlike many other parts of the OSMP land system, the lands that surround this Trail Study Area are mostly publicly protected natural areas (other OSMP lands, state parks, national forest, and county open space), and the adjacent private land uses are low intensity. Consequently, the ecosystems in this Trail Study Area function more naturally than those in closer proximity to more intense or interspersed human land uses. The Boulder City Council recognized the unique natural qualities of the Trail Study Area and directed that OSMP: closely monitor this area to ensure that any undue impacts do not occur as a result of visitor use; and develop and implement a restoration plan for this area to ensure that the health of the ecosystem is restored.

The high-value natural resources in the TSA require management actions to protect and restore them. Opportunities exist to interpret the natural resources in the TSA to provide visitors with an understanding and appreciation of them, and thereby foster visitor stewardship of the resources.

The larger Eldorado Mountain / South Boulder Creek area is a place that both residents and non-residents feel connected to because they highly value its special cultural, natural, and recreational qualities. People have demonstrated a deep commitment to protect the area from the incursion of new development and resource extraction activities. Over the last 30 years, citizens have organized against various proposals for development, rock quarrying, hard rock mining, radio towers, and hydro-electric power facilities. People who love the place have been successful in defeating these various proposals. They have also been successful in advocating expansion of Eldorado Canyon State Park and OSMP's acquisition of the extensive land holding that would otherwise have been further mined and developed for residential subdivisions. Citizens have also contributed countless hours toward the reclamation of the Conda Mine on the front side of the mountain backdrop. Planning for the Eldorado Mountain / Doudy Draw Trail Study Area greatly benefits from the continuing contribution of those who love this place.

Existing Recreation Activities

Many different opportunities exist to recreate in a variety of natural habitats in the Eldorado Mountain / Doudy Draw Trail Study Area. The levels of visitor use by pedestrians, mountain bikers, equestrians, and dog walkers is moderate but has increased steadily over time in the TSA, fueled by its "discovery" by new visitors. The estimated visitor use in the TSA is 90,000-100,000 visits per year. Visitors enter the TSA at three major access points (Doudy Draw Trailhead on S.H. 170 / Eldorado Springs Drive, Flatirons Vista Trailhead on S.H. 93, and the County Road 67 parking area) and several other lesser-used locations. The popular Community Ditch Trail and Doudy Draw Trail, and the lesser-used Fowler Trail, serve the northern and eastern parts of the TSA.

The Eldorado Mountain / Doudy Draw TSA is located on the outskirts of the Boulder Valley and requires most visitors to drive to this destination. For visitors using the Doudy Draw and Community Ditch Trails, they are likely to see many other visitors during weekends, weeknights,

and other busy times. For visitors traveling off-trail in the western and southern portions of the TSA, which are more remote and currently do not have any designated trails, their visit will feel more like a backcountry experience where few other visitors are seen much of the time.

A significant amount of off-trail visitor travel occurs in the southern and western parts of the Doudy Draw Natural Area and in the Eldorado Mountain HCA, on a network of undesignated trails created by users or on old roads. This off-trail travel has been expanding and dispersing in areas not served by designated trails, as indicated by the expansion of the undesignated trail network over time. This off-trail travel has caused significant natural resource damage. Most of the undesignated trails are located along and north of the Community Ditch Trail, south of the Doudy Draw Trail (west and south of the Flatirons Vista Trailhead), and the area around Lindsay Pond. Undesignated trails are used by climbers traveling to the Mickey Mouse Wall in the HCA, several of which cross private property or the railroad right-of-way. This climbing area is accessible only part of the year and is not heavily used. Mickey Mouse Wall has a raptor closure from February 1 to July 31.

Current dog management on the Community Ditch Trail and the Doudy Draw Trail is on-leash or voice-and-sight control, except for a portion of the Doudy Draw Trail that is seasonally on-leash because of bear protections. On the Fowler Trail from County Road 67 and the segment that connects to the Rattlesnake Gulch Trail, dogs are required to be on-trail and on-leash. Since the mid-1990s, dogs have been prohibited in the western portion of the Doudy Draw Natural Area (west of the Doudy Draw Trail to the Denver Water Department Road) and the Eldorado Mountain HCA.

Plan Benefits

The Eldorado Mountain / Doudy Draw Trail Study Area Plan provides the direction to maintain or improve the quality of visitor experience, visitor access opportunities provided by trails and trailheads, and the integrity of natural and cultural resources. Some of the things that the plan provides are:

- **Improved Accessibility for Visitors to Destinations and Connections**

New sustainable designated trails will significantly enhance on-trail visitor accessibility in the southern and western portions of the Trail Study Area. Sustainable, multiple-use trails in desirable locations will be provided in currently un-trailed areas. Internal and external trail connections to desired destinations will increase recreational opportunities and options for long-distance travel. A number of new trail loops will provide diverse travel opportunities of different lengths, challenges, and experiences.

Existing designated trails in the TSA are 7.2 miles. New designated trails in the TSA are estimated to be 8.7 miles (more than doubling existing miles). These new designated trail miles include construction of 7.6 trail miles and designation of 1.2 trail miles of connecting roadway links (i.e., the road from the C.R. 67 gate / beginning of the Fowler Trail and the Denver Water Department road). Some of the new trails follow portions of

existing undesignated trails as modified to improve sustainability. The specific new designated trails include (see Map 1):

- Doudy Draw-Flatirons Vista Trail Loops (2.7 miles, Map 1, Location # 7)
- Fowler to Doudy Draw Trail (1.8 miles, Map 1, Location #13)
- Doudy Draw-Spring Brook Loop Trail (1.8 miles, Map 1, Location # 14)
- Post Office Trail (.1 mile, Map 1, Location # 17)
- Mickey Mouse Access Trail (.5 mile, Map 1, Location # 24)
- Goshawk Ridge Trail (1.8 miles, Map 1, Location # 25)
- Total new trails (8.7 miles)

- **Opportunity for A Unique “Wilder” Visitor Experience**

An opportunity for a more remote and rugged experience will be provided in the TSA, where the natural qualities of the ecosystems are preserved and maintained, especially in the Doudy Draw / Spring Brook subarea and the Eldorado Mountain HCA. In these areas, protection of wildlife habitats is emphasized, and sustainable trails are located to allow visitors to experience and appreciate the highly valuable and unique natural features. In the Eldorado Mountain HCA, a backcountry experience will be maintained by providing low trail density, more primitive trails, and a lower intensity of visitor use. Fewer visitors and slower travel in the HCA will provide the opportunity for solitude and contemplation.

- **Changed and Improved Opportunities for Various Passive Recreational Activities**

Existing multiple-use trails in the TSA (allowing pedestrians, mountain bikers, and equestrians) include 2.7 miles out of the total existing 7.2 miles (38%). The total multiple-use trail miles will now include 13.6 miles out of the total 15.9 miles (86 %). This increase is accomplished by adding new multiple-use miles and allowing mountain bikes on the entire Doudy Draw Trail (adding 4.5 miles).

Hiking

Trail opportunities for hikers and runners will be substantially expanded with new trails and loop trails in desirable locations serving multiple destinations. Internal and external trail connections will increase recreational opportunities and options for long-distance travel. Hiking off-trail will be possible under the HCA off-trail permit program with some limitations.

Mountain Biking

Opportunities for mountain bikers will be expanded: bike access from the Fowler Trail to OSMP trails east of Doudy Draw to the Flatirons Vista Trailhead and Marshall Mesa area trails; bike access from OSMP to Eldorado Canyon State Park and its challenging Rattlesnake Gulch Trail (under an agreement between OSMP and the State Park); stacked loop trail opportunities in the Doudy Draw / Spring Brook and Flatirons Vista subareas; and new bike access to the Doudy Draw Trail (along with existing bike access on the Community Ditch Trail). These trails provide a diverse set of riding opportunities that vary by trail length, challenge, and experience. Providing new bicycle trails west of

Broadway / S.H. 93 is a major departure from the long-standing City Council policy of prohibiting new bicycle trails in this area.

Equestrians

Horseback riders will enjoy additional trail opportunities provided by new trails, trail loops, and trail connections. Off-trail travel will be allowed in parts of the Doudy Draw Natural Area, but not in the Doudy Draw / Spring Brook subarea in the Natural Area or the Habitat Conservation Area. New equestrian pull-through parking will be provided at the Flatirons Vista Trailhead.

Paragliders / Hang Gliders

Access to paragliders / hang gliders will be re-opened in the Flatirons Vista Mesa area, under conditions intended to adequately protect the resources and ensure compatible use with other visitors (see recommendation B.3). This site will provide an important opportunity for flying activities given its north and northeast wind aspects. A two-year trial demonstration will provide the user group with the opportunity to prove that this area can support sustainable flying activities and thereby gain long-term designation.

Dog walkers

Dog walkers will have expanded access. Dog walkers will be provided voice-and-sight opportunities with new trails in the Flatirons Vista subarea. Dog walkers will now be able to access the Doudy Draw / Spring Brook subarea (on-trail and on-leash), which is not currently allowed except for the Fowler Trail; and they can make the trail connection from the Flatirons Vista Trailhead to the Doudy Draw Trail and new trails east of Doudy Draw to the Fowler Trail. No-dog opportunities will be provided for pedestrians in the HCA on the Mickey Mouse Access Trail and the Goshawk Ridge Trail. The Visitor Master Plan commits OSMP to expand no-dog opportunities on some trails, with emphasis on new trails to meet this community desire.

- **Improved Trailhead Access**

The Doudy Draw and Flatirons Vista Trailheads will be improved with delineation of parking spaces, safer pedestrian access (Doudy Draw), and new pull-through horse trailer parking. The C.R. 67 parking area turnaround area will be improved and on-street parking spaces delineated.

- **Protecting Valuable Resources**

A high level of protection for valuable and fragile resources will be provided. Trails will not be built that would critically fragment large habitat blocks or create impacts to highly sensitive areas. New trail alignments and designs will be selected to minimize resource impacts. Closing 14 miles of undesignated trails will allow repair of damaged habitat and restoration of larger undisturbed habitat blocks. New trail alignments and designs will provide an incentive to stay on the designated trail. Dog management requirements in the Doudy Draw / Spring Brook Area (restricted to on-trail on-leash on the Fowler to Doudy Draw Trail, no dog access on the Doudy Draw-Spring Brook Loop Trail, and no off-trail

dog access) and the HCA (no-dogs) will provide a higher level of resource protection than is normally provided in the Natural Area and the HCA, respectively. Visitor access closures will be used to protect vulnerable resources at key times (e.g., seasonal bear feeding, cliff-nesting birds, ground-nesting birds, and potentially others), and Lindsay Pond will be legally closed to visitors to protect unique and rare aquatic resources. A higher level of resource protection will be provided by OSMP strongly encouraging dogs to be on-leash in prairie dog colonies and an extension of seasonal dog on-leash requirements to protect foraging bears in the fall (Doudy Draw Trail).

