



United States Department of Agriculture
Forest Service

Buffalo Pass Trails Project

Environmental Assessment & Finding of No Significant Impact

Hahns Peak/Bears Ears Ranger District, Medicine Bow-Routt National Forest and Thunder Basin National Grassland, Routt County, Colorado

Township 6 North: Range 83 West, Sections 3-5, and 8; Range 84 West, Sections 1, 2, and 11.
Township 7 North: Range 83 West, Sections 27-29 and 32-35; Range 84 West, Sections 25-26 and 35-36.

May 2016

Responsible Official: Chad Stewart, District Ranger

For Further Information contact: Kent Foster, Recreation Program Manager, (970) 870-2142, kfoster@fs.fed.us



Mountain biking on Buffalo Pass.

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1.0 INTRODUCTION

The Hahns Peak/Bears Ears Ranger District is proposing to develop and manage recreation trails in the Buffalo Pass area. The Forest Service has prepared this environmental assessment[†] (EA) in order to comply with the National Environmental Policy Act[†] (NEPA), agency directives[†], and other relevant Federal and State laws and regulations.

This EA describes the Buffalo Pass Trails Project and presents an analysis of potential direct, indirect, and cumulative impacts that may result from the action alternatives[†]. Additional documentation may be available upon request in the project record[†] from the Hahns Peak/Bears Ears Ranger District. This EA and other public information are also available on the Routt National Forest website at: http://www.fs.fed.us/nepa/nepa_project_exp.php?project=46247.

Based on information in this EA and the project record, the Responsible Official[†] may decide to take no action (Alternative 1); implement the Proposed Action[†] (Alternative 2); or close and rehabilitate existing user-created, unauthorized[†] trails and prohibit off system trail bike use by implementing a Closure Order for bicycle use off of designated routes. (Alternative 3). The Responsible Official may also determine that an environmental impact statement[†] (EIS) is needed.

This EA provides an opportunity for the public to understand the NEPA process, not only as it applies to this project, but also how project specific analyses tier to the Routt National Forest Land and Resource Management Plan (Forest Plan).¹ To help understand terminology, specialized words are followed by a [†] symbol the first time they are used in this document to denote that they are defined in the Glossary (Appendix A).

1.1 PROJECT AREA

The Buffalo Pass Trails Project area is on the Hahns Peak/Bears Ears Ranger District of the Routt National Forest, administered by the Bow-Routt National Forests and Thunder Basin National Grassland in Routt County northeast of Steamboat Springs, Colorado (Map 1), in the Middle Yampa Geographic Area[†]

¹ The Forest Plan provides specific direction on how to manage different land areas. Management areas (MA) are sections of land on the Forest that have a certain emphasis to direct management activities on that piece of land. They include standards and guidelines, which are referred to as “prescriptions”. Prescriptions include “theme” (the general management direction), “setting” (the general environment in which the management is located), and “desired condition” (how the area will look and the opportunities available in the future). Geographic areas (GA) are sections of land that are 100,000 acres or less in which management is directed toward achieving a specified desired condition at the landscape or watershed level. Application of the MA prescriptions are intended to move GAs towards the desired condition.

(GA), as described in the Forest Plan. The 95,040 acre Middle Yampa GA is dominated by spruce/fir (46%), aspen (23%), lodgepole pine (11%), and grass and forbs (10%). Unique features of this geographic area include, but are not limited to: diverse recreation opportunities; a rural-urban boundary along the Yampa River Valley; the Steamboat Ski Area; low motorized travel route density; and domestic water supply provided by the watershed (Forest Plan 3-54). Geographic area and management area (MA) direction allow for a variety of activities with an emphasize providing for recreation opportunities while minimizing environmental effects on resources. For a detailed description of the Middle Yampa GA and MA's, please refer to the Forest Plan (USDA Forest Service 1997).

The analysis area includes portions of two Colorado Roadless Areas[†] (CRA) and three Potential Conservation Areas^{2†} (PCA). Effects to CRAs are addressed later in this document. Effects to PCAs are analyzed in the Botany Specialist Report (Aitken 2016) and summarized in Appendix C, page 65, of this document.

1.2 EXISTING CONDITION & DESIRED CONDITION

The Buffalo Pass area is one of the closest portals to the Routt National Forest from Steamboat Springs, CO. Access is via the Buffalo Pass Road (National Forest System Road [NFSR] 60), or the Spring Creek Trail (National Forest System Trail [NFST] 1160). Designated trails in this popular area are currently limited to the Spring Creek Trail, which originates in downtown Steamboat Springs terminating at the Dry Lake area on the western edge of the project area; and the Wyoming Trail (NFST 1101) at the summit of Buffalo Pass, five miles east of the Dry Lake. Due to the lack of Forest Service trails and the area's proximity to town and easy access, a series of non-system trails have been created by recreationists, sometimes using old routes including an old jeep road and irrigation ditch. Other routes evolved through repeated use and, in some cases, have been maintained without Forest Service authorization. Generally, these trails are not meeting Forest Service standards for sustainability and, in specific locations are creating resource damage.

Relevant to this action, desired condition of the Middle Yampa GA is to provide high quality motorized and non-motorized recreation opportunities in this scenic area while minimizing resource impacts and managing potential user conflicts. Motorized recreation is an acceptable use in some MAs within the Middle Yampa GA, however, the desired condition for a low density of motorized travel ways emphasizes non-motorized recreation. A motorized trail is planned to provide an opportunity and to alleviate mixed use congestion on the Buffalo Pass Road.

² The EIS for the Forest Plan refers to this as Preliminary Conservation Planning Area (D-55). The EIS only references the Soda Creek PCA, as the data compiled by the Colorado Natural Heritage Program for the other two PCAs in the project area was made available after the EIS publication date.

Minimal vegetation management is desired to maintain the area in a natural state. Human caused disturbance is not to interfere with visual quality (Forest Plan 3-55). This desired condition, as described in the Forest Plan, can be upheld with a well-designed trail system that creates loops for various modes of recreation.

1.3 PURPOSE AND NEED FOR ACTION

Consistent with the Forest Plan, the purpose of this project is to provide for trail-based recreation by developing and managing a designated and sustainable trail system in the Buffalo Pass area. This project is needed because Forest Service designated trails in the area are currently limited, which has resulted in the construction, maintenance, and recreational use of a network of unsustainable and unauthorized trails in the area. These trails are creating resource damage. If left unmanaged, resource damage will likely continue to occur, and will likely increase, as more unauthorized trails are constructed. There is a need to manage a trail system to protect resources and reduce the illegal actions.

1.4 DECISION FRAMEWORK

The Hahns Peak/Bears Ears Ranger District Ranger, Chad Stewart, is the Responsible Official for this project. Given the purpose and need, the Responsible Official will review the Proposed Action and the two alternatives to the proposed action, issues identified during public involvement “scoping[†]”, and potential impacts associated with implementing each alternative. This information will form the basis for the Responsible Official to make a decision of which of the alternatives to implement.

1.5 INTERDISCIPLINARY TEAM

In accordance with 40 CFR 1501.2 (a), the Responsible Official selected a interdisciplinary team[†] (IDT) of Forest Service resource specialists to plan and analyze the Buffalo Pass Trails Project:

Marti Aitken, Botany
Nic Bencke, Geographic Information Systems[†] (GIS)
Melissa Dressen, Wildlife
Kent Foster, IDT Leader & Recreation
Rick Henderson, Aquatics
Bridget Roth, Cultural Resources[†]
Charlie Sharp, NEPA Planner
Brandon Taglioli, Engineering
Randy Tepler/Ryan Adams, Soils
Jeff Tupala, Visuals
Liz Schnackenberg, Watershed[†]

1.6 PUBLIC INVOLVEMENT AND CONSULTATION

The Forest Service had partnered with the Colorado Off Highway Vehicle Coalition (COHVCO) in 2011 and with the International Mountain Bike Association (IMBA) in 2014 on assessments and both identified shortfalls and opportunities for desired trail systems. In August of 2014, the Forest Service hosted a public meeting to provide an opportunity for the public to identify and discuss trail proposals and potential issues across the Hahns Peak/Bears Ears Ranger District in support of developing a District Trails Master Plan. In this public forum, the Forest Service received proposals across the 600,000 acre Ranger District from various stakeholder and user groups. The Forest Service compiled information, prioritizing needs and ideas from the community. This project is a subset of the districtwide Trails Master Plan. The Buffalo Pass Trails Project was listed on the Forest Service Schedule of Proposed Actions[†] (SOPA) (<http://www.fs.fed.us/sopa>) on April 1, 2015.

The legal notice was published in the *Steamboat Pilot and Today* on April 19, 2015. Written comments were accepted for thirty calendar days following the publication of the notice, as required by NEPA.

The Notice of Proposed Action[†] (NOPA) was signed on April 20, 2015 and mailed to forty-seven interested or affected federal, state, and local agencies and elected officials; Native American tribes; organizations; and individuals. Eighteen parties were also notified via e-mail. The NOPA served as a notification of the opportunity to comment on the project.

Ninety-eight comment letters were received: forty-eight letters were in favor of the project; forty-five letters were opposed to the project; two letters were neutral; and three of the letters were submitted after the comment period, disqualifying them from consideration. Comments that did not meet the other requirements for substantive comments of 36 CFR 219.62 were disqualified from consideration. All comments that met the substantive comments requirements were considered by the IDT and Responsible Official in the development of the Final Proposed Action. In total, the comment letters yielded 209 separate comments. Topics included: cultural resources; economics; fire; NEPA process; recreation; roadless/special areas; soils/hydrology; special uses; threatened, endangered, and sensitive species; visual resources; and wildlife.

For a list of consulted parties and commenters, please refer to Appendix B.

Several possible issues were identified from the public comments received and internal agency scoping. These potential issues included: economics; Buffalo Pass Road improvements; Dry Lake parking lot expansion; motorized use; user-group conflicts; safety concerns; hunting impacts; special events impacts; roadless area impacts; and soil, watershed, plant, wildlife, and aquatic species impacts.

The IDT and Responsible Official reviewed internal and external comments and possible issues and considered them in their modifications to the original

Proposed Action. Considering all comments and modifying the original Proposed Action has resulted in no unresolved conflicts that would necessitate additional alternatives. No significant resources or social issues have been raised that were not disposed of by either incorporation into the final proposed action with associated design criteria, so an EIS is not necessary. Please refer to Appendix C for a list of more specific non-key issues identified during scoping and their disposition.

Public comments and specific Forest Service comment responses are available in the project record.

2.0 ALTERNATIVES

Three alternatives are evaluated in this EA for complying with the Forest Plan, meeting the purpose and need of the project, for addressing or disposing of the list of issues, and for impacts that may result from implementation of the three alternatives: Alternative 1: No Action Alternative; Alternative 2: Proposed Action Alternative; and Alternative 3: Trail/Area Closure Alternative.

2.1 ALTERNATIVE 1: NO ACTION ALTERNATIVE

With this alternative, the Buffalo Pass Trails Project would not be implemented (Appendix E: Map 1). Approximately fourteen miles of existing unauthorized trail would continue to be open for non-motorized recreational use. No new Forest Service designated trails or facilities would be developed to provide for recreation needs. No mechanism to prevent further trail development would be implemented. Resource impacts and conflicts associated with the unauthorized trails would continue, with the only deterrent being enforcement of Forest protection laws.

With the No Action Alternative, previously-approved Forest Service management actions would continue to be implemented in the project area. Future Forest Service management actions could be analyzed and/or implemented under separate NEPA analyses.

Table 1: Miles of Trail in the No Action Alternative		
Existing Non-System Miles of Trails	Existing Non-Motorized Trail Use on FSR 319	Total Miles of Trail That Will Remain Open for Public Use
13.7	1.4	15.1

2.2 ALTERNATIVE 2: PROPOSED ACTION ALTERNATIVE

The Proposed Action Alternative would meet the project's purpose and need to create a sustainable trail network. Maps 2 and 3 in Appendix E show this alternative.

The Proposed Action to analyze in this EA was modified based on public comments received, resource specialist input, and refined accuracy of on-the-ground data collection. No additional routes were added to the Final Proposed Action from the Proposed Action described in the NOPA.

Specific changes include:

- Updating total proposed miles of system trail from 42.2 miles to 48.6 miles of trail due to:
 1. Incorporating closed Forest Service Level 1 Maintenance Roads[†] into the miles of trail calculations. These miles were included in order to clarify that these sections would not be prohibited to mountain bike use, as they would be incorporated as part of the designated trail network.
 2. Incorporating updated Global Positioning System[†] (GPS) information, which increased length. Some of the proposed trails were designed using GIS, rather than on-the-ground, resulting in some of the GIS designed trails to be straighter and steeper than desired for on-the-ground implementation. To meet Forest Service standards for trail grades and to avoid sensitive areas identified during field review, trail lengths were made more accurate with GPS.
- Updating total miles of new non-motorized trail from 38.5 to 34.9 miles.
- Including 3.0 miles of proposed trail on City of Steamboat Springs administered ground.
- Incorporating and improving 9.3 miles of existing non-system trail to meet Forest Service standards.
- Adjusting the original proposed motorized trail. Field review of the upper motorized trail determined that it was not desirable. A new upper route that incorporates approximately 1.4 miles of closed road was identified, resulting in 5.7 miles of single track motorized route, also open to bikes and other trail uses. These adjustments to the motorized trail resulted in updating the miles of new motorized trail from 3.7 miles to 4.3 miles.
- Reducing total miles in the Colorado Roadless Areas from 17.9 to 17.1 miles.
- Designating designed and managed use; and trail classes. Based on public comments to provide for a variety of needs, ability levels, and recreational opportunities, including accessibility, the Final Proposed Action designates trail classes (EA: Tables 3 and 4; Appendix E: Map 3). This description was not included in the original proposed action.
- Determining specific Dry Lake Trailhead improvement, including updating trailhead signs and providing an accessible toilet.

Trails

With this alternative, a total of approximately 48.6³ miles of trail would be designated and/or constructed. The Forest Service would incorporate and designate approximately 9.3 miles of existing user-created trail, provided they meet or could be improved to meet, Forest Service sustainability standards as outlined in Forest Service Manuals[†] (FSM) 2300, 2350, and Forest Service Handbook[†] (FSH) 2309.18. Approximately 4.5 miles of user-created trail that do not meet Forest Service sustainability standards would be decommissioned[†] and rehabilitated[†] for resource protection.

The Forest Service would construct approximately thirty-five miles of new trail and incorporate 4.4 miles of existing Forest Service Level 1 Maintenance Roads into the designated trail network.

In order to accommodate multiple user groups, the proposed trail network would include approximately 5.7 miles of multiple-use[†] trail that would be available to motorized use and non-motorized multiple uses. The remaining trail miles would be open to multiple-use, including foot traffic, bicycles, and horses, but would exclude motorized[†] use, in order to reduce the potential for user-conflicts, avoid resource damage, and follow management area direction, per FSM 2350.3.5. Map 2 in Appendix E show which trails would be motorized and non-motorized.

Table 2: Miles of Proposed Action Trail				
(Includes existing trails incorporated, existing roads incorporated, new trail, and miles of non-system trail to rehabilitate)				
	Non-System Trails To Designate	Existing Road Miles Used As Trails	Proposed Miles of Trail	Existing Non-System Miles of Trail Closed
Non-Motorized	9.3	3.0	30.6	4.5
Motorized	N/A	1.4	4.3	N/A
Total	9.3	4.4	34.9	4.5
Total Miles of Trail in Proposed Action = 48.6				4.5

Design parameters[†] for trails include technical guidelines for the survey, design, construction, maintenance, and assessment of a trail based on its designed use[†] and trail class[†] (FSH 2309.18. Ch. 05). Trails are designed for the most prevalent use and most trails are managed for multiple uses. Updates to the Proposed Action resulted in identification of a range of trail classes, dependent on location, terrain, and designed use (Appendix E: Map 3). Trail classes range in development scale from 1 to 5, with “1” being primitive and “5” being a fully accessible paved trail. Generally, trails near developed recreation areas (e.g. Dry Lake Campground and Parking Area) would be designed for hiker/pedestrian use

³ Trail lengths included in the EA may vary slightly from trail lengths in GIS due to rounding miles in the EA to the nearest tenth of a mile.

and meet Forest Service Trails Accessibility Guidelines[†] (FSTAG) by being wider and smoother (e.g. Trail Class 4). Trails in more remote areas would be more advanced and rugged (e.g. Trail Class 1) and designed for bicycle, hiker, pack and saddle and motorcycle use.

Table 3: Miles of Proposed Action Trails by Trail Class			
(Includes existing trails incorporated, existing roads incorporated, and new trail)			
Trail Class	Non-Motorized	Motorized	Total
1	8.7	0	8.7
2	23.1	4.7	27.8
3	6.8	1	7.8
4	4.4	0	4.4

Table 4 shows the miles of trail within each management area as defined in the Forest Plan. Map 4 in Appendix E illustrates these areas.

Table 4: Miles of Proposed Action Trail by Management Area and City Property			
(Includes existing trails incorporated, existing roads incorporated, and new trail)			
	New	Existing	Total
1.32 Backcountry Recreation Non-Motorized with Limited Motorized	3.8	3.6	7.4
3.23 Municipal Watersheds	10.3	2.4	12.7
4.2 Scenery	15.4	6.4	21.8
4.3 Dispersed Recreation	1.7	1.2	2.9
7.1 Residential/Forest Interface	0.8	0	0.8
City of Steamboat Springs ⁴	3.0	0	3.0
Total	35	13.6	48.6

Closure Order

To address further unauthorized user-created trail development and protect resources, a Closure Order would be implemented prohibiting mountain bike and all other wheeled-vehicle use off of designated roads and trails within the analysis area. Maps 1-3 and 6 in Appendix E show the Closure Order boundary for the Buffalo Pass area.

⁴ Inclusion of the three miles on City of Steamboat Springs property is not included in this NEPA decision, but is included in the table to demonstrate its inclusion in indirect and cumulative effects analysis.

