United States
Department of
Agriculture

Caribou Range Mountains Subsection

Summer Travel Management Plan

Draft Environmental Assessment

Forest Service
Intermountain
Region

Bear Creek Trailhead – Palisades Ranger District

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Abstract:

The Palisades Ranger District of the Caribou-Targhee National Forest proposes to develop a clearly defined plan for a mix of trails designed and managed specifically for all- terrain vehicles (ATVs), motorcycles, mountain bikes and non-motorized uses. The goal is to create a balanced network of trails that are safe, environmentally sound, affordable to manage and maintain, and responsive to public needs. The District plans to **eliminate** the existing designation of "Open for motorized use less than 50 inches wide but **NOT RECOMMENDED FOR ATVs**" and allow ATVs only on trails designed and designated for ATV use. They also are proposing to close all of the Caribou Range Mountains Subsection to off-trail use (cross-country use) by bicycles. The Forest Service proposed alternative as disclosed in Chapter Two, pages 2-4 – 2-7 is Alternative C.

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Chapter One

PURPOSE AND NEED

Introduction

The project area is in Southeastern Idaho within Bonneville County. The area includes National Forest System lands between Idaho Falls, Idaho and Alpine, Wyoming - south of the South Fork of the Snake River and west of Palisades Reservoir. The Forest Plan identified the area as the Caribou Range Mountains Subsection (1997 Revised Forest Plan, page III-62 and III-63). (Figure 1.1 - Vicinity Map, page 1-3).

Background

The 1999 Open Road and Open Motorized Trail Analysis (Motorized Road and Trail Travel Plan) developed a travel system for the Targhee National Forest which complied with direction from the 1997 Revised Forest Plan (RFP). A major objective of the plan was to resolve conflict by finding integrated, compatible management methods and prescriptions that allow public use of roads and trails to occur in a way that can best meet the needs of the resources and the recreating public. In other words, the plan was developed so that it would be compatible with other resource objectives, such as protecting soils, water quality, riparian habitat, wildlife habitat, or other forest resources while at the same time trying to provide a transportation system that was safe, environmentally sound, affordable to manage and maintain, and responsive to public needs.

Existing Condition

The Forest completed a travel plan in 1999 using the best information available at that time. Since that time, some site specific condition data is now available which will help develop a more workable travel system while protecting natural resources. Also, better resource and user information has been obtained. Revised Forest Plan direction (page III-27) calls for annual monitoring of 5-10 percent of the trails to determine rehabilitation needs.

The 1999 travel plan designated open motorized routes on the Targhee National Forest. On trails, it made the distinction between vehicles over 50 inches in width and those less than 50 inches in width. The travel plan designated trails that were "Open for Motorized Use less than 50 inches wide but **NOT RECOMMENDED FOR ATVs**". It also designated trails that were "Open for Motorized Use less than 50 inches wide and suitable for ATVs". The travel plan also allowed cross-country travel by mountain bikes/mechanized vehicles in most areas of the forest – except for example in wilderness and other special areas such as Research Natural Areas (RNAs).

Purpose and Need for Action

The **purpose** of this project is to:

- Revisit the existing Travel Plan direction for the Caribou Range Mountains Subsection within Bonneville County in order to clarify ambiguity discovered during implementation of the existing travel management plan direction and annual monitoring efforts for the existing trail system. Analysis of the road system is **not** part of this project except for two roads

which are proposed to be converted from a "road" designation to a "trail" designation and one short road which is to be obliterated in Alternative C – Proposed Action (see Appendix A – Comparison Summary of All Trails by Alternative – Caribou Range Mountains Subsection Summer Travel Management Plan and the analysis discussions in Chapter Four).
- Incorporate better inventory information into the trail designation plan.
- Develop a clearly defined plan for a mix of trails designed and managed specifically for all-terrain vehicles (ATV), motorcycles, and non-motorized uses.
- Close the Caribou Range Mountains Subsection to off-trail or cross-country use by bicycles (such restrictions are already in place for motorized vehicles).

The **goal** is to create a balanced network of trails that is safe, environmentally sound, and affordable to manage and maintain, and be responsive to public needs without exceeding existing OROMTRD standards.

The **need** for this analysis was discovered during implementation of the 1999 Travel Plan for the following reasons:
- The current travel plan allows ATV use on motorized single-track trails that are shown as "Open for motorized use less than 50 inches wide but **NOT RECOMMENDED FOR ATVs**" (Targhee National Forest Travel Map - 2001). This is causing a number of resource problems and user conflicts.
- A considerable increase in ATV use has occurred during the last several years. Such an increase of ATV use on single-track motorized trails that were not designed for ATV use has and is continuing to pose safety risks for visitors as well as causing damage to vegetation, soils and in some cases, the trails capability to support other uses.
- Continued use of some of these single-track motorized trails by ATVs may result in significant environmental effects. At the same time, some trails would be suitable for ATV use with minor modifications in trail design and reconstruction.
- During the same time period, there has been an increase in the recreation use levels of all types of trail use which has increased user conflicts. The combination of increased recreation use, user conflicts and trail use beyond the capability of the intended trail design has led to some damage of the existing trail system.
- In addition, user-created motorized routes may exceed established density standards, fragment wildlife habitat, increase erosion, and cause other resource impacts.

In **summary**, the overall **purpose** of this analysis is to:
- Refine the existing trail network in the Caribou Range Mountains Subsection to provide and manage trail opportunities for all recreation user groups.
- Reduce user-conflicts.
- Better protect the natural resources.
- Better implement the 1997 Revised Forest Plan and 1999 Open Road and Open Motorized Trail Road Density (OROMTRD) analysis standards and guidelines.

Forest Plan Amendment

No plan amendments will be required for any alternative. OROMTRD was not exceeded in any alternative. Calamity Prescription Area appeared to be exceeded at first, but after further review the Calamity Area (Prescription 5.1.3(a) - Timber Management (No Clearcutting, Urban Interface) does not apply to OROMTRD because it is less than 2.5 sq. miles in size (see RFP, page III-138).

Poker Peak Area (Prescription 3.1.1(a) – Non Motorized

- For **Alternative A – No Action (Existing Situation)**, no motorized trails or roads exist in the prescription area. However, due to mapping procedures, the Bear-Jensen Road mileage, which boarders the prescription area on the west side was assigned half of the mileage to be included in this prescription area and half to another adjacent prescription. This caused the OROMTRD standard for the Poker Peak area to be exceeded by 6.8 miles even though no motorized roads or trails are within the prescription area.

This project will not re-analyze all aspects of travel management planning in the Caribou Range Mountains Subsection. **Winter travel will not be addressed.** All action alternatives will comply with existing 1997 Forest Plan Direction and the 1999 Open Road and Open Motorized Trail and Road Density Analysis (OROMTRD). All actions will comply with the **"Final Travel Management Rule**" announced on November 2, 2005 by the USDA Forest Service which revises regulations at 36 CFR parts 212, 251, and 261 to require designation of roads, trails, and areas for motor vehicle use. All action complies with the Idaho Roadless rule of 2008.

This document will clarify the motorized route density standard concerns for prescription areas where current OROMTRD standards appear to be exceeded in the summary above.

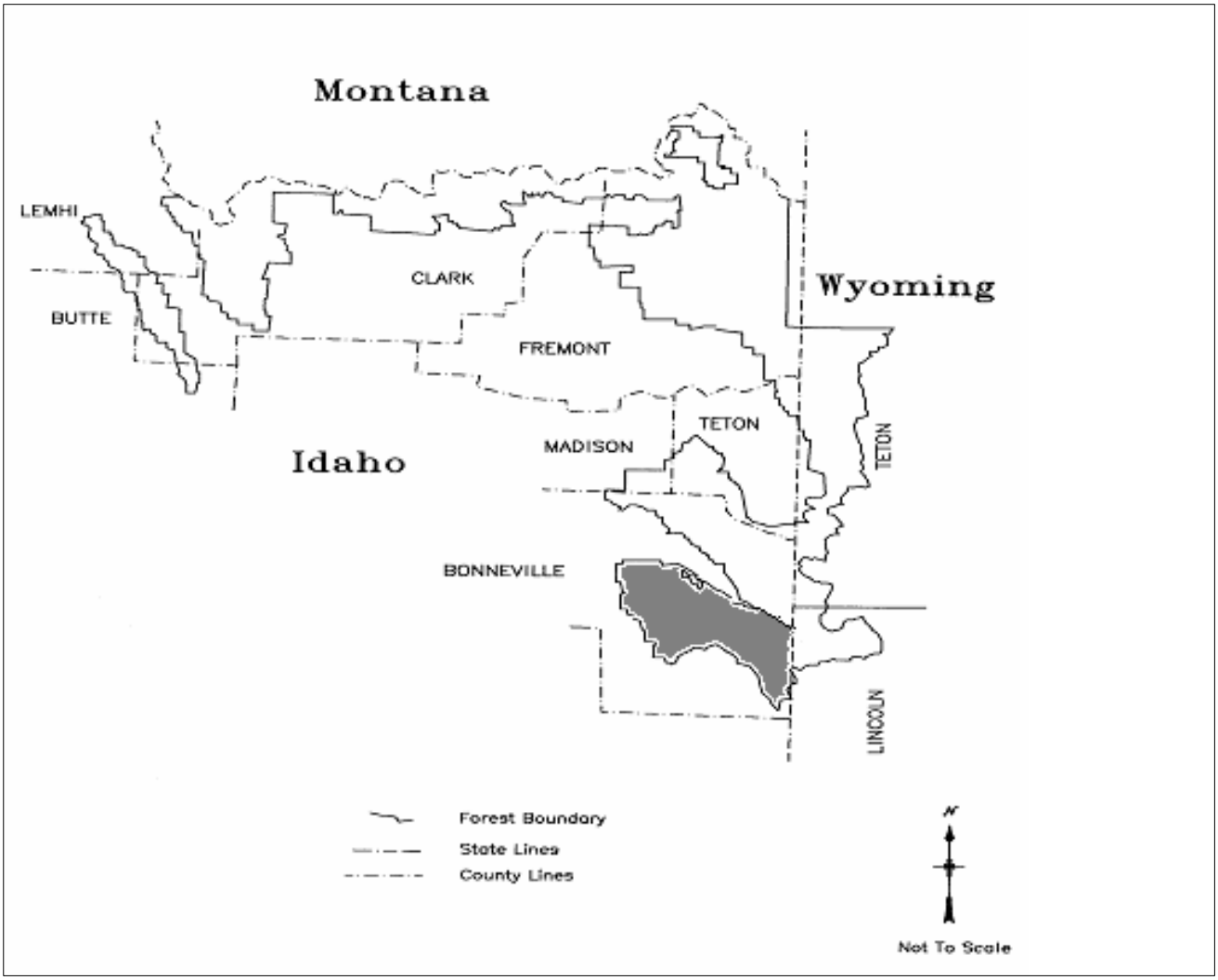

Figure 1.1 - Vicinity Map

Proposed Action

The actions proposed by the Forest Service to meet the purpose and need are:

1. Develop a clearly defined plan for a mix of trails designed and managed specifically for all-terrain vehicles (ATVs), motorcycles, and non-motorized uses. The goal is to create a balanced network of trails that are safe, environmentally sound, affordable to manage and maintain, and responsive to public needs. (See Appendix A - Comparison Summary of All Trails by Alternative – Caribou Range Mountains Subsection Summer Travel Management Plan).
2. **Eliminate t**he existing designation of "Open for motorized use less than 50 inches wide but **NOT RECOMMENDED FOR ATVs**" and allow ATVs only on trails designed and designated for ATV use.
3. Close the Caribou Range Mountains Subsection to off-trail use (cross-country use) by mountain bikes.
4. Relocate sections of trails that may be necessary to accommodate the designated use in a safe and sustainable manner and be environmentally sound.

The protocol established in the 1999 Open Road and Open Motorized Trail Analysis, "Road Decommissioning Process Guidelines", Appendix B, will be followed during trail reclamation and decommissioning as directed by the Revised Forest Plan. A description of the procedures to be followed is found in Appendicies C & D of this document. Documentation (Appendix B) at the time of reclamation and or decommissioning will occur to determine effectiveness of the closure type (such as scarification, berms, rocks and vegetation).