The proposed recommendations in this plan could result in unintended impacts to wildlife and plant species and communities. OSMP staff will work closely with community groups and researchers to design and implement monitoring projects to provide baseline information and detect unintended impacts early. These efforts will ensure impacts to important resources are avoided, minimized and mitigated.

Public Input and How Key Questions Were Handled

Two planning issues and choices are highlighted by this TSA, for which public input was diverse and decisions required a balancing of the issues and concerns.

Visitor Access Opportunities and Habitat Protection in the Eldorado Mountain Habitat Conservation Area

The Visitor Master Plan designates Habitat Conservation Areas with a management emphasis on resource protection. The HCAs represent the largest, relatively least human-altered blocks of wildlife habitat remaining in the OSMP system. Some visitors desire to visit these habitat areas, both to get away to more remote destinations and experience the remnants of functioning natural ecosystems still present in HCAs. OSMP seeks to provide visitor opportunities in HCAs with a minimum number of low-impact trails designed to accommodate low levels of use and locating these trails in places that will protect the natural functioning of these wildlife habitats. This approach is designed to minimize additional human influence and impacts on the high quality habitat that remains. Many wildlife species are highly sensitive to human presence and will be displaced or disappear if human disturbance is intolerable for them.

The Eldorado Mountain HCA has unique attributes that contribute to its high value as native plant and animal habitat. The HCA is located in the ecotonal transition zone between mountain and plains where a high level of biological diversity still remains, is connected to large swaths of other protected public wildlands, is remote from development, and contains a large un-trailed and un-roaded habitat block. Because of these attributes, many people consider this HCA as one of the best places in the OSMP land system to preserve and restore habitat for wide-ranging grazing animals and predators that prey on them, forest interior habitat specialist species, and many species that are especially shy or vulnerable to human impacts. Many people have suggested that the HCA offers a unique opportunity to preserve a refuge for wildlife to live, move, and reproduce with little interference from humans traveling either on-trail or off-trail. They

prefer that no trails be designated or constructed in the HCA, in order to not degrade its habitat quality or natural processes, and they do not want any off-trail travel in the HCA.

At the same time, many public comments expressed the desire to travel on multiple-use trails in the Eldorado Mountain HCA and travel off-trail under the HCA off-trail permit program. Many recreational activities are desired in the HCA: hiking and running, rock climbing, bicycling, horseback riding, wildlife watching and nature study, and quiet contemplation. Many people want more trails than what is proposed in the plan. In contrast to what the plan recommends, many bikers want to be able to ride the challenging steep terrain in the HCA and many equestrians want the option of riding off-trail under the HCA off-trail permit program. Many dog walkers want to hike and run in the HCA with their dogs.

The plan recommends visitor access in the HCA be provided by building the Goshawk Ridge Trail (pedestrians and equestrians, no bikes) and a spur trail to the Mickey Mouse Wall climbing area (pedestrians only), while minimizing the resource impacts of visitor travel. These trails will be designed to be physically and environmentally sustainable and to preserve the special qualities of the Eldorado Mountain HCA—both as a place where visitors can feel they can get away and experience remote and rugged areas and where wildlife can feel safe and secure and can thrive without a significant amount of human presence and impact.

The Goshawk Ridge Trail and the Mickey Mouse Access Trail will be located in the eastern portion of the HCA, leaving most of the HCA un-trailed. These trails will be designed to focus visitor travel to the trail and contain visitor resource impacts to the trail corridor (i.e., the area of “trail effects”). OSMP estimates that over three thousand annual visits occur in the HCA, and the impacts of this unmanaged dispersed visitor travel are evident. While building the trails may increase the overall level of visitor use, it is expected that resource impacts will be lessened by concentrating the impacts rather than dispersing the impacts, which would occur with dispersed off-trail travel under the HCA off-trail permit program. The expectation is that most visitors to the HCA will travel on the new trails, thereby reducing the number of off-trail visits. In addition to reducing overall impacts, the proposed new trails will provide a unique primitive backcountry trail experience for HCA visitors.

Some recreational activities will be limited in the HCA. Bikes will not be allowed in the HCA. Equestrians will be required to stay on trail in the HCA. Off-trail equestrian travel will not be allowed under the HCA off-trail permit program to minimize impacts on steep slopes and erosive soils. Dogs will continue to be prohibited in the HCA and some areas immediately to the east in the Douby Draw Natural Area.

Dog Management Opportunities Provided in the Trail Study Area

In this TSA a continuum of recreational opportunities and resource protection is proposed (see Map 4 that shows existing and proposed dog management for this TSA). The “front-country” areas closer to development, roads, and trailheads are where a higher level of

visitor use is planned; these areas will be accommodated with higher trail densities. The “backcountry” areas that are more remote and removed from human development and easy access are where a lower level of visitor use is planned; these areas will be accommodated with lower trail densities and less-developed trails. The areas that contain natural resources that are most sensitive to human impacts will be provided a higher level of protection. Eldorado Mountain HCA and Doudy Draw / Spring Brook subarea contain concentrations of rare and sensitive natural resources that require careful attention to protect them.

Dog management in the Trail Study Area is in line with this continuum of recreational opportunities and resource protection. Dog management strategies are proposed to be more protective and restrictive when one moves from east to west in the Trail Study Area. Specifically, this continuum provides that dog management east of the Doudy Draw Trail offer the option of voice-and-sight control; west of the Doudy Draw Trail to the Denver Water Department (DWD) Road, dog management would be on-trail, on-leash on the Fowler Trail and the Fowler to Doudy Draw Trail (but dogs prohibited off these trails); and west of the DWD Road (in the HCA) dogs would be prohibited. This continuum for dog management is intended to offer the opportunity for dog walkers to travel across the OSMP system and connect with Eldorado Canyon State Park while still providing a high level of protection for sensitive areas and resources.

Public input was diverse on dog management in the TSA. Some people have advocated that the current prohibition of dogs west of Doudy Draw be continued to provide extra protection for the relatively abundant wildlife that persist, which would mean no dogs would be allowed in the HCA or any of the trails in the Doudy Draw / Spring Brook subarea. Other people feel that only the “default” management strategies as identified in the Visitor Master Plan should be implemented for Natural Areas (voice-and-sight control) and HCAs (on-trail and on-leash).

The plan recommends continuing the current dog prohibition in the HCA and most of the Doudy Draw / Spring Brook Area. This dog prohibition is intended to continue these areas as a refuge for wildlife that need minimal disturbance from humans and are vulnerable to impacts from dogs. Some people have expressed the opinion that allowing any dogs in the Spring Brook area, even if they are restricted to on-trail and on-leash on two trails, would be a significant harm to the wildlife. The plan provides limited dog access on-trail and on-leash (no off-trail access) while also providing dog management strategies for the Doudy Draw / Spring Brook subarea that are more stringent than would normally be employed in Natural Areas or HCAs.

If the compliance level for dogs to be on-trail and on-leash for the two trails in the Doudy Draw / Spring Brook subarea is high, then protection for wildlife can be maintained. The plan proposes that a standard of 85-90% for compliance be set. Monitoring would assess whether or not this standard is met over time. Given these results, OSMP will be able to decide if changes in dog management need to be implemented to ensure that wildlife and other sensitive resources are adequately protected. Changes could involve increased

education and enforcement efforts to improve compliance or restricting dogs from trails in the Doudy Draw / Spring Brook subarea in the future.

Eldorado Mountain / Doudy Draw Trail Study Area

Recommendations

A. General Recommendations for the Trail Study Area

Map 1 identifies the location of recommended trail and trailhead improvements, management actions for specific recreational activities, and special resource protection measures.

A.1 Implement major maintenance projects for trails and trailheads to improve physical and environmental sustainability and the visitor experience.

Achieving and maintaining the desired conditions for trails and trailheads requires periodic maintenance. The identified projects will correct existing trail deficiencies. They involve retrofitting the existing Doudy Draw, Community Ditch, and Fowler trails to reduce soil erosion, trampling of vegetation, and spread of weeds. Examples of these projects include improving the Doudy Draw Trail switchback and creek crossings to eliminate erosion and provide easier access, and re-routing the connection to the Doudy Draw Trail from the Flatirons Vista Trailhead to make it more sustainable.

A.2 Manage undesignated trails in the Eldorado Mountain Habitat Conservation Area (HCA) and the Doudy Draw Natural Area (NA).

Map 3 identifies currently known undesignated trails and classifies them by type and priority of management actions, including, (1) designate; or (2) close and re-vegetate. Authorized vehicle accesses are also classified as, (1) open to non-motorized visitor access; or (2) visitor access by permit only (applies to Habitat Conservation Areas). Appendix 1 provides the context for recommended management actions and a description of definitions and methods used in classifying undesignated trails by management action.

A number of undesignated trails and old roads exist in the Eldorado Mountain HCA and Doudy Draw Natural Area from railroad and canal building, settlement, mining and other activities. Updated mapping of undesignated trails in the Trail Study Area show an estimated 20 miles of undesignated trails and 4 miles of authorized vehicle accesses open to non-motorized visitor travel (compared to 7.2 existing designated trail miles).

Some of these undesignated trails (5.3 trail miles) will be designated with the construction of new sustainable trails in the same general location (i.e., the Mickey Mouse Access Trail, the Goshawk Ridge Trail, and the Flatirons Vista Trail Loops). Others will be closed to visitor access and restored to natural conditions (14 trail miles) where they are not needed as part of the trail system and are not environmentally sustainable. Some of the undesignated trails are located on roads used for official

purposes that are open for visitor use and others will be retained for limited visitor access under the HCA off-trail permit program (4.1 miles).

Closure and restoration of undesignated trails will be scheduled before or simultaneously with development of new trails. Monitoring activities will occur to detect the creation of newly forming undesignated trails early so they can be closed and restored effectively.