Dry Lake Parking Lot

In order to accommodate users and meet Forest Service policy, the Dry Lake parking lot facilities would be improved for visitor use with the installation of an accessible toilet and updated trailhead signs. The Forest Service will follow Forest Service Outdoor Recreation Accessibility Guidelines[†] (FSORAG) and FSTAG for designing and constructing new accessible facilities and associated trails.

Timeline

Project implementation would likely begin in spring or summer of 2016. With a limited construction season, the project is anticipated to take several years to complete. Priority will be placed on correcting resource issues and operational efficiencies.

Economics/Funding

Funding for the planning and construction of the trails comes primarily from the 2A Tax fund of Steamboat Springs. 2A Tax dollars were designated primarily for development and construction of new trails and other amenities and can be summarized as: *“accommodation tax funding is specifically requested to enhance multi-use recreation through new and improved natural surface trails, enhanced trailhead areas, safety improvements, and core trail extension for the benefit of all recreational users,”* More information on the trails alliance proposal can be found at: www.steamboatspringstrails.com.

The issue of long term maintenance is both a Forest Service management concern and public issue. Mountain biking groups and partners have committed time and resources to help construct and maintain the proposed trails. The Forest Service and Routt County Riders have entered into a Challenge Cost Share Agreement[†] in order to ensure time and resources to construct and maintain the proposed trails are available. A Trail Maintenance Endowment Fund has been established through the Yampa Valley Community Foundation to help financially support trail and trailhead maintenance. Over the long term, the Forest Service will continue working with current partners and strive to develop new partnerships for additional funding and maintenance needs, such as developing an Adopt-A-Trail program with local businesses. As a result of the combination of these partnerships, agreements, and resources, the Buffalo Pass Trails Project is not anticipated to negatively impact the Hahns Peak/Bears Ears Ranger District's budget.

Consistency with Forest Plan

The Proposed Action is designed to meet Forest Plan goals[†], objectives[†], and desired conditions[†]. Project direction is also obtained from the FSM and FSHs.

It would specifically meet the following goals and guidelines[†] by:

- Providing for multiple-uses and sustainability of National Forests and grasslands in an environmentally acceptable manner (Regional Goal #2). Specifically, this will be achieved by avoiding trail location in areas of soil, watershed, plant, or wildlife concern and rehabilitating areas that have already experienced resource damage from the user-created trails.
- Providing for scenic quality and a range of recreation opportunities which respond to the needs of National Forest customers and local communities (Regional Goal #4).
- Providing a wide variety of outdoor recreational opportunities and experiences to meet the full range of visitor experiences (Forest-Wide Goal #2).
- Identifying appropriate programs and compatible levels of use for Forest recreation and resource programs in collaboration with user groups, communities, and other agencies (Forest-Wide Objective).
- Managing trail development at a broad scale to coordinate with trail systems developed by municipalities, counties, states, other federal agencies and partners. (Dispersed Recreation Guideline #3).
- Considering proximity to population centers, feasibility of loop trails, types of trail users to be served, and other factors in the development of new trails (Dispersed Recreation Guideline #6).
- Following FSM 2350.3 Policy #7: “Do not maintain unauthorized trails”.

2.3 ALTERNATIVE 3: TRAIL/AREA CLOSURE ALTERNATIVE

With this alternative, approximately fourteen miles of existing unauthorized trails in the project area would be closed and rehabilitated (Appendix E: Map 6). No new trails would be designated. A Closure Order would be implemented to prohibit mountain bike and all other wheeled-vehicle use off of designated roads and trails. Implementation would likely begin in spring or summer of 2016.

This alternative would be consistent with FSM 2350.3 Policy #7.

Table 5: Miles of Trail Closed in The Trail/Area Closure Alternative	
Existing Non-System Trail	Total That Would Be Closed
13.7	13.7

3.0 ENVIRONMENTAL CONSEQUENCES

This section summarizes potential resource impacts of the alternatives, how each alternative meets the purpose and need of the project, and addresses issues. Further information on the analyses beyond what is summarized in this EA were completed to support the determinations made and to ensure compliance with various federal and state laws and regulations. That information is part of the project record and is available from the Hahns Peak/Bears Ears Ranger District

office. Resources that were not impacted by the proposed action and therefore not further analyzed include: air quality, climate change, energy use, environmental justice, farmlands, fire/fuels, flood plains, range, and timber.

The IDT analyzed direct effects[†], indirect effects[†], and cumulative effects[†] of the three alternatives.

Analyses are based on a variety of information sources including field surveys, geographic information systems and other information databases, relevant available scientific literature, and professional judgment. Conclusions are based on the fact that all alternatives would be implemented as described, including sustainable trail design and design criteria for the Proposed Action.

3.1 AQUATICS (AMPHIBIANS & FISH)

Trails could affect amphibians by loss of, or changes to, habitat. Fish can be negatively impacted by water depletions and water quality changes, including increased sediment. Increased sediment can affect fish habitat by 1) changing substrate composition; 2) reducing the depth of pools that are critical for over-wintering fish; and 3) reduce spawning success by reducing fresh water delivery to egg masses. For more detailed analysis on aquatic resources within the project area, see the Aquatics Specialist Report (Henderson 2016).

Threatened, Endangered, Candidate, Proposed Species (TECP)

The bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker are endangered fish species that persist downstream in larger rivers and could be impacted by projects that create water impoundments or water depletions[†]. Therefore, the U.S. Fish & Wildlife Service (FWS) requires that the potential for this effect to occur as a result of a Federal action to be analyzed. There would be no water depletions associated with this project and there would not be any net effect on habitats in the main stem of the Yampa River. Therefore, there would be no direct, indirect, or cumulative effects associated with any of the alternatives to the endangered downstream fish populations or habitat. Any further analysis of these species has been dismissed and will not be discussed further.

The western boreal toad is a FWS candidate[†] species for listing on the threatened or endangered list, as well as a Region 2 Sensitive Species[†]. Candidate species are not required to be analyzed for the FWS, therefore, the boreal toad will be analyzed as a sensitive species.

No other TECP aquatic species are known to occur in or have potential habitat in the project area.

Forest Service Region 2 Sensitive Species

Three Region 2 Aquatic Sensitive Species are known/thought to occur within the project area or have suitable habitat present: Western boreal toad, Northern

leopard frog, and Colorado River cutthroat trout. For a list of the other Region 2 Aquatic Sensitive Species that were not included in this analysis and rationales for exclusion, please refer to the Aquatics Specialist Report (Henderson 2016).

Routt National Forest Management Indicator Species[±] (MIS)

Two Aquatic MIS are known to occur within the project area: Colorado River cutthroat trout and brook trout. These species are indicators of aquatic habitat fragmentation and sedimentation.

Alternative 1: No Action Alternative

Direct and Indirect Effects

Impacts from existing user-created trails would continue to effect aquatic resources. Eroding trail segments and stream/wetland crossings would continue to input sediment into water bodies. Additional future user-created trails would also increase the sediment impact.

Cumulative Effects

There would be minimal potential for additional cumulative effects under this alternative.

Determination

Overall, aquatic habitat would remain stable, but in a slightly degraded state. This alternative would have minimal impacts on aquatic individuals, populations, and habitat. These impacts would be within the range of natural variability. Therefore, a determination of “no impact” is made for Alternative 1. Forest Plan direction for aquatic resources would be met and there would not be any irreversible or irretrievable impacts.

Alternative 2: Proposed Action

Direct and Indirect Effects

New trail construction would increase sediment delivery to wetlands and streams immediately after construction and during run-off events. However, the reduction of sediment delivery that would result from improving and/or decommissioning user-created trail that are creating resource damage would likely off-set the sediment that would occur from new trail construction. Specifically, rehabilitating 0.25 miles of trail through the Soda Creek beaver complex would improve resource conditions within the best potential amphibian habitat within the project area.

Stream and wetland trail crossings would also provide small, chronic sediment inputs. The use of bridges for crossings would greatly reduce sediment input relative to using hardened crossings. Specifically, the two proposed crossings on upper Spring Creek would benefit from bridges as Colorado Parks and Wildlife

(CPW) plans to reintroduce native Colorado River cutthroat trout into this stream within the next five years.

Cumulative Effects

There would be minimal potential for additional cumulative effects under this alternative.

Determination

Overall, aquatic habitat would remain stable, but in a slightly degraded state. There would be minimal impacts to aquatic individuals, populations, and habitat. These impacts would be within the range of natural variability and can be considered insignificant. Therefore, a determination of “may adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing” is made for Alternative 2. Forest Plan direction for aquatic resources would be met and there would not be any irreversible or irretrievable impacts.

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

The rehabilitation of the current user-created trails would result in less sediment reaching aquatic habitat. No new sediment delivery would occur as no new trail construction would occur. A negligible amount of sedimentation may occur as a result of trail decommissioning.

Cumulative Effects

There would be minimal potential for additional cumulative effects under this alternative.

Determination

This alternative would benefit aquatic individuals, populations, and habitat due to decommissioning of the trails. A determination of “no impact” is made for Alternative 3. Forest Plan direction for aquatic resources would be met and there would not be any irreversible or irretrievable impacts.

3.2 BOTANY

Potential impacts to the Botany resource include trampling, breaking, crushing, uprooting, and mortality of individual plants by humans and animals. Some species of plants are abundant in the Forest, and regenerate with ease. This analysis will focus on the effects of the alternatives on Threatened, Endangered, Candidate, Proposed species (TECP); Region 2 Sensitive Species, and Routt National Forest Species of Local Concern.

The Colorado Natural Heritage Program (CNHP) has identified three Potential Conservation Areas (PCAs) within the project area and has documented two rare

wetland plant associations within the area that are considered vulnerable. These plant associations are not affected by the proposed action, and will not be considered further. For a more detailed analysis on botany resources within the project area than is provided in this EA, see the Botany Specialist Report (Aitken 2016). Map 5 in Appendix E shows the PCAs in the Project Area.

Threatened, Endangered, Candidate, Proposed Species (TECP)

No TECP plant species are known/suspected to occur or have suitable habitat in the project area. In the unlikely event that any TECP plant species or suitable habitat are discovered during project implementation, the Forest Service Botanist will be notified and appropriate protection measures will be implemented.

Because there are no known or suspected TECP plants or suitable habitat in the project area, the alternatives should have no effect to federally-listed TECP plants. Any further analysis of these species has been dismissed and will not be discussed further.

Forest Service Region 2 Sensitive Species

Thirteen Sensitive Species occur or have the potential to occur within the project area: Colorado tansyaster, dwarf raspberry, lesser panicled sedge, lesser bladderwort, livid sedge, plains rough fescue, Rabbit Ear's gilia, roundleaf sundew, Selkirk's violet, simple bog sedge, slender cottongrass, sphagnum, and triangleglobe moonwort. These species were analyzed for potential impacts from the alternatives.

Routt National Forest Species of Local Concern

Four Species of Local Concern occur in the project area: broad-leaved twayblade, Crandall's wild hollyhock, largeflower hollyhock, and Pacific trillium. These four species were analyzed for potential impacts from the alternatives.

Alternative 1: No Action Alternative

Direct and Indirect Effects

Direct impacts include trampling, breaking, crushing, uprooting, and mortality of plants from user-trail construction, cross-country travel, and "cat holes" dug for burying human waste. These effects could reduce growth, development, and the seed set of individual plants, which could result in reduced or extirpated plant populations.

Indirect effects include soil degradation, compaction, and loss, reduced soil moisture, and increased bare soil (Potito & Beatty 2005). These effects could decrease seed germination and survival, which could result in reduced or extirpated plant populations and a shift in species composition. The introduction of non-native plant species or the promotion of conditions that favor non-native plant species is a significant indirect effect, as trails can act as corridors for non-

native species (Bella 2011; Gower 2008; Pickering et al. 2010; Potito & Beatty 2005; Wells et al. 2012). Trails that cross wetlands and/or fens[†] have the potential to dry out the peatland, thereby degrading the habitat for plant species. Trails that cross meadows have a high potential to impact several plant species, especially Rabbit Ear's gilia, a Region 2 Sensitive Species.

Cumulative Effects

Disturbances would be chronic and there would be little or no opportunity for plants and their habitat to recover due to recurring trail use. Effects would increase in severity and extent with continued trail use. Forest Plan direction for botany resources would not be met and there would not be any irreversible or irretrievable impacts.

Tourism and outdoor recreation in the Steamboat Springs area has increased over the past ten years. It is likely that this will continue, not only on the current user-created trails, but also across the Routt National Forest. The cumulative effects of increased outdoor recreation may adversely impact species. Particularly, Rabbit Ear's gilia, Crandall's wild hollyhock, and largeflower hollyhock may sustain negative population impacts that could potentially affect viability on the Routt, due to their limited distribution on the Routt National Forest.

Determination

For Alternative 1, a determination of "may adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing" is made for ten Sensitive Species and two Species of Local Concern. A determination of "Likely to result in a loss of viability in the planning area, or in a trend toward federal listing" is made for Rabbit Ear's gilia and sphagnum (Region 2 Sensitive Species) and Crandall's wild hollyhock and largeflower wild hollyhock (Routt National Forest Species of Local Concern). Forest Plan direction for botany resources would not be met and there could be irreversible or irretrievable impacts.

Alternative 2: Proposed Action Alternative

Direct and Indirect Effects

Direct impacts to plant species from the Proposed Action would be similar to the Alternative 1 impacts. However, the initial impacts from the Proposed Action would be greater than the impacts from Alternative 1 due to trail construction and associated ground disturbance. Over time the impacts of the Proposed Action would likely be less than Alternative 1, as sustainable trail design will reduce potential for trail creep or braided trails to develop; a Closure Order to regulate use to existing trails limiting new miles of trail to only those proposed.

Indirect impacts to plant species from the Proposed Action would be also be similar to the Alternative 1 impacts. However, they may occur to a lesser extent due to sustainable trail design. The potential for non-native species spread would

likely increase as trail use increases, but there would be a greater possibility of detection and treatment.

Cumulative Effects

Cumulative impacts would be similar to the Alternative 1 cumulative impacts, with these exceptions:

1. Mitigation measures would be in place to avoid the possible loss of viability across the Forest of Rabbit Ear's gilia, Crandall's wild hollyhock, and large flower hollyhock.
2. The impacts of uncontrolled user-created trail construction and use that will likely occur as a result of Alternative 1 will likely surpass the impacts of the Proposed Action.

Determination

For Alternative 2, a determination of "may adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing" is made for all plant species analyzed. Forest Plan direction for botany resources would be met and there would not be any irreversible or irretrievable impacts.

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

Short-term and low intensity trampling of plants would occur during restoration efforts. Non-native species would persist, but native species would recolonize the area over time.

Cumulative Effects

As this alternative restores habitat, it would benefit plant species, especially as projects elsewhere may reduce plant habitat.

Determination

For Alternative 3, a determination of "beneficial impact" is made for all analyzed plant species. Forest Plan direction for botany resources would be met and there would not be any irreversible or irretrievable impacts.

3.3 COLORADO ROADLESS AREAS

The project area partially lays within portions of the Mad Creek and Long Park Colorado Roadless Areas (CRA). Characteristics established by the 2001 Roadless Rule (36 CFR[†] 294) and adopted in the 2012 Colorado Roadless Rule provide a framework/template to analyze effects for analyzing how an action may affect a CRA. The nine criteria are:

1. High-quality or undistributed soil, water, or air.
2. Sources of public drinking water.
3. Diversity of plant and animal communities.
4. Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land.
5. Primitive, semi-primitive, and semi-primitive non-motorized recreation opportunity spectrum[†] (ROS) classes
6. Reference landscapes
7. Natural-appearing landscapes with high scenic quality
8. Traditional cultural properties and sacred sites
9. Other locally identified unique characteristics (e.g. unique social, geological, scenic, scientific qualities, etc.)

To meet the spirit of the Colorado Roadless Rule, the Forest Service conducts an internal project review including analyzing the effects of a Federal action on these criteria. This review is included in the project record in the pre-decision roadless review, accepted by the Deputy Regional Forester for the Rocky Mountain Region.

In the Mad Creek CRA, recreation use is high along the easily accessible areas adjacent to the Buffalo Pass Road, Hot Spring Road, and Elk Park Road. Hiking, and horseback and mountain bike use is allowed on Forest Service system trails within the CRA. Non-system trails off of the Buffalo Pass Road have developed as a result of the use of old motorized routes and riding on newly created routes. In specific areas these trails are impacting resources due to lack of proper design. Currently, no prohibitions exist for bike use off of designated routes, and new routes have potential to impact resources further as they develop. During the winter, snowmobile use is allowed in most of the area; and the Forest Service authorizes through special use permit a commercial backcountry powder cat skiing business. The Forest Plan identifies the Mad Creek Roadless Area as “Capable and Available for Wilderness.” The Mad Creek Roadless Area was not recommended for addition to the National Wilderness Preservation System in the Record of Decision (ROD) for the Final Environmental Impact Statement (FEIS) and Revised Land and Resource Management Plan for the Routt National Forest.

In the Long Park CRA, recreation use is focused along trails and adjacent to access roads. All trails are open to hiking, equestrian, mountain bike use, and a portion of NFST’s #1102 and #1134 are open to OHV motorized use. Snowmobile use is allowed in a large portion of the CRA, including Forest Service designated routes. The Forest Plan identifies the Long Park Roadless Area as “Capable and Available for Wilderness.” The Long Park Roadless Area was not recommended for addition to the National Wilderness Preservation System in the Record of Decision for the Final Environmental Impact Statement

and Revised Land and Resource Management Plan for the Routt National Forest.

Table 6: Miles of Proposed Action Trail in CRAs			
(Includes existing and new trails to be incorporated as NFSTs)			
	New	Existing	Total
Long Park CRA	6.3	0	6.3
Mad Creek CRA	5.0	5.8	10.8
Total	11.7	5.8	17.1

Map 5 in Appendix E shows the Proposed Action and relationship to the CRAs.