Decision Framework

Given the purpose and need, the District Ranger will review the proposed action and the other alternatives in order to make the following decisions:

1. Whether the proposed action will proceed as proposed, as modified by an alternative, or not at all. If it proceeds:
2. What mitigation measures and monitoring requirements will the Forest Service apply to the reconstruction and rehabilitation?

Public Involvement

The Council on Environmental Quality (CEQ) defines scoping as "...an early and open process for determining the scope of issues to be addressed and for identifying the issues related to a proposed action" (40 CFR 1501.7). Among other things, the scoping process is used to invite public participation to help identify public issues and to obtain public comment at various stages of the Environmental Analysis process. Although scoping is to begin early, it is really an interactive process that continues until a decision is made. In addition to the following specific activities, the Caribou Range Mountains Subsection Summer Transportation project was listed on the Caribou-Targhee National Forest Schedule of Proposed Actions. To date, the public has been invited to participate in the project in the following ways:

1. Bonneville County Idaho created the Bonneville County Trails Committee (BCTC) in March 2003 for the purpose of developing recommendations to the Caribou-Targhee National Forest on recreation related plans and issues. The BCTC consists of Bonneville County residents who represent the various motorized and non-motorized recreation user

groups. The committee members were all volunteers; duly appointed by the Bonneville County Board of Commissioners. The first project the commissioner's directed the BCTC to complete was to review the 2001 Travel Map (Big Hole Mountains Subsection) and provide recommendations for the Caribou-Targhee NF to consider in future travel management planning in the area.

2. Likewise, the committee has made recommendations to the Caribou-Targhee NF for this project on modifications they feel are necessary to improve the current travel management system. The committee limited its recommendations to comply with the motorized road and trail densities that are established in the current travel management plan (see individual Management Prescriptions in the Forest Plan). Alternative B is the county recommendation.

The **goals** of the BCTC were to:

- Provide recreation opportunities for all trail user groups.
- Provide a quality experience for all trail user groups.
- Improve trail conditions.
- Reduce environmental impacts.

Further definitions of these goals include:

- **Recreation opportunity:** Provide (a) trail/road mileage for motorized and non-motorized user groups and (b) motorized mileage for both ATV users and motorcyclists.
- **Quality experience:** Recognize that (a) loop trails are preferred over out-and-back trails, and (b) motorcyclists prefer single track trails over double track and (c) ATVs should not be permitted on single track motorized trails.
- **Trail conditions:** Recognize that (a) unsafe trail conditions should be corrected, and (b) ATV trails should be designed specifically for the ATV.
- **Environmental impact:** Trails that are causing detrimental environmental impacts should be corrected; key considerations are to minimize soil erosion and stream sedimentation.

In an effort to obtain other public comments and concerns, news releases were sent to area newspapers and media on April 1, 2008 and hard copies of the Scoping document were sent to approximately 95 individuals and groups on August 19, 2008. On August 23, 2008 a Legal Notice and News Release were published notifying the public that a Scoping document had been prepared and available for review. A second Scoping Document was sent out on January 13, 2009 offering a second opportunity to comment. The Scoping documents were also posted to the Caribou-Targhee National Forest web site. Due to a change in personnel over-seeing the project during 2010, completion of the draft environmental assessment was delayed until late December of 2010.

In summary, a total of 25 letters and emails were received – six in the fall of 2008, eight (includes one form letter with 40 individual signatures) in the spring of 2009, and 11 in the spring of 2010. Many of the comments represent the same issues and concerns expressed in the scoping document plus detailed suggestions on specific trails and how they should be managed. In addition, some discussion was centered on the concern for motorized road and trail density standards as shown in the Revised Forest Plan. Comments and suggestions for consideration were analyzed and used in the development of the draft environmental analysis document.

Forest Plan Management Direction

The following Targhee Forest Plan (1997 Revised Forest Plan) direction applies (direction stated as

Goals (G), Standards (S), or Guidelines (G).

Desired Future Condition

- Recreation will emphasize disperse recreation opportunities, and semi-primitive backcountry experiences while providing high-quality motorized use on designated trail systems. (RFP, Page III-64)
- "....The Bear Creek & Poker Peak Roadless Area ....overall rating did not meet wilderness recommendations. (FEIS, Table IV-14, footnote, Page IV-48)
- "The Bear Creek & Poker Peak Roadless Area – This area was not recommended for wilderness considerations for the following reason: ..." (See paragraph, FEIS, Appendix B, Update To The Roadless Areas Process Paper For Wilderness Recommendation Rationale. (FEIS, Page B-4)

Forest-wide Goals (G), Standards (S) and Guidelines (G)

See the specific goal, standard or guideline listed below by element and resource area.

Physical Elements

Soils

- In areas of high mass instability, that have been ground verified, occupancy shall not be allowed. (S) (RFP, Page III-7)
- In areas identified as having moderate instability, and that are ground verified, occupancy may be allowed provided it can be shown the project design can prevent unacceptable resource damage. (G) (RFP, Page III-7)
- The Region 4 Soil Management Handbook FSH 2509.18 Direction (see Appendix I)
- Region 4 Soil and Water Conservation Practices Handbook FSH 2509.22 Direction:
- Recommended BMP Project Design Features

Biological Elements

Fisheries

- The goal of the Revised Forest Plan (RFP) is to maintain or restore water quality, stream channel integrity, channel processes, and sediment regimes to a degree that provides for stable and productive riparian and aquatic ecosystems. Another goal is to maintain or restore riparian vegetation and aquatic habitat to support populations of well-distributed native species. The Forest is directed to minimize adverse effects to aquatic and riparian dependent species from past, existing, and proposed management activities.
- Relevant and specific trail-related Aquatic Influence Zone guidelines include:
- No new trails will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place.
- Improve, seasonally close, close, relocate and stabilize, or obliterate roads and trails that have been identified as posing a high risk of causing unnaturally high levels of sediment input. Action to be taken will be determined based on travel management needs, terrain, need for road or trail, potential environmental impacts, and resource priorities.

Forest Service Manual

- The Forest Service Manual provides specific direction for the conservation of Sensitive species during the planning and implementation of Forest Service projects.

- 2620.45 Each District Ranger has the authority and responsibility to implement management direction and ensure that standards and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species, are met.
- 1640.3 It is Forest Service policy to emphasize the protection, enhancement, and maintenance of habitats for production of wildlife and fish.
- 2670.22 Develop and implement management practices for Sensitive species to ensure that species do not become threatened or endangered because of Forest Service actions. Maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
- 2670.32 Avoid or minimize impacts to species whose viability has been identified as a concern.
- 2672.1 Sensitive Species Management: Sensitive species or native plant and animal species must receive special management emphasis to ensure their viability and to preclude trends toward endangerment that would result in the need for Federal listing. There must be no impacts to sensitive species without an analysis of the significance or adverse effects on the populations, their habitat, and on viability objectives when making decisions that would significantly reduce sensitive species numbers.

Interagency Yellowstone Cutthroat Trout Memorandum of Agreement

- Conservation goals and objectives have been developed for Yellowstone cutthroat trout in the Memorandum of Agreement for Conservation and Management of Yellowstone Cutthroat Trout among Montana, Idaho, Wyoming, Nevada, Utah, US Forest Service, Yellowstone National Park, and Grand Teton National Park (Anonymous 2000). Although these are general and rather broadly worded, they provide some conservation direction. The agreement has a goal to ensure the persistence of Yellowstone cutthroat trout within its historic range and to manage them to provide adequate numbers and populations. The interagency agreement includes objectives to secure and enhance conservation populations and restore populations.

Wildlife

- Wildlife biodiversity is maintained or enhanced by managing for a diverse array of habitats and distribution of plant communities. (G) (RFP, Page III-15)

Plant Species Diversity

- Preserve unique formations within a landscape (such as cliffs, bogs, seeps, talus slopes, warm or alkaline springs, pot holes, and rock outcroppings) that provide habitat to plant species not common to the overall landscape and contribute to the species diversity within the landscape. (G) (RFP, Page III-14)
- Provide necessary protection and management to conserve listed threatened, endangered and sensitive plant species. (G) (RFP, Page III-14)
- Native plant species from genetically local sources will be used to the extent practicable for erosion control, fire rehabilitation, riparian restoration, forage enhancement, road right-of-way seeding, and other revegetation projects. (G) (RFP, Page III-14)
- Areas planned for nonnative seedings or planting of nonnative woody species need to be evaluated to determine the impacts to the native flora within the analysis area and habitats adjacent to it. (G) (RFP, Page III-14)
- Introduced species should be utilized in project seedings where native species would not

meet the objectives of erosion control, such as high use or impact areas, and where the effects on local, native flora is minimal; sites that are currently dominated by introduced species and use of nonnative species has not degraded the adjacent native flora; and sites where the management objective is to utilize nonnative species in one area to prevent degradation of other native areas. (G) (RFP, Page III-14)

- Information on the presence of listed threatened, endangered or sensitive plant species will be included in all assessments for vegetation and/or ground disturbing management activities. Appropriate protection and mitigation measures will be applied to the management activities. (S) (RFP, Page III-14)

Forest Use and Occupation

Access

- The Forest road and trail system is cost effective and integrates human needs with those of other resource values…. (G) (RFP, Page III-23)

Recreation

- Provide a network of OHV trails while minimizing the effects of OHV use on soils, wildlife and other users. (G) (RFP, Page III-26)
- Discourage OHV use on slopes greater than 40 percent, except on designated routes…Roads and trails; however, may cross slopes that exceed 40 percent. (G) (RFP, Page III-26)
- Areas with slopes of 25-40 percent may require travel restrictions if soil erosion factors warrant them. (G) (RFP, Page III-26)
- Restrict OHV use on identified areas of unstable soils except for snowmobiles. (G) (RFP, Page III-26)
- No motorized vehicles over 50 inches wide are allowed on trails unless the trails are specifically designed for such vehicles. (G) (RFP, Page III-26)
- Trails for motorized/mechanized use would be sufficient to sustain use over long periods of time and minimize requirements for maintenance or reconstruction. (G) (RFP, Page III-27)
- Trails for non-motorized/mechanized use would be sufficient to sustain use over long periods of time with minimal requirements for maintenance or reconstruction. (G) (RFP, Page III-27)

Heritage Resources

- Forest consultation procedures and intergovernment agreements with the tribes to guide future cooperative efforts will comply with the protocols set forth in the National Resource Book on American Indian and Alaska Native Relations Working Draft 1995 or its successor. (S) (RFP, Page III-28)
- Appendix A - National direction Relevant to Land and Resource Management (Based on FSM Objective Statements) (Pages A-1 – A-7)

The following Forest Plan direction applies to the Caribou Range Mountains Subsection project area. (RFP, Page III-62 and III-63)

Goals and Objectives

- **Recreation**

- Improve the quality of summertime OHV use in this subsection and protect resource values by locating and maintaining trails at suitable locations. (RFP, Page III-64)

- **Inventoried Roadless Areas**
  - Protect resource vales on lands managed with a non-wilderness emphasis. (RFP, Page III-64)

Management Prescription Areas

- **Rx 2.7(a) Elk and Deer Winter Range**
  - Motorized vehicle use less than 50 inches wide is allowed on trails designated open in the Forest Travel Plan Map. {Access Table (S) – 2.7(a)} (RFP, Page III-105)
- **Rx 6.1 (b) Range Management**
  - Dispersed recreation activity generally occurs throughout these areas. (RFP, Page III-155)
  - Motorized vehicle use less than 50 inches wide is allowed on trails designated open in the Forest Travel Plan Map. {Access Table (S) – 6.1 (b){ (RFP, Page III-156)
- **Rx 5.4 (c) Elk Summer Range**
  - Within the security area, OROMTRD must be < the density established for this management prescription. (S) (RFP, Page III-155)
  - Motorized vehicle use greater and less than 50 inches in width is allowed on designated routes shown in the Forest Plan Travel map. (S) (RFP, Page III-154)
  - Motorized access is managed to provide security for elk. Motorized summer use will occur only on designated routes. (RFP, Page III- 152)
- **Rx 3.1.1 (a) Non Motorized**
  - Motorized vehicle use is not allowed shown in the Forest Plan Travel map. (S) (RFP, Page III-115)
- **Rx 5.1.3 (a+b) Timber Management (No Clearcutting, Urban Interface)**
  - Road and Trail travel is allowed on routes designated in the Forest Plan Travel Maps. (S) (RFP, Page III-138)
- **Rx 5.1.4 (b) Timber Management (Big Game Security Emphasis)**
  - Motorized access is managed to provide security for elk.
  - Within the security area, OROTRD must be < the density established for this management prescription. (S) (RFP, Page III-142)
  - Road and Trail travel is allowed on routes designated in the Forest Plan Travel Maps. (S) (RFP, Page III-140)
- **Rx 2.8.3 Aquatic Influence Zone**
  - No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place. (G) (RFP, Page III-110)
  - Improve; seasonally close; close, relocate and stabilize; or obliterate roads and trails that have been identified as posing a high risk of causing unnaturally high levels of sediment input or are know to be doing so. Action to be taken will be determined based on travel management needs, terrain, the need for the road or trail, the potential environmental impacts, and resource priorities. (G) (RFP, Page III-110)
  - Roads and trails or sections of them that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be based on

the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail. (G) (RFP, Page III-110)