In the Douby Draw Natural Area, strategies will be evaluated and implemented to minimize undesignated trails created by cattle. Preserving historic agricultural activities in the Boulder Valley is one of the defined purposes of OSMP lands, and OSMP seeks to preserve this activity in the eastern portion of the Douby Draw Natural Area, while providing quality recreational opportunities. Cattle grazing can create undesignated trails that damage natural resources. Cattle-created undesignated trails in the Douby Draw Natural Area create a situation where visitors sometimes travel on these undesignated trails causing additional resource damage.

OSMP will implement ways of minimizing cattle trails and allow re-vegetation to occur to reduce resource impacts and visitor use of cattle trails. Some of these strategies may include: 1) develop a multi-year grazing rotation that provides adequate rest periods (both duration and seasonality) to allow the vegetation to recover; 2) reduce cattle trailing by moving salt supplements; and 3) redevelop the well on the mesa top near S.H. 93 (south edge of the Matterhorn open space property) for cattle and remove the existing water tank on the steep hillside on the West Rudd property west of S.H. 93.

A.3 Implement Best Management Practices for trail construction and maintenance.

Best Management Practices (BMPs), which are currently under development, will guide the selection of trail locations, design, construction, and maintenance. BMPs are intended to support both physical and environmental sustainability for trails and facilities. Physically sustainable trails hold up over time with minimal regular maintenance. Environmentally sustainable trails minimize impacts on the natural environment. Location and design of trails, using Best Management Practices, provide travel routes that encourage users to stay on-trail and minimize degradation of habitat.

A.4 Provide opportunities for trails and facilities which are accessible to mobility-impaired persons.

OSMP is committed to providing trails and trailheads that meet the needs of mobility-impaired persons in appropriate places. In this Trail Study Area, constructing new trails and retrofitting existing trails and trailheads can provide facilities that are accessible. Some of the potential accessibility improvements include:

- Retrofitting the existing Douby Draw and Community Ditch trails for accessibility for the mobility-impaired.
- Providing a trail link from the Flatirons Vista Trailhead to the Douby Draw Trail that is accessible for the mobility-impaired and provide parking spaces for vehicles that transport mobility-impaired persons.

- Providing trail grades and surfaces which are accessible for the mobility-impaired on the Doudy Draw-Flatirons Vista Trail Loops.
- Improving the trail surface on the Fowler Trail from the gate at County Road 67, to make it a more accessible trail.

A.5 Stabilize, restore, protect, and interpret cultural and paleontological resources.

The Eldorado Mountain / Doudy Draw Trail Study Area contains a rich collection of cultural and paleontological resources. Artifacts from prehistory and from mining, railroad building, and canal building activities are located in many areas. Interesting geological and fossil features are present. These resources typically need stewardship to maintain and protect them.

Cultural and paleontological features also provide opportunities for OSMP visitors to learn about the rich human and natural history of this area of the Boulder Valley. In the Trail Study Area plan, the location of cultural and paleontological resources has been taken into account in formulating trail recommendations. Additional planning will be undertaken to adequately protect, restore, and interpret important cultural and paleontological resources.

A.6 Control jointed goatgrass and other noxious weeds in the TSA.

Weed management activities are extremely important as part of the overall program to construct and maintain trails. Integrated weed control methods will be implemented before and after trails are built, and on an ongoing basis to ensure effective weed management. Ongoing monitoring of weeds will be key to prevent further weed invasion, gauge the degree of progress in implementing weed control strategies, and adjusting weed control efforts.

Jointed goatgrass was recently discovered along Doudy Draw Trail south of the trailhead and along the Fowler Trail. Weed management began in these areas in 2006. However, current methods for controlling jointed goatgrass in heavily used recreational areas on OSMP have not been successful. To control and prevent the spread of jointed goatgrass, visitors will be asked to cooperate by staying on designated trails and complying with a possible dog on-leash requirement in goatgrass infested areas. In addition, temporary trailside fencing may be installed, undesigned trails in the area may be closed, appropriate herbicides may be applied, native grasses will be seeded, and Best Management Practices for trail construction will be followed. Pre-treatment and post-treatment monitoring will guide ongoing jointed goatgrass control activities.

A.7 Identify and provide opportunities for visitors to learn about and appreciate important natural and cultural features through interpretive guided hikes, interpretive signs, brochures, and other materials.

Interpretive opportunities will provide significant benefits and add to the enjoyment of the Trail Study Area. This TSA contains a wealth of local sites and scenic vistas where

interpretation can provide important stories and information about natural ecosystems, wildlife, geology, fossils, history of Native American and Euro-American occupation and settlement, past and current land use, and current land management and restoration activities.

Different methods and venues for interpretation will be employed, targeted to the specific types of resources to be interpreted. In some cases, interpretation will occur on-site with guided hikes or interpretive signs at important viewpoints or places where the resources occur. In other case, interpretation will occur with information provided off-site, through trailhead signboards, brochures, or website material.

As detailed planning is undertaken for new trails and trailhead improvements, interpretive opportunities will be identified and implemented. In some areas, providing short destination spur trails will be considered.

A.8 Provide sufficient resources for effective enforcement of visitor use regulations in the TSA.

To provide and maintain acceptable conditions for natural and cultural resources and for the visitor experience, OSMP will devote sufficient management resources to enforce regulations dealing with seasonal and permanent visitor access closures, use restrictions for specific recreational activities, and on-trail, on-leash, and no-dog requirements. Adjustment of enforcement activities will occur over time, as needs change and levels of visitor compliance evolve.

A.9 Acquire available adjacent undeveloped properties for OSMP purposes.

Acquiring properties adjacent to OSMP properties will further protect lands around Eldorado Canyon State Park, Boulder County Parks and Open Space, Jefferson County Open Space, and OSMP. Land acquisition could provide a larger protected habitat block and preserve the whole Bull Gulch drainage, improve management of climbing at the Industrial Wall and associated raptor protection areas, and preserve many sensitive resources. It could also expand recreational opportunities and provide connections to other public lands.

A.10 Establish appropriate monitoring and research in the Trail Study Area.

Monitoring will be used to determine the effectiveness of management strategies to improve conditions where necessary and maintain acceptable conditions elsewhere. Measuring the effectiveness of strategies involves several steps including identifying the range of acceptable conditions, selecting indicators that will be measured, developing protocols for measuring those indicators, and then implementing the monitoring on the ground. Effectiveness monitoring often requires the collection of baseline data to formally document existing conditions before a strategy is put into action. Monitoring provides the Open Space and Mountain Parks Department with information not only to

assess how well the TSA plan strategies are working, but also to refine the nature, location, or extent of implementation.

Specific monitoring actions proposed for this TSA include:

- Trial Demonstration of Specific Recreational Activities
Three activities are proposed on a trial basis in selected areas; paragliding / hang gliding in the Flatirons Vista Mesa area, mountain biking on the Fowler Trail on OSMP and Eldorado Canyon State Park lands, and on-trail equestrian travel in the HCA. Monitoring will help determine whether these activities can be managed successfully and impacts on resources and other visitors are within an acceptable range. After the trial demonstration periods, decisions will be made on whether to allow these activities on a long-term basis.
- Dog Management in the TSA
The plan proposes to prohibit dogs in the HCA, prohibit dogs generally west of the Doudy Draw Trail but allowed on-trail and on-leash on the Fowler to Doudy Draw Trail, and allow dogs on-leash or under voice-and-sight control in the rest of the Trail Study Area (see Map 4 that shows existing and proposed dog management for this TSA). The quality of the visitor experience and the health of the natural ecosystem in the area are influenced by compliance with dog management regulations. Monitoring and assessment of dog management will utilize surveys of visitor experience and direct measurement of environmental impacts.
- On-Trail Use
On-trail travel is required in the Eldorado Mountain HCA and proposed in the Doudy Draw Spring Brook subarea for selected uses (bikes, equestrians, and dogs). Maintaining the ecological integrity of the HCA and the Doudy Draw / Spring Brook subarea relies upon compliance with the on-trail requirement. Compliance will be assessed through direct observation and evaluation of physical impacts in off-trail areas.
- Trail Condition
Annual or periodic monitoring of trail condition can be used to direct maintenance activities and identify segments of trail that are physically unsustainable. Indicators of trail condition include trail widening, erosion, and braiding.
- Undesignated Trail Development
Periodic surveys by OSMP staff will establish the location and extent of undesignated trail development. Undesignated trails will be managed using the undesignated trail classification system (see Appendix 1).
- Reclamation of Native Vegetation
Closure and reclamation of undesignated trails and restoration of other disturbed areas will be assessed by measuring changes in vegetative cover and composition.

- Establishment and Spread of Weeds
New trails, trailheads, and other visitor facilities will be constructed to minimize the establishment and spread of weeds. Monitoring will help OSMP staff set standards, make needed corrections, and determine when disturbed areas are successfully restored. The composition of the plant communities will be measured, including the relative proportion of native plants, weeds, and bare ground.
- Effects on Wildlife
Changes in trails and access patterns have the potential to affect the abundance, diversity, and use patterns of wildlife in the TSA. Baseline data are available from some areas of the TSA, but more information will be needed where trail modifications and new trails are proposed. These data will be compared with data collected after changes are made (new trails, undesignated trails closed, etc.). A variety of techniques will be used to measure wildlife abundance, distribution and behavior.

A detailed long-term monitoring plan with sufficient funding will be developed to guide TSA plan implementation. As part of this monitoring plan, baseline information will be collected where needed and monitoring criteria to measure success in implementing plan goals will be developed.

A.11 Assess the overall level of visitor nighttime use and its associated impacts, continue nighttime parking restrictions at the trailheads, and strongly encourage a nighttime curfew for all visitors west of the Doudy Draw Trail.

The level of visitor nighttime use in the Eldorado Mountain / Doudy Draw Trail Study Area is thought to be minimal and incidental at the present time. Concerns about nighttime use in the TSA and about the potential of increasing levels of nighttime use support a continued assessment of the status of nighttime use, including assessment of the need for instituting further restrictions on nighttime use in the TSA to protect the area and nocturnal activities of wildlife.

Direction from City Council in the Visitor Master Plan on nighttime use is to continue the 11 p.m. to 5 a.m. prohibition on parking at OSMP trailheads and to encourage a nighttime curfew one hour after dusk to one hour before dawn in Habitat Conservation Areas (Eldorado Mountain HCA).