Alternative 1: No Action Alternative

9.3 miles of unauthorized, non-system trail would remain in the Mad Creek CRA in this alternative. There are no existing user-created trails in the Long Park CRA that the Forest Service is aware of. However, as this alternative does not include a Closure Order and it is possible that user-created trails could be constructed in the CRA in the future.

Direct and Indirect Effects

Based on evaluations made in the Botany, Soils, and Watershed Specialist Reports, the existing trails are creating resource damage in places, primarily in wetlands and fens. Resource impacts in the project area would increase in severity and extent with continued trail use.

Cumulative Effects

Tourism and outdoor recreation in the Steamboat Springs area and across the Forest has increased and will likely continue. The cumulative effects of increased outdoor recreation, especially unmanaged recreation on the Forest, may adversely impact botany, soils, visuals, watershed, and wildlife resources on a landscape level.

Determination

This alternative would negatively impact the overall character of the CRAs as a result no action by the Forest Service. Alternative 1 would not be consistent with Forest Plan direction nor meet the Purpose and Need of the project because it would allow for resource damage in the CRAs. There would not be any irreversible or irretrievable impacts as a result if this alternative.

Alternative 2: Proposed Action

A total of approximately 17.1 miles of trail would be in the CRAs: 6.3 miles in the Long Park CRA; 10.8 miles in the Mad Creek CRA, utilizing approximately 5.8 miles of existing user-created trails.

Direct and Indirect Effects

Portions of the current unauthorized trails in the Mad Creek CRA that could be improved to meet Forest Service trail design and standards would be incorporated into the designated system. The remaining unauthorized trails would be decommissioned and rehabilitated to reduce aquatic, botany, soils, and watershed resource impacts. New trail construction would follow Forest Service sustainable trail design and standards, thereby not creating resource impacts in either CRA. The proposed Closure Order will reduce the potential for any further unmanaged trail development.

Tree cutting and trimming of approximately less than 11.5 acres would be incidental to the construction and future maintenance of the proposed trails. Tree cutting associated with trail construction is not prohibited under the rule (36 CFR 294.42 (c)). Tree removal has been analyzed for wildlife impacts in the Wildlife Section of this chapter and in the Wildlife Specialist Report and submitted in the pre-scoping and pre-decision Regional Roadless Review.

Cumulative Effects

There would be no added cumulative effects from this alternative, considering this and any reasonably foreseeable future federal projects expected in the CRAs. As the CRAs are on Forest Service land, no private or state developments are expected to occur.

Determination

The Forest Service completed pre-scoping and pre-decision roadless reviews for the Proposed Action and found it would be consistent with the Colorado Roadless Rule. These reviews are available in the project record. Any of the potential resource impacts identified in the specialist reports would be mitigated through incorporation of design criteria. Neither CRA was recommended for designation in the wilderness in the Record of Decision for the FEIS of the 1997 Forest Plan. This alternative is consistent with Forest Plan direction and meets the Purpose and Need of this project. There would not be any irreversible or irretrievable impacts as a result of this alternative.

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

Decommissioning and rehabilitating the current trails would be beneficial to all resources, as described in the specialist reports. The Closure Order would prevent unauthorized trail construction and off-route wheeled travel in both CRAs and the associated resource impacts.

Cumulative Effects

This alternative would not contribute any cumulative effects.

Determination

This alternative would not create resource damage, however, it would not meet the Purpose and Need of the project because it would not allow for sustainable recreational use in the project area, including in the CRAs. This alternative is consistent with Forest Plan direction, however it does not meet the Purpose and Need to provide for recreational opportunities. There would not be any irreversible or irretrievable impacts as a result if this alternative.

3.4 CULTURAL RESOURCES

Cultural occupation of the Buffalo Pass area dates from the Archaic to Contemporary Periods. The types of cultural resource types reflect the diverse uses of the area over time. They include areas of pre-contact occupation, stone tool making, historic irrigation for agriculture, and historic trash sites.

Cultural resources sites face essentially two types of impacts, both of which can be either direct or indirect: natural and cultural. Natural impacts are natural ecological processes. Cultural effects are the impacts caused by contemporary human activities. These include, but are not limited to: compaction of soils; displacement of artifacts; and trampling of artifacts and ground surfaces through activities, including recreational mountain biking, hiking, equestrian, and motorized trail use. Unmanaged use may intensify the interaction of cultural and natural impacts.

All user-created trails were surveyed to assess the presence and condition of significant cultural resources in 2013. All priority trail corridors identified by GPS were surveyed in 2015. Numerous cultural resources, both significant and non-significant, were identified in the trail corridors.

Effects determinations for this analysis are made for those area where cultural resource survey and consultation with interested parties is complete. In those areas where cultural resource surveys are not currently completed, determinations will be made upon survey and consultation completion.

The Forest Service made significance and effects determinations for identified cultural resources in surveyed areas, in consultation with the Colorado State Historic Preservation Officer (CO SHPO) and the Office of Archaeology and Historic Preservation (OAHP). Tribal Nations were contacted during the scoping phase of this analysis for comments on the proposed actions on any sacred sites, as well as to initiate consultation under the National Historic Preservation Act[†] (NHPA), as amended in 2000, for comment on the potential to effect any significant historic properties. No comments were received from Tribal Nations.

Alternative 1: No Action Alternative

Direct and Indirect Effects

Direct impacts of existing user-created trails on cultural resources can include trampling, breaking, horizontal and vertical displacement of cultural materials (if present) through soil erosion (resulting from removal of existing vegetation) or soil compaction. When trails are created without first identifying cultural resources, the potential for irreplaceable damage to significant sites is high. Trail construction should be completed in conjunction with cultural resource survey for the presence of cultural resources. Those resources are then evaluated for their significance and potential for inclusion to the National Register of Historic Places.

There is no beneficial effect of the No Action Alternative to cultural resources and negative impacts would continue. In the analysis area, existing unauthorized trails bisect archaeological sites determined to be eligible for inclusion to the National Register of Historic Places. User-created trails have eroded soils through a site, disturbing the horizontal and vertical placement of artifacts. Opening up the area with trails increases the possibility of damage through looting, or inadvertent damage through additional unmanaged dispersed recreation activities such as camping.

Cumulative Effects

Cumulative effects are considered for how long the effects of the alternative are expected to last. For Alternative 1, the effects of taking no action on cultural resources are considered to be in perpetuity. These effects would include consideration of the defined direct and indirect effects of user-created trails on known cultural resources, and the ongoing creation of new user-created trails.

Should additional user-created trails be created through direct construction or by default through continued use of new areas, effects to cultural resources will continue. Cultural and natural impacts to the vertical and horizontal placement of cultural materials on the landscape will continue.

Given the intensive occupation of the Buffalo Pass area throughout history, should new user-created trails be developed, it is likely that previously unidentified cultural resources will be effected under the No Action Alternative.

Determination

Current user-created trails have a direct, indirect, and cumulative effect on significant cultural resources. These effects would continue should use of these trails continue.

Protection measures to protect significant cultural resources can be implemented to protect those qualities making the site significant under the

NHPA, but these measures cannot protect otherwise unidentified cultural resources as new unauthorized user trails are created.

Alternative 1 is not consistent with the Routt National Forest Plan. Current impacts to significant cultural resources are irreversible, but could be mitigated through additional compliance with the NHPA.

Alternative 2: Proposed Action

Direct and Indirect Effects

Given sustainable trail design and construction in compliance with the National Historic Preservation Act, implementation of appropriate mitigation of current impacts on significant cultural resources, and implementation of design criteria during design and construction, the direct and indirect effects to significant cultural resources would be minimal. Short term disturbances to significant cultural resources during mitigation of current impacts would limit additional irreversible impacts. The effects of establishing a Closure Order would have a beneficial effect to cultural resources. Effects of Dry Lake Trailhead enhancements would have no impact to cultural resources.

Cumulative Effects

Cumulative effects are considered for as long the effects of the alternative are expected to last. As the Proposed Action assumes management of system trails into the foreseeable future, the effects of implementing the Proposed Action on cultural resources are considered to be in perpetuity. Therefore, the cumulative effects of the Proposed Action would have no impacts to cultural resources.

Determination

Overall, the Proposed Action would benefit cultural resources. Decommissioning user-created trails where significant cultural resources are present would reduce ongoing, irreversible effects. New trail construction would be in compliance with the NHPA. Establishing a Closure Order would prevent irreversible effects to otherwise unidentified, significant cultural resources. Enhancing the Dry Lake Trailhead would have no effect on cultural resources. Alternative 2 is consistent with the Forest Plan and there would not be any irreversible or irretrievable impacts as a result of this alternative.

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

The Trail/Area Closure Alternative would be the most beneficial to known and otherwise unidentified cultural resources. As existing designed trails and roads are developed in conjunction with assessing the effects to significant cultural resources, prohibiting mountain bike and all other wheeled-vehicle use off designated roads and trails would limit the effects of these activities to important cultural sites. Mitigation of the current impacts to known significant cultural resources could be enacted while reducing risk to otherwise unidentified sites by

encouraging recreation use on Forest Service designated trails elsewhere in the Steamboat Springs area.

Cumulative Effects

As the Trail/Area Closure Alternative would establish a Closure Order and restore the impacts of user-created trails, which have direct and current impacts on significant cultural resources, this alternative would benefit cultural resources.

Determination

This alternative would benefit cultural resources. Decommissioning user-created trails where significant cultural resources are present would reduce ongoing, irreversible effects. New trail construction would be in compliance with the NHPA. Establishing a Closure Order would prevent irreversible effects to otherwise unidentified, significant cultural resources. Enhancing the Dry Lake Trailhead would have no effect on cultural resources. Alternative 3 is consistent with the Forest Plan and there would not be any irreversible or irretrievable impacts as a result of this alternative.

3.5 RECREATION

Renowned for its world class skiing, Steamboat Springs has developed into a year-round, four-season resort community. The project area has the potential for various high quality recreation experiences during the summer. Forested areas of aspen and conifer are intermixed with open meadows and parks and abundant wildflower viewing. This great vegetation diversity within a 20 minute drive from the resort community attracts a large number of visitors.

Summer activities in the analysis area include: camping in the Dry Lake and Summit Lake Forest Service fee campgrounds; dispersed camping; hiking; biking; horseback riding; OHV use; wildlife viewing; hunting; and driving for pleasure for wildflower and fall foliage colors viewing. During the summer months, use is concentrated on roads, the Spring Creek Trail, the Soda Creek Trail, and other user-created trails. The Dry Lake Campground is at capacity 80% of the summer season and many dispersed campsites are visible along the Buffalo Pass Road.

Access to the area is via the Buffalo Pass Road, which bisects the project area. From pavement end on Routt County Road 38 to Dry Lake, Buffalo Pass Road is a Forest Service Level 4 Maintenance Road, maintained by Routt County. This road level provides for user comfort and allows higher speeds. At Dry Lake, the road level drops to a Level 3 Maintenance Road, which is suitable for passenger vehicle, however, comfort and convenience are not priorities. Therefore, the Buffalo Pass Road is currently meeting transportation system objectives.

However, safety is a concern on and alongside the Buffalo Pass Road. This area has a limited number of trails, but sees high recreation use. Not only is the road heavily used by highway vehicles, but also by multiple user groups, including 4-

WD and OHV users, mountain bikers, horseback riders, and hikers. Dispersed camping along the road and the open side roads is increasingly popular. Various studies and reports suggest that use trends will increase in future years (State of Colorado 2014, USDA Forest Service 1997, USDA Forest Service 2014)

Trails

Non-system trails provide recreation opportunities in the Buffalo Pass area. NFSR 319 is a Level 1 Maintenance Road, beginning at the Dry Lake Trailhead and Campground and accessing the Soda Creek area, is frequented by recreationists. It has been included in local hiking guides, such as *Hiking the Boat*, (White-Crane 1991). Spurring from this trail is an abandoned irrigation ditch that has developed into a user-created trail. Another user-created trail, segments of which are an old jeep road, begins at Dry Lake and ends near the summit of Buffalo Pass. These routes have not been officially designated by the Forest Service as trails.

With the increased popularity and improved technology of mountain bikes and a lack of Forest Service trails in the Buffalo Pass Area, approximately fifteen miles of user-created trails have developed in the past ten years by cross-country, off-trail travel. In some cases, maintenance and improvements were made to these user-created trails. These trails are “unauthorized” in that they are not designated on the Forest Service trail system, lack Travel Management Objectives and have not been designed for sustainability or protection of resources. Surveys show that in places, the existence of the user-created trails are causing damage to various resources in places. While it is Forest Service policy to not maintain unauthorized trails (FSM 2350.3, Policy #7), there are currently no specific Forest Service prohibitions on off-trail travel.

Forest Service options to manage this unauthorized use include:

1. Closing these popular routes and prohibiting use.
2. Developing a Forest Service trail system where needed.

Case studies in other Western resort communities have demonstrated that Option 1 is difficult to enforce and does not necessarily solve the issue, as trails tend to be built elsewhere instead. However, Option 2 implemented as a collaborative effort with community groups has resulted in positive outcomes.

In light of lessons learned from these case studies, the Forest Service has had a long running dialogue with the local biking community, including Routt County Riders, on the management of these trails. Initial thoughts were to adopt the trails to provide opportunities. Through public outreach, both informally and during a trails charrette in 2014, and formally through an IMBA Trail Assessment in 2014, a sustainable trail system was identified and an implementation plan was developed. Public comments from this collaborative analysis voiced the need for a variety of trails to meet the diversity of needs. This was a key factor in the development of the Proposed Action.

Outfitter and Guides

Currently, summer and fall outfitter and guide activity is low. This area is easily accessible and heavily used, so the need for commercial outfitters to provide access for the public is low. Quality outfitter-guide trips, especially hunting trips, are generally in more of a backcountry setting.

Recreation Events

Limited recreation events occur in the project area. There are two running races that utilize the Spring Creek Trail and one utilizing the Buffalo Pass Road. More events are difficult to have, due to the lack of system trails and staging areas.

Alternative 1: No Action Alternative

Direct and Indirect Effects

Allowing the existing non-managed use will continue to provide recreational opportunities for the public. The lack of regulations will not affect existing use. Unmanaged recreation in the form of unauthorized trail development will provide opportunities, but not provide for quality trail experiences. Existing problem areas on unauthorized trails will continue to deteriorate, resulting in alternate routes or braided trails around these areas.

Anticipated and predicted increase in use will apply more pressure on the limited existing system and non-system trails. User conflicts on the Spring Creek Trail will continue to increase. Additional non-engineered trails may develop to meet the increased demand, and the desire to explore new areas. Generally, these trails do not meet Forest Service standards, and most likely cause more resource damage.

Opportunities for recreation events and/or outfitting and guides will continue to stagnate due to congestion on existing system routes. Mixed use on the Buffalo Pass Road will continue to take away from the recreational experience for those who chose to use it, and continue to be a safety concern.

The opportunity to partner with clubs and individuals to collaborate on maintenance and improvements for sustainable trails will be lost, as will the opportunity to engage the community on the stewardship of public land.

Cumulative Effects

With most of the illegal trail building done by mountain bikers, other user groups will have a diminished recreation experience and will either go to other areas, or not recreate on the Forest.

Determination

Alternative 1 is not consistent with the Forest Plan, and while partially meeting the Purpose and Need by allowing continued use of trails, it does not address other resource protection required in the Purpose and Need. The desired

condition to provide for maintaining and improving trails will not be met. There would not be any irreversible or irretrievable impacts as a result of this alternative.

Alternative 2: Proposed Action Alternative

Direct and Indirect Effects

Alternative 2 will meet the Purpose and Need for the proposal, providing trail based opportunities and manage illegal trail development through closures. Trails will be designated with appropriate design class and trail class to meet both multiple use needs and safety. Implementation of this alternative will provide for a sustainable network of system trails meeting current and expected demand. Existing trails will be improved to meet Forest Service standards for trail construction. Sustainable trails reduce maintenance costs, and development of partnerships and outside funding will minimize potential Forest Service maintenance costs further.

Indirect effects will be a positive experience for individuals of all user groups. Trail loops closer to the Dry Lake area will be designed more for hiker/pedestrian use, and managed for all non-motorized uses and will meet FSTAG standards for accessibility. Trail loops further from the developed area will be designed for more difficult bicycle use, and managed for all non-motorized uses.

While motorized trails is limited to the one new route, it does provide an alternative to using the Buffalo Pass Road to access the Wyoming Trail and other trails east of Buffalo Pass. It is recognized that motorcyclists are able to travel further than mountain bikers, hikers and equestrians.

This alternative allows the Forest Service to partner with organizations and individuals to collaborate on the management of this trail system, reducing the cost to the Forest Service for long term maintenance. Recreation events and outfitter/guide opportunities could also be realized by implementing this alternative, opening up the Forest to more people, and generating revenue to the Forest and community.

Cumulative Effects

There will be no adverse cumulative effects to the recreation resource under this alternative.

Determination

Implementation of this alternative will be consistent with Forest Plan, FSH, and FSM direction to provide for recreational opportunities where appropriate while protecting resources. There would not be any irreversible or irretrievable impacts as a result of this alternative.

Alternative 3: Trail/Are Closure Alternative

Direct and Indirect Effects

This alternative partially meets the Purpose and Need of the project by reducing unmanaged recreation and closing unauthorized trails to use, and preventing further development through the Closure Order. However, there will be an adverse effect to recreation: closure and monitoring of trails is an additional cost to the District, without the benefit of community engagement. Areas of the Forest in Buffalo Pass will no longer be open to users other than by foot and horse, and even then, it will be more difficult for these users to access the area without trails. Hunters may benefit from the reduced number of other recreationists in the area.

Opportunities for recreation events, and outfitter-guides will be limited or prohibited due to the lack of system trails. The only opportunity in the non-winter season may be hunting, however the area is easily accessible, and this service is not needed in this area.

Partnerships and collaborative opportunities will not occur. Any patrolling and enforcement of regulations will be at the cost to the Forest Service.