- **Rx 2.9.2 South Fork Snake River Eligible Recreation River**
  - Motorized vehicle use greater and less than 50 inches in width is allowed on designated routes shown in the Forest Plan Travel map. (S) (RFP, Page 113)
- **Rx 4.2 Special Use Permit Recreation Sites**
  - Motorized use is allowed only on existing roads and is limited to entering, leaving, and visiting other sites within the facility, except as guided by the special use permit. (S) (RFP, Page III-130)
  - Trails may be allowed for the convenience of people using these sites. (G) (RFP, Page III-130)
  - Short trails are allowed which provide access to facilities and opportunities for interpretation. (G) (RFP, Page III-130)

Issues and Area(s) of Concern

The Forest Service separated the comments into two groups – issues to be addressed in detail and issues not addressed in detail. Issues addressed in detail are defined as those directly or indirectly caused by implementing the proposed action. Issues not addressed in detail were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…"

The key issues and areas of concern identified through the scoping process from public comments, Trails Committees' recommendations, and interdisciplinary team comments are summarized as such:

1. Fisheries
2. Water Quality and Soil Erosion
3. Wildlife
4. Recreational Use
5. Open Road and Open Motorized Trail Route Density (OROMTRD)
6. Roadless Areas

Individual descriptions of each issue and area of concern are shown below:

- **Issue 1 – Fisheries** -- Designated motorized travel routes have the potential to affect aquatic and riparian-dependent species, particularly where they encroach upon riparian areas and water. Potential impacts to fish habitat include decreases in riparian vegetation and its benefits to riparian areas and water (shading, large wood delivery, bank stabilization, filtering, and nutrients), increases in erosion, and increases in sediment delivery to water. Indicators associated with this issue are miles of trail in Aquatic Influence Zones (AIZs) and density of designated motorized routes within AIZs. Specifying the type of motorized use designation within AIZs would also be important. Total miles of ATV trails within the project area should also be considered. .

Indicators:

1. The density of designated motorized routes within riparian areas of fish bearing streams.
2. ATV trail densities within the Aquatic Influence Zones (AIZ).
3. Non-motorized trail densities within the Aquatic Influence Zones (ZIZ).

- **Issue 2 -Water Quality and Soil Erosion** -- Designated trail use (non-motorized verses motorized), trail location, trail design and trail maintenance have the potential to affect soil erosion and mass instability negatively or positively which could directly affect water quality and aquatic habitats by increasing or reducing sediment into streams. Soil quality may also be affected negatively or positively.

  Indicators:

  1. Acres of disturbance returned to productivity.
  2. Miles of trails returned to productivity.
  3. Miles of trails constructed on erodible/unstable soils.
  4. Miles of trails and acres within the aquatic influence zone (AIZ).
  5. Miles (acres) of trails within the aquatic influence zone (AIZ) adjacent to IDEQ 303(d) listed watersheds.

- **Issue 3 – Wildlife** -- The proposed action could affect important plant and wildlife habitat and wildlife species (including threatened and endangered species) by direct removal of habitat to make trails wider for safer ATV use, to relocate segments of trails in order to make viable loop trails and to protect riparian areas. This may not be an issue addressed in depth but this topic should be discussed and documented.

  Indicators:

  1. Acres lost to new trail construction.
  2. Change in the Road and Motorized Trail Density by Prescription.
  3. Total miles of trails classified as "Not Recommended for ATVs".
  4. Change in total miles of ATV trails.
  5. Change in total miles of motorized trails.

- **Issue 4 - Recreational Use –** Public use satisfaction and law enforcement needs may be affected negatively or positively by several factors such as having trails go and end where users want to be, providing loop trail opportunities for the various user groups, performing proper trail design for the intended use, and providing a mix of trails designated for specific user groups or mode of travel.

  Indicators:

  1. Miles of ATV trails.
  2. Miles of single-track motorized trails.
  3. Miles of non-motorized trails.
  4. Miles of trails to be reconstructed to meet ATV standards.
  5. Miles of new trails to be constructed for ATV use.
  6. Miles of new trails to be constructed for single-track motorized use.
  7. Miles of new trails to be constructed for non-motorized use.
  8. Miles of trails to be obliterated.

9. Miles of loop trails for ATV and single-track motorized vehicles.
10. Acres closed to cross-country bicycle and other mechanized use.
11. Total miles of ATV and single-track motorized trails.

- **Area of Concern – Open Road and Open Motorized Trail Route Density (OROMTRD)** Motorized route density standards were established in the 1997 Revised Forest Plan (RFP) – Final Environmental Impact Statement (FEIS) and the October 1999 Final Environmental Impact Statement (FEIS) for the "Open Road and Open Motorized Trail Analysis" (Motorized Road and Trail Travel Plan) for the Targhee National Forest. The 1999 document was intended to clarify and correct errors in the previously established density standards in the 1997 RFP. During analysis of this Environmental Assessment, it was found that one management prescription area apparently still does not meet the density standards under Alternative A – Existing Situation (No Action). This discrepancy is due to mapping procedures. The area in question is:

  Poker Peak Area (Prescription 3.1.1(a) – Non-motorized

  See page 1-2 and 1-3 of this chapter for a complete description of this area.

The intent of this project is to remain within established motorized density standards in all of the alternatives in each of the Management Prescriptions.

As noted in Table 2.1 – Effects to Indicators by Alternative and Table 4.11 - Direct and Indirect Impacts to Wildlife Indicators by Alternative, a number of OROMTRDs (motorized densities) are reduced. Some densities were increased but still remain within the maximum allowable density levels.

- **Area of Concern – Inventoried Roadless Areas (IRAs) –** The management of IRAs on National Forest System Lands is currently directed by the 2001 Roadless Area Conservation Rule. The proposed action is in compliance with the Roadless Area Conservation Rule because it does not propose any road construction, either through active development or reclassification, in inventoried roadless areas covered by the Rule.

  The projects affect on the Roadless Characteristics in the analysis area (Bear Creek, Poker Peak, Caribou City, Pole Creek, and Bald Mountain) have been evaluated (Appendix E thru I). Additional management direction and background information is discussed in Chapter 3 (pages 3-47 to 3-49) and Chapter 4 (pages 4-86 to 4-87) of this Environmental Assessment. The 1997 RFP Management Prescription Areas describe the management of these roadless areas.

As indicated in the issues discussion above, two action alternatives were mapped which best represented a range of alternatives based on comments received from individuals, groups, and forest resource specialists.

The issues concerning motorized travel and access from the Revised Forest Plan analysis were considered in relation to public issues identified from comments concerning development of this environmental analysis. This current analysis of specific trail issues indicates existence of the same

polarization concerning access issues as identified during the original public scoping processes for the 1997 RFP and 1999 FEIS for the Open Road and Open Motorized Trail Analysis.

Issues not considered in depth or brought forward for further analysis for various reasons

Some of the concerns or topics listed below may or may not have been raised by the public during the scoping process. Others are required to be addressed by other laws or regulations but are not analyzed in detail in this EA. These topics are outside the scope of the analysis for the reasons shown, or are controlled by law or regulations, or are addressed in reports or other NEPA documents. None of these topics drive specific alternatives, and none have been determined to be significant under 40 CFR 1501.7.

- Cultural resources were analyzed and addressed in the 1997 FEIS for the Revised Forest Plan. Law requires that when proposing undertakings that might affect historic properties, the agency will determine the scope of effects, identify historic properties, and evaluate the historic significance of the property. Therefore, normal cultural resource inventories will be conducted for individual proposed projects. In the event unevaluated cultural resource sites are encountered, they will be treated as significant until comprehensive evaluations are completed. See Chapter Three and Chapter Four for further discussions.
- Mineral resources were analyzed and addressed in the 1997 FEIS for the Revised Forest Plan. No proposed activities will affect this topic.
- Coniferous Forest Old Growth was analyzed and addressed in the 1997 FEIS and is being revisited in 2008 and 2009. Any proposed activity from this action will have no affect on this topic.
- Livestock and Range management was also analyzed and addressed in the 1997 FEIS for the Revised Forest Plan. Any proposed changes in proposed trail use designations or the number of trails constructed, reconstructed, or decommissioned/closed, will have no affect on this topic area.
- Air Quality was analyzed and addressed in the 1997 FEIS. Any proposed activity such as new trail construction or re-routing would not decrease the air quality of the area.

Past, Present and Reasonably Foreseeable Actions

Cumulative effects consist of the direct and indirect effects resulting from the incremental impact of the proposed action or alternatives when added to other past, present, and reasonably foreseeable future actions, regardless of who carries out the action (40 CFR 1508.7). All of the environmental issues carried forward for analysis in the EA have the potential for cumulative effects. Detailed discussion of cumulative effects is found in Chapter Four, Environmental Consequences.

Guidance implementing NEPA requires that federal agencies identify the temporal and geographic boundaries within which they will evaluate potential cumulative effects of alternative, and the specific past, present, and reasonably foreseeable projects that will be analyzed (40 CFR 1508.25). In 1997, the Council on Environmental Quality published additional guidance on cumulative effects assessment, which provides the basis for discussion in thus EA (Council on Environmental Quality, 1997).

For purposes of this EA, the general temporal boundaries of analysis are from 1975 to 2015, for all

indicators. This 40-year period encompasses a range within which data are reasonably available and forecasts are reasonably foreseeable. Certain effects may continue beyond 2015 as noted in Chapter Four, but any quantification is speculative and therefore outside the scope of analysis for this document. The geographic boundaries of analysis vary depending on the specific resource and potential effects; therefore they correspond to the "analysis areas" described in Chapters Three and Four for each resource issue.

Specific projects with the potential to affect the same resources potentially affected by the proposed action or alternatives and which were therefore analyzed for cumulative effects are shown below in Table 1.1 and described in Chapter Four, Environmental Consequences.