In addition, a voluntary nighttime curfew for all visitors west of the Doudy Draw Trail will be strongly encouraged to reduce human disturbance in this high-value habitat area. Encouraging a voluntary curfew on nighttime activities will be implemented by communicating educational / informational messages using a variety of venues (trailhead boards, signs at key locations, trail maps, website, interpretive hikes, outreach to OSMP user and community groups, etc.).

These nighttime visitor use management measures are intended to support visitor safety, protect the quality of visitor experience for people who appreciate natural settings, and

reduce visitor impact on wildlife sensitive to human presence during the nighttime hours. The effectiveness of these management measures will be evaluated over time.

A.12 Evaluate implementation of the Eldorado Mountain / Doudy Draw Trail Study Area Plan periodically and adjust as needed.

OSMP staff will periodically assess the status of the Eldorado Mountain / Doudy Draw TSA Plan implementation to track progress and evaluate projects. This assessment will take into account new information regarding the success management efforts (e.g., education and enforcement of new on-trail and dog management requirements, the Habitat Conservation Area off-trail permit program, and management decisions for specific recreational activities), and progress in building trails and improvements. Progress in implementing the plan will be reported during the annual public meeting to review implementation activities for the Open Space and Mountain Parks Visitor Master Plan.

B. Management Recommendations for the Community Ditch Subarea
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B.1 Improve the functioning of the Doudy Draw Trailhead and the pedestrian crossing of S.H. 170 between the Doudy Draw and South Mesa trailheads.
(Map 1, Location # 1).

Most of the time, parking is ample at this trailhead. Congestion at the Doudy Draw Trailhead occurs only 40-50 days a year, even though the Doudy Draw Trailhead sometimes functions as overflow parking for the busy South Mesa Trailhead. Consequently, there is no current need for trailhead capacity expansion.

However, the rectangular parking lot is deficient in how it functions and accommodates horse trailers. Vehicle parking sometimes is inefficient and contributes to parking congestion and overflow parking on S.H. 170. The lack of dedicated “pull-through” horse trailer parking spaces at this trailhead and at the South Mesa Trailhead has limited access for equestrians and can lead to inefficient parking for all vehicles. Ingress and egress of horse trailers is difficult, particularly at the Doudy Draw Trailhead.

Parking spaces and vehicle flow in the Doudy Draw Trailhead will be delineated to improve utilization and functioning of the trailhead. In addition, a limited number of new dedicated horse-trailer parking spaces may be provided within the existing trailhead area, if it is feasible without a significant reduction of overall parking capacity or major access improvements on S.H. 170. Providing a limited number of dedicated horse-trailer parking at the South Mesa Trailhead will also be evaluated.

Crossing S.H. 170 between the South Mesa Trailhead and the Doudy Draw Trailhead can be unsafe. OSMP will work with the Colorado Department of Transportation to provide a safe pedestrian crossing of S.H. 170. Consideration will be given to installing

crosswalk striping, a flashing pedestrian light and a connecting trail along the south side of the highway.

To better ensure visitor safety, OSMP will work with the Boulder County Sheriff to enforce the current no-parking regulation along S.H. 170.

B.2 Provide multiple-use access on the Doudu Draw Trail and make appropriate changes to the trail to support sustainable bike use (Map 1, Location # 2).

Only the section of the Doudu Draw Trail from the Doudu Draw Trailhead to the Community Ditch Trail currently provides bicycle access. Providing bicycle access on the rest of the Doudu Draw Trail provides trail connections for mountain bikes between Marshall Mesa area trails, trails in Flatirons Vista subarea, trails in the Doudu Draw / Spring Brook subarea, the Fowler Trail on OSMP and trails in Eldorado Canyon State Park.

Realigning portions of the Doudu Draw Trail are needed to provide new sustainable bicycle access. Realigning the switchback from the Flatirons Vista Mesa approximately thirty feet to the south would allow the trail grade to be reduced, provide a wider turning radius, and allow the steps and water bars to be removed. This retrofit would provide more functional and sustainable access for pedestrians, equestrians, and bicyclists, as well as eliminate current deficiencies in water drainage and soil erosion.

B.3 Allow paragliding / hang gliding activities in designated zones on a two-year trial basis (Map 1, Location # 3).

A two-year trial demonstration is proposed to determine whether flying activities in the area are compatible with resource protection and other Visitor Master Plan policies. Undesignated trails, weed spread, and compliance with other conditions placed on the flying activities will be monitored during the trial. If problems surface during the demonstration period, corrective action will be taken to improve how the activities are managed. The trial will be evaluated at the end of the demonstration period to determine whether to provide long-term flying activities in the area. Details of this proposal are presented in a report entitled “Activity Assessment for Paragliding and Hang Gliding Activities in the Flatirons Vista Mesa Area”, which is available on request.

Three launch zones and two landing / ground handling zones dispersed over a large area in the “bowl” of the Flatirons Vista Mesa edge will be designated for paragliding and hang gliding activities.

Access to the sites will originate at the Doudu Draw Trailhead. Travel to the sites will be on off-trail travel corridors identified in the management plan for paragliding / hang gliding activities in the Flatirons Vista Mesa area.

B.4 Provide neighborhood access to the TSA through a pedestrian gate south of Senda Rocosco Drive. Close or fence off other gates in the area and reclaim their associated undesignated trails (Map 1, Location # 4).

Several gates were installed years ago with no plan for sustainable visitor access. As a result, unsustainable undesignated trails that climb steep hills lead from many of these gates. Access through these multiple gates created damage to vegetation and soils, spread weeds (including jointed goatgrass), disturbed ground-nesting birds and other wildlife, and created numerous undesignated trails.

One gate to the south of Senda Rocosco Drive will provide convenient neighborhood access where impacts can be minimized. Other gates will be closed or fenced off to consolidate neighborhood access and reduce undesirable impacts. Visitors will be asked to disperse their travel south from the gate. Visitor use levels and travel patterns will determine whether a new designated trail will be needed from the gate to the Community Ditch trail in the future.

B.5 Discourage off-trail visitor access into the prairie dog colony through visitor education and strongly encourage dogs to be on-leash when traveling near or through the colony (Map 1, Location # 5).

To minimize impacts to prairie dogs and reduce prairie dog / human conflicts, several management actions are recommended. These include but are not limited to educating visitors, marking the boundaries of the prairie dog colony, installing signs that discourage off-trail access into the prairie dog colony, and strongly encouraging dogs to be leashed within the established boundary.

B.6 Implement a seasonal ground-nesting bird closure from May 1 to July 31 north of Community Ditch to Eldorado Springs Drive (Map 1, Location # 6).

This seasonal ground-nesting bird closure is located in parts of both the Flatirons Vista subarea and the Community Ditch subarea.

This un-trailed habitat block includes high-quality xeric tallgrass, a plant community designated as rare and sensitive by the Colorado Natural Heritage Program. Studies have shown this area supports a high concentration of grassland ground-nesting birds and is similar in quality to the grassland bird habitat east of Highway 93 in the Doudy Draw Natural Area and the Southern Grassland Habitat Conservation Area. Seasonal ground-nesting bird closures are in effect in these areas. The three month closure to protect ground-nesting birds is important for their reproductive success. Grassland birds have shown dramatic population declines throughout their range, and OSMP seeks to conserve these species.

B.7 Do not build a Lower Doudy Draw Trail Loop (Map 2, Location # 1).

This trail loop would circumnavigate a small mesa and would be approximately a half mile in length. It was considered as an opportunity for a no-dog trail and / or a trail accessible to mobility-impaired persons. The major rationale for not building this trail is that it would be less than ideal as a destination for people seeking a dog-free opportunity or a wheelchair accessible trail. While this short trail loop would be conveniently located next to the Doudy Draw Trailhead and would offer some nice views and interpretive opportunities, it would probably not be desirable for very many visitors because of its distance from most city and county residents. Most visitors drive to the Doudy Draw Trailhead seeking a medium or long hike.

The trail loop would not be very suitable for people with mobility impairment. The only place where the trail could ascend to the top of the mesa without numerous switchbacks would be on the south side of the mesa, which is not close to the Doudy Draw Trailhead. The trail grades on the south side of the mesa would push the limits of wheelchair accessibility guidelines. The trail would also be very exposed to sun and wind and very hot with only minimal shade.

In the absence of building a designated trail, the numerous undesignated trails in the area will be closed and restored, which is especially important to prevent the spread of jointed goatgrass from the Doudy Draw Trail corridor to nearby areas.

B.8 Evaluate a trail connection from the Flatirons Vista Trailhead to the Matterhorn underpass if the Community Ditch underpass is not built, and evaluate a connection from this TSA to South Boulder Creek trails when planning the Shanahan / South Mesa Trail Study Area (Map 2, Location # 2).

Current visitor use levels and patterns do not support the need for a trail connecting Flatirons Vista Trailhead to the Matterhorn underpass. However, a trail connection may be needed if the Community Ditch underpass is not built. Resource issues for this trail connection include crossing of the large prairie dog colony and potential impact on xeric tallgrass vegetation.

A trail connection to South Boulder Creek Trails poses many feasibility issues related to crossing Eldorado Springs Drive, two irrigation ditches, wetlands, riparian habitat of South Boulder Creek, the designated Tallgrass Prairie Natural Area, and agricultural operations. The evaluation of a possible trail connection to South Boulder Creek trails will be addressed in the Shanahan / South Mesa Trail Study Area planning process.

C. Management Recommendations for the Flatirons Vista Subarea

C.1 **Build the Doudy Draw-Flatirons Vista Trail Loops** (Map 1, Location # 7).

These trails will connect with the existing Doudy Draw Trail and form two interconnected “stacked” trail loops (a “figure 8” design). These loops will provide options for trips of varying length. The trails are proposed for multiple-use allowing pedestrians, equestrians, mountain bikers, and dogs under voice-and-sight control. Undesignated trails in the middle of the “figure 8” and near the Flatirons Vista Trailhead will be closed and reclaimed. The Xcel power line easement and maintenance road will not be designated as a trail but will remain open to visitor travel. The alignment of the western portion of the trail loops will be located to protect cultural resources and encourage on-trail travel in the Doudy Draw riparian area. The conceptual trail alignment is shown on the map. The actual trail alignment will be determined after detailed on-the-ground evaluation of factors such as trail grade and cross slope, soil type, drainage characteristics, location of sensitive resources and wildlife protection needs, and visitor experience characteristics.