Cumulative Effects

There will be no adverse effects to the recreation resources under this alternative

Determination

This alternative is not fully consistent with the Forest Plan for recreation. While addressing unmanaged recreation and resource protection, it does not meet the desired condition for this area close to town to collaborate with communities on recreational opportunities on the Forest. There would not be any irreversible or irretrievable impacts as a result of this alternative.

3.6 SOILS

Soil is a fundamental component of the environment. Soil absorbs, filters, and stores water, releasing it slowly over time. It supplies nutrients and structural support for vegetation, which in turn supplies habitat for wildlife and other resources. All renewable resources of the forest are dependent upon soils as major component in the nutrient cycle. Soil quality[†] is an indicator of soil productivity. The primary goal of soil management is to maintain or enhance long-term soil productivity.

Recreation activities can impact soil resources. Specifically, trails increase the potential for erosion, compaction, ground cover loss, and surface hydrology changes during construction and use, which can lead to soil displacement. Where trails descend or ascend unstable and/or steep slopes, the potential for soil displacement increases. Off-highway mechanized (both motorized and non-motorized) recreation has the potential to remove the top soil layer as a result of spinning tires, a significant impact. However, most soil resource impacts can be avoided or mitigated by incorporating sustainable trail design and construction,

rehabilitating or rerouting trails that create resource damage, educating trail users about sustainable trail use, and restricting off-trail travel.

Potential impacts are analyzed in regards to the following categories: soil classifications, soil compaction, nutrient removal, soil heating, erosion potentials, and mass movement potentials.

Alternative 1: No Action Alternative

Direct and Indirect Effects

This alternative would continue to have adverse soil impacts. User-built trails were not designed to Forest standards to consider slope, soil, and location. The trails would remain in place without proper reconstruction and maintenance to mitigate soil degradation. The deleterious effects associated with poor trail design and lack of maintenance could lead to users establishing alternate routes to circumvent severely damaged sections of trail. There is the likely potential for user-built trails to proliferate in the absence of a designated and maintained trail system. The additional footprint from these trails may lead to dispersed resource damage, including erosion and sedimentation of streams. Without rehabilitation of disturbed sites where unauthorized trails have been developed, continual compaction and degradation would increase soil loss in the area.

Cumulative Effects

This alternative would not maintain consistency with Forest Plan direction for the soil resource, however there would be no irreversible or irretrievable impacts.

Alternative 2: Proposed Action Alternative

Direct and Indirect Effects

Soil compaction resulting from the construction and maintenance of the proposed trails is expected. New trails will experience greater levels of compaction relative to their background bulk densities (Goetz and Alder 2001). Compacted soils will be denser and less permeable to water, which may in turn increase runoff. However, compacted soils also help to resist erosion and soil displacement and provide durable treads that support traffic. From this perspective, soil compaction is considered beneficial for trail development and maintenance, and it is an unavoidable form of trail impact.

Nutrient removal resulting from the construction and maintenance of the proposed trail system is expected. A necessary part of constructing any trail system is the removal of vegetation and topsoil. Establishing an enduring and usable tread requires an appropriate substrate. Often, topsoil is removed so that a mineral portion of the soil is exposed and then utilized as the foundation of the trail tread. Topsoil generally contains a high percentage of organic matter and is central in determining soil quality and nutrient availability (Brady 1974). Nutrient removal from the system is inevitable given the nature of trail construction. Taking

measures like reusing excavated topsoil and retaining root structures may aid in nutrient retention.

Soil temperature significantly impacts soil quality. By regulating organic matter decomposition and accumulation, temperature indirectly regulates nutrient delivery to plants. The proposed action would expose sections of soil to increased solar radiation and this may in turn cause soil temperatures to increase. However, because most topsoil will be removed during trail construction, increases in soil temperature will have less of an impact on the exposed mineral fraction constituting the tread. For this reason, it is believed that increased soil temperatures as a result of trail construction will be insignificant.

Proper trail design with appropriate grade control and outcropping will aid in minimizing erosion for all trails. However, some portions of the project area may be subject to high erosion potentials due to seasonally saturated soils and soils containing high amounts of organic materials in the upper horizons. Eight of the thirteen miles of trail with the severe erosion potential are Mollisols soils, which can be easily displaced by the erosive force of surface flowing water. Therefore, implementation of erosion control features, boardwalks, turnpikes, or other techniques, such as leaving root systems in place, may be required on the Mollisols soil sections of trail. The remaining five out of the thirteen miles of trail with severe erosion potential are mapped as "exposed rock". Because of the impervious nature of bedrock, surface runoff is nearly 100%, meaning more water is available as surface runoff, which potentially increases erosion.

Some factors contributing to high mass movement potentials in the project area include saturated soil due to spring snowmelts or disturbance near hillside seeps and springs. However, given the small overall footprint of the proposed trail system, mass movement on the scale of acres is not anticipated.

As outlined in the Forest Plan and the Soils Management Handbook (FSH 2509.18), a project should not result in soil impacts that exceed 15% of an activity area. For this analysis, soil loss is the determining factor to gauge soil impacts from the Proposed Action. Soil loss will inevitably occur as a result of trail construction, however the amount of soil loss estimated to result from the trail construction is estimated to be 0.16% of the project area.

Cumulative Effects

Soil erosion will occur during the construction phase and throughout the re-vegetation process, which will likely persist for the short-term (one to five years). After construction is completed, erosion is expected to continue, however, standard trail maintenance should mitigate this impact. The soil disturbance that is likely to occur under the Proposed Action, in combination with impacts from past, present, and future activities such as powerline construction and maintenance, road construction and maintenance, and dispersed and designated camping, would not have a significant adverse cumulative impact on the soil resource in the project area.

Determination

Trail construction removes vegetation, exposes soil and/or bedrock, and compacts the soil. This, in turn, has the potential to contribute to accelerated erosion and sediment delivery to streams. Erosion degrades soil and renders it less productive. Rills and gullies may form from the channeling of water on the soil surface and could cause slope failure. Sediment production resulting from trail construction is inevitable. However, if appropriate trail construction measures are followed, soil impacts can be minimized and a sustainable trail can result.

User-created trails are not generally sustainably constructed, and therefore, are a source of concern. Decommissioning of the non-sustainable user-built trails and/or improving user-created trails to not create resource damage, would result in higher infiltration rates on the landscape, increased vegetative cover, and long-term reestablishment of soil productivity.

Implementation of the Proposed Action would result in a long term reduction in erosion through user-created trail rehabilitation, construction of trails that meet Forest sustainable design standards, and avoidance of areas that are vulnerable to erosion. Furthermore, a designated trail system and Closure Order will limit soil erosion and compaction by discouraging the proliferation of user-created trails.

The Proposed Action would maintain consistency with Forest Plan direction for the soil resource and there would be no irreversible or irretrievable impacts. For a more detailed analysis, please see the Soils Specialist Report (Adams 2016).

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

Trail rehabilitation would remove the trail prism altogether and return the slope back to its natural state by re-contouring and re-vegetating user-built trails. Construction of drainage features, embedded debris on steep pitches, and seeding with native species will further aid in the rehabilitation of these trails. Restoration of these surfaces will slow surface runoff, thereby increasing the infiltration capacity for the project area. Improvements in soil structure would directly affect vegetative growth and soil productivity (Brady 1974). In turn, this will promote the long term ecological restoration of the area.

Cumulative Effects

This alternative would maintain consistency with Forest Plan direction for the soil resource and there would be no irreversible or irretrievable impacts.

3.7 VISUALS

The Forest Plan desired condition for visual resources is to provide scenic quality, maintain the overall landscape character, and to draw visitors through the physical setting and scenic beauty of the forest. The project area is rated as

Sensitivity Level One[†] and Landscape Variety Class B[†]. The project area is also designated with Retention and Partial Retention Visual Quality Objectives[†] (VQO). For more detailed analysis than is provided in this EA, see the Visual Resources Specialist Report (Tupala 2016).

Alternative 1: No Action Alternative

There would be no new direct, indirect, or cumulative effects as a result of Alternative 1 on visual resources. Current user-created trails would continue to cause visible resource damage. This alternative would be consistent with visual standards and guidelines in the Forest Plan, except where user-created trails would continue to cause visual resource damage.

Alternative 2: Proposed Action Alternative

There would be short-term direct effects on visual resources until the vegetation reestablished on disturbed areas. There would still remain some possible indirect effects if off-trail travel continues to occur. However, this potential would be greatly curbed by the Closure Order. There would be no cumulative effects from Alternative 2. It would also be consistent with visual standards and guidelines in the Forest Plan.

Alternative 3: Trail/Area Closure Alternative

There would be short-term direct effects on visual resources until the vegetation reestablished on disturbed areas after rehabilitation of the closed trails. There would not be any indirect effects as there would be a closure order and no trails in the area. This alternative would also be consistent with visual standards and guidelines in the Forest Plan.

3.8 WATERSHED

The project area is within the Fish Creek, and Soda Creek, and City of Steamboat Springs watersheds. Named streams that may be directly or indirectly affected in the analysis area include the main stem and tributaries to Soda Creek, South Fork Soda Creek, Spring Creek, and North Fork Fish Creek. Groundwater dependent ecosystems[†] (GDEs) and wetlands, including fens, are prevalent in the headwaters of the South Fork of Soda Creek and North Fork Fish Creek. None of the streams in the analysis area have been listed as impaired on the Colorado Department of Public Health and Environment 303(d) list (Colorado Department of Public Health and Environment 2016) indicating that state water quality standards are being met. A portion of the City of Steamboat Springs, and the majority of the Fish Creek watersheds are in Management Area 3.23 Municipal Watershed- Water Quality Emphasis.

Trails and roads can be a source and conduit for sediment. Water quality can be impacted by increased sediment delivery to streams from road and trail connected disturbed areas[†], a main source of watershed resource damage.

Trail construction can also create sediment. Erosion rates are generally highest during construction and decrease over time as disturbed areas are stabilized by revegetation or development of an armored surface. Erosion rates may temporarily increase when these areas are maintained or reconstructed. If revegetation and surface stabilization does not occur, large amounts of sediment may continue to be produced.

Trails and roads can also alter hydrology by reducing infiltration[†] and by intercepting subsurface flows and converting them to surface flows, which may ultimately increase peak flows (Wemple et al. 1996).

Water contamination can result from fuel spills/leaks on roads or from trail construction equipment, and inadequate sanitation facilities.

The desired condition is to maintain or improve the integrity of the watersheds. The primary actions to move toward the desired condition are 1) reduce existing impacts and sediment sources where possible; 2) implement design criteria to minimize additional sedimentation to streams and alterations to hydrology; and 3) restore and maintain wetland flow paths and function. Three key indicators of accomplishing this goal are: 1) miles or density of trail; 2) the miles of trail within three hundred feet of streams; and 3) the direct and indirect effects to wetlands. Alternatives are also analyzed in regards to meeting Forest Plan Standards and Design Criteria from the Watershed Conservation Practices Handbook (FSH 2509.25).

Cumulative Effects for All Alternatives

Past, present, and reasonably foreseeable future management activities contributing to cumulative effects include water developments, road/trail construction, and recreation. The effects of water developments and recreation, other than unauthorized user-created trails, are similar, but vary in degree between the alternatives.

Alternative 1: No Action Alternative

Direct and Indirect Effects

Impacts from this alternative would be similar to the existing condition as current management would continue. Existing road and trail densities in the City of Steamboat Springs watershed have a moderate probability of altering hydrology. Densities in the Fish Creek and Soda Creek Watersheds have a low probability. However, the miles of roads and trails within three hundred feet of streams are highest in the Soda Creek and Fish Creek Watersheds, indicating a higher amount of connected disturbed areas.

Road and trail densities would remain the same unless additional non-system trails develop. There would be no known increases in connected disturbed area, alteration of the hillslope hydrology, or additional water quality impacts. However,

the user-created trails would continue their current level of impact to overall hydrologic function, wetlands, and water quality. The greatest impacts would be from the Soda Mountain Trail. The trail's multiple steep sections and inadequate drainage would continue to create erosion. Additionally, there would be several wetlands and fen impacts, especially in the headwaters of the South Fork Soda Creek.

The potential for future impacts from additional non-system trail development would remain.

Cumulative Effects

This alternative has the highest potential for adverse cumulative impacts to watershed resources as a Closure Order would not be implemented. This could result in additional user-created trail development in wetlands or adjacent to streams without proper design features to minimize resource impacts.

Determination

This alternative has the highest potential for adverse effects to watershed resources as impacts from unauthorized trail and off-trail activities would continue. The effects are not anticipated to be irreversible or irretrievable, except possibly where unauthorized user-created trails are negatively impacting fens. This alternative is not consistent with Forest Plan direction, particularly MA 3.23 Water and Soil Standard 1: Promptly restore disturbed areas contributing to water quality degradation.

Alternative 2: Proposed Action Alternative

Direct and Indirect Effects

This alternative would result in increases in road/trail densities. Increases in the City of Steamboat Springs watershed would put it at high potential risk for hydrology impacts. Connected disturbed areas may increase in all watersheds. However, proper implementation of design criteria should minimize impacts and maintain Forest Plan consistency.

Decommissioning, rerouting, and/or improving the existing non-system trails would reduce the impacts from the majority of those trails. However, the proposed Soda Mountain trail reroute in the headwaters of the South Fork Soda Creek would still adversely impact wetlands and fens and would not be consistent with Water and Aquatic Standard 7. In order to meet this standard, an alternate reroute would need to occur.

The potential for water quality impacts are highest under this alternative, but design criteria would minimize impacts and protect water quality. Water quality impacts in Management Area 3.23 would occur primarily from increased sediment at trail-stream crossings and other connected disturbed areas.

Installation of a toilet at the Dry Lake Parking area would reduce water quality impacts from human waste.

Cumulative Effects

This alternative has a higher potential than Alternative 3 for increasing adverse cumulative impacts to watershed resources due to the increase in road/trail densities and miles of roads/trails within three hundred feet of streams. These impacts could increase in the future if more trails or roads are constructed within the watersheds.

Determination

Sustainable trail design and proper implementation of watershed-specific design criteria would minimize the potential for connected disturbed areas to increase and would maintain and protect water quality.

This alternative would be consistent with Forest Plan direction and would not have irreversible or irretrievable effects assuming 1) implementation of all watershed-specific design criteria; 2) an alternative reroute for the Soda Mountain Trail; 3) non-system trails that would be incorporated into the Forest Service trail system would minimize wetland impacts and the number of stream crossings; and 4) closure and rehabilitation of existing non-system trails that would not be incorporated into the Forest Service trail system.

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

This alternative would reduce and prevent watershed impacts. Road/trail densities and the miles of roads/trails within three hundred feet of streams would be lowest under this alternative for all three watersheds. Water quality impacts, particularly in Management Area 3.23, would be lowest under this alternative. Restoration of the Soda Mountain Trail would restore wetland flow patterns and maintain fens.

Cumulative Effects

This alternative would reduce cumulative effects to watershed resources and minimize the potential for future development of non-system trails.

Determination

This alternative would have an overall benefit for watershed resources. This alternative is consistent with the Forest Plan and there would be no irreversible or irretrievable effects. For a more detailed analysis, please see the Watershed Specialist Report (Schnackenberg 2016).

3.9 WILDLIFE

Wildlife impacts from recreation can include impacts to individuals, populations, and/or habitat. The research on recreation related impacts is limited (Reed and Merenlender 2008, 2011) to relatively recent and species or assemblage-specific studies, but nearly all document some level of impact.

Recreation may elicit a variety of behavioral and physiological wildlife responses. The responses are influenced by species, distance from activity, and type, location, direction, speed, predictability, frequency, and magnitude of activity (Knight and Cole 1995). In some cases, motorized use that is predictable and confined to a route may be less detrimental than humans on foot or skis that may surprise an animal (Youmans 1999). A separate study showed that recreation pressure increased elk travel time with ATVs causing highest stress, followed by mountain bikers and then hikers, while horseback riders were not much different than the control (Naylor et al. 2008). Alternatively, in a desert bighorn sheep study, hikers caused the most severe responses, followed by vehicles, and lastly, mountain bikers (Papouchis et al. 2001). Taylor and Knight (2003) found that bison, mule deer, and pronghorn antelope alert distance to hikers and mountain bikers was similar. Night riding on mountain bikes has increased in popularity, but no information was found in the literature on its influence on wildlife. In addition, no information was found on recreation pressure on prey and changing behavior on predators

An indirect impact, habitat fragmentation, should also be a consideration in recreation management, especially in consideration of cumulative landscape effects (Theobald et al. 2011). Habitat fragmentation is created by land use barriers such as highways, residential developments, or conversion of forest to industrial farmland and may hinder wildlife breeding, migration, or foraging.

Therefore, trail-based recreation may have impacts on wildlife species, although more research is needed to fully understand the extent and variety of the impacts. Unmanaged recreation without any type of wildlife protection design criteria or monitoring measures, may have greater ramifications on wildlife individuals, populations, and habitat than managed recreation. Following is an analysis of potential impacts that may result from implementation of each alternative on specific species of concern.

Sage-Grouse

Northwest Colorado Greater Sage-Grouse Land Use Plan Amendment was signed in 2015 and requires consideration of sage-grouse in projects. No mapped priority or general sage-grouse habitat is in the project area, so no further analysis for this amendment will be conducted.

Threatened, Endangered, Candidate, or Proposed Species (TECP)

The Canada lynx, a threatened species, has the potential to occur and may occur in the project area. The project area is in mapped lynx habitat, although it is lower quality lynx habitat and is not necessarily lynx diurnal security or foraging areas.

The project area is also within the Horsethief and Mount Werner Lynx Analysis Units. A thorough Proposed Action effects analysis was prepared in a Biological Assessment (BA), as required by Section 7 (c) of the ESA (50 CFR 402.12). Following is a summary:

Direct Effects

Lynx may avoid construction areas, however, this disturbance would be limited in space and time and would not pose a large risk to lynx survival. Lynx may be temporarily displaced by trail use, especially at times when trail use is concentrated, however, as the area is already utilized for recreation via user-created trails and Forest Service trails and roads, human presence would not be a new effect. Since lynx primarily hunt for prey at night, trail use would cause little effect to their hunting ability. Therefore, the effects from human presence in the area could be considered insignificant.