Table 1.1 - Past, Present, and Reasonably Foreseeable Actions

Cumulative Action Items from Land Management Activities	Past	Present	Future	Comments
Firewood collection including post and poles.	Most activity occurred.	Some on-going activities.	Will continue but less volume removed.	Generally accessed from existing system roads. Access within 300 feet of some roads would be allowed.
Timber harvest to include wildlife habitat improvements and urban interface fuel reduction for protection from wildfires.	Heaviest activity occurred.	Limited with most for urban interface and wildlife improvements i.e. Calamity fuel reduction projects.	Limited but more for urban interface and wildlife habitat improvements. i.e. Hoffman Fuel reduction project.	Some of this activity is off forest on private land. Some temporary roads may need to be constructed but large timber sales are not likely. Clamaity fuel reduction was sold in 2007. Hoffman Fuel reduction is planned between 2010 and 2013.
Mining activities.	Travertine mine.	Travertine mine.	Travertine mine.	Activity is very localized and changes very litlle from year to year.
Grazing of livestock.	Greatest intensity.	Still on-going.	Will most likely continue.	Concern is possible impacts in riparian areas (to fisheries and water quality, etc.)
Fires including prescribed burns and wildfires.	Few.	Some prescribed fire for wildlife purposes.	Will continue at some level.	Concern is for fire location and size of event and intensity of burns.
Private housing development.	Little development	Considerable increase in developments.	Continued considerable increase in all areas .	Off-forest development could affect fisheries in streams on forest. Increase in human populations could put more pressures on forest resources – natural resources and trails.
Road and trail use.	Roads used mostly for recreation related activities.	Limited timber related use but some increase in trail users. Road surfacing	Continued demand for trail use as private development continues. Road	Motorized trail use could cause more erosion, thus impacting water quality and fish habitat. Trail maintenance and proper trail

		done on McCoy Creek,Snake River and Elk Jensen Roads.	surfacing planned for Brockman, Skyline Ridge (esections) and South Bear (sections)Roads in 2010.	design could lessen impacts. Surfacing was done as part of the economic stmulas act. It included road repair and gravel surfacing.
Cross country access from motorized and non-motorized users.	Subsection closed to cross-country motorized vehciles but open to bicycles.	Same as the "Past" column .	Subsection would be closed to cross-country motorized and bicycle use in Alt. C only.	Development of unwanted user created trails could create additional erosion sources if not promptly closed and taken care of.
Dispersed activities from all users (including outfitters - on and off forest land) including camping off trails and hunting from motorized vehicles (ATVs and motorcycles) .	Traditional uses but fewer in numbers.	Some increase in motorized and non-motorized trail use.	Should be an increase in all types of uses due to increases in private development closer to forest.	Activities could generate additional ground disturbance if not restricted to designated trails and camp sites not properly selected.
User conflicts between different type uses such as between ATV and motorcycles, motorized and non-motorized and motorized vehicles less than 50 inches wide and full-size cars and trucks.	Less of a problem due to fewer numbers of ATVs and motoricycles.	Some conflicts due to increased trail users and vehicle capabilites (ATVs)	Continued increase in number of people – especially ATV users – thus greater potential for conflicts.	Providing adequate routes (including loop systems) for all types of user groups could lessen user conflicts and improve overall recreation experiences.

Chapter Two

ALTERNATIVES

Introduction

This chapter describes and compares the alternatives considered for the Caribou Range Mountains Subsection Summer Transportation Travel Plan, including the proposed action. It includes a description of each alternative considered. This section also presents the alternatives in comparative form, defines the differences between each alternative and provides a clear basis for making a choice between options by the decision maker and the public.

In all alternatives except Alternative A, the current "Open for Motorized Use less than 50 inches wide but **NOT RECOMMENDED FOR ATVs**" designation **would be eliminated**. All ATV trails would be designated as such and ATVs would not be allowed on single-track motorized or non-motorized trails.

Alternatives, Including the Proposed Action

Alternatives were developed from:

- Comments received from internal agency and public scoping on the proposed action (see details under "Public Involvement", Chapter One).
- Forest Service interdisciplinary team (IDT) issues to address in depth and concerns about the proposal.
- Desired Future Condition statements in the 1997 Revised Forest Plan (RFP) and the 1999 Final Environmental Impact Statement (FEIS) for the Open Road and Open Motorized Trail Analysis (Motorized Road and Trail Travel Plan).

Alternatives Considered in Detail

The two action alternatives discussed in this section represent a reasonable range of actions to accomplish the purpose and need for this proposal and respond to the issues identified in Chapter One. The No Action Alternative (Alternative A) describes the effects of taking no action and provides a basis for comparing the environmental effects of the two action alternatives.

- **Alternative A – No Action (Existing Situation)**

  This alternative is based on the existing situation. This alternative would leave the summer transportation system in place for the Palisades Ranger District within the Caribou Range Mountains Subsection. Open Road and Open Motorized Trail Route Density (OROMTRD) standards would be met under all alternatives.

  Note: The OROMTRD in the Poker Peak - Prescription 3.1.1(a) Area appears to currently exceeded the density standard by 6.8 miles of road. However this is a mapping procedure and not an actual standard violation. The procedure is caused by a prescription boundary

road (Bear–Jensen Road) which does not enter the prescription area. Boundary roads mileage such as this situation is assigned half to each adjoining prescription area. Since Poker Peak is non-motorized and has a density standard of zero, the boundary road shows the standard as exceeded when in reality the density standard in the RFP is being met.

This alternative is displayed on the current Travel Map – dated 2001. (See Map A – No Action (Existing Situation) in Appendix J and Appendix A - Comparison Summary of All Trails by Alternative – Caribou Range Mountains Subsection Summer Travel Management Plan).

The following currently exists:

- Approximately 187.0 total miles of trails.
- Approximately 129.7 miles of trails open to motorized use less than 50 inches wide **but not recommended for ATVs**.
- Approximately 23.2 miles of trails open to motorized use less than 50 inches wide that are designed and constructed **(suitable) for ATVs.**
- Approximately 152.9 total miles open to motorized use.
- Approximately 34.1 miles of trails open to non-motorized use.
- Perform normal yearly trail maintenance as needed.
- Re-routes 3.0 to 10.0 miles of trails (not show in Table 2.2 – is an estimate only).
- No closures for cross-country mountain bike use currently exists (see current Travel Map). Bicycles are allowed cross-country throughout the subsection.
- Approximately 0.0 miles of motorized trails will be decommissioned and rehabilitated.

As part of the normal operation and maintenance procedures, trails could continue to be relocated as needed, user-created trails could be decommissioned as funding allowed, some trails could be reconstructed to better accommodate ATVs, reduce user conflicts and protect natural resources. Also, trail or trail segments may be re-designated for a different type of use to protect natural resources and reduce user conflicts. New trails could be constructed after appropriate planning had taken place and as funding became available.

Under this alternative, conflicts between different user types would be greater, resource impacts in some areas would remain and be more severe, and user satisfaction would improve more slowly since loop systems would not be developed as quickly beyond what currently exists. Trail maintenance would continue to be a challenge in areas where ATV use occurs on single-track motorized trails that are not adequate for such vehicles (but can legally be there) – thus causing erosion and other resource problems.

- **Alternative B - Trail Committees'**

This alternative is based on recommendations of the Bonneville County Trails Committee Advisory Group. Not all trails in the subsection were reviewed by the committee and group. Trails that were not addressed are shown with the same type use as shown in Alternative A – No Action (Existing Situation) and Appendix A - Comparison Summary

of All Trails by Alternative – Caribou Range Mountains Subsection Summer Travel Management Plan and Appendix J, Map Alternative B – Trail Committees'.

This alternative would eliminate the "NOT RECOMMENDED FOR ATVs" designation and would specify which trails would be open to ATVs and which would not. Existing single-track trails – motorized or non-motorized - converted to ATV trails, would be reconstructed to meet ATV standards. New trails constructed for ATV use would be designed and constructed to meet ATV standards. This would mean a finished trail prism of 50 inches wide with turn-outs at appropriate locations and distances to allow vehicles to pass. This alternative would also designate trails for single-track motorized vehicles (motorcycles) and trails that would be closed to all motorized vehicle use. Single-track motorized and non-motorized trails would be maintained with a 24 inch finished tread width. ATV trails would be open to single-track motorized vehicles. All trails would be open to non-motorized use.

Note: The OROMTRD in the Poker Peak - Prescription 3.1.1(a) Area appears to currently exceed the density standard by 6.8 miles of road. However this is a mapping procedure and not an actual standard violation. The procedure is caused by a prescription boundary road (Bear–Jensen Road) which does not enter the prescription area. Boundary road mileage such as this situation is assigned half to each adjoining prescription area. Since Poker Peak is non-motorized and has a density standard of zero, the boundary road shows the standard as exceeded when in reality the density standard in the RFP is being met.

The following summarizes what would be provided by Alternative B – Trail Committees':

- 214.0 total miles of trails for motorized and non-motorized uses. (All miles would be open for horse, hiking, and mountain bikes).
- 63.8 miles open to ATVs less than 50 inches wide. These trails would also be open to single-track vehicles (motorcycles) and non-motorized uses.
- 106.6 miles open to single-track motorized vehicles (motorcycles) and non-motorized uses.
- Increases total motorized trails by 17.5 miles.
- 43.6 miles open to non-motorized and mechanized uses (includes mountain bikes).
- Increases total non-motorized trails by 9.5 miles.
- Reconstruction of 7.7 miles of trails to meet ATV standards.
- Construction of 7.0 miles of new ATV trails.
- Re-routes 3.0 to 10.0 miles of trails (not show in Table 2.2 estimated only).
- Construction of 0.0 miles of new non-motorized trails.
- Converts 0.0 miles of non-motorized trails to motorized trails.
- Converts 9.5 miles of motorized trails to non-motorized trails.
- Decommissions 3.3 miles of existing trails.
- Decommissions 1.0 miles of existing roads.
- Converts 1.0 miles of system road to ATV trails.
- Perform normal yearly trail maintenance as needed.

- Converts 0.0 miles of existing non-motorized non-system trails to non-motorized system trails.
- Converts 22.7 miles of existing motorized non-system trails to motorized system trails.

When these recommendations are completed on the ground, this action would provide the following loop trail opportunities:

- Approximately 59 miles for ATVs and 12 miles for single-track uses. (This is very difficult to determine because of the numerous possibilities. Actual loop routes may well exceed the estimates).
- Numerous loop trail possibilities for two-wheel motorized vehicles (motorcycles) and non-motorized uses.

- **Alternative C – Proposed Action**

This alternative is based on scoping comments, IDT recommendations and agency specialist evaluation of the proposal. It incorporates many recommendations from Alternative C and B – specifically the designation of ATV trails. ATV use would only occur on trails designed, constructed, and designated for ATV use. It would increase the total number of miles of trails open to motorized use while meeting existing OROMTRD standards in all Prescription Areas (see Appendix J, Map C – Proposed Action and Appendix A - Comparison Summary of All Trails by Alternative – Caribou Range Mountains Subsection Summer Travel Management Plan).

Note: The OROMTRD in the Poker Peak - Prescription 3.1.1(a) Area appears to currently exceeded the density standard by 6.8 miles of road. However this is a mapping procedure and not an actual standard violation. The procedure is caused by a prescription boundary road (Bear–Jensen Road) which does not enter the prescription area. Boundary roads mileage such as this situation is assigned half to each adjoining prescription area. Since Poker Peak is non-motorized and has a density standard of zero, the boundary road shows the standard as exceeded when in reality the density standard in the RFP is being met.

This alternative would **close the subsection to cross-country mountain bike travel off system roads and trails**. Improved technology has allowed mountain bikes to be constructed that are more durable, lighter, have gear systems which allow greater climbing ability at slower speeds, and have better breaking systems for down-hill travel. Some mountain bike users feel many existing trails – whether motorized or non-motorized – are not suitable and or desirable for mountain bike use. Therefore, off-trail use has increased and is creating trails where they are not wanted and also may be causing resource impacts. **Cross-country motorized travel would remain prohibited.**

Adaptive Management

- In an effort to address the number of **non-system (user-created trails),** work will continue to be done to close and or decommission such trails as quickly as possible after they are identified. The rate at which these trails can be treated is of course depended for the most part on funding received. When such trails are identified, they may be closed and decommissioned without going through the

normal or formal environmental analysis process. A quick response to eliminate these trails may prevent serious resource damages.

- However, when normal re-routing and decommissioning of **system trails** is to be done in order to minimize soil erosion, sediment in streams, etc., - basically to improve overall resource values - the normal environmental analysis process will be followed.
- Whether closing, decommissioning and rehabilitation, re-routing, or new construction, the methods identified and shown in Appendix B, C, & D will be utilized. Continued monitoring and evaluation will be used to assess the effectiveness of the work completed.
- When a new user-created route is identified for decommissioning, forest specialists, including but not limited to representatives from soils, hydrology, wildlife, fisheries, botany, engineering and vegetation management, will be contacted and their input recorded (see Appendix B - Adaptive Management Specialist Checklist).
- Decommissioning methods include ground-disturbing surface scarifying and/or trenching/surface debris placement (slash and rocks). The slash and rocks would be packed or dragged from the surrounding forest – within close proximity to the trail being decommissioned and closed. Mechanized equipment such as a small trail cat may need to be used to effectively complete the intended work. To reduce erosion, drainage features such as water bars, rolling dips, out sloping, etc. would be provided where necessary (see Appendix C - Trail Decommissioning Process Guidelines).