In this area with higher levels of use and fewer sensitive resources, dog walkers will be provided the option of voice-and-sight control (see Map 4 that shows existing and proposed dog management for this TSA). The trail will be routed away from and out of sight of Lindsay Pond, a high-value habitat area that will be protected with a visitor access closure.

C.2 **Improve the functioning and efficiency of the Flatirons Vista Trailhead by re-configuring the existing parking lot layout and providing new “pull-through” horse trailer parking. These trailhead improvements are contingent on not triggering expensive access improvements on S.H. 93** (Map 1, Location # 8).

Most of the time, parking is ample at this trailhead. Significant congestion at this trailhead is estimated to occur less than 40 days a year. Consequently, there is no current need for significant expansion for auto parking.

The rectangular trailhead currently is deficient in how it functions and accommodates horse trailers. At times, vehicle parking is inefficient, especially when horse trailers are present. In addition, ingress and egress of horse trailers is difficult, and there is often unsafe overflow of horse trailer parking along S.H. 93.

Parking spaces and vehicle flow in the Flatirons Vista Trailhead will be delineated to improve utilization and functioning of the trailhead. In addition, four to six additional dedicated “pull-through” horse trailer parking spaces will be provided. These improvements will require enlargement of the trailhead parking lot to the north. The expansion area does not contain any sensitive resources and is comprised of mostly non-native grasses.

Expansion of trailhead parking is contingent on the Colorado Department of Transportation (CDOT) not requiring installation of costly acceleration / deceleration lanes on S.H. 93.

C.3 Continue to investigate a regional trail connection to Jefferson County (Map 1, Location # 9).

OSMP will continue to cooperate with Jefferson County Open Space and other agencies and landowners for a regional trail connection. However, because of physical and land ownership constraints, a regional trail connection may not be possible in the near future. Where opportunities exist, OSMP will use acquisition and trail easements to facilitate the trail connection.

C.4 Monitor visitor use and off-trail travel in the xeric tallgrass community north of the Doudy Draw Trail to Community Ditch and reevaluate how to provide sustainable visitor access to this area in the future. (Map 2, Location # 3).

This area is one of the largest, high-quality un-trailed grassland habitat blocks on the OSMP system. High diversity of grassland bird species is documented here. The habitat is large enough for many prairie inhabitants to thrive, including a large prairie dog colony. The tallgrass community, which is considered very rare nationally and globally, is habitat for several rare plants. One rare plant in particular is the grassy slope sedge, located along the mesa rim and known from only one other location in Boulder County. The ground disturbance associated with constructing a formal trail would remove rare plant and community habitat, and reduce the resistance of the remaining trailside habitat to weed invasion.

Off-trail visitor travel across this high quality tallgrass habitat block often involves visitors traveling through the Matterhorn underpass under S.H. 93. Currently visitor use is at a low level and does not create unacceptable resource impacts.

Continuing the option of off-trail access (during times when grassland birds are not nesting) is considered a better option than providing a trail at this time because of the current low use levels and associated minimal resource impacts. A Doudy Draw-Mesa Rim Loop Trail was considered, with various options as a multiple-use trail including mountain biking, a no-dog trail, and an interpretive prairie trail. However, the drawbacks of a potential trail outweigh its potential benefits at this time. If a trail loop were provided, much higher visitation to the area would occur. While most visitor travel would be on trail, providing a designated trail would encourage a higher level of use that could negatively affect the sensitive resources in this area by introducing non-native invasive weed species and enticing visitors to travel up and down the steep mesa edge and through the core of the xeric tallgrass habitat block to the south.

Visitor use levels and off-trail travel in the area will be monitored to document any change in the volume or extent of visitor travel. Monitoring will allow OSMP to identify any increased impacts before they reach an unacceptable level and reevaluate options for possible trails and resource protections that may be needed.

- C.5 **Discourage off-trail visitor access into the prairie dog colony and strongly encourage dogs to be on-leash if visitors travel near or through the colony (Map 1, Location # 10).**

This prairie dog colony is located in a designated prairie dog habitat conservation area because of its location in a native grassland habitat, its size, and its remoteness from land uses that may conflict with prairie dogs. To avoid or minimize the disturbance to prairie dogs by dog walkers and their dogs traveling off-trail, a number of management actions will be implemented. These include but are not limited to educating visitors, marking the boundaries of the prairie dog colony, installing signs that discourage off-trail access into the prairie dog colony, and strongly encouraging dogs to be leashed within the established boundary.

- C.6 **Implement a seasonal ground-nesting bird closure from May 1 to July 31 north of the Doudy Draw Trail to the edge of the Flatirons Vista Mesa (Map 1, Location # 6).**

This seasonal ground-nesting bird closure is located in parts of both the Flatirons Vista subarea and the Community Ditch subarea. See recommendation B.6 for details.

- C.7 **Maintain visitor access through the Matterhorn underpass during times when seasonal ground-nesting bird closures are not in effect, until the Community Ditch underpass is accessible. Reevaluate whether to maintain or close visitor access through the Matterhorn underpass once the Community Ditch underpass is constructed (Map 1, Location # 11).**

The proposed Community Ditch underpass would provide a safe and convenient below-grade solution for visitors crossing S.H. 93. However, it is not yet certain that the proposed trail crossing using the Community Ditch underpass will be built. Although not optimal for equestrian safety, the Matterhorn underpass provides an alternative for visitors to cross the highway other than at the existing stoplights at S.H. 128 and at Eldorado Springs Drive.

When the ground-nesting bird closure is in effect, the Matterhorn underpass will be closed to visitor travel. The west side of the Matterhorn underpass leads to a prairie dog colony. OSMP will strongly encourage dogs to be on-leash when they are in the vicinity of the prairie dog colony.

Once the Community Ditch underpass is constructed, the need for continued access through the Matterhorn underpass will be reevaluated.

- C.8 **Remove the existing east-west interior access gate near the Flatirons Vista overlook and close and reclaim the unsustainable trail on the west side of the overlook (Map 1, Location # 12).**

The existing east-west access gate allows access to a very steep slope on the west side of the Flatirons Vista Mesa to and from the Doudy Draw Trail. This off-trail visitor travel has created an undesignated trail that is deeply-incised, eroding, and unsustainable.

Removing the east-west gate will discourage visitor access to this unsustainable undesignated trail and allow its closure and reclamation.

Closing the existing undesignated trail will also help prevent the spread of jointed goatgrass. A severe infestation of this noxious weed is located near the Doudy Draw Trailhead and close to the undesignated trail. Jointed goatgrass is difficult to control, and a sustained effort will be needed to control this weed.

D. Management recommendations for the Doudy Draw / Spring Brook Subarea

D.1 Build a new Fowler to Doudy Draw Trail (Map 1, Location # 13).

This multi-use trail will provide a connection for pedestrians, equestrians on-trail (see D.9 below), mountain bikers on-trail, and dogs on-trail and on-leash (see D.8 below and Map 4 that shows existing and proposed dog management for this TSA). The alignment will be located on diverse terrain in grassland and forested environments and will minimize impacts to crossing the Spring Brook riparian area and other sensitive resources. The conceptual trail alignment is shown on the map. The actual trail alignment will be determined after detailed on-the-ground evaluation of factors such as trail grade and cross slope, soil type, drainage characteristics, location of sensitive resources and wildlife protection needs, and visitor experience characteristics.

The trail will be on diverse terrain and would be winding, providing for travel speeds conducive to appreciating and protecting the area's natural values but also providing interest and challenge for the visitor.

The trail connection will provide mountain bikers the opportunity for long-distance rides and access to other mountain biking destinations in Eldorado Canyon State Park, Marshall Mesa, and potentially Walker Ranch and Jefferson County.

This trail, along with the Doudy Draw-Spring Brook Loop Trail and the Denver Water Department canal road, would form a loop within the subarea. Fencing and signs will be used to guide visitor travel to designated trails.

Visitor compliance with the on-trail requirements for this trail (bikes, horses, and dogs) will be monitored during the first two years after the trail is built. Changes to the types of allowed visitor uses will be considered during or after this period if compliance with on-trail requirements does not meet management goals.

D.2 Build a Douly Draw-Spring Brook Loop Trail (Map 1, Location # 14).

This multi-use trail will create a loop by connecting with the Fowler to Douly Draw Trail and the Denver Water Department Canal Road. The trail allows pedestrians, equestrians on-trail (see D.8 below), and mountain bikers on-trail. Dogs would not be allowed on this trail to support a high level of resource protection in the Spring Brook area and provide a no-dog trail opportunity (see D.7 below and Map 4 that shows existing and proposed dog management for this TSA). By providing a loop trail, in addition to a trail connection between the Fowler Trail and the Douly Draw Trail, visitors will have more opportunities to travel in and experience this portion of the Natural Area.

The alignment of the Douly Draw-Spring Brook Loop Trail will be located on diverse terrain in grassland and forested environments and will avoid sensitive riparian and mature forest areas. The trail will be routed away from and out of sight of Lindsay Pond, a high-value habitat area that will be protected with a visitor access closure. The conceptual trail alignment is shown on the map. The actual trail alignment will be determined after detailed on-the-ground evaluation of factors such as trail grade and cross slope, soil type, drainage characteristics, location of sensitive resources and wildlife protection needs, and visitor experience characteristics.

OSMP is working with the Denver Water Department to provide appropriate public access on the canal road and address potential concerns including facility security, water quality issues, and visitor safety. The Denver Water Department is concerned about visitor travel in the vicinity of the water siphon (at the head of the above-ground water pipe), which would occur if visitors travel between the Natural Area and the Habitat Conservation Area by crossing the canal at the existing bridge. The possibility of constructing a new visitor access bridge north of the existing bridge at some distance from the siphon is being discussed. The alignment of the Douly Draw-Spring Brook Loop Trail and the Goshawk Ridge Trail (see E.4 below) would need to be adjusted if a new bridge crossing were constructed.

Dogs would not be allowed on the trail located on the Denver Water Department Road, both to protect water quality and to provide a no-dog trail opportunity (see D.7 below).

Visitor compliance with the on-trail requirements for the Douly Draw-Spring Brook Trail (bikes and horses) and the no-dog requirement will be monitored and assessed during the first two years after the trail is built. Changes to the types of allowed visitor uses will be considered if compliance with on-trail and no-dog requirements do not meet management goals.