Indirect Effects

The proposed action may have an indirect effect to lynx due to small amount of habitat loss and/or a reduced quality of habitat. Approximately 45.5 acres of suitable lynx habitat would become unsuitable. A small degree of habitat fragmentation could occur as trails, however design criteria would be incorporated to avoid this as much as possible. Indirect effects could also occur from human presence in the area. Lynx are mostly active at night when foraging and hunting occurs, which does not coincide with the time of the majority of human use on the trails. Therefore, the small amount of quality habitat loss could be considered insignificant.

Cumulative Effects

No cumulative effects from future state or private actions as is required by the Endangered Species Act to be analyzed, are anticipated. A summary of the cumulative effects on lynx from Federal actions as is required by NEPA is included later in the Wildlife section.

Determination

A concurrence letter was signed by the FWS that the Proposed Action “may affect, but is not likely to adversely affect” the Canada lynx. The Proposed Action is consistent with the Southern Rockies Lynx Amendment[†] (SRLA).

Routt National Forest Management Indicator Species (MIS)

There are four terrestrial MIS species on the Forest: golden-crowned kinglet, Northern goshawk, vesper sparrow, and Wilson’s warbler. The proposed project would not occur in nor impact vesper sparrow or Wilson’s warbler habitats, so they will not be analyzed in this report. The golden-crowned kinglet and Northern goshawk may have species and habitat in the project area, however, there are no anticipated population impacts under the alternatives. Goshawks were sighted in the project area, but recreation trails are not anticipated to influence population

change. The only known goshawk nest observed in the project area was observed in 2000 and has been inactive since, however annual monitoring and intensive nest searches has not been consistent. Therefore, no MIS will be carried forward in the analysis, however Northern goshawk will be analyzed as a Forest Service Region 2 Sensitive Species⁵.

Forest Service Region 2 Sensitive Species

The Northern goshawk, American marten, and Canada lynx were included in the effects analysis because 1) they are likely to occur within or near the project area; 2) have potential habitat in or near the project area; and/or 3) may be impacted by the implementation of an alternative. All other terrestrial species were not included in analysis because 1) suitable habitat and/or elevation range does not exist for the species in the project area; 2) the type and/or intensity of the proposed activity is expected to have no impact on the species or their habitat; and/or 3) project design criteria eliminates any potential impact to the species.

Alternative 1: No Action Alternative

Direct and Indirect Effects

Direct and indirect effects would continue for all three species under the scenario of unmanaged recreation.

Unauthorized trail building has occurred in prime marten habitat. Down logs have been used for jumps and ramps on these non-system trails. Use of down logs for this purpose may reduce habitat effectiveness for marten and snowshoe hare (a primary food source for lynx) and foraging of prey for marten.

User-created trails may be built through a lynx denning area or bisecting high quality foraging habitat. Lynx may be temporarily displaced by unauthorized trail construction and continued use. Lynx habitat has been lowered in quality by unmanaged recreation, and lynx may avoid these areas with high human use.

There would be no Forest Service mandated protections for goshawk nesting or general habitat protections from user-created trails. Unmanaged recreation may cause disturbance to nesting goshawks leading to a potential of nest failure (Reynolds et al. 1992, Squires and Reynolds 1997, Richardson and Miller 1997).

Cumulative Effects

⁵ MIS analysis is for anticipated population and habitat impacts and population level impacts across the Forest. Therefore, Northern goshawk are not analyzed as an MIS, but they are analyzed as a Region 2 Sensitive Species, which allows analysis of impacts to individuals.

The unmanaged recreation could add to existing cumulative effects to marten and lynx due to a loss of overstory and reduction of prey across the Forest as a result of the bark beetle epidemic.

The cumulative effects of forest management and beetle epidemic on goshawks are still playing out and are as of yet, undetermined (Skorkowsky 2009). As recreation and general human activity increases across the Forest, impacts to the nesting success of goshawks may accumulate.

Determination

The unmanaged recreation is having direct, indirect, and cumulative effects on habitat and individuals in the project area. These effects will continue and potentially increase with continued unauthorized trail building and unregulated trail use. Appropriate protection measures cannot be applied with Alternative 1.

Therefore, the determination for the American marten and Northern goshawk under Alternative 1 is: “may adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend to federal listing.” The determination for Canada lynx under Alternative 1 is: “may adversely affect, but not likely to adversely affect.”

This alternative would not be consistent with the Forest Plan and SRLA. There would not be irreversible or irretrievable effects to wildlife as a result of Alternative 1.

Alternative 2: Proposed Action Alternative

Direct and Indirect Effects

Marten may temporarily avoid the area while trail building occurs. Otherwise, minimal direct effects are anticipated. The majority of potential impacts to marten are more indirect and long-term as Alternative 2 will increase managed recreational use in marten habitat. Trail maintenance, such as removing downed trees and snags along the trails to provide for user safety, will be a part of Forest Service management. This will simplify forest structure for marten and reduce denning habitat, prey populations, as well as possibly increase the potential for crushing of the animals by bikes. Lastly, the access provided may increase use by trappers into the area. Fur trapping is managed and permitted by the State and may cause secondary effects on local populations that are not previously anticipated.

Short-term direct effects of trail building may occur from personnel, chainsaws, and heavy machinery. However, the potential direct effects from trail building and use will be reduced with nest buffers and timing restrictions in nesting areas. The one known, but inactive, nest and any discovery of a new nest or territory will be protected with the design criteria. The project specific design criteria will reduce direct effects to goshawks during the nesting period.

Recreation in post-fledging areas or foraging areas may cause indirect impacts interrupting goshawks foraging and reduce habitat effectiveness. Moderate to heavy use of trails may also reduce prey availability due to lowered bird and small mammal numbers, since native birds seem to avoid nesting near trails (Miller et al. 1998) and small mammals could be casualties of bikers, although this is anecdotal evidence. Goshawks are susceptible to human disturbance during nesting (Squires and Reynolds 1997) and recreation pressure during nesting may reduce goshawks ability to catch prey and successfully rear young.

Direct and indirect effects to lynx include those listed in the TECP lynx section at the beginning of the Wildlife Section.

Cumulative Effects

Cumulative effects to wildlife are occurring across the Forest related to the bark beetle epidemic and the resulting salvage of trees in lodgepole dominated stands. Outside of timber and recreation areas, the marten habitat will improve over the long-term as the complex structure of dead trees, snags, and down woody material that are important for denning and prey populations will increase. However, the forest structure will be simplified in timber and recreation areas, resulting in reduced habitat cover and prey for marten.

The literature does not document Goshawk population response twenty years post-beetle epidemic, but ecological inference suggests that some decline in the goshawk population may occur while there is a lack of mature forest conditions and suitable nest locations (Skorkowsky 2009). The combination of bark beetle salvage harvest and increased recreation in potential goshawk habitat may reduce goshawk nesting, foraging, and raising of young (Graham et al. 2015) and increase cumulative effects. Recreation pressure from adding thirty-five miles of trail and use across a total of forty-nine miles of trail in potential goshawk habitat may also increase cumulative effects.

The bark beetle epidemic has rendered much of the mapped lynx habitat currently unsuitable across the Forest. Reduced habitat across the Forest, especially in the Horsethief and Mount Werner LAUs, may increase lynx susceptibility to effects from increased recreation. However, trail use does not appear to pose a negative effect to lynx (Interagency Lynx Biology Team 2013). Additionally, the recreation association with the Proposed Action would occur in an already highly used recreation area.

Determination

Under Alternative 2, recreation would be better managed and trails would be designed to avoid marten, goshawks, and lynx habitat. The project was planned to maintain functional and connected habitats by condensing recreation use and protecting areas with biological significance through design criteria. The Proposed Action may reduce the capacity of some wildlife species to meet their life history needs, but it is unlikely that it would create a barrier. In recognition that

there may be impacts, it is recommended that the area have future monitoring on how wildlife respond to the new trail system.

Therefore, the determination for the American marten and Northern Goshawk under Alternative 2 is: “may adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend to federal listing.” The determination for Canada lynx under Alternative 2 is: “may affect, but not likely to adversely affect.” The proposed action would be consistent with the Forest Plan and SRLA. There would not be any irreversible or irretrievable impacts as a result if this alternative

Alternative 3: Trail/Area Closure Alternative

Direct and Indirect Effects

The adverse direct and indirect impacts would be minimal. There would be some temporary, direct impacts to marten, lynx, and goshawk related to decommissioning of the trails. The area would not experience the recreation levels that Alternative 1 or 2 would allow, so recreation pressure would not directly nor indirectly disturb these species or their habitat, nests and/or dens. Habitat area for the species may increase over time as trees regenerate in the current disturbed trail area. The newly created slash put over the trails during decommissioning might even result in added marten and lynx habitat. Decommissioning trails will provide less access to fur trappers.

Cumulative Effects

Cumulative effects from the bark beetle epidemic and salvage of trees is occurring across the Forest. Recreation is increasing across the Forest. Restoring habitats would be beneficial to goshawks as the forests regenerate. By not adding additional potential habitat loss and recreation pressure, the cumulative effects to marten, lynx, and goshawk populations and habitats discussed in Alternatives 1 and 2 would be decreased.

Determination

Some temporary direct effects may occur with trail decommissioning, but overall the closure and restoration would maintain and possibly improve habitats for marten, lynx, and goshawk. Cumulative effects would be less with this alternative. Therefore, the determination for the American marten and Northern goshawk under Alternative 3 is: “beneficial impact” and for the Canada lynx, “no impact.” This action would be consistent with the Forest Plan and SRLA. There would not be any irreversible or irretrievable impacts as a result if this alternative.

4.0 CONCLUSION

A summary of the impacts and Forest Plan Consistency for the resource areas and alternatives included in this EA is provided in the following tables.

Table 7: Resource Impacts by Alternative			
	Alternative 1	Alternative 2	Alternative 3
Aquatics- TECP	NI	NI	NI
Aquatics- Region 2 Sensitive Species & MIS	NI	MAII	NI
Aquatics- Irreversible or Irrecoverable Impacts	None	None	None
Botany- TECP	NI	NI	NI
Botany- Region 2 Sensitive Species	MAII: 11 species. LA: 2 species	MAII	BI
Botany- Species of Local Concern	MAII: 2 species. LA: 2 species.	MAII	BI
Botany- Irreversible or Irrecoverable Impacts	Possible	None	None
CRAs Characteristics	Impacts to CRA characteristics	None	None
Cultural Resources- Impacts	Continued adverse impacts	None	None
Cultural Resources- Irreversible or Irrecoverable Impacts	Irreversible	None	None
Recreation	Proliferation of illegal trail development	None	None
Recreation- Irreversible or Irrecoverable Impacts	None	None	None
Soils	Increased erosion and sedimentation. Continued compaction and degradation resulting in soil loss.	Long-term erosion and compaction reduction. Limit on soil erosion and compaction.	Long-term ecological restoration of the area.

Table 7: Resource Impacts by Alternative			
	Alternative 1	Alternative 2	Alternative 3
Soils- Irreversible or Irretrievable Impacts	None	None	None
Visuals	No new impacts.	Short-term direct impacts.	Short-term direct impacts.
Watershed	High potential for adverse impacts.	Minimal potential for increased impacts.	BI
Watershed- Irreversible or Irretrievable Impacts	Possibly to fens.	None	None
Wildlife- TECP Lynx	Not analyzed.	MANLAA	Not analyzed.
Wildlife- MIS	None	None	None
Wildlife- Region 2 Sensitive Species	MAIL: goshawk and marten MANLAA: lynx	MAIL: goshawk and marten MANLAA: lynx	BI: goshawk and marten NE: lynx.
Wildlife- Irreversible or Irretrievable Impacts	None	None	None
Wildlife- SRLA Consistency?	No	Yes	Yes
<p>BI= Beneficial impact. LA= Likely to result in a loss of viability in the planning area, or in a trend toward federal listing. MAIL= May adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing. MANLAA= May affect, but not likely to adversely affect. NI= No impact.</p>			

Table 8: Forest Plan Consistency by Alternative			
	Alternative 1	Alternative 2	Alternative 3
Aquatics	Yes	Yes	Yes
Botany	No	Yes	Yes
CRAs	Yes	Yes	Yes
Cultural Resources	No	Yes	Yes
Recreation	No	Yes	Partial
Soils	No	Yes	Yes

Table 8: Forest Plan Consistency by Alternative			
	Alternative 1	Alternative 2	Alternative 3
Visuals	Yes, except where user-created trails are causing visual resource damage.	Yes	Yes
Watershed	No	Yes	Yes
Wildlife	No	Yes	Yes

Table 9: Purpose and Need Met by Alternative		
Alternative 1	Alternative 2	Alternative 3
No	Yes	Partial

This EA described the Buffalo Pass Trails Project and presented an analysis of potential direct, indirect, and cumulative impacts that may result from the action alternatives. Additional documentation may be available upon request in the project record from the Hahns Peak/Bears Ears Ranger District. This EA and other public information are also available on the Routt National Forest website at: http://www.fs.fed.us/nepa/nepa_project_exp.php?project=46247.

Based on information in this EA and the project record, the Responsible Official has decided that Alternative 2: Proposed Action Alternative 2 does not have a significant impact on the environment. This decision is documented in the Finding of No Significant Impact that follows.

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FINDING OF NO SIGNIFICANT IMPACT

As the responsible official, I am responsible for evaluating the effects of the project relative to the definition of significance established by the Council on Environmental Quality (CEQ)[†] Regulations (40 CFR 1508.13). I have reviewed and considered the EA and documentation included in the project record, and I have determined that Buffalo Pass Trails Project Proposed Action (Alternative 2) will not have a significant effect on the quality of the human environment. As a result, no environmental impact statement will be prepared. My rationale for this finding is as follows, organized by sub-section of the CEQ definition of significance cited above.

CONTEXT

Disclosure of direct, indirect, and cumulative effects in this EA and the project record demonstrate analysis of the Proposed Action primarily in the context of the project area (Appendix E: Maps 2-5) and the locality (e.g. effects beyond the boundaries of the project area, including downstream and adjacent lands). Effects to the geographic region (e.g. the MBRTB National Forest) were also considered. Short- and long-term effects of the Proposed Action were also considered.

INTENSITY

Intensity is a measure of the severity, extent, or quantity of effects, and is based on information from the effects analysis of this EA and the references in the project record. The effects of this project have been appropriately and thoroughly considered with an analysis that is responsive to concerns and issues raised by the public. The agency has taken a hard look at the environmental effects using relevant scientific information and knowledge of site-specific conditions gained from field visits. My finding of no significant impact is based on the context of the project and intensity of effects using the ten factors identified in 40 CFR 1508.27(b).

1. *Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.*

The IDT analyzed the direct, indirect, and cumulative effects of the Proposed Action on biological, physical, and cultural resources in and around the Buffalo Pass Trails Project Area (EA, pp. 9-40). The EA summarizes the negative and positive effects of the Proposed Action over the short- and long-term. Beneficial effects to the quality of the human environment are expected over the long-term in the project area and through the Forest. Design criteria have been agreed upon by the IDT to ensure that impacts will not be significant (Appendix D, pp. 68-73). The EA provides a summary of resource effects (EA, pp. 41-42) and determined there will be no irreversible or irretrievable commitment of aquatic, botanical, cultural, recreation, soils, visual, watershed, or wildlife resources, nor to Colorado Roadless Areas, as a result of the Proposed Action (EA, pp. 41-42). The project record also describes in detail the analyses of effects of the alternatives to the resources

analyzed in the EA. These analyses contribute to my understanding of the effects of the alternatives and confirm that there will be no significant impacts to these resources.

2. *The degree to which the Proposed Action affects public health or safety.*

The Proposed Action is not expected to significantly affect public health or safety. By following Forest Service trails standards and designating trails as system trails, as described in the EA (p. 26), trails will meet standards for user safety, based on the type of trail and user type. Additionally, trail use can be monitored and managed by being a Forest Service trail system. Any associated conflicts can be mitigated through trail-use enforcement. This will be an improvement to user safety over existing unmanaged non-system trails.

3. *Unique characteristics of the geographic area such as the proximity to historical or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

The project area does not include parklands, prime farmlands, wild and scenic rivers, wilderness. Cultural Resource surveys of all affected areas will be completed prior to trail construction, rerouting, or improvements, in accordance with the Colorado State Historic Preservation Office and Section 106 of the National Historic Preservation Act. Project design criteria will be implemented to ensure that any cultural resources found within the affected project area will be protected (Appendix D, pp. 68-69). Wetlands, including fens, and Management Area 3.23: Municipal Watershed-Water Quality Emphasis, which contains the City of Steamboat Springs municipal watershed, are protected by project-specific design criteria (Appendix D, pp. 70-71). Effects to roadless areas within the project area were thoroughly analyzed (EA, pp.16-20). The Proposed Action's pre-scoping and pre-decision Regional Roadless Reviews, available in the project record, concurred that there would not be significant impacts to any of the nine roadless area characteristics and that the Proposed Action is within the Colorado Roadless Rule. The three Potential Conservation Areas will not be impacted by the Proposed Action (Appendix C, p. 65). Elk Production Areas and Winter Range will be protected by seasonal closures as described in the Wildlife Design Criteria (Appendix D, p. 73).

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial⁶.*

The IDT has reviewed the effects analyses and determined that there no substantial scientific dispute exists as to the size, nature, or effects of the Federal action on any human environmental factor.

⁶ Note: The term "controversial" in this context refers to cases where substantial scientific dispute exists as to the size, nature, or effects of the Federal action on some human environmental factor, rather than to public opposition to the Proposed Action or alternatives.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

The effects analyses of the EA (pp. 9-40), specialist reports, and other information in the project record incorporate accepted techniques and methods, the best available scientific literature, reliable data, field review, and the judgement of qualified professional resource specialists. The Forest Service is experienced in trail development, maintenance, and improvements, and effects analyses. These analyses did not identify highly uncertain effects or unique or unknown risks associated with the Proposed Action (EA, pp. 41-42).