The following summarizes what would be provided by Alternative C – Proposed Action:

- 215.1 total miles of trails for motorized and non-motorized uses. (All miles would be open for horse, hiking, and mountain bikes).
- 68.2 miles open to ATVs less than 50 inches wide. These trails would also be open to single-track vehicles (motorcycles) and non-motorized uses
- 81.5 miles open to Single-track motorized vehicles (motorcycles) and non-motorized uses.
- Decrease total motorized trails by 4.2 miles.
- 65.4 miles open to non-motorized and mechanized uses (includes mountain bikes).
- Increases total non-motorized trails by 31.3 miles.
- Reconstruction of 6.0 miles of trails to meet ATV standards.
- Construction of 2.8 miles of new ATV trails.
- Re-routes 3.0 to 10.0 miles of trails (not show in Table 2.2 estimated only).
- Construction of 2.5 miles of new non-motorized trails.
- Converts 1.5 miles of non-motorized trails to motorized trails.
- Converts 11.0 miles of motorized trails to non-motorized trails
- Decommissions 11.0 miles of existing trails.
- Decommissions 1.3 miles of existing roads
- Converts 9.9 miles of system road to ATV Trails
- Perform normal yearly trail maintenance as needed.

- Converts 12.9 miles of existing non-motorized non-system trails to non-motorized system trails
- Converts 11.8 miles of existing motorized non-system trails to motorized system trails

When these recommendations are completed on the ground, this action would provide the following loop trail opportunities:

- Approximately 42 miles for ATVs and 22 miles for single-track of new loops trail opportunities will be created (This is very difficult to determine because of the numerous possibilities. Actual loop routes may well exceed the estimates).
- Numerous loop trail possibilities for two-wheel motorized vehicles (motorcycles) and non-motorized uses.

Management Common to All Action Alternatives (B and C)

Trails for ATVs will be designated as such and ATVs will not be allowed on single-track motorized trails. Single-track motorized use will be allowed on ATV trails. Non-motorized uses will be allowed on all trails.

Mitigation Measures and Project Design Features

- Applicable mitigation measures associated with the Revised Forest Plan (RFP) and the FEIS for the Open Road and Open Motorized Trail Analysis will apply. More specifically, the Forest wide Standards and Guidelines of the Forest Plan are shown in various sections on Pages III-6, III-9, III-12, III-14, III-15, III-23, and III-25.
- Additional mitigation measures are found in individual Management Prescriptions; 2.1.2 Visual Quality Maintenance, Page III-83; 2.7(a) Elk and Deer Winter Range, Page III-105; 2.8.3 Aquatic Influence Zone, Page III-110; 2.9.2 South Fork Snake River Eligible Recreation River, Page 113; 4.2 Special Use Permit Recreation Sites, Page III-130; 5.1.3(1-b) Timber Management (No Clear-Cutting), Page III- 138; and 5.1.4(a-d) Timber Management (Big Game Security Emphasis), Pages III-140 and 141.
- Additional mitigation measures applicable to this analysis are found in Appendix C & D.
- Recommended Project Design Features:
    1. Design all new ATV trails away from unstable slopes and soils that have high erosion potential.
    2. Design all new trails using FSH 2509.22 Soil and Water Conservation Practices (see Appendix D).
    3. Trails that are to be decommissioned will have effective closures applied and where appropriate, should be ripped, seeded and slash placed on the prism.
    4. Provide for proper drainage in new and existing trails.
    5. Trails that will be relocated and or abandoned need to be ripped and the old trail prisms restored to as near natural conditions as possible.

In addition to the mitigation measures above, additional measures will be applied as such:

- ATVs will be allowed on single-track motorized trails designated for ATV use before the trail has been reconstructed or constructed for such use. However, these trails will be

monitored on an annual basis to determine if unacceptable resource damages are occurring. If such damage is being done, then ATV use will be restricted until such trails can be properly reconstructed and or constructed for ATV use.

- Site-specific review for Threatened, Endangered and Sensitive Plants will occur when specific ground disturbing actives are scheduled. Appropriate protection will be applied if TES plants are found to occur.
- When specific ground disturbing activities are scheduled, field surveys of those areas will be conducted and identified cultural sites will be evaluated for their significance. If additional sites are discovered during on the ground layout and design of any action alternatives or other on-going survey activities, the Forest Archaeologist will consult with the State Historic Preservation Officer, as required by law to document and determine the significance of the discovery and the effects of the project on them. The Shoshone-Bannock Tribes and Northwest Band of Shoshone will be consulted regarding any potential effects on Native American sites.

  Mitigation of effects to other identified cultural resource sites could be accomplished through complete avoidance or scientific removal of the resource. If cultural resources are discovered during future ground disturbing activities, such activities will be stopped until the cultural materials are properly documented and evaluated by the Forest Archaeologist in compliance with 36 CFR 800.11.

Summary - Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in Table 2.1 – Effects to Indicators by Alternative, is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 2.1 – Effects to Indicators by Alternative

Issue Indicator	**Alternative A – Existing Situation (No Action) (**see Table 3.3)	**Alternative B - Trail Committees'** (see table 4.1)	**Alternative C - Proposed Action** (see Table 4.2)
Fisheries Motorized Trail Densities in AIZs (miles/square mile)			
• Palisades Reservoir	0	.12	0
• McCoy Creek Headwaters	0	0	0
• Wolverine Creek-McCoy Creek	0	0	0
• Fish Creek-McCoy Creek	0	0	0
• Jensen Creek-McCoy Creek	.18	.27	.18
• Upper Bear	1.16	1.16	1.11
• Middle Bear	2.29	2.29	2.12
• Lower Bear	1.38	1.38	1.23
• Sheep Creek-Snake River	1.84	1.18	.29

• Pritchard Creek-Snake River	2.13	2.26	1.84
• Garden Creek	3.42	3.81	3.56
• Upper Antelope Creek	2.16	.97	1.32
• Salt River-Dry Creek	0	.71	.47
• Jackknife Creek	0	0	0
Fisheries ATV Trail Densities in AIZs (miles/square mile)			
• Palisades Reservoir	0	.12	0
• McCoy Creek Headwaters	0	0	0
• Wolverine Creek-McCoy Creek	0	0	0
• Fish Creek-McCoy Creek	0	0	0
• Jensen Creek-McCoy Creek	0	.27	0
• Upper Bear	0	.13	.13
• Middle Bear	0	0	0
• Lower Bear	0	0	0
• Sheep Creek-Snake River	0	0	.19
• Pritchard Creek-Snake River	.26	.26	.36
• Garden Creek	.29	0	0
• Upper Antelope Creek	2.16	.97	1.32
• Salt River-Dry Creek	0	.71	.47
• Jackknife Creek	0	0	0
Fisheries Exclusively Non-motorized Trail Densities in AIZs (miles/square mile)			
• Palisades Reservoir	.99	.99	1.40
• McCoy Creek Headwaters	0	0	0
• Wolverine Creek-McCoy Creek	0	0	0
• Fish Creek-McCoy Creek	0	0	0
• Jensen Creek-McCoy Creek	.12	.12	.29
• Upper Bear	.17	.17	.05
• Middle Bear	0	0	.10
• Lower Bear	.40	.46	.60
• Sheep Creek-Snake River	1.78	3.00	3.00
• Pritchard Creek-Snake River	.01	.01	.30
• Garden Creek	0	0	2.4
• Upper Antelope Creek	0	0	.84
• Salt River-Dry Creek	0	0	0
• Jackknife Creek	0	0	0
Water Quality & Soil Erosion Acres of disturbance returned to productivity.	0	3.0	3.8

Water Quality & Soil Erosion Miles of trails returned to productivity.	0	3.3	9.6
Water Quality & Soil Erosion Current and (additional miles) of trails constructed on erodible/unstable soils.	153.8	11.05	30.7
Water Quality & Soil Erosion (Miles) of trails and (acres) within the aquatic influence zone (AIZ).	(83.0 miles) (36.8 acres)	(92.2 miles) (27.1 acres)	(99.6 miles) (31.0 acres)
Water Quality & Soil Erosion Miles (acres) of trails within the aquatic influence zone (AIZ) adjacent to IDEQ 303(d) listed watersheds	(44.3 miles) (11.8-19.1 acres)	(47.3 miles) (13.05 acres)	(53.2 miles) (16.5 acres)
Wildlife Acres lost to new trail construction	0	8.4 acres	6.4 acres
Wildlife Change in the Road and Motorized Trail Density by Prescription (Rx)	No change	3 Rxs increased and 2 Rxs decreased	3 Rxs increased and 3 Rxs decreased
Wildlife Change in total Miles of ATV Trails **1/**	No Change - currently there are 23.2*	Increase of 40.6 miles to 63.8* total	Increase of 45.0 miles to 68.2* total
Wildlife Total miles of single-track motorized trail **2/**	129.7	106.6	81.5
Wildlife Change in total miles of motorized trails	No change – currently 152.9	Increase of 17.5 miles - total of 170.4	Decrease of 4.2 miles - total of 148.7
Recreational Use Miles of ATV trails **1/**	23.2	63.8	68.2
Recreational Use Miles of single-track motorized trails **2/**	129.7	106.6	80.5
Recreational Use Miles of non-motorized trails	34.1	43.6	65.4
Recreational Use Miles of trails to be reconstructed to meet ATV standards	0	7.7	6.0
Recreational Use Miles of new trails to be constructed for ATVs	0	7.0	2.8
Recreational Use Miles of new trails to be constructed for single-track motorized use	0	0	0
Recreational Use Miles of new trails to be constructed for non-motorized use	0	0	0
Recreational Use Miles of trails to be obliterated	0	3.3	9.3

Recreational Use Miles of loop trails for ATV and single-track motorized vehicles	None designated as such for ATV. _____ There are multiple combinations for single-track motorized. vehicles.	Approx. 59 mi. for ATV. _____ There are numerous combinations for single-track motorized.	Approx. 42 mi. for ATV. _____ There are numerous combinations for single-track motorized.
Acres closed to cross-country bicycle use	0	0	195,850
Total miles of ATV and single-track motorized trails	152.9	170.4	149.7
Approximate Total Miles of Trails	187.0 **3**/	214.0 **4**/	215.1 **4**/

*Trails designed/constructed and designated for ATVs.

Note: For Alternative A, ATVs are currently allowed on all motorized trails - including single-track trails – even though most single-track motorized trails will not accommodate ATVs.

1/ ATV trails are also open for single-track motorized use (motorcycles) and all non-motorized use.
2/ Single-track motorized (motorcycle) trails are closed to ATVs but open to all non-motorized use.
3/ The total trail miles for Alternative A does not include some trails that may exist on the ground and were missed during the inventory process.
4/ Includes new proposed trails and trails which are existing on the ground but not shown on the current travel map.

NOTE: In Alternative A – Existing Situation (No Action), single-track motorized trails are open for ATV use BUT NOT RECOMMENDED for ATVs since they are not designed and constructed for these wider vehicles. This type of designation will be eliminated in Alternatives B and C. For Alternative A, trail names and mileages are taken from the Current Forest Travel Plan for the Palisades Ranger Districts. For the other alternatives, current names are also used except when a new trail is proposed.