D.3 If approved by the Colorado State Parks Board, OSMP and Eldorado Canyon State Park, allow mountain bikes on the Fowler Trail on a trial demonstration basis (Map 1, Location # 15).

If the Fowler Trail were open to mountain bikes on both OSMP and State Park lands, bikers could travel from Marshall Mesa area trails, through the Eldorado Mountain /

Doudy Draw Trail Study Area to the Rattlesnake Gulch Trail in Eldorado Canyon State Park. The Fowler Trail on OSMP and State Park lands currently do not allow mountain bikes. In the State Park, the Fowler Trail is currently ADA accessible and includes a self-guided nature trail. These uses may create user conflicts and safety concerns.

If approved by the Colorado State Parks Board, and upon completion of a cooperative agreement between OSMP, Eldorado Canyon State Park, Boulder Mountainbike Alliance, and the International Mountain Bicycling Association, mountain bikes will be allowed on the Fowler Trail on OSMP and Eldorado Canyon State Park during a trial demonstration program. This cooperative agreement will set out roles and responsibilities for the participating entities to address potential issues and opportunities and implement management activities intended to make the mountain biking demonstration successful. Some of the issues that need to be addressed include ensuring that bicyclists maintain a speed safe for all visitors; providing an effective system for collecting state park user fees; and implementing education, outreach, signing, enforcement, monitoring, and maintenance activities.

The trial mountain biking demonstration will be monitored to determine if management goals have been met. If after the trial period the State Park and OSMP determine there are minimal resource impacts, user conflicts, and safety issues, then mountain biking would be an approved use on the trail, providing no significant issues arise in the future.

D.4 Maintain the informal on-street parking on County Road 67 north of the OSMP property gate (Map 1, Location # 16).

In cooperation with Boulder County, limited improvement to the existing parking situation will be considered to provide better parking turnaround and improved safety. With Boulder County approval, six-to-eight on-street parking spaces would be delineated on C.R. 67 and other on-street parking would be prohibited. This approach will maintain an informal parking opportunity and provide safer parking.

D.5 Designate a Post Office Trail connection to the Fowler Trail; close and reclaim the other undesignated trail on OSMP (Map 1, Location # 17).

This trail will direct visitors onto one designated trail on OSMP land and allow closure of the other undesignated trail on OSMP lands.

D.6 Continue to investigate a regional trail connection to Walker Ranch. (Map 1, Location # 18).

This trail would provide longer, more challenging mountain bike rides and provide a connection to Walker Ranch without driving or riding up Flagstaff Road. The Eldorado Canyon Trail currently provides a connection for pedestrians to Walker Ranch, but bicycle access on this trail is not feasible. Opportunities to provide a trail connection will likely require securing a trail easement on private roads or utility rights-of-way, which

have not been feasible in the past because of lack of support by the private property owners.

D.7 Allow dogs on-trail and on-leash west of Doudy Draw on the Fowler to Doudy Draw Trail and Fowler Trail only. (Map 1, Location # 19).

Dogs are currently restricted from this area based on dog management agreements implemented in the mid-1990s. The intent of prohibiting dogs was to provide an extra level of protection for the many sensitive resources in this un-trailed area. The Doudy Draw / Spring Brook subarea contains high value natural resources that are sensitive to the impacts of visitor use and dogs specifically. The subarea also contains many of the same resources as the Upper Doudy Draw / Bull Gulch area. Some of these resources include:

- high-quality riparian areas and shrublands
- fawning areas for deer
- bear foraging habitat
- critical habitat for the federally threatened Preble's meadow jumping mouse
- forest interior / mature forest habitat areas that support bird and mammal species with a low tolerance for human disturbance including wild turkeys, large predators, and elk
- Native American and Euro-American cultural resources

Requiring dogs to be on-leash and on-trail on the Fowler to Doudy Draw Trail and the Fowler Trail (Map 1, Location 19), will help protect wildlife species that are particularly sensitive to disturbance from dogs. As discussed below under E.2, research has demonstrated that dogs reduce the suitability of wildlife habitat for many birds, small mammals, and other species, displacing them from areas they would otherwise inhabit (especially species that perceive dogs as predation threats) (Lenth 2006 and, Miller et al. 2001, and others). The area prohibition for dogs will continue west of the Doudy Draw Trail to the Denver Water Department canal road.

Restricting dogs to the Fowler to Doudy Draw Trail and the Fowler Trail will provide several benefits:

- Restricting dogs to the two trails (on-leash) will reduce the impacts of dogs along the trail corridors (an area of influence some distance from the trail). The on-trail and on-leash requirement is stricter than the default dog management strategy in Natural Areas, which allows dogs on-leash or under voice-and-sight control. However, the highly valuable and vulnerable resources in the Doudy Draw / Spring Brook subarea justify a more restrictive approach.
- An extra level of protection to wildlife and other vulnerable resources will be provided by excluding dogs in most of the subarea, with many wildlife species benefiting, including, but not limited to: grassland and shrubland birds; forest interior birds such as hawks, owls, and many others; wintering and calving elk; deer and their fawns; and wide-ranging predators such as bears, coyotes, and lions.

- The combined area that will be dog-free, including areas in the western portion of the Doudy Draw Natural Area and the Eldorado Mountain Habitat Conservation Area, will be large enough to protect wildlife species sensitive to dogs. In a regional context, this dog-free area provides one of the few places that offer protection of wildlife from dogs. In addition, this dog-free area will provide enhanced opportunities for visitors to view deer, elk, blue grouse, wild turkeys, and other wildlifespecies.
- This recommendation would mean that dogs would not be allowed on most of the Doudy Draw-Spring Brook Trail Loop. A new no-dog trail opportunity would be provided by not allowing dogs on the western and eastern portion of the loop (i.e., the Denver Water Department Canal Road and the trail link on its southern terminus to the Fowler to Doudy Draw Trail). Dogs would be allowed on-trail and on-leash on that portion of the loop formed by the Fowler to Doudy Draw Trail. The need for new no-dog trail opportunities is recognized as a priority in the Visitor Master Plan. The dog-free portion of the Doudy Draw-Spring Brook Trail Loop would connect with the Goshawk Ridge Trail in the HCA, which would provide a combined 3.6 miles of trail offering a dog-free visitor experience.

Allowing dogs on the Fowler to Doudy Draw Trail will also provide several benefits:

- Dogs will continue to be allowed on the Fowler Trail (on-leash) and on the Doudy Draw Trail (voice-and-sight control) and will be able to travel between these two and their connecting trails to the west in Eldorado Canyon State Park and to the east in the Doudy Draw Natural Area and further east in the Marshall Mesa Area and beyond.
- The proposed new Fowler to Doudy Draw Trail will provide a new dog access opportunity in the area where dogs are currently prohibited (as indicated in the Visitor Master Plan) but still provide a high level of resource protection with the requirement for dogs to be on-trail and on-leash. Allowing dogs on the Fowler to Doudy Draw Trail offers a degree of functionality and fairness for dog walkers while still providing a high level of protection for sensitive lands.

Realizing a higher level of protection for wildlife and other resources will require a high level (85-90%) of compliance with the on-trail and on-leash requirements on the Fowler Trail and the Fowler to Doudy Draw Trail. OSMF will evaluate compliance with the on-trail and on-leash requirements for two years after the trails are built and determine whether any adjustments to dog management are needed.

D.8 Require on-trail equestrian travel in the Doudy Draw / Spring Brook subarea (Map 1, Location # 20).

An on-trail requirement for equestrians in this subarea would provide a sustainable way for horses to travel in the subarea and provide an extra level of resource protection for the high-value resources. Requiring equestrian on-trail travel in this subarea is warranted because of the high concentration of sensitive resources that can be damaged particularly by horse travel. The subarea includes wetlands, riparian areas, pockets of mature forest,

and other sensitive wildlife habitat areas. In the Spring Brook drainage and the Lindsay Pond area, especially on steep terrain and erosion-prone soils, there is evidence to suggest that off-trail travel by equestrians has created or intensified the high level of environmental impacts from past visitor use, including soil compaction and erosion, trampling of vegetation, weed dispersal, and creation of undesignated trails. Requiring equestrian on-trail travel in the Douady Draw / Spring Brook subarea will significantly contribute to the restoration of damaged natural resources. The new trails in the subarea (the Fowler to Douady Draw Trail and the Douady Draw-Spring Brook Loop Trail) will provide high quality visitor opportunities for equestrians, and requiring equestrian travel on these trails will provide a higher level of resource protection that will benefit the sensitive resources in the Spring Brook area.

D.9 Extend the current seasonal dog on-leash requirement on the Douady Draw Trail to include the Douady Draw Trail from the switchback to the intersection with the Xcel powerline easement on the top of the mesa (Map 1, Location # 21).

The existing seasonal dog on-leash requirement is intended to minimize disturbance to fall feeding bears and protect dogs and their guardians. However, the current extent of the seasonal bear protection does not reflect an ecologically relevant boundary. Extending the seasonal dog on-leash requirement up to the Xcel right-of-way would include a larger portion of the Douady Draw riparian area, where bears frequent in the fall. See Map 4 that shows existing and proposed dog management for this TSA.

D.10 Close public access to Lindsay Pond using fences and signs (Map 1, Location # 22).

Lindsay Pond contains historic and potential habitat for northern leopard frogs which are identified as a state species of concern and are rare across the OSMP system. Native fish are also reared in Lindsay Pond for reintroduction to habitats where they have been extirpated.

Pedestrian and horse access to the pond has created numerous undesignated trails to and around the pond, with impacts to vegetation and wildlife and soil disturbance. To preserve this important habitat, the pond will be legally closed to visitor access with a formal access closure and “wildlife-friendly” fencing.

D.11 Evaluate the need for additional special resource measures after trails are built.

Special resource protection measures such as seasonal or permanent closures may be needed to protect the highly-sensitive resources in the subarea given the large increase in visitor use that may result with new trails. However, given new opportunities and requirements for bikes, horses, and dogs to be on-trail (and dogs on-leash) in the subarea, determining what special resource protection measures will be implemented can best be decided when information on new visitor use levels and patterns becomes available.

E. Management Recommendations for the Eldorado Mountain Habitat Conservation Area

E.1 Continue the existing cliff-nesting raptor seasonal closure from February 1 through July 31 (Map 1, Location # 23).

Long-standing seasonal visitor access closures to protect cliff-nesting raptors have been very successful in the conservation of falcons and eagles on OSMP. Existing cliff-nesting closures will be continued for the Mickey Mouse formation to maintain the existing level of resource protection.