6. *The degree to which the action may establish precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

The Proposed Action is within the scope of the Forest Plan (EA, pp. 9-10 and p. 42). While the project may appear large in scale, trail development and management plan have been completed before in this and other locations on Forest Service land in the past. The Proposed Action is not initiating a new process or setting a new standard. No Forest Plan Amendments are initiated by the Proposed Action.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.*

The EA, specialist reports, and project record state that there are no significant cumulative effects for any resources, either when combined with the effects created by past and reasonably foreseeable future projects, or the effects from natural changes taking place in the environment (EA, pp. 9-40 and pp. 41-42).

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

Surveys of the affected project area for cultural resources will be completed prior to trail construction, rerouting, or improvements in accordance with the Colorado State Historic Preservation Office and Section 106 of the National Historic Preservation Act. Project design criteria will be implemented to ensure that any cultural or historical resources found within the affected project area will be protected (Appendix D, pp. 68-69). Therefore, there will not be any significant effect to cultural or historical resources. The effects analyses of the EA (pp. 9-40), specialist reports, and other information in the project record did not identify significant effects on any scientific resources.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

No aquatic endangered or threatened species, nor habitat, occurred within the project area. There were no water depletions that would initiated U.S. Fish and Wildlife consultation or affect the four federally-listed endangered fish occurring downstream of the project area. Therefore, they were excluded from analysis due to no potential for impact as a result of the Proposed Action (EA, p. 11). There were no populations of or habitat for any threatened and endangered plant species, therefore there was no U.S. Fish and Wildlife consultation for plants and they were excluded from analysis due to no potential for impact (EA, p. 14). Pursuant to Section 7 of the Endangered Species Act, the Forest Service initiated consultation with the U.S. Fish and Wildlife for Canada lynx. It was determined that, with implementation of project-specific design criteria, the Proposed Action “may affect, but is not likely to adversely affect” the Canada lynx (Terrestrial Wildlife Biological Assessment, available in the project record). For lynx analysis as a Region 2 Sensitive Species, the same determination was made (EA, p.40).

Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The Buffalo Pass Trails Project Proposed Action complies with all Federal, State, and local laws and requirements imposed for the protection of the environment. These include the Clean Water Act, the Wetlands and Floodplains Executive Orders, the Endangered Species Act, the National Historic Preservation Act, the National Environmental Policy Act, and the National Forest Management Act. This is demonstrated in the applicable Specialists Reports, which are available in the project record. The Proposed Action complies with Forest Plan desired conditions, objectives, standards, and guidelines (EA, pp. 9-10 and p. 42).

APPENDIX A: GLOSSARY

Action Alternatives: One of the courses of action proposed to meet the purpose and need of a NEPA project. For an EA, the Federal agency is only required to analyze the Proposed Action Alternative, unless there are unresolved conflicts (40 CFR 1501.2(c)).

Best Management Practices (BMP): Nationally standardized set of general practices for managing activities on Forest lands to minimize adverse impacts to water quality as outlined in the National Core BMP Technical Guide (Volume 1, FS-990a, April 2012, http://www.fs.fed.us/sites/default/files/FS_National_Core_BMPs_April2012_sb.pdf).

Biological Assessment (BA): Information prepared to comply with Section 7 of the Endangered Species Act (ESA) for major Federal construction activities to determine whether listed and proposed species and designated and proposed critical habitat may be present in the action area, and the evaluation of potential effects of the action on such species and habitat.

Biological Evaluation (BE): A documented Forest Service review of Forest Service actions in sufficient detail to determine how an action or proposed action may affect any threatened, endangered, proposed, or sensitive species.

Candidate Species: Species that the FWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species receive no statutory protection under the ESA, but the FWS encourages cooperative conservation efforts for these species because they are, by definition, species that may warrant future protection under the ESA.

Challenge Cost Share Agreement: A cooperative agreement between the Forest Service and partner where funds are exchanged from one entity to another to achieve a common goal.

Code of Federal Regulations (CFR): An annual codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. Code of Federal Regulations Tools.

Colorado Roadless Areas (CRA): Roadless areas are generally greater than 5,000 acres, unless contiguous to existing wilderness areas or other designated areas, that are subject to specific agency direction for conservation and management. They are generally characterized by nine characteristics that were defined by the 2001 Roadless Rule (federal) and upheld in the 2012 Colorado Roadless Rule:

1. High-quality or undistributed soil, water, or air.
2. Sources of public drinking water.
3. Diversity of plant and animal communities.
4. Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land.
5. Primitive, semi-primitive, and semi-primitive non-motorized recreation opportunity spectrum classes
6. Reference landscapes
7. Natural-appearing landscapes with high scenic quality
8. Traditional cultural properties and sacred sites
9. Other locally identified unique characteristics (e.g. unique social, geological, scenic, scientific qualities, etc.)

Connected Disturbed Area: High runoff areas like roads and other disturbed soils that discharge surface runoff into a stream or lake. Connected disturbed areas are highly disturbed soil areas that discharge surface runoff into waterways. They are a main source of damage and occur at trail and road stream crossings or where there is an insufficient buffer between the trail and the stream.

Consultation: A formal interaction between the U.S. Fish and Wildlife Service and another federal agency when it is determined that the agency's actions may affect a species that has been listed as threatened or endangered or its critical habitat.

Council on Environmental Quality: The Council on Environmental Quality is a division of the Executive Office of the President that coordinates federal environmental efforts in the United States and works closely with agencies and other White House offices on the development of environmental and energy policies and initiatives.

Cultural Resource: The remains of sites, structures, or objects used by humans at least fifty years ago (historical), or predating the European entrance (archaeological).

Cumulative Effects: Effects that result from the combined effects of an alternative in addition to any effects of past, present, or foreseeable future activities. Cumulative effects may be outside of the project area. Activities and events include natural disturbances, such as the mountain pine beetle outbreak; federal, state, and local government management activities, such as hazard tree clearing; and private landowner activities, such as ski area development. Cumulative effects analysis for NEPA differs from the ESA analysis: Cumulative effects for ESA are those effects of future State or private activities, not involving Federal activities that are reasonably certain to occur within the action area of the Federal action; cumulative effects for NEPA include effects of past, present, and future Federal, state, or local government; tribal; or private actions.

Decommissioning: Activities that result in the stabilization and restoration of unneeded roads to a more natural state. (36 CFR 212.1, FSM 7705 – Transportation System)

Design Criteria: Any requirement to prevent environmental impacts that are included in the project design and must be complied with by law, regulation, or policy, and is approved by the Responsible Official.

Design Parameters (Trails): Technical guidelines for the survey, design, construction, maintenance, and assessment of a trail, based on Design Use and Trail Class.

Designed Use (Trails): The Managed Use of a trail that requires the most demanding design, construction, and maintenance parameters and that, in conjunction with the applicable Trail Class, determines which Design Parameters will apply to a trail.

Desired Condition: A portrayal of the land or resource conditions which are expected to result if goals and objectives are fully achieved.

Direct Effects: Effects that occur at the same time and place in which a project is implemented.

Endangered Species: Any species of animals or plants listed as “endangered” by the U.S. Fish and Wildlife Service and in danger of extinction throughout all or a significant part of its habitat.

Endangered Species Act (ESA): An act of Congress which sets a policy for conserving species (and their critical habitat) of fish, wildlife, and plants that are in danger of or threatened with extinction.

Environmental Assessment (EA): A concise public document for which a Federal agency is responsible that serves to: 1) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement of a finding of no significant impact; 2) aid an agency’s compliance with NEPA when no environmental impact statement is necessary; 3) facilitate preparation of an EIS when one is necessary. The EA shall include brief discussions of the need for the proposal, of alternatives as required by 36 CFR 102(2)(e), of the environmental impacts of the proposed action and alternatives, and of a listing of agencies and persons consulted.

Environmental Impact Statement (EIS): A detailed public document disclosing environmental impacts of a proposal and alternatives.

Fens: Geographically restricted wetlands where perennial groundwater discharge occurs on the time scale of millennia and where little erosion or

mineral sediment deposition occurs. Fens are generally characterized by their stable presence on the landscape for thousands of years and associated plant and animal communities that may be relics from historic glaciation periods.

Forest Plan (Forest Land and Resource Management Plan): A document which guides all natural resource management activity and establishes management standards and guidelines for a National Forest, embodying the provisions of the National Forest Management Act of 1976.

Forest Service Directives: The agency's directives consist of the Forest Service Manual and Handbooks, which organizes the agency's policy, practice, and procedure. The system serves as the primary basis for the internal management and control of all programs and the primary source of administrative direction to employees.

Forest Service Goal: A broad, generally timeless and difficult to measure, statement which describes the conditions the Forest will strive to achieve. Goals describe the ends to be achieved, rather than the means of doing so. There are National, Regional, and Forest goals.

Forest Service Guideline: Advisable courses of action which should be followed to achieve Forest goals, but are optional. Deviations from guidelines are allowed and do not require a Forest Plan Amendment, but must be analyzed and documented in a project decision document.

Forest Service Handbook (FSH): Handbooks are the principal source of specialized guidance and instruction for carrying out FSM direction.

Forest Service Manual (FSM): Contains legal authorities, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis to plan and execute assigned programs and activities.

Forest Service Objective: Measurable steps, such as a project or activity, taken to accomplish a goal.

Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG): Forest Service directive that new or reconstructed outdoor developed recreation areas, including campgrounds, picnic areas, beach access routes, and outdoor recreation access routes, comply with agency guidelines and applicable Federal accessibility laws, regulations, and guidelines. The directive ensures that new or reconstructed developed outdoor recreation areas on Forest lands are developed to maximize accessibility, while recognizing and protecting the unique characteristics of the natural setting.

Forest Service Standard: Actions defined in the Forest Plan which must be followed or are required limits to activities in order to achieve Forest goals.

Deviations from standards must be analyzed and documented in a Forest Plan Amendment.

Forest Service Trail Accessibility Guidelines (FSTAG): Forest Service directive that new or altered trails managed for pedestrian use on National Forest System lands are developed to maximize accessibility for all people, including people with disabilities, while recognizing and protecting the unique characteristics of the natural setting of each trail.

Geographic Area (GA): A watershed or aggregation of watersheds that are 125,000 acres or smaller, in which Forest Service management is directed toward achieving a specified desired condition through standards and/or guidelines. GA's desired conditions link the Forest Plan to landscape or watershed management.

Geographic Information System (GIS): An organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information.

Global Positioning System (GPS): A navigations system based off of satellites that orbit Earth and provide location and time information to users via handheld devices. The GPS system is part of the Global Navigations Satellite System.

Groundwater Dependent Ecosystem (GDE): Communities of plants, animals, and other organisms whose extent and life processes are dependent on access to or discharge of groundwater.

Impoundment: In the context of this EA, impoundments refer to water that is collected and confined, such as in a reservoir formed by a dam.

Indirect Effects: Effects that occur at a later time or a distance from a project as a result of implementing the project.

Infiltration: Infiltration is the process by which water on the ground surface enters the soil. Infiltration rate in soil science is a measure of the rate at which soil is able to absorb rainfall or irrigation. It is measured in inches per hour or millimeters per hour.

Interdisciplinary Team (IDT): A Forest Service team directed by the Responsible Official to analyze a project from an interdisciplinary approach to ensure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making for a project that may have an impact on the human environment, as required by Section 102(2)(a) of NEPA.

Irretrievable: A term that applies to the loss of production, harvest, or use of the natural resources. The production, harvest, or use is irretrievable, but the action is not irreversible.

Irreversible: A term that describes the loss of future options, primarily in regards to nonrenewable resources or to factors that are renewable only over long periods of time.

Forest Service Road Maintenance Level: Categorization of roads by maintenance levels to define the level of service provided by, and maintenance required for, a specific road. Level 1 Roads have been placed in storage between intermittent uses. Between uses, they are closed to vehicular traffic, but may be available and suitable for non-motorized uses. Level 3 Roads are open and maintained for travel by a prudent driver in a standard passenger car at low speeds. User comfort and convenience are not considered priorities. The road is usually single lanes with turnouts.

Lynx Analysis Unit (LAU): A project analysis unit in which direct, indirect, and cumulative effects on lynx are analyzed for effects comparison.

Managed Use (Trails): A mode of travel that is actively managed and appropriate on a trail, based on its design and management.

Management Area (MA): A land area with a certain emphasis that directs management activities through prescriptions to achieve a desired condition. There are eight major prescription categories, ranging from the least evidence of disturbance to the most evidence of disturbance. These prescriptions are implemented through standards and guidelines that are outlined for each MA.

Management Indicator Species (MIS): Species that indicate the presence of certain environmental conditions, seral stages, or previous treatment.

Mitigation Measure: Actions applied to projects post-analysis to reduce environmental impacts.

Motorized: In the context of this EA, “motorized” refers to dirt bike use. In other Forest Service documents, “motorized” can refer to any off-highway vehicle, including motorcycles, ATVs and UTVs.

Multiple-use: The management of the lands and their various resource values so they are utilized in the combination that best meets the present and future needs of the American people.

National Environmental Policy Act (NEPA): NEPA and implementing regulations by the Council on Environmental Quality specify procedure for integrating environmental considerations into agency planning.

National Forest Management Act (NFMA): An act of Congress which provides guidelines for planning and management of the National Forests.

National Historic Preservation Act (NHPA): The National Historic Preservation Act (NHPA) directs federal agencies to take into account the effect of any undertaking (a federally funded or assisted project) on historic properties.

Non-Motorized: In the context of this EA, “non-motorized” refers to foot, bicycle, and horse traffic.

Non-Native: Refers to invasive plant or animal species. For plants, non-native species are commonly referred to as “weeds”.

Notice of Proposed Action (NOPA): Informs the public of the upcoming environmental analysis and describes how the public can become involved. The NOPA starts the scoping process, which is the period in which the federal agency and the public collaborate to define the range of issues and possible alternatives to be addressed in the analysis.

Objection: A written document submitted by an individual or organization seeking a pre-decisional administrative review of a proposed land management plan amendment or revision, or of a project or activity implementing a land management plan and documented with an environmental assessment or environmental impact statement.

Potential Conservation Area (PCA): Certain designated areas in which surveys were conducted by the Colorado Natural Heritage Program to identify potentially high biological diversity that the Forest Service could use as a baseline indicator for future management.

Project Record: Official project documentation for all assumptions, data collection, calculations, analysis, and decisions used in the course of preparing the environmental and decision documents.

Proposed Action: A proposal made by the Forest Service to authorize or implement an action to meet a specific purpose and need.

Recreation Opportunity Spectrum (ROS): A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a spectrum into six classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban.

Region 2 Sensitive Species: Those plant and animal species identified by the Region 2 Forester for which population viability is a concern.

Regional Roadless Review: A process required for all proposed projects within CRAs in which proposals are reviewed for consistency with the Colorado Roadless Rule by the Deputy Regional Forester.

Rehabilitating: Putting or bringing back National Forest Lands into a former, normal, or unimpaired state or condition, especially as it pertains to trails and roads.

Responsible Official: The Forest Service employee who has the authority to make and implement a decision on a proposed action. This is generally a district ranger or a forest supervisor.

Scope: The range of actions, alternatives, and impacts to be considered in a project proposal.

Scoping: An early and open process for determining the scope of issues to be addressed and for identifying the issue related to a proposed action.

Schedule of Proposed Actions (SOPA): A Forest Service document/website that informs the public about those proposed and ongoing actions for which a record of decision, decision notice, or decision memo would be or has been prepared.

Sensitivity Level: Sensitivity considers viewpoints and corridors on the Forest. Level One are roads, trails, and developed recreation areas with high visitation. Level Two are secondary roads, trails, and other viewpoints. Level Three are seldom used roads and trails.

Soil Quality: The capacity of a specific kind of soil to function, within natural or managed ecosystem boundaries, to sustain plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation.

Specialist Report: A report written by a Forest Service specialist for the purpose of analyzing effects to a resource area from a proposed project. Its findings are incorporated into the analysis document (EA/EIS). BAs and BEs may be incorporated into specialist reports.

Southern Rockies Lynx Amendment (SRLA): This 2008 amendment provides management activity guidance to ensure consistent and effective lynx conservation on federal lands.

Threatened Species: Any species of animal or plants listed as “threatened” by the U.S. Fish and Wildlife Service and likely to become an endangered species within the foreseeable future throughout all or part of its range.

Trail Class: The prescribed scale of development for a trail, representing its intended design and management standards.

Unauthorized Trail: A trail that is not a Forest Service designated trail or temporary trail and that is not included in a Forest Transportation Atlas (36 CFR 212.1). Unauthorized trails are also referred to as “non-system trails” and “user-created trails”.

United States Code (USC): Official compilation and codification of the general and permanent federal statutes of the United States.

Variety Class: A factor in Visual Quality Objective (VQO) mapping along the scenic quality spectrum determined by landscape characteristics. Variety Class A (Distinctive) are visually outstanding landscapes in a specific landscape character type. Variety Class B (Common) are common. Variety Class C (Minimal) are mostly flat without attractive mountains or water features.

Visual Quality Objective (VQO): A desired level of excellence based on physical and sociological characteristics of an area. Refers to a degree of acceptable alteration of the characteristic landscape. VQOs include Maximum Modification, Modification, Partial Retention (allows visible changes to the landscape, but the changes must remain visually subordinate), Preservation, and Retention (allows only imperceptible changes as seen from viewpoints and travel corridors).

Water Influence Zone (WIZ): The land next to water bodies where vegetation plays a major role in sustaining long-term integrity of aquatic systems. It includes the geomorphic floodplain (valley bottom), riparian ecosystem, and inner gorge. Its minimum horizontal width (from top of each bank) is 100 feet or the mean height of mature dominant late-seral vegetation, whichever is most.