Table 2.2 OROMTRD COMPARISON BY ALTERNATIVE - (Change in motorized road and trail availability [miles] by Prescription (Rx) areas by Alternative)

Available Miles by Alternative										
Caribou Range Mountains Subsection Summer Travel Management Plan - Update										
Polygon Number	**Polygon Name**	**RFP Rx Number**	**RFP Rx Area**	**RFP STD**	**Alt A - No Action (Existing Situation) MRTM***	**Alt A – No Action - Available Miles1/**	**Alt B – Trails Committees' MRTM***	**Alt B Trails Committees' Available Miles1/**	**Alt C – Proposed Action MRTM***	**Alt C – Proposed Action Available Miles1/**
629	Pritchard Creek	2.7 (a)	38.9	2.0	39.3	38.5	**41.8**	36.0	**42.6**	35.2
642	Fall Creek	2.7 (a)	38.7	2.0	30.1	47.3	**36.6**	40.8	**32.6**	44.8
661	Commissary Ridge	6.1 (b)	103.7	2.0	88.3	119.1	87.7	119.7	78.0	129.4
655	Long Gulch	5.4 (c	20.5	1.3	23.4	3.2	19.6	7.0	15.0	11.6
713	Poker Peak	3.1.1 (a)	32.3	0.0	0.0	-6.8**	0.0	-6.8**	0.0	-6.8**
780	Black Mountain	5.4 (c	26.7	1.3	15.1	19.6	**27.8**	6.9	**19.1**	15.6
777	Fish Creek	5.1.3 (b)	3.7	3.0	3.8	7.3	3.8	7.3	3.8	7.3
695	Brockman	5.1.4 (b)	19.3	1.5	19.9	9.1	19.9	9.1	19.9	9.1
649	Snake River Bench	5.1.3 (b)	1.7	3.0	4.8	0.3***	4.8	0.3***	4.8	0.3***
681	Calamity	5.1.3 (a)	0.9	3.0	2.8	-0.1***	2.8	-0.1***	**4.0**	-1.3***
81	Nelson Creek	6.1(b)	5.4	2.0	7.3	3.5	*6.5*	4.3	*6.4*	4.4
				Totals	234.8	241.0	**251.3**	224.5	*226.2*	249.6

Code: No highlight and no underline = Current Situation/No Change
Underlined numbers (i.e. 25) = Decrease
Highlighted/bold numbers (i.e. **20**) = Increase

OROMTRD = Open Road Open Motorized Trail Route Density

RFP Rx = Revised Forest Plan Prescription Number

RFP Rx Area = Square Miles

RFP Std = Motorized miles per square mile

*MRTM = Motorized Road and Trail Miles

** GIS Mapping protocol calculates one half the width of the adjacent motorized road as being in the polygon. Therefore the reason for the minus (-) number. But in actuality, there are no motorized roads or trail s in the polygon.

***OROMTRD does not apply due to the small size of the polygon (see RFP, Page III-138 - less than 2.5 sq miles).

1/Available Miles = after Implementation of Alternative

Table 2.3 OROMTRD COMPARISON BY ALTERNATIVE - (Change in motorized road and trail density by Prescription area by Alternative)

Compared by Alternative									
Caribou Range Mountains Subsection Summer Travel Management Plan - Update									
Polygon Number	**Polygon Name**	**RFP STD**	**RFP Rx Area**	**Alt A – No Action (Existing Situation) MRTM***	**Alt A – No Action (Existing Situation) OROMTRD**	**Alt B – Trail Committees' MRTM***	**Alt B – Trail Committees' OROMTRD**	**Alt C – Proposed Action MRTM***	**Alt C – Proposed Action OROMTRD**
629	Pritchard Creek	2.0	38.9	39.3	1.01	41.8	**1.07**	42.6	**1.09**
642	Fall Creek	2.0	38.7	30.1	0.78	36.6	**0.95**	32.6	**0.84**
661	Commissary Ridge	2.0	103.7	88.3	0.85	87.7	0.85	78.0	0.75
655	Long Gulch	1.3	20.5	23.4	1.14	19.6	0.96	15.0	0.73
713	Poker Peak	0.0	32.3	6.8	0.21	6.8	0.21	6.8	0.21
780	Black Mountain	1.3	26.7	15.1	0.57	27.8	**1.04**	19.1	**0.72**
777	Fish Creek	3.0	3.7	3.8	1.03	3.8	1.03	3.8	1.03
695	Brockman	1.5	19.3	19.9	1.03	19.9	1.03	19.9	1.03
649	Snake River Bench	3.0	1.7	4.8	2.82***	4.8	2.82***	4.8	2.82***
681	Calamity	3.0	0.9	2.8	3.08***	2.8	3.08***	4.0	**4.40*** **
81	Nelson Creek	2	5.4	7.3	1.35	6.5	1.20	6.4	1.19

Code: No highlight and no underline = Current Situation/No Change
Underlined numbers (i.e. 25) = Decrease
Highlighted/bold numbers (i.e. **20**) = Increase

OROMTRD = Open Road Open Motorized Trail Route Density

RFP Std = Motorized miles per square mile

RFP Rx Area = Square Miles

* MRTM = Motorized Road and Trail Miles

***OROMTRD does not apply due to the small size of the polygon (see RFP, Page III-138 - less than 2.5 sq miles).

Chapter Three

Affected Environment

Introduction

The current physical, biological, social, and economic values of the Caribou Range Mountains Subsection environment are discussed in general terms in the Revised Forest Plan EIS (Targhee National Forest, 1997) and the Final Environmental Impact Statement for the Open Road and Open Motorized Trail Analysis (Motorized Road and Trail Travel Plan – Targhee National Forest – October 1999). The project area is in Southeastern Idaho within Bonneville County. The area includes National Forest System lands between Idaho Falls, Idaho and Alpine, Wyoming - south of the South Fork of the Snake River and west of Palisades Reservoir. The Forest Plan identified the area as the Caribou Range Mountains Subsection (1997 Revised Forest Plan, pages III-62 and III-63) (see Figure 1.1 - Vicinity Map, Chapter One, page 1-3). This chapter describes the site-specific environmental conditions that would be affected if any of the alternatives, including the "No Action" Alternative, were implemented. Environmental components of the affected environment are described below at various scales appropriate to the issue being addressed. Included in this discussion are statements regarding Heritage/Cultural Resources.

This description of the existing conditions provides the basis for assessing the environmental effects of each alternative discussed in Chapter Four Environmental Consequences and assessing how well each of the alternatives responds to the issues identified in Chapter One.

The Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508) require that analysis address only those issues, area and components of the environment with the potential to be affected by the proposed action. Therefore this chapter analyzes the existing conditions as related to the following four issue areas and two areas of concern, identified in Chapter One as significant:

- Issue 1 - Fisheries
- Issue 2 - Water Quality and Soil Erosion
- Issue 3 - Wildlife
- Issue 4 - Recreational Use
- Area of Concern – Open Road and Open Motorized Trail Route Density (OROMTRD)
- Area of Concern – Roadless Areas

Issue 1- Fisheries

The Caribou Range Mountains Subsection of the Caribou-Targhee National Forest supports a diversity of both native and non-native fish. The fish species within the streams in the subsection are listed below in Tables 3.1 and 3.2, with their common names, scientific names, and status. This list is followed by narrative descriptions of each native and some non-native fish.

Table 3.1 - Fish Species List: Native Fish

Common Name	Scientific Name	Status
Yellowstone cutthroat trout	(*Oncorhynchus clarki bouvieri*)	S, SC-A
Mountain whitefish	(*Prosopium williamsoni*)	
Utah chub	(*Gila atraria*)	
Mottled sculpin	(*Cottus bairdi*)	
Paiute sculpin	(*Cottus beldingi*)	
Longnose dace	(*Rhinichthys cataractae*)	
Speckled dace	*Rhinichthys osculus*)	
Redside shiner	(*Richardsonius balteatus*)	

Table 3.2 - Fish Species List: Introduced Non-native Fish

Common Name	Scientific Name
Rainbow trout	(*Oncorhynchus mykiss*)
Brown trout	(*Salmo trutta*)
Brook trout	(*Salvelinus fontinalis*)
Lake trout	(*Salvelinus namaycush*)

Status Codes:

1. S: USDA Forest Service Regional Forester **S**ensitive (S) species designation (Forest Service Manual 2670.5). Those plant and animal species identified by the Regional Forester for which population viability is a concern as evidenced by:
    A. Significant current or predicted downward trends in population numbers or density.
    B. Significant current or predicted downward trends in habitat capability that would reduce a species existing distribution.

2. SC: Idaho Fish & Game Species of **S**pecial **C**oncern (SC): native species that are either low in number, limited in distribution, or have suffered significant population reductions due to habitat losses, but is not likely to become threatened in the near future.
    A. SC-A: Species, which meet one or more of the criteria listed above and for which Idaho presently contains, or formerly constituted, a significant portion of their range (i.e. priority species).

Native Fish Species

- **Yellowstone cutthroat trout** (*Oncorhynchus clarki bouvieri*)
  U.S. Fish and Wildlife Service was petitioned to list Yellowstone cutthroat trout in August 1998. In February 2001, U.S. Fish and Wildlife Service determined the petition did not provide substantial information to indicate listing may be warranted. In January 2005, a Federal Court asked U.S. Fish and Wildlife Service to re-visit their decision. In March 2006, the Fish and Wildlife revisited their finding and reaffirmed their earlier determination. In May 2006, the litigants announced their intention to sue the US Fish and Wildlife Service over their finding. Yellowstone cutthroat trout currently retains its status as a Sensitive species on the Regional Foresters Sensitive Species List.

The Caribou-Targhee National Forest is currently addressing the needs of Yellowstone cutthroat trout by maintaining consistency with its revised Forest Plans and an interagency conservation agreement and strategy for Yellowstone cutthroat trout prepared and signed in 2009, and through an active restoration program.

Within Idaho, the original cutthroat trout native to the Snake River system may have been the Yellowstone cutthroat trout. It is believed they were replaced by rainbow trout and other subspecies of cutthroat trout in drainages downstream of Shoshone Falls. Shoshone Falls isolated cutthroat trout from contact with rainbow trout and the Yellowstone subspecies remains the native trout in the upper Snake River basin. Yellowstone cutthroat trout are adapted to cold water. Water temperatures between 4.5 and 15.5 Centigrade (C) appear to be optimum for the subspecies. This subspecies migrates for spawning when threshold water temperatures approach 5 C (optimum 10 C) and stream flows subside from spring peaks. Streams selected for spawning are commonly low gradient (up to 3%), perennial streams, with groundwater and snow fed water sources. Use of intermittent streams for spawning is not well documented, but has been noted in some intermittent tributaries to Yellowstone Lake. Spawning potentially occurs wherever optimum size gravel (12-85 mm in diameter) and optimum water temperatures (5.5-15.5 C) are found. Depending on variations in growth, spawning populations are comprised of individuals age three and older (primarily ages 4-7). Juveniles congregate in shallow, slow-moving parts of the stream (USDA Forest Service 1996).

Three life history patterns of Yellowstone cutthroat trout that occur in the Caribou Range Mountains Subsection of the Caribou-Targhee National Forest include resident, fluvial, and adfluvial. Resident trout spend their entire lives in small streams. Fluvial fish spend most of their lives in large streams and rivers, migrating into small streams in the spring to spawn. Their offspring spend the first couple years of their lives in these small streams and eventually migrate to the large streams and rivers downstream. Fluvial and resident populations may interact in the spawning stream. Adfluvial fish spend most of their lives in lentic waters, migrating upstream to small streams to spawn. Their young generally rear in these streams for a couple years and return to the lakes downstream. All adfluvial life history Yellowstone cutthroat trout in the Caribou Range Mountains Subsection were forced into this pattern by the construction of Palisades Reservoir. They also interact with resident Yellowstone cutthroat trout populations. For centuries, migratory populations were instrumental in re-founding extirpated resident populations.

Both large-spotted and fine-spotted varieties of Yellowstone cutthroat trout occur on the Forest. The two varieties have been observed inhabiting the same streams and, in fact, the same habitat within the stream. While some biologists prefer to split these forms of Yellowstone cutthroat trout when analyzing effects, there has been no genetic, behavioral, or biologic reason to do so to date. During a symposium held in 2006 exploring the differences between fine-spotted and large-spotted varieties of Yellowstone cutthroat trout, there was general agreement among the convened experts that the two varieties should be considered as one sub-species unless additional evidence in the future indicates differently (Van Kirk et al 2006).

Intensive surveys for Yellowstone cutthroat trout distribution have been conducted on the Caribou-Targhee National Forest since 1996. The subspecies appear to be well distributed

throughout the parts of the Forest within the Snake River Basin, but populations in various streams or stream segments vary in strength. While some populations are threatened by competition and interbreeding with nonnative, introduced fish species, others appear to be thriving in some streams or stream reaches. Apparently, some populations have been replaced by nonnative, introduced fish species. Genetic interactions between existing Yellowstone cutthroat trout populations have diminished from historic conditions because of a decrease in connectivity.