E.2 Continue no-dog access in the Eldorado Mountain Habitat Conservation Area.

Continuing the current no-dog access in the HCA is proposed to provide a high level of resource protection and provide no-dog trail opportunities (See Map 4 that shows existing and proposed dog management for this TSA).

This HCA provides habitat for a wide range of species, some of which are highly sensitive to the presence of dogs (e.g., shrub-nesting birds, turkey, blue grouse, elk, deer, and predators such as bears, bobcats, and mountain lions). Research by Lenth (2006), Miller et al. (2001), and others has shown that some wildlife species respond to dogs by reducing their utilization of habitat (especially species that perceive dogs as natural predators) and that many wildlife species are displaced or harmed by dogs. In a regional context, the Eldorado Mountain HCA and the adjacent Doudy Draw / Spring Brook subarea possess high biodiversity and offer a rare opportunity for wildlife to persist without the impacts associated with dogs.

This is one of the few areas on OSMP lands that currently offer a no-dog experience. In the Visitor Master Plan, OSMP committed to provide no-dog trails as new trails are developed. The Mickey Mouse Access Trail and the Goshawk Ridge Trail will provide no-dog trail opportunities for this Trail Study Area.

As part of the dog management agreement implemented in the mid-1990s, dogs have been prohibited in the HCA and the western portion of the Natural Area. The original intent of not allowing dogs is still valid; it provides a much higher level of protection for wildlife and other resources, enhanced wildlife viewing opportunities, and provides a no-dog opportunity whether visitors are traveling on-trail or off-trail through the HCA off-trail permit program.

E.3 Build the Mickey Mouse Access Trail (Map 1, Location # 24).

This trail is intended for climbing access to the Mickey Mouse rock climbing area and a low level of visitor use. Travel on the trail will be restricted to pedestrians only and visitors will be required to stay on-trail. Dogs will continue to be prohibited in the HCA and are not allowed on this trail.

The trail will follow an existing and well publicized climbing route to the Mickey Mouse Wall. It begins at the Conda Mine Road and travels south and west across OSMF property to the railroad tracks. The conceptual trail alignment is shown on the map. The actual trail alignment will be determined after detailed on-the-ground evaluation of factors such as trail grade and cross slope, soil type, drainage characteristics, location of sensitive resources and wildlife protection needs, and visitor experience characteristics.

A safe and legal crossing of the railroad tracks will be provided using the top of a railroad tunnel, if approved by the Colorado Public Utilities Commission. The access from the tunnel to the Mickey Mouse climbing area will require technical climbing skills. The extent of the climbing area owned by OSMF will be delineated and designated.

E.4 Build the Goshawk Ridge Trail (Map 1, Location # 25).

This trail will originate at the Conda Mine Road, travel southeast through the HCA and connect with the Denver Water Department road at a bridge crossing over the canal. The trail will be a minor development design intended for a low level of visitor use. The conceptual trail alignment is shown on the map. The actual trail alignment will be determined after detailed on-the-ground design and evaluation of trail alignment options using factors such as trail grade and cross slope, soil type, drainage characteristics, location of sensitive resources and wildlife protection needs, and visitor experience characteristics.

Pedestrians will be required to be on-trail, and equestrian on-trail access will be allowed during a trial period for up to two years. No mountain biking will be allowed because the trail will not be designed to sustain mountain bike use. Dogs will continue to be prohibited in the HCA and are not allowed on this trail.

This trail would accommodate visitor desires to travel on-trail and experience the natural qualities of the lands in the HCA. It would also provide a no-dog trail opportunity. The trail would be located in the eastern portion of the HCA, so a large habitat block in the western portion of the HCA would remain un-trailed and function more naturally as wildlife habitat. Restricting visitor use to pedestrian and equestrian on-trail travel will accommodate the desires of most visitors and reduce the overall level of resource impacts associated with increasing visitor use and travel, will not necessitate a more developed trail, and will reduce human-wildlife conflicts.

Constructing the Goshawk Ridge Trail will provide the option of visiting the HCA without obtaining an HCA off-trail permit.

While mountain biking will not be allowed in the Eldorado Mountain Habitat Conservation Area, a diversity of mountain biking opportunities will be provided in the Doudy Draw Natural Area—offering different types of experiences and a variety of distances and challenge levels (ranging from single-track riding on diverse challenging terrain to easier riding on flatter terrain), loop trails, and trail connections to other mountain biking destinations.

Allowing on-trail equestrian access during a trial period for up to two years is intended to ensure compatibility with resource protection. The minor development design of the Goshawk Ridge Trail will be constructed primarily for pedestrian access. However, within the two-year pilot demonstration period OSMP will examine the benefits and impacts of allowing horseback riding on this trail. Monitoring and assessment would be completed within the two years to determine whether equestrian use over time will be sustainable on the trail. If not, modifications to the trail and / or management changes will be considered.

E.5 Require on-trail equestrian access in the Eldorado Mountain Habitat Conservation Area. Do not allow equestrian off-trail travel under the HCA off-trail permit program.

Requiring equestrian travel in the HCA to be exclusively on-trail, and not allowing equestrian off-trail travel under the HCA off-trail permit program, will provide a sustainable way for equestrians to travel in the HCA and a higher level of resource protection, consistent with the management goals for the HCA. Excluding equestrians from the off-trail permit program for this particular HCA is warranted for two reasons. First, it would reduce the overall number of off-trail visits in a remote habitat block with a high concentration of sensitive resources. The HCA includes wetlands, riparian areas, pockets of mature forest, and other sensitive wildlife habitats. Second, off-trail travel by horses, especially on steep terrain or erosion-prone soils, creates a disproportionately high level of environmental impacts including soil compaction and erosion, trampling of vegetation, weed dispersal, and creation of undesignated trails.

In this Trail Study Area, equestrians have the opportunity for an off-trail experience in the area east of Douady Draw (most of the Douady Draw Natural Area), as well as in most other areas of the OSMP land system. As noted above, plan recommendation D.8 would require on-trail equestrian travel in that portion of the Natural Area west of the Douady Draw Trail. The justification for this restriction is the same as the recommendation for the on-trail requirement for equestrians in the HCA.

E.6 Do not build an Upper Douady Draw / Bull Gulch Trail and provide pedestrian access through the HCA off-trail permit program (Map 2, Location # 4).

This remote, relatively pristine area contains high value natural resources that are sensitive to the impacts of visitor use. These resources justify a very high level of resource protection in the context of the Habitat Conservation Area designation. Some of these resources include:

- high quality riparian areas and diverse shrublands that support high bird diversity
- foraging bears.
- Preble's meadow jumping mouse habitat.
- forest interior / mature forest habitat areas that support bird and mammal species that have a low tolerance of human disturbance.
- habitat for blue grouse and wild turkeys.
- habitat for large predators and elk.
- Native American and Euro-American cultural resources.

Protecting these resources can be best accomplished by managing visitor use through the HCA off-trail permit program. It is anticipated that providing access through this program will keep the numbers of visitors lower than providing a trail and reduce the overall level of resource impacts.

E.7 Provide HCA off-trail permit access, monitor visitor use patterns and impacts, and determine the appropriate number of annual permits and seasonal wildlife closures.

Two designated trails will provide access in the HCA. Consequently, some visitor travel in the HCA will occur through the HCA off-trail permit program. Permits will be issued initially to determine the demand for off-trail travel. Limits on the number of HCA off-trail permits for the Eldorado Mountain HCA may be necessary to provide the desired level of resource protection. Monitoring visitor use patterns and impacts for two to three years will provide the basis for determining the appropriate number of permits.

Documenting the number of visitor permits requested, where visitors travel, and visitor use impacts will be the basis for determining permit numbers.

To minimize the impacts of visitor travel, visitors may be required to use existing historic primitive roads, which may be retained if they provide a sustainable travel way.

Costs and Scheduling for Recommended Trail Study Area Programs and Projects

Ongoing Activities to Implement the TSA Plan
Monitor the creation of undesignated trails and take appropriate management actions
Implement Best Management Practices for trail construction and maintenance
Manage cultural / paleontological resources
Control jointed goatgrass and other noxious weeds in the TSA
Provide interpretive guided hikes, interpretive signs, brochures, and other materials
Take advantage of land acquisition / protection opportunities in or near the TSA
Establish and implement appropriate monitoring of trails, compliance with on-trail, on-leash, and other visitor access requirements; and resource impacts
Assess the overall level of nighttime visitor activities / impacts and encourage a nighttime curfew for visitation west of the Doudy Draw Trail
Conduct a trail demonstration program for equestrian travel on the Goshawk Ridge Trail and paragliding / hang gliding activities in the Flatirons Vista Mesa area
Provide education and enforcement activities for on-trail, no-dog, dog leash, nighttime parking, and access closure requirements
Continue to explore opportunities for trails and facilities that are accessible to persons who are mobility-impaired
Implement wildlife closures for cliff-nesting birds, grassland nesting birds, bears, and other wildlife
Continue to investigate new regional trail connections
Maintain continued access under S.H. 93 underpass (with seasonal ground-nesting bird closure)

Ongoing Activities to Implement the TSA Plan							
Cooperate with the Denver Water Department in managing visitor use							
Partner with Eldorado Canyon State Park on the trial demonstration for mountain bikes on the Fowler Trail							
Implement the Habitat Conservation Area off-trail permit program in Eldorado Mountain HCA							

TSA Projects / Programs	Total Cost	2007	2008	2009	2010	2011	2012
Major maintenance / retrofit projects for the Doudy Draw Trail	\$20,000	\$20,000					
Undesignated trail closure / reclamation	\$25,000	\$8,000	\$ 7,000	\$5,000	\$5,000		
Management of undesignated trails created by cattle (grazing rotation, salt lick moving or weed whipping, redevelopment of well and moving of stock tank)	\$20,000 (\$10,000 every three years)		\$10,000			\$10,000	
Intensive trailside control of jointed goatgrass (temporary trailside fencing, undesignated trail closure signing, mowing, application of herbicides, re-vegetation, etc.)	\$120,000 (\$20,000/yr)	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Doudy Draw Trailhead improvements including pedestrian crossing	\$25,000	\$25,000					
Closure of visitor access gates along Eldorado Springs Drive	\$5,000	\$5,000					
Fencing and signs for new seasonal grassland bird-nesting closure and extended bear-feeding closure	\$4,000	\$4,000					
New Doudy Draw-Flatirons Vista Trail Loops	\$145,000		\$145,000				
Flatirons Vista Trailhead improvements and horse trailer parking	\$10,000	\$10,000					
New Fowler to Doudy Draw Trail connection and loop trail	\$177,000	\$177,000					
County Road 67 parking area improvements	\$100	\$100					
Closure of Lindsay Pond area with fencing and signing	\$10,000	\$10,000					
New Mickey Mouse Access	\$5,000	\$5,000					

TSA Projects / Programs	Total Cost	2007	2008	2009	2010	2011	2012
Trail							
New Goshawk Ridge Trail (Conda Mine to Denver Water Department Canal)	\$25,000	\$25,000					
TOTAL	\$591,100	\$309,100	\$182,000	\$25,000	\$25,000	\$30,000	\$20,000

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Appendix 1

Undesignated Trail Classification on Opens Space and Mountain Parks Lands

Background

The Open Space and Mountain Parks Department manages over 138 miles of designated trails and over 300 miles of undesignated trails. While designated trails are shown on trail maps and are maintained, management of undesignated trails is less clear. This can lead to visitor and staff confusion, resource damage, and the creation of more undesignated trails. The Trail Study Area planning process provides an opportunity to decide how to manage undesignated trails to both enhance visitor opportunities and protect resources.