Watershed: The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.

Wetlands: Areas that are inundated by surface water or ground water with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetative or aquatic life that require saturated or seasonally saturated soil conditions for growth and reproduction.

APPENDIX B: CONSULTATION AND COMMENTER LISTS

Agencies Consulted

Bureau of Land Management- Wendy Reynolds
City of Steamboat Springs- John Overstreet and Laureen Schaffer
Colorado Department of Highways
Colorado Parks & Wildlife- Billy Atkinson, Steve Baumgartner, Josh Dilly, Danielle Domson-Graham, James Haskins, Libby Miller, Liza Rossi, Andrea Sponseller, and Jeff Yost
Colorado Parks & Wildlife- Stagecoach State Park
Colorado State Forest Service- John Twitchell
Colorado State Land Board
Craig City Council
Grand County Commissioners
Jackson County- Kent Crowder, Commissioners
Routt County CU Extension Office
Routt County- Timothy Corrigan, Cari Hermacinski, Douglas Monger, Historic Preservation Board, and Planning Commission
State Historic Preservation Office- Edward Nichols
U.S. Fish and Wildlife Service- Arapahoe Wildlife Refuge and Kurt Broderdorp

Tribes Consulted

Curtis Cesspooch, Ute Tribal Council, Northern Ute Business Committee
Betsy Chapoose, Director of Cultural Rights and Protection Department, Northern Ute Tribe
Neil Cloud, NAGPRA Coordinator, Southern Ute Tribal Council
Darline Conrad, THPO, Northern Arapaho Tribe
Conrad Fisher, THPO, Northern Cheyenne Tribe
President Llevando Fisher, Northern Cheyenne Tribe
Lynette Gray, THPO, Cheyenne and Arapaho Tribes
Governor Eddie Hamilton, Cheyenne and Arapaho Tribes
Chairman Gary Hayes, Ute Mountain Ute Tribe
Chairman Richard Jenks, Ute Business Committee
Terry Knight, THPO, Ute Mountain Ute Tribe
Chairman Jim R. Newton, Southern Ute Tribe
Chairman Darrell O'Neill, Northern Arapaho Tribe

Organizations Consulted

Colorado River Water Conservation District
Craig Chamber of Commerce- Christina Currie
International Mountain Biking Alliance (IMBA)
Museum of Northwest Colorado- Dan Davidson
Routt County Riders- Eric Meyer, President
Routt Powder Riders- Gaylan Hellyer
Steamboat Springs Trail Alliance (SSTA)
Western Area Power Administration- Rocky Mountain Regional Manager, Environment

Elected Individuals Consulted

Senator Michael Bennet
Senator Cory Gardner
Representative Scott Tipton

Interested Parties Notified Via E-mail

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Ball, Spencer	Esswein, Erich	Kotkas, Kristin
Bass, Boyd	Eubank, Gary	Kowynia, Ken
Beall, Ben	Faltyn, Len	Langdon, Michael
Beall, Rodney	Foulk, Cary	Leidigh, Morgan
Belohrad, Alex	Fox, Allen	Lewis, Steve and Linda
Beyer, Mike and Emily	Garrett, David	Liebetrau, Lloyd
Bird, Nate	Gollnick, Todd	Lovejoy, Leslie
Boisjoli, Nate	Hagenbuch, Julie	Martorano, Bill
Brass, Timothy	Harmon, Cristina	Matheny, Paul
Brown, Ben	Haskins, James	Mayne, Joel
Butler, Ellen	Hawkins, Mike	McCaulley, Marilyn
Cariveau, Jon	Herholtz, Bill	McClellan, Roz
Casson, Shannon	Heydon, Matt	Merrill, Nancy
Carlin	Hicks, Jim	Meyer, Eric
Cheney, Rick	Hruby, Janet	Mincher, Jack
Clark, Jim	Jones, Paxton	Mitchell, Jim
Cook, Michael	Jones, Scott	

Moro, James
Moss, Ted
Moyer, Clint
Nichols, Edward
O'Donnell, Michael
Perkins, Alan
Petrie, Donna and
Sonny
Randolph, John
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Seymour, Blair
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Smith, Brian
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Vander Wall, Dane
Vertrees, Kent
Waters, Rene
Weihman, Elizabeth
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White, Valerie

APPENDIX C: ISSUES

Issues serve to highlight effects or unintended consequences that may occur from the Proposed Action and Alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs. Internal Forest Service comments and external public comments related to this project were reviewed by Forest Service Resource Specialists and the Responsible Official. Potential issues are separated into two categories: key issues and non-key issues.

Key Issues: Issues used to develop alternatives that meet the purpose and need of the project. This review did not identify any key issues that necessitated the development of more alternatives than the three alternatives analyzed in this EA.

Non-Key Issues: Several non-key issues were identified during internal and external scoping and have been addressed in the development of the Proposed Action. The following table describes the non-key issues and disposition of the issue.

Non-Key Issues Disposition	
Issue Identified During Scoping	Rationale
Buffalo Pass Road: The road maintenance and use needs to be managed (with differing views on how this should be done).	Improvements to the Buffalo Pass Road are beyond the scope of this project. The road within the project area meets Forest Service Standard for Level 3 Maintenance Roads. Maintenance improvements may occur as funding allows.
Dry Lake Parking Lot: The Dry Lake parking lot and its capacity and level of use needs to be managed (with differing views on how this should be done).	Current parking capacity is adequate for summer uses. Parking lot capacity and increased use are related to winter recreation, which is outside of the scope of this analysis and will not be done until a winter capacity analysis is completed for the Buffalo Pass area. Other improvements not associated with winter parking lot capacity and increased use will be included in the analysis (e.g. signage and an accessible toilet).
Hunting Impacts: The Proposed Action will negatively impact hunting in the project area.	Colorado Parks & Wildlife understands the wildlife impacts that are occurring as a result of existing summer recreational use in the Buffalo Pass area, and supports the Proposed Action over other trail proposals that may impact large blocks of undeveloped public lands. Colorado Parks & Wildlife comment letter from May 17, 2015 is available in the project record.

<p>Recreation Special Uses: There are pros and cons of allowing special events, which must be considered.</p>	<p>Any permitted recreation activity (event or outfitting and guiding) will be permitted on a case-by-case basis, in accordance with the Forest Plan, FSM and FSH direction. Includes operating guidelines to protect resources and may include requirements for repair and/or restitution of damages.</p>
<p>Trail Management: Reduce user conflicts and address safety concerns through trail management, including single-use, directional-use, multi-use, and motorized-use.</p>	<p>The Proposed Action's multiple-use design is consistent with Forest Plan and Management Area direction, and Forest Service policy (FSM 2350.2.2). User group conflicts will be reduced through trail design and education (e.g. signs and social media). However, in order to accommodate multiple user groups and reduce the potential for user group conflicts, not all of the trails will be open for motorized use, per FSM 2350.3.5. An implementation plan will manage these issues.</p>
<p>Long-Term Trail Maintenance Funding: There must be adequate funds for maintenance.</p>	<p>The Forest Service has entered into Challenge Cost Share Agreements with partners in order to ensure time and resources to construct and maintain the proposed trails are available. Additionally, the Yampa Valley Community Foundation has established a Trail Maintenance Endowment Fund to help financially support trail and trailhead maintenance. The combination of these resources will minimize costs to the Forest Service.</p>
<p>Roadless Area Impacts: Trail development in roadless areas may negatively impact resources and could make the areas ineligible for wilderness designation in the future.</p>	<p>The Proposed Action passed a pre-scoping Regional Roadless Review[†] and pre-decision Regional Roadless Review. The Proposed Action is consistent with the 2012 Colorado Roadless Rule[†]. Potential resource impacts were analyzed in specialist reports for the 9 roadless area criteria. Any impacts identified in these reports are mitigated through incorporation of design criteria, which results in no significant impacts for this resource. Neither roadless area was recommended for wilderness designation in the Forest Plan.</p>
<p>Revegetation: Areas disturbed during trail construction and trail restoration should be revegetated to prevent soil</p>	<p>All revegetation measures will be in accordance with the Medicine Bow-Routt National Forest's Revegetation Guide. Design criteria and mitigation measures are included in the Proposed Action to ensure that proper</p>

<p>loss, sediment delivery to streams, and to reduce the risk of invasive species establishment.</p>	<p>revegetation measures are implemented, which results in no significant impacts for this resource.</p>
<p>Preliminary Conservation Areas (PCA): The Proposed Action could contribute to a loss of biodiversity in the Soda Creek Potential Conservation Area.</p>	<p>Potential impacts to the Soda Creek PCA and its rare wetland plant associations are analyzed in the EA and Botany Specialist Report (Aitken 2016). The Proposed Action will avoid any sensitive plants in the Soda Creek PCA, as required by the Forest Service botanist. Boreal toad impacts were analyzed in the Aquatics section of the EA and Aquatics Specialist Report (Henderson 2016). No boreal toad impacts from the Proposed Action were found. Therefore, there will not be a loss of biodiversity in the Soda Creek Potential Conservation Area.</p> <p>The two other PCAs in the project area were also included in analysis and the Proposed Action was found to not have a significant impact on these additional areas.</p>
<p>Botany Impacts: The Proposed Action could impact sensitive plants and plant species of local concern and contribute to invasive and noxious weed spread.</p>	<p>The Botany Specialist Report made a determination that the Proposed Action “may impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing” for these species. Design criteria and mitigation measures are included in the Proposed Action to avoid this potential impact, which results in no significant impacts for this resource. The Proposed Action has the potential to increase invasive non-native plant species in the area, as determined in the Botany Specialist Report. However, design criteria and mitigation measures are included in the Proposed Action to reduce this potential impact, which results in no significant impacts for this resource.</p>
<p>Sediment: New and existing trails and roads can be both a source of erosion and a conduit for sediment to be delivered to streams through connected disturbed areas. Increased sediment in streams can alter the</p>	<p>The Soda Mountain Trail will be relocated so as to meet Water and Aquatic Standard 7 and design criteria outlined in the Watershed Specialist Report. If an alternate location cannot be identified to meet this standard, the trail will not be constructed. Design criteria are incorporated as part of the Proposed Action to guide sustainable trail development that will</p>

<p>hydrologic regime and be an indicator of a poor condition or impaired watershed. Specifically, the Soda Mountain Trail could contribute the greatest impacts.</p>	<p>minimize the potential for erosion and sediment impacts and results in no significant impacts for this resource.</p>
<p>Water quality: Water quality could be reduced as a result of increased sediment from connected disturbed areas, from fuel/chemical spills/leaks from trail construction equipment, or from inadequate sanitation facilities.</p>	<p>The Proposed Action design and design criteria, in accordance with the Forest Service Watershed Conservation Practices Handbook (FSH 2509.25) minimize this potential, which results in no significant impacts for this resource.</p>
<p>Altered hydrology: The increase in road and trail densities could put watersheds at high risk for an altered hydrologic regime by increasing peak flows.</p>	<p>Proper implementation of design criteria will minimize this potential in Alternative 2. While Alternative 3 will reduce trail densities, it does not fully meet the Purpose and Need of the project.</p>
<p>Wetlands and GDEs: The Proposed Action could inhibit wetland flow paths and functions, resulting in degraded wetlands and groundwater dependent ecosystems.</p>	<p>Trails will not be located in wetlands, fens, or springs. Watershed and botany design criteria are incorporated as part of the Proposed Action to avoid any direct, indirect, or cumulative impacts to wetlands[†], fens[†], springs, or groundwater dependent ecosystems[†]. Proper implementation of design criteria will result in a no significant impacts for this resource.</p>
<p>TES: The Proposed Action could impact threatened, endangered, or sensitive (TES) wildlife, fish, or plant species populations and/or habitat.</p>	<p>Surveys and/or data reviews were conducted to determine presence/absence of TES species and their habitat. Potential impacts were analyzed for any TES species that were identified or were determined to have potential habitat in the project area. There was not a determination of “likely to result in a loss of viability in the Planning Area, or in a trend toward federal listing” for any TES species as a result of the Proposed Action. Design criteria are incorporated as part of the Proposed Action to minimize any potential impacts to these species. Monitoring plans are also in place to ensure that any newly discovered TES species in the project area are protected during</p>

	<p>construction and project implementation. Proper implementation of design criteria will result in no significant impacts for this resource.</p>
<p>Wildlife Impacts: The Proposed Action may contribute to habitat loss, habitat fragmentation, and population declines or shifts for wildlife species, especially lynx and big game.</p>	<p>Design criteria are incorporated into the Proposed Action to avoid or minimize impacts related to wildlife habitat, especially for lynx and big game. Potential impacts to wildlife that may result from the Proposed Action are described in the EA. Based on analysis in the Wildlife Specialist Report, the Proposed Action will not have a significant impact on wildlife habitat.</p>
<p>Human-Wildlife Conflicts: The Proposed Action will increase human activity in the project area and cause an increase in the potential for human-wildlife conflicts.</p>	<p>The Proposed Action will enable information on the potential for human-wildlife conflicts and how to minimize this potential to be posted at the trailhead. If education efforts are unsuccessful, regulations will be enforced to reduce human-wildlife conflicts. Colorado Parks & Wildlife is aware of this potential, but is in support of the Proposed Action, overall.</p>
<p>Wildlife Impacts at Sensitive Times: The Proposed Action may impact wildlife, especially elk, during sensitive times, such as calving.</p>	<p>Design criteria, such as protecting elk calving and winter range areas, are incorporated into the Proposed Action to avoid or minimize impacts. Potential impacts to wildlife that may result from the Proposed Action are described in the EA. Based on analysis Wildlife Specialist Report, the Proposed Action will not have a significant impact on wildlife.</p>
<p>Raptors: If the Proposed Action includes trails in the vicinity of raptor nests, the species will be negatively impacted.</p>	<p>There are no raptor nests identified in the project area. Design criteria are incorporated as part of the Proposed Action to avoid impacting raptor nests if any nests are newly discovered.</p>

APPENDIX D: PROPOSED ACTION DESIGN CRITERIA

Aquatics

1. If specific impacts from the alternatives to threatened, endangered, and Region 2 Sensitive Species and/or their habitats are identified, management may be adjusted as necessary to reduce those impacts through working with the biologists or botanists. Timing restrictions may also need to be applied. The species of interest include amphibians and Colorado River cutthroat trout.

Botany

Design Criteria:

1. All proposed trails will be surveyed prior to implementation.
2. If, during implementation, impacts to newly discovered, threatened, endangered, and Region 2 sensitive plant species and/or their habitats are identified, management will work with the Forest Service botanist to reduce those impacts. Timing restrictions may also need to be applied.
3. Avoid any loss of rare wetlands such as fens and springs. Restore areas of user-created damage.
4. Treat any Routt National Forest priority invasive species along proposed trail alignment or restoration areas prior to project implementation.
5. Establish effective ground cover on disturbed sites to prevent accelerated on-site soil loss and sediment delivery to streams, and to reduce the risk of invasive species establishment. Restore ground cover using certified native plants as practicable to meet revegetation objectives. Work with the Forest Service botanist to identify appropriate species for planting.

Mitigation Measures:

1. Conduct surveys outside the project area to identify potential habitat and additional populations of Rabbit Ears gilia, Crandall's wild hollyhock, and largeflower wild hollyhock.
2. Collect and propagate seed from the species listed above for use in project area restoration efforts and to establish populations in unoccupied potential habitat.
3. Conduct population monitoring that would improve understanding of population demographics for Rabbit Ears gilia.
4. Develop management strategies for the species listed in Mitigation Measure 1.
5. Monitor and treat known populations of invasive species at trailheads and within trail corridors annually.

Cultural Resources

1. If, during construction, any historic or prehistoric properties are located or unearthed, stop implementation and consult Zone Archeologist before continuing.
2. In areas identified for rehabilitation and known sites are nearby, consult with Zone Archeologist for guidance on how to minimize any further adverse effects.

Recreation

1. To minimize potential user conflicts, implement a management plan for the area including information, education, monitoring and enforcement. If monitoring determines information and education is not working, enforcement of rules (e.g. directional traffic, separation of uses). (FSM 2302.2b)
2. Trails should meet standards for design and trail class listed in FSH 2309.18. Exceptions may occur only by approval of IDT and Line Officer, and will be included in the Travel Management Objective for that trail segment.
3. Recreation events in MA 1.32 may be allowed on a case by case basis, and after IDT and line officer review.
4. If trail design and construction determines a trail segment cannot be built without impacts to resources (e.g. wetlands, fens), the trail will not be implemented.
5. If long term funding/maintenance guarantees do not get implemented, re-assess decision to complete project and consider closing and rehabilitation of trails.

Soils

Routt Forest Plan Soil Standards 1-6 and Guidelines 1 and 2.

Forest Service Handbook 2509.18- Soil Management Handbook. Chapter 2- Soil Quality Monitoring

2.03: Policies 1 and 2

2.2: Soil Quality Standard 3

FSH 2509.25- Watershed Conservation Practices Handbook. Chapter 10- Management Measures and Design Criteria

11.2: Management Measure and Design Criteria a-b.

12.1: Management Measure and Design Criteria a-e.

12.4: Management Measure and Design Criteria a-d.

- 13.1: Management Measure and Design Criteria a-i.
- 13.2: Management Measure and Design Criteria a-f.
- 13.3: Management Measure and Design Criteria a-f.
- 13.4: Management Measure and Design Criteria a-d.
- 14.1: Management Measure and Design Criteria a-d.
- 14.2 - Management Measure and Design Criteria a-b.

Additional Design Criteria: When rehabilitating user-created trails, incorporate construction of drainage features, embedded debris on steep pitches, and seeding with native species.