In 2009, the Forest Fisheries Crew returned to survey transects established in 1999, to monitor the status of populations of Yellowstone cutthroat trout determined as strongholds during the initial 1999 survey. This 10-year survey return interval is required by the Forest Plan. While some stronghold populations retained their integrity, non-native fish invasion was documented in other streams. In 1999, YCT stronghold populations were documented in Nelson, Antelope, Garden, Pritchard, Squaw, Indian (tributary to the Snake River), Bear, Elk (tributary to Bear Creek), Landslide, Sulphur Bar, Williams, McCoy, Trout, Burns, and McNeal creeks. In 2009, non-native rainbow trout were documented in Indian Creek for the first time, non-native brook trout were observed in lower McCoy Creek for the first time, and the Squaw Creek YCT population was apparently extirpated due to migration barriers and excessive livestock use on private land.

The project analysis area encompasses the center of Yellowstone cutthroat trout strongholds on the Forest. Distribution surveys of the 190 6th Code HUCs within the Targhee half of the Forest that were historically inhabited by Yellowstone cutthroat trout determined 77 of the 6th Code HUCs have strong populations, 54 6th Code HUCs have depressed populations, and 59 6th Code HUCs have no Yellowstone cutthroat trout present where they have historically occurred. Specifically in the Caribou Range Mountains Subsection Analysis Area (comprised of 23 6th Code HUCs), there are 20 6th Code HUCs with strong populations and three 6th Code HUCs where Yellowstone cutthroat trout populations never occurred due to limited flow or natural barriers. In this analysis, populations were described as Strong when all life histories that historically occurred in the subwatershed are still present, numbers of fish are stable or increasing, the local population is likely to be half or more of its historic density, and greater than 50% of the total salmonid community consists of native trout.

- **Mountain whitefish** (*Prosopium williamsoni*)
  Mountain whitefish is widely distributed throughout the western United States and occur in large streams on the Caribou-Targhee National Forest. They are considered abundant. Its preferred habitat is cold mountain rivers where it rests in the deep pools and feeds in the riffle areas. They spawn in the fall in riffles. Whitefish are active feeders throughout the year, feeding on aquatic and terrestrail insects and fish eggs (Idaho Fish and Game 2000).

- **Utah chub** (*Gila atraria*)
  In Idaho, the Utah chub is native to the Bear River drainage and the Snake River Drainage upstream of Shoshone Falls. It prefers a lake, pond, or reservoir environment and is very abundant in waters with aquatic vegetation. These fish spawn in late spring and early summer when surface waters reach or exceed 60F. The eggs are scattered indiscriminately over varied types of lake bottom in a water depth of two feet or less. Young chubs eat zooplankton until they reach 6-7 inches in length. They then become omnivorous, eating aquatic plants, insects, and crustaceans (Simpson and Wallace 1982).

The Utah chub is very prolific and is a strong competitor with small trout for food and space (Simpson and Wallace 1982). Although they are native to some waters of the Forest, they have been introduced in other waters, including the Henry's Fork upstream of Mesa Falls (Targhee section of the Forest), by some anglers using them as bait.

- **Mottled sculpin** (*Cottus bairdi*)
  The mottled sculpin occur in the Snake River upstream of Shoshone Falls and in the Bear River Basin. It is abundant over its entire range and prefers streams with rubble stream bottoms (Simpson and Wallace 1982). They are seldom found in silted areas (AFS 2000). Spawning season is in May and early June. Their eggs are deposited in burrows, on the undersides of rocks (Hendricks 1997). The spawning nest is usually protected by a male until the eggs hatch. Mottled sculpin eat immature aquatic insects, crustaceans, small sculpins, fish eggs, annelids, and plants (Hendricks 1997). Sculpin are an important forage fish for trout, particularly cutthroat, rainbow, and brown trout (Simpson and Wallace 1982).

- **Paiute sculpin** (*Cottus beldingi*)
  Paiute sculpin occur in the upper Snake River and Bonneville Basins. It is known to occur in both lakes and streams where rubble is present. In streams, it occurs in riffle areas among rubble or large gravel. It prefers clear, cold water with slight to moderate current. It also serves as an important food source for trout (Simpson and Wallace 1982).

  Relatively little is known of the life history of this species in Idaho, but in Lake Tahoe, Paiute sculpins spawn in the spring. Eggs are laid in clusters on the undersides of rocks and are guarded by the male. The number of eggs in each nest is usually 100-200 eggs. Their food consists of a variety of aquatic invertebrates (AFS 2000).

- **Longnose dace** (*Rhinichthys cataractae*)
  Longnose dace is widespread from the Pacific to the Atlantic in north, central America. In Idaho it is a common species in every river system. It occurs primarily in the riffle areas of streams, but has been taken from lakes where the shoreline is composed of small rubble. Spawning likely occurs over gravel in riffle areas of streams. It eats immature aquatic insects. Because of its small size and preference for living in riffle areas, it is an important forage fish for trout. It is reported to hybridize with redside shiners (Simpson and Wallace 1982).

- **Speckled dace** (*Rhinichthys osculus*)
  Speckled dace are present in tributaries of the Snake and Bear Rivers in Idaho. They will live in a variety of habitat, but normally prefer the shallow, cool, and quiet waters in contrast to the longnose dace that prefer the fast riffle areas (Simpson and Wallace 1982). They spawn in the spring, usually in May, and broadcast their eggs over the gravelly stream bottom. They are omnivorous, feeding on aquatic insects, plant material, and zooplankton (AFS 2000). Speckled dace are an important forage fish for trout and have been used as a baitfish in parts of its range.

- **Redside shiner** (*Richardsonius balteatus*)
  The redside shiner occurs in the Columbia River System and the Bonneville Basin. In Idaho, it is found in all the major river systems. It prefers the slow moving currents of lakes, ponds, ditches, springs, sloughs, streams, and rivers (AFS 2000). Spawning generally occurs in June or July in water depths of less than six inches. Eggs are broadcasted by the female and settle

to the stream bottom, attaching to substrate or submerged vegetation. The fry of redside shiners feed on small planktonic organisms but switch to a diet of insects, mostly terrestrail, by their second year of life. They will prey on eggs, often their own (Simpson and Wallace 1982).

- **Utah sucker** (*Catostomus ardens*)
  The Utah sucker is presently found in the Snake River drainage above Shoshone Falls and the Bear River Drainage. It is an adaptable species and lives in lakes, rivers, or streams in warm to very cold water. If living in a stream, it prefers a slow moving current where there is a variety of bottom material (Simpson and Wallace 1982).

  The Utah sucker spawns during the spring in small tributaries. Their diet is varied and includes animals and plants found at the bottom of its habitat. Many of the early settlers of the Bear River area harvested large numbers of suckers during their spawning runs. They were eaten fresh and some were salted and stored in wooden barrels or earthen crocks for winter consumption (Simpson and Wallace 1982).

- **Bluehead sucker** (*Catostomus discobolus*)
  The bluehead sucker occurs on the Forest within the Bonneville basin and the Snake River above Shoshone Falls. It is a river dwelling species, occurring in a variety of habitats, ranging from cold, clear trout streams to warm, very turbid waters. It prefers riffle areas with rocky substrates. It spawns in late spring/early summer and probably scrapes its food off rocks (AFS 2000). Little is known about the life history of this species, but it is assumed to be similar to that of other members of the sucker family. It is often found associated with mountain sucker but can easily be distinguished from it by the smaller scales and by its size when mature (generally larger). It is relatively rare in Idaho waters (Simpson and Wallace 1982).

- **Mountain sucker** (*Catostomus platyrhynchus*)
  Mountain sucker are widespread throughout the Snake and Bear River Systems in Idaho. The preferred habitat of this fish is usually clear, cold streams with clean rubble or sand bottoms. It is seldom found in lakes. This is a small species, when compared with bluehead sucker (AFS 2000). Spawning occurs in late spring or early summer in riffles of clear, swift streams. Its food consists almost entirely of algae that are scraped from the rocks by means of the cartilaginous sheath on the jaws. Because of its preference for cool water, it may serve as an important forage fish to several trout species (Simpson and Wallace 1982).

Selected Non-Native Species Descriptions

Several non-native fish species have been introduced to or just downstream of some streams, rivers, and lakes in or near the analysis area. Of those species, three are particularly important to describe because they are valued by some anglers and are considered a threat to some native fish species on the Forest.

- **Rainbow trout** (*Oncorhynchus mykiss*)
  Rainbow trout are native to the Pacific coast and lower Snake and Columbia systems. They have been introduced to the Snake River above Shoshone Falls and the Bear River System. Naturally reproducing populations occur in many streams on the Forest where past

introductions have occurred. Idaho Department of Fish & Game still stocks non-native rainbow trout in some streams on the Forest to cater to some recreational anglers. Current and future rainbow trout releases will primarily be sterile fish.

Naturally reproducing populations generally spawn from March through June. They are basically stream spawners and usually search out the small tributaries where gravel riffles are abundant. After hatching, young alevins drift into deeper pools of the streams. Their diet consists mainly of aquatic insects. Large individuals take small fish of any available species as well as aquatic invertebrates (Simpson and Wallace 1982).

Rainbow trout may interbreed with native cutthroat trout, affecting their gene pool. In addition, rainbow trout compete with cutthroat trout for habitat. There are low densities of rainbow trout populations in the larger tributaries of the Snake River in the analysis area, particularly Salt River and Indian Creek.

- **Brown trout** (*Salmo trutta*)
  The brown trout is native to Europe. Successful introductions to Idaho waters began in 1948. The species is now well established in several river systems, including the Snake and Bear Rivers. Its preferred habitat is larger streams, rivers, lakes, and reservoirs at lower elevations. It is more tolerant of the less favorable environment of the lower reaches of streams and rivers than are rainbow and cutthroat trout. The fish spawn in October through December. They usually move upstream some distance to small tributaries to spawn. They spawn by excavating a redd in gravel or small rubble, like other salmonids. Brown trout normally live longer than cutthroat trout. They eat aquatic insects and other fish (Simpson and Wallace 1982). Brown trout occur in the planning area but are generally restricted to lower reaches of large streams or to rivers. They may prey upon native cutthroat trout and other fish species. There are low densities of brown trout populations in lower reaches of some tributaries to Palisades Reservoir and the South Fork of the Snake River.

- **Brook trout** (*Salvelinus fontinalis*)
  Brook trout are native to eastern Canada and the United States. It has been extensively planted in lakes, rivers, and streams in the West, including on the Caribou portion of the Caribou-Targhee National Forest. It competes for habitat with native cutthroat trout and has completely displaced some cutthroat populations on the Forest. Brook trout appears to more readily compete with native fish when habitat has been altered (Marcus et al. 1990). Brook trout also prey upon cutthroat trout juveniles and other native fish.

  Of the non-native fish that occur in the analysis area, brook and rainbow trout have the potential to have the most significant effect upon native Yellowstone cutthroat trout populations. They have strong populations in Fall and Brockman creeks. A population has recently been documented in lower McCoy Creek. The newly invaded McCoy Creek brook trout population was likely from Indian Creek, across Palisades Reservoir. Brook trout have complete displaced the native Yellowstone cutthroat trout in some streams within the Forest.

  Like other salmonids, brook trout excavate redds while spawning. They spawn in the fall, usually in late September and October in gravels of small streams. The fry emerge from the gravel in April and May and move into pools in the stream. Brook trout generally eat aquatic insects and other small aquatic invertebrates. Large individuals also eat small fish.

Trails

Single and double-track trails present a moderate threat to fish and their habitat throughout most of the analysis area. Trails have frequently been established parallel to streams and often serve as sources of sediment to water bodies. In addition, these trails may affect riparian vegetation, potentially affecting stream temperature, frequency of large instream wood, and available floodplain (decreasing the ability of the stream to dissipate energy). These impacts have increased stream bank instability and surface fine sediment deposits in the stream channels (Furniss et al. 1991), likely affecting cutthroat trout and other aquatic species. Generally, the closer the trail is to streams and the less maintenance of the trail, the more sediment delivery (Furniss et al. 1991). Generally, the wetter the weather during trail use, the more sediment delivered to streams from erosion during motorized use. Trails that accommodate ATV traffic have more surface area exposed to erosion than single-track trails.