The Visitor Master Plan includes a management strategy to assess and manage undesignated trails that is integrated with other strategies to provide a sustainable and maintainable trail system and to provide adequate protection of natural resources. Trail Study Area plans provide the opportunity to develop a comprehensive set of recommendations on how to manage undesignated trails. These recommendations will help decide where new trails should be built and where resource protection measures should be implemented.

Primary uses for this information include:

- Provide appropriate visitor access and resource protection.
- Communicate to the public the status of undesignated trails and how they are managed.
- Provide clear trail management and maintenance direction to staff based on the undesignated trail classification.

Project Goal

The goal of this project is to provide appropriate visitor access and reduce resource damage by:

1. Assigning each undesignated trails to one of three categories, which indicate the appropriate range of management actions:
 - designate
 - authorized vehicle access
 - close and revegetate
2. Provide a high or low management priority for those trails listed as “close and revegetate.”

Definitions

Trail categories are defined as:

1. Designate – These undesignated trails become part of the designated trails system by constructing a sustainable designated trail in the same general location as the undesignated trail. In some cases, rerouting of the undesignated trail may be required to meet sustainability standards, protect resources or enhance the visitor experience.

Undesignated trails will be designated where trails provide a physically and environmentally sustainable route to an OSMP-designated destination, provide a good-quality visitor experience, and are not duplicated by other designated trails.

Sustainable trails are built and maintained to meet standards for physical and environmentally sustainability with these characteristics:

- **Physical Sustainability:** Physically sustainable trails support current and planned visitor uses and volumes with minimal impact to the surrounding area. Physical sustainability for trails involves building a durable trail with design features and materials that allow it to accommodate all physical forces acting upon it (both natural and human-caused), drain water with negligible soil loss, and be maintained with minimal regular maintenance over extended periods of time.
- **Environmental Sustainability:** These trails support current and planned visitor uses and volumes with minimal damage and cumulative impacts to natural resources. Environmental sustainability for trails involves building a trail that ensures continued ecosystem and biological integrity and protects important plant and wildlife species and communities.

Some undesignated trails that provide limited access to specific destinations may be retained to meet management objectives. These limited access trails are intended to sustain low levels of use and will not necessarily be promoted or shown on official maps. Limited access trails will be part of the department's official designated trail system and monitored periodically to determine their condition and status.

2. Authorized vehicle access - Vehicle access occurs on OSMP lands for a variety of official land management purposes. Some of the vehicle access is on "roads" owned and maintained by OSMP. Legal access to private entities or government agencies is authorized through ownership of the road right-of-way or an access easement on OSMP lands.

Vehicle access serves a variety of purposes to support activities related to firefighting, emergency or rescue response, forest management, agricultural management, and maintenance of facilities. Other agencies use vehicle access to support maintenance activities for utility lines, ditches, and canals.

Areas authorized for vehicle access and use are either open to the public for non-motorized visitor access or will require an off-trail permit in HCAs for visitor access, unless specifically closed to visitor access.

3. Close and Revegetate – These undesignated trails are physically or environmentally unsustainable and /or duplicate other designated trails. They are physically closed to visitor use and re-vegetated to natural conditions. Examples of management actions to close and restore undesignated trails include: signs, fences, obstructions with rocks and logs and branches, soil scarification and planting of native vegetation, area closures, and modifications in livestock grazing. Management actions will vary depending on site specific issues.

High and low priorities are assigned to undesignated trails in this category depending on site-specific circumstances. Resource protection, minimization of impacts and levels of visitor use of a route or destination are the main issues considered in the priority rating. Other issues such as livestock grazing may result in a lower priority rating because of the difficulty in changing grazing patterns. A high priority rating for closure and revegetation may be assigned where undesignated trails receive a high level of visitor use and require management actions to physically remove the undesignated trail and restore the area using ecological restoration techniques. Closure and revegetation of undesignated trails where a lower level of visitor use and natural revegetation can occur may also receive a higher priority rating to accomplish management objectives.

Periodic inspection and maintenance will occur to determine the success of closing and revegetating undesignated trails. Management actions may be adjusted over time to achieve the management goals for specific undesignated trails.

Mapping and Classifying Undesignated Trails

Undesignated trails used by visitors were mapped in July 2006. Cattle or wildlife trails that do not appear to have recreational use were not mapped. Roads used by pedestrians, equestrians, or bicyclists were included in the undesignated trails mapping. Trail width was measured to help determine the level of visitor use on different trail segments. Other map coverages were used when classifying trails. Examples include: old undesignated trails mapping, vegetation, weeds, and cultural resources. For more information on the methodology used to map undesignated trails see Monitoring Protocol for Undesignated Trails (2006 City of Boulder Open Space and Mountain Parks).

Undesignated trails were categorized and prioritized using a rapid assessment protocol. This streamlined process was designed to accomplish the goals of managing undesignated trails, recording decisions, and categorizing undesignated trails for appropriate management actions.

The TSA was analyzed by subareas based on patterns of visitor use and distribution of resources. A subset of the OSM Trail Suitability and Evaluation Criteria was used to classify undesignated trails. The criteria include visitor experience, physical sustainability, environmental sustainability, and cultural/paleontological resources on a scale of high, medium, or low suitability. A composite suitability rating for each category was recorded in the GIS database for

the trail segment. A brief narrative was included in the database describing the most pertinent decision making issues. A map coverage showing the classified undesignated trails was created to display the results.

Detailed field inspections and reports will guide management of undesignated trails. These reports will be drafted as part of the Trail Study Area plan implementation.

Rapid Assessment Undesignated Trail Suitability and Evaluation Criteria Matrix
Revised for undesignated trails 8/9/06

Quality of Visitor Experience				
Suitability Criterion	High Suitability	Medium Suitability	Low Suitability	Not Suitable
A. Trail Connections / Enhanced Trail Opportunity	Critical link to the existing trail system; possible opportunity for longer-distance trail, loop trail, or improved access to existing destination.	Important link to the existing trail system or planned trail system; possible opportunity for longer-distance trail, loop trail, or improved access to existing destination.	Less important trail connection or trail enhancement.	
B. Visual Quality	Dramatic vistas or high interest scenic features.	Partial vistas or high interest scenic features.	Few or no vistas or high interest scenic features.	
C. Access to Water Resources	Direct access to water in an area not prone to erosion or vegetation trampling.	Limited access to water in an area prone to erosion or vegetation trampling.	No access to water or ephemeral water source.	
Physical Sustainability				
Suitability Criterion	High Suitability	Medium Suitability	Low Suitability	Not Suitable
A. Trail Grade	Gentle grades between 2 and 7%.	Moderate grades between 7 and 14%.	Steep grades greater than 14% or flat grades less than 2%.	
B. Cross Slope	Moderate slopes of 10 to 70%.	Gentle slopes (between 0 and 10%) or Steep slopes (between 70 and 90%).	Very Steep slopes (exceeding 90%).	
C. Soil Types	A good mixture of fines and small angular rock.	A good mixture of soil and small rock intermixed with	Soils with uniformly fine texture with little	

		larger cobbles or small boulders or mostly rock of uniform or varying size containing little or no soil.	or no rock content or material with uniform sand-grain texture with few fines.	
Environmental Sustainability				
Suitability Criterion	High Suitability	Medium Suitability	Low Suitability	Not Suitable
A. Rare and Imperiled Species, Habitats, or Communities (listed as rare or imperiled on federal, state, county, Colorado Natural Heritage Program, or OSMP lists)	Impacts no rare and imperiled species or habitats.	Impacts few rare and imperiled species or habitats.	Impacts several rare and imperiled species or habitats.	Legal requirements are met to avoid impacts to the habitat of threatened or endangered species (designated by state or federal agencies).
B. Size and Functioning of Habitat Blocks	Maintains or increases the size and functioning of habitat blocks.	Moderately decreases the size and functioning of habitat blocks.	Significantly decreases the size and functioning of habitat blocks.	
C. Presence, Introduction, or Spread of Priority Weed Species (due to construction and visitor use)	Has low potential to contribute to the introduction, spread, or continued presence of OSMP priority weeds.	Has moderate potential to contribute to the introduction, spread, or continued presence OSMP priority weeds.	Has high potential to contribute to the introduction, spread, or continued presence of State A and B Listed weeds or OSMP priority weeds.	
Cultural / Paleontological Resources				
Suitability Criterion	High Suitability	Medium Suitability	Low Suitability	Not Suitable

A. County, State (State Historic Preservation Officer), or Federal (National Register of Historic Places) Historic Designation	Designated and protected; may be interpreted.	Designated and needs protection; interpretation potential moderate.	Needs protection; no interpretation potential.	Trail will not violate legal requirements to avoid or not create significant impacts to federal-, state-, or county-regulated historic resources.
B. Known Cultural Sites with Documented Artifacts or Evidence of Human Habitation	Protected, may be interpreted.	Needs protection.	Needs protection.	
C. Known Paleontological Locality with Documented Fossil Occurrences	Protected, may be interpreted.	Protected, may be interpreted.	Needs protection.	