Visuals

1. Design trails to follow the natural contour lines, as feasible.
2. Retain and protect natural features, such as rock outcrops, young healthy trees and shrubs. Cut stumps low to the ground as feasible. Remove fallen trees and large volumes of forest residues, including small trees, and tops and limbs of larger trees within trail corridors to minimize visual impacts and for maintaining the scenic quality.
3. Revegetate disturbed soils on cut and fill slopes with native seed mixture after the completion of trail construction to reduce soil contrast and blend with the surrounding landscape.
4. Restore and recontour illegal/unneeded trails to natural state and to move towards the desired landscape character of the area. Scarify and reseed trail beds to reduce visual impact and to blend with the surrounding landscape. Use different sizes of rocks and boulders buried at least 1/3 in the ground for barriers.

Watershed

1. Minimize the number of trail-stream crossings. Consult with the Forest Service hydrologist on trail-stream crossing locations.
2. Use bridges at all trail-stream crossings unless prohibited by the size of the stream. Consult with the Forest Service hydrologist on bridge abutment placement. If a bridge is not feasible (e.g. Spring Creek), use low water crossings with armored approaches.
3. Do not allow loss of stream cross sectional area from bridge construction.
4. Do not allow new trail construction in fens.
5. New trail construction through other wetlands would not be allowed unless approved by the Forest Service hydrologist. All trails in wetlands should have an elevated structure, such as a boardwalk, to minimize wetland disturbance and alteration of wetland hydrology. No mechanical equipment should be used for trail construction in wetlands. Any fill or structures in wetlands must comply with 404 permit requirements.

6. Existing non-system trails not incorporated into Alternative 2 should be rehabilitated. Any new unauthorized non-system trail construction will be immediately closed and rehabilitated following discovery. Rehabilitation will consist of some or all of the following:

- Scarifying the trail surface
- Mulch the surface with tree slash or straw so that groundcover equals 65%
- Prevent re-use with signage or some type of physical barrier
- Drainage structures
- Seeding
- Re-contouring

Specific measures used will be identified by Forest Service personnel.

7. Outslope trails wherever possible to prevent concentration of water on the trail tread.

Wildlife

Lynx-Specific Criteria

1. If specific impacts from the existing non-system trails to lynx and/or their habitats are identified, then trail and recreation management will be adjusted as necessary to reduce those impacts.
2. All proposed trails will be surveyed by wildlife personnel before construction begins once trail design is finalized and trails are flagged on the ground, but before construction begins to complete habitat evaluations to determine any lynx and snowshoe hare habitat to avoid.
3. Trails will be kept to the edges of any high quality lynx habitat islands to avoid habitat fragmentation. High quality lynx habitat is dense horizontal cover that could support snowshoe hare, and therefore, lynx winter foraging.
4. Trails will not be placed in areas of lynx habitat that are greater than 35% dense horizontal cover for lynx or snowshoe hare habitat.
5. Trail construction will be suspended in the vicinity of any new lynx habitat or site identified during construction until a wildlife biologist determines the appropriate action to take for protection of the habitat and/or individual lynx. Appropriate action determination should typically occur within 3 working days after discovery.
6. Appropriate lynx habitat or site protection actions may include: implementation of a seasonal restriction to protect a species from disruption, harassment, or habitat destruction; changes in trail design to protect or maintain existing habitat; or elimination of trails within a specified protection area. These actions will not typically apply over more than 40 acres.

Criteria for Other Species

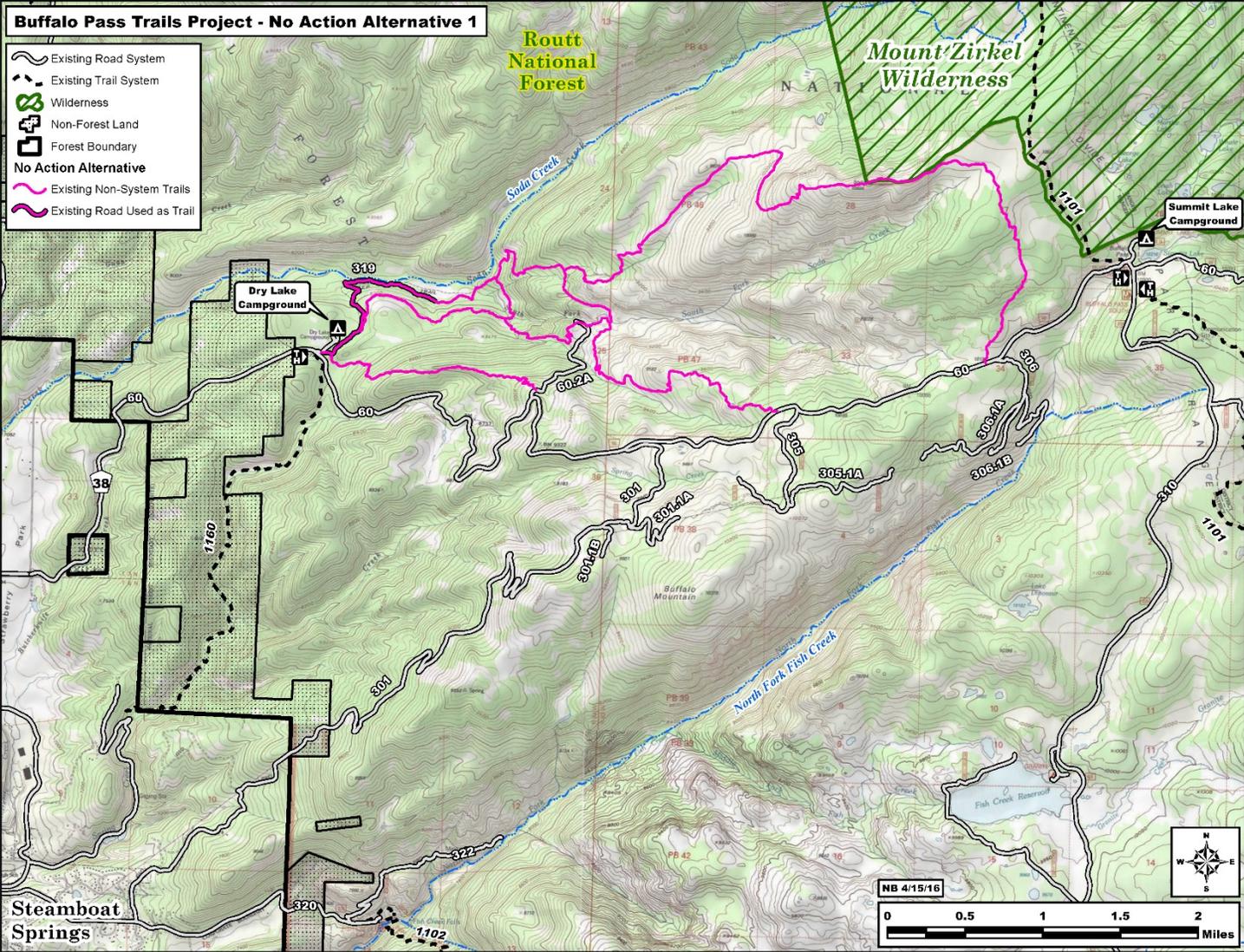
1. The wildlife design criteria should be included in any Buffalo Pass Trails Project contract or plans. Any buffer or protection area of a trail/road or

- trail/road seasonal restriction should be displayed on maps and provided to contractors building trails, but should not include exact location of important wildlife areas.
2. Trail decommissioning and recreation management will be adjusted to reduce any specific effects from the existing non-system trails to sensitive species, Management Indicator Species (MIS), lynx, or their habitat.
 3. All proposed trails will be surveyed by wildlife personnel after trail design is finalized and flagged on the ground, but before trail construction begins to complete sensitive species surveys, MIS population analyses, and lynx habitat evaluations.
 4. Trail construction will be suspended in the vicinity of any sensitive species, MIS habitat, or lynx habitat identified during construction until a wildlife biologist determines the appropriate action to take for protection of the habitat and/or species. Appropriate action determination should typically occur within 3 working days after discovery.
 5. Trail use will be suspended in the vicinity of any new threatened, endangered, or sensitive species discovered until a wildlife biologist determines the appropriate action to take for protection of the habitat and/or species. Appropriate action determination should typically occur within 3 working days after discovery.
 6. Appropriate habitat or site protection actions may include: implementation of a seasonal restriction to protect a species from disruption, harassment, or habitat destruction; changes in trail design to protect or maintain existing habitat; or elimination of trails within a specified protection area. These actions will not typically apply over more than 40 acres.
 7. If important sensitive species or MIS and/or their habitat is found during trail lay out, the trail will be kept to the edge of habitat islands to avoid habitat fragmentation and loss of protective cover.
 8. If high quality lynx habitat is found during trail lay out, the trail will be kept to the edge of habitat islands to avoid habitat fragmentation and loss of important prey habitat. High quality lynx habitat is dense horizontal cover (>35%) that could support snowshoe hare, and therefore, lynx winter foraging.
 9. If an active or inactive goshawk/raptor nest is found, a wildlife biologist will monitor status each year during trail implementation or recreational use, and will work with the recreation department to adjust buffers or seasonal restrictions.
 10. If goshawk or raptor nests are discovered, up to a ¼ mile buffer around the goshawk or raptor nest will be identified by a wildlife biologist. Within the identified buffer, there will be no trail construction or use from a period of March 1-September 15. Use of National Forest roads that are open to unrestricted public vehicle use, is specifically exempted from this seasonal closure.
 11. Within ¼-mile of an active goshawk/raptor nest, limited use of an existing Forest Service road (that has been and is currently closed to public travel) may be granted during the seasonal closure for administrative access. On

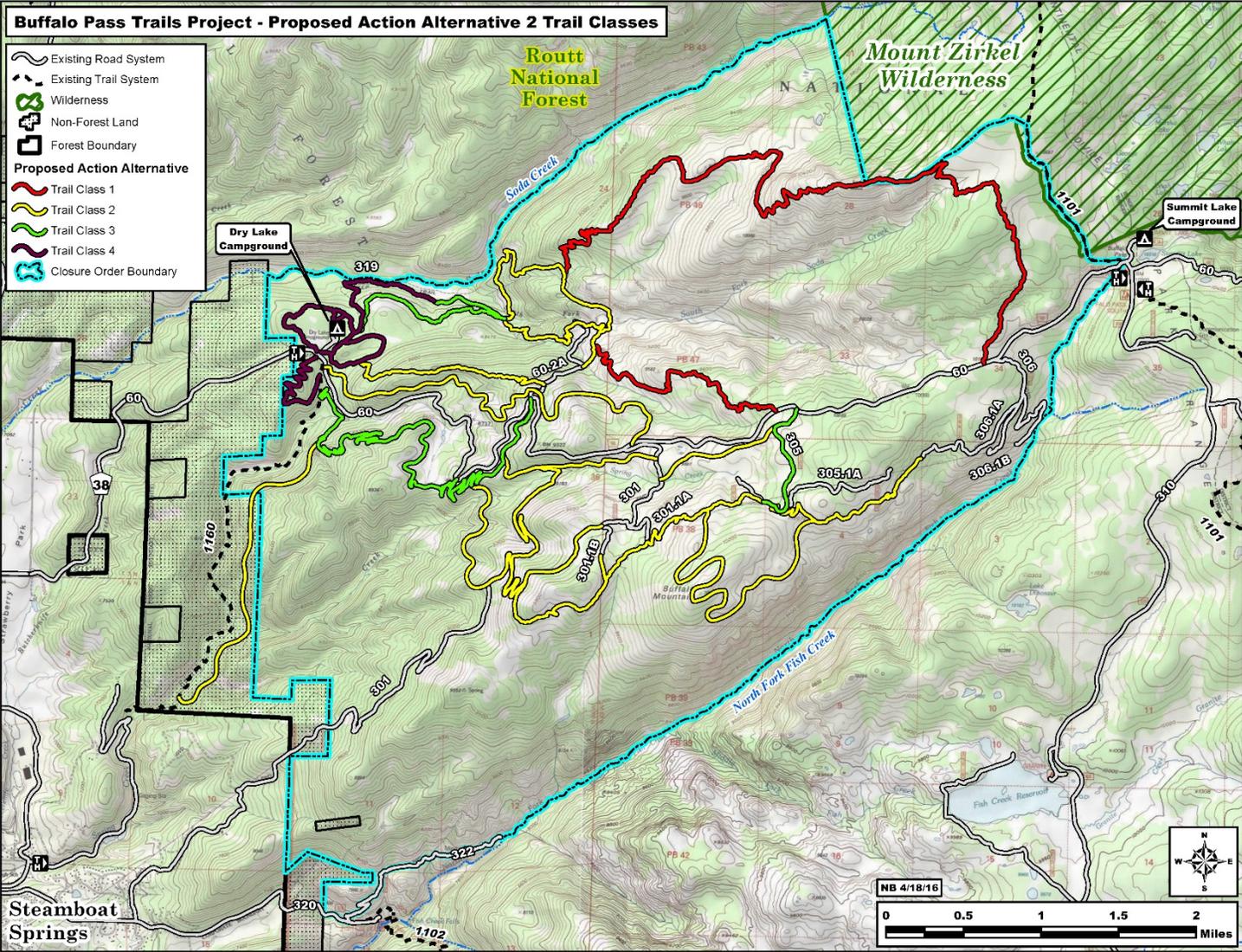
- average, no more than four separate vehicle passes/day would be allowed on a road that is within ¼-mile of an active raptor nest. One pass is defined as: one vehicle or up to three vehicles traveling together on the road segment that is within ¼ mile of an active nest. Administrative access is defined as: vehicles used for transporting FS and contracted workers, trail building machinery, or machinery maintenance equipment.
12. The following seasonal restrictions on trails and/or trail segments may be implemented to protect elk calving and big game winter range. Any further seasonal restrictions will be determined on a case-by-case basis, as needed, in collaboration with CPW.
 - a. There will be a mandatory closure for Management Area 7.1: Residential/Forest Interface from December 1-April 15, which includes Trail Segment 12 and Spring Creek Trail (#1106).
 - b. There will be a mandatory closure from May 15-June 15 for trail segments that are within or linked to CPW mapped Elk Production Areas. This will include Trail Segments 8, 9, 22, and 23, and possibly Segment 12.

APPENDIX E: MAPS

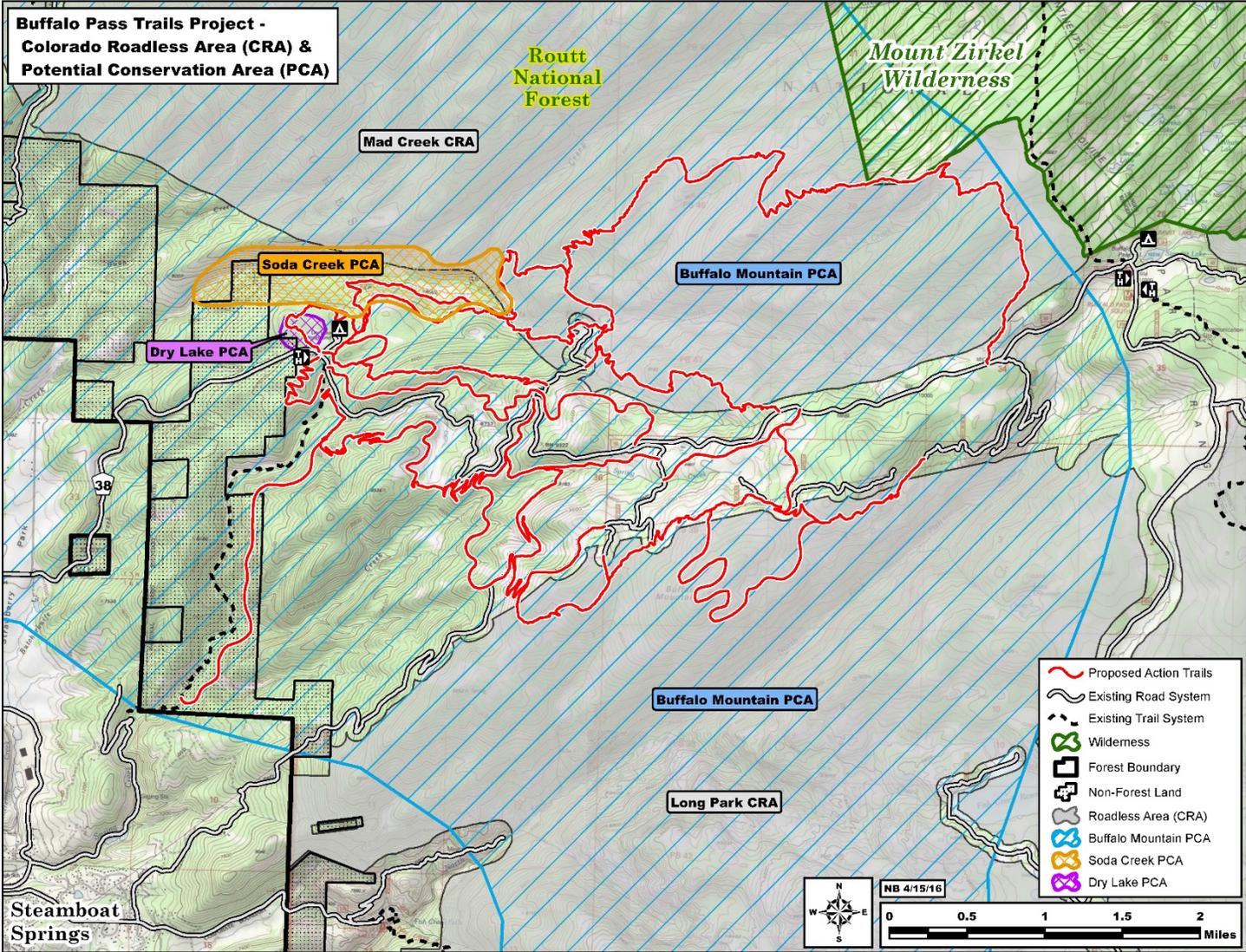
MAP 1: NO ACTION ALTERNATIVE



MAP 3: PROPOSED ACTION ALTERNATIVE TRAIL CLASSES



MAP 5: CRAS AND PCAS WITHIN THE PROJECT AREA



MAP 6: TRAIL/AREA CLOSURE ALTERNATIVE