Fine sediment, when delivered to streams, has the potential to affect aquatic habitat. Fine sediment fills the spaces between and covers spawning gravels, decreasing spawning success. Excessive sedimentation reduces stream channel complexity and diversity. Sedimentation can fill pools that would otherwise be valuable rearing and adult habitat (Kaufman et al. 1983 and Platts 1991). An increase in sediment decreases the survival of trout embryos (Irving and Bjornn 1984).

From an aquatic resource management perspective, one of the most significant threats associated with the Caribou Range Mountains Subsection trail system is the continued expansion of a user-created, illegal trail system. These user-created trails are not professionally designed or maintained and are likely to be more of an impact upon aquatic resources and riparian areas than agency-created and maintained trails. An example is in Fall Creek, where an isolated population of Yellowstone cutthroat trout struggle from competition with brook trout and high and competing resource use. Users have created illegal trails within the watershed in part to accommodate ATV and motorized traffic. Several ford stream crossings were created on Fall Creek and its tributaries. These fords are direct sources of sediment to the stream. Within the Caribou Range Mountains Subsection, the creation of trails by users has the potential to affect riparian vegetation and deliver sediment to streams.

Recent projects on the Targhee portion of the Forest addressed some impacts from trails and off-trail motorized use upon Yellowstone cutthroat trout habitat. These include projects at Burns, Palisades, Pritchard, and Big Elk creeks. In Burns Creek, user-created illegal trail segments were blocked and trail bridges were constructed in place of fords across tributaries of Burns Creek. In upper Palisades Creek, a trail bridge was replaced to decrease equestrian ford use. ATV traffic was discontinued in Pritchard Creek because the trail system that paralleled the stream did not accommodate ATVs. In Big Elk Creek, bog bridges were installed to keep trail users out of a headwater wetland complex. These types of trail maintenance, construction, and planning efforts happen annually in the project area trail network. When funding allows, the Palisades District Trail Crew have been improving trail drainage and stream crossings and have effectively relocated many miles of trail away from riparian areas. These types of projects will continue each year as the funding is available and by priority.

Several Yellowstone cutthroat trout stronghold streams occur in the planning area, including those in Nelson, Antelope, Garden, Pritchard, Indian, Bear, Elk, Landslide, Sulphur Bar, Williams, McCoy, Trout, Burns, and McNeil creeks. Most have trails or roads paralleling them or their tributaries, or trail crossings. In past Forest Fisheries Program surveys, trail-related impacts to riparian or aquatic

habitat were documented in Nelson, Antelope, Garden, Pritchard, Indian, Bear, and Elk watersheds. These impacts primarily occur in the riparian area of these streams but may also affect stream channels where trails ford streams or are located directly adjacent to stream banks. The impacts result in the addition of sediment to the stream from the eroding trail surface or stream bank. The additional sediment has the potential to affect aquatic biota, including Yellowstone cutthroat trout, by decreasing reproduction success, availability of aquatic insect prey species, and available rearing habitat.

Currently, there are approximately 187 total miles of trails in the analysis area. Approximately 151 miles are open to motorized use and 34 miles are closed to motorized use. Of the miles open to motorized use, approximately 23 miles are currently considered suitable for ATV traffic. There are approximately 69 miles of motorized trail in AIZs. Currently, the Forest Travel Plan designates non-motorized and motorized trails. Although it recommends single-track or two-track traffic, it is only advisory, maintaining the potential for aggressive ATV users to attempt to squeeze through single-track trails and increasing the potential for resource damage from vegetation impacts and erosion.

One particularly helpful parameter in assessing the current condition of the Yellowstone cutthroat trout stronghold streams pertaining to trail impacts is trail densities in AIZs (see Table 3.3 – Trail Densities in AIZs). Trail encroachment upon streams and their riparian areas is important to consider because it is a source of sediment and can affect the stability of fallen large woody debris. Trees that have fallen across trails are cut during trail maintenance, decreasing their stability and the potential of them benefiting aquatic habitat through dissipating stream energy, sorting stream gravels, and providing cover, shade, and nutrients. Trail crossings are important to consider because they are sources of sediment and usually impact stream channel width and hydrology. The densities of trails within AIZs will serve as a surrogate for trail crossings because accurate trail crossing data are not currently available. Motorized use is of primary concern due to the higher potential for erosion from their tires. ATV traffic is more of a concern than motorcycles because of the associated larger trail widths, providing more surface area for potential erosion and resulting sedimentation. Of the Yellowstone cutthroat trout stronghold streams in the analysis area, the HUCs including Garden, Middle Bear, Upper Antelope, and Pritchard creeks have relatively high motorized trail densities in AIZs. In all of these HUCs except upper Antelope, the motorized trail densities are dominated by motorcycle use. All of the motorized trail densities in Antelope HUC are ATV trails. Palisades, McCoy, Wolverine, Fish, Salt River, and Jackknife creeks HUCs have no AIZ motorized trails.

Table 3.3 – Trail Densities in AIZs

Yellowstone Cutthroat Trout Stronghold HUCs	Motorized Trail Densities in AIZs (miles/sq mi)	ATV Trail Densities in AIZs (miles/sq mi)	Exclusively Non-motorized Trail Densities in AIZs (miles/sq mi)
Palisades Reservoir	0	0	.99
McCoy Ck Headwaters	0	0	0
Wolverine Ck-McCoy Ck	0	0	0
Fish Creek-McCoy Creek	0	0	0
Jensen Ck-McCoy Ck	.18	0	.12
Upper Bear	1.16	0	.17
Middle Bear	2.29	0	0
Lower Bear	1.38	0	.40
Sheep Creek-Snake River	1.84	0	1.78

Pritchard Ck-Snake River	2.13	.26	.01
Garden Creek	3.42	.29	0
Upper Antelope Creek	2.16	2.16	0
Salt R-Dry Creek	0	0	0
Jackknife Creek	0	0	0

Issue 2 - Water Quality and Soil Erosion

The 1999 Travel Management Plan designated open motorized routes on the Targhee National Forest. It made the distinction between vehicles over 50 inches in width and those less than 50 inches in width. For motorized routes less than 50 inches in width the travel plan designated trails or routes that were suitable for ATVs and those that were not recommended for ATVs. Due to the popularity of and increased capabilities of ATVs, use on trails or routes has increased and is taking place where it is often not safe and or environmentally suitable. Such use has also lead to an enforcement problem in areas where motorized use is not allowed or where motorized use needs to be discontinued in order to protect the natural resources of an area. A more concise designation of trails or routes for non-motorized and motorized vehicles, such as ATVs less than 50 inches in width and motorcycles, needs to be completed in the Caribou Range Mountains Subsection (see map of project area on page 3-12) for purposes of resource protection and public need.

In addition, the 1999 travel plan was a more broad brush approach that did not have some of the site specific evaluation data that now exists on trails or routes that is useful and necessary to develop a good travel system while protecting natural resources. Revised Forest Plan direction (page III-27) called for annual monitoring of a certain percent of the trails in order to determine future management needs.

The existing and proposed trails within the Caribou Range Mountains Subsection have been evaluated within the Palisades Ranger Districts. The purpose of this project is to revisit the existing travel plan direction for this subsection, within Bonneville County, Idaho in order to determine if any aspects of the existing trail system need to be modified or changed in order to provide a balanced network of motorized and non-motorized trails that are safe, environmentally sound, affordable to manage and maintain, and responsive to public needs.

The Caribou Range Mountains Subsection intersects nine watersheds (5th HUCs) and is shown in Tables 3.4 and 3.5.

Table 3.4 - Watersheds (HUC 5), Subwatersheds (HUC6) and the percent of total watershed within the Caribou Range Mountains Subsection. Hydrologic Unit Code (HUC).

Watershed (HUC5)	Subwatershed (HUC 6)	HUC Name	HUC Total Acres	HUC Project Acres	Percent of Total HUC
1704010401		Indian Creek	74,412	14,248.9	19.1%
	170401040101	Palisades Reservoir	49,356	14,248.9	28.9%
1704010402		McCoy Creek	69,550	12,081.6	17.4%
	170401040201	McCoy Creek Headwaters	19,693	95.4	0.5%
	170401040202	Wolverine Creek-McCoy Creek	10,908	6.0	0.1%
	170401040204	Fish Creek-McCoy Creek	11,947	4.7	0.0%

	170401040205	Jensen Creek-McCoy Creek	13,457	11,975.5	89.0%
1704010403		Bear Creek	54,119	53,345.8	98.6%
	170401040301	Upper Bear Creek	14,959	14,949.2	99.9%
	170401040302	Middle Bear Creek	10,086	10,052.8	99.7%
	170401040303	Lower Bear Creek	29,074	28,343.8	97.5%
1704010406		Snake River	112,703	41,289.9	36.6%
	170401040601	Sheep Creek-Snake River	15,704	7,954.0	50.6%
	170401040602	Pritchard Creek-Snake River	35,442	28,605.6	80.7%
	170401040605	Garden Creek	13,130	4,730.3	36.0%
1704010407		Fall Creek	49,802	49,641.0	99.7%
	170401040701	Upper Fall Creek	26,596	26,434.6	99.4%
	170401040702	Lower Fall Creek	23,206	23,206.4	100.0%
1704010409		Antelope Creek	94,785	3,723.7	3.9%
	170401040904	Upper Antelope Creek	18,564	3,723.7	20.1%
1704010503		Lower Salt River	215,415	12,854.8	6.0%
	170401050307	Salt River-Newswander Canyon	15,915	542.4	3.4%
	170401050308	Jackknife Creek	30,399	760.4	2.5%
	170401050309	Salt River-Dry Creek	27,917	11,552.0	41.4%
1704020502		Outlet Grays Lake	132,298	14,149.5	10.7%
	170402050201	Clark Creek-Outlet Grays Lake	17,185	410.9	2.4%
	170402050202	Brockman Creek	23,178	11,250.5	48.5%
	170402050203	Lava Creek-Outlet Grays Lake	17,030	1,108.8	6.5%
	170402050205	Hell Creek	20,839	1,379.3	6.6%
1704020504		Outlet Willow Creek	137,981	4,608.5	3.3%
	170402050402	Tex Creek	30,982	4,122.2	13.3%
	170402050405	Meadow Creek	18,190	486.3	2.7%
		TOTALS		**397,638.5**	

Water Quality Limited Waters, Total Maximum Daily Loads (TMDLs), and BMPs.

Idaho Department of Environmental Quality (IDEQ) has identified surface water use designations (i.e. beneficial uses) and the water quality standards necessary to support those uses (IDEQ 2009a). The Idaho 2008 Integrated (303(d)/305(b)) Report (IDEQ, 2009b) provides assessment unit level water quality information concerning support of designated uses. Units determined to not be in support of designated uses are placed on the 303(d) list until a TMDL is approved by the U.S. Environmental Protection Agency (EPA). No Wyoming streams within this project area were identified as not supporting beneficial use and listed on the 303(d) list associated within the 2010 Wyoming Water Quality Assessment and Impaired Waters List (2010 Integrated 305(b) and 303(d) Report) http://deq.state.wy.us/wqd/watershed/Downloads/305b/2010/WY2010IR.pdf. Figure 3.1 shows stream not supporting beneficial use and Table 3.5, summarize information from the Idaho Integrated Report (IDEQ 2009b) and the draft 2010 Integrated Report (http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/2010_draft.cfm). Trails influencing those streams not supporting beneficial use are shown by watershed in Table 3.5. Three subbasin/watershed assessments and TMDL documents cover portions of the Caribou Range Mountains Subsection . These are Willow Creek Subbasin (IDEQ, 2004), Fall Creek Watershed

(IDEQ, 2003), Palisades Subbasin Assessment (IDEQ, 2001). Sediment and temperature are predominantly the pollutant of concern not supporting beneficial use (see Table 3.5). Sediment TMDLs are based on literature suggesting that 80% bank stabilities show for full beneficial use support. Cold water aquatic life and salmonid spawning are expected to be fully supported at 80% streambank stability. Instream sediment targets have been identified from literature values that are supportive of salmonid spawning and coldwater aquatic life. These target values are set at 28% fine sediment less than 6.35 mm in diameter in spawning habitat and will be used to track the progress of streambank stabilization and the reduction of depth fines to determine the need for additional management practices to improve water quality. Stream temperature as it relates to effective shade could be improved through the development of riparian vegetation that would support beneficial use(s) with details shown in Table 3.5.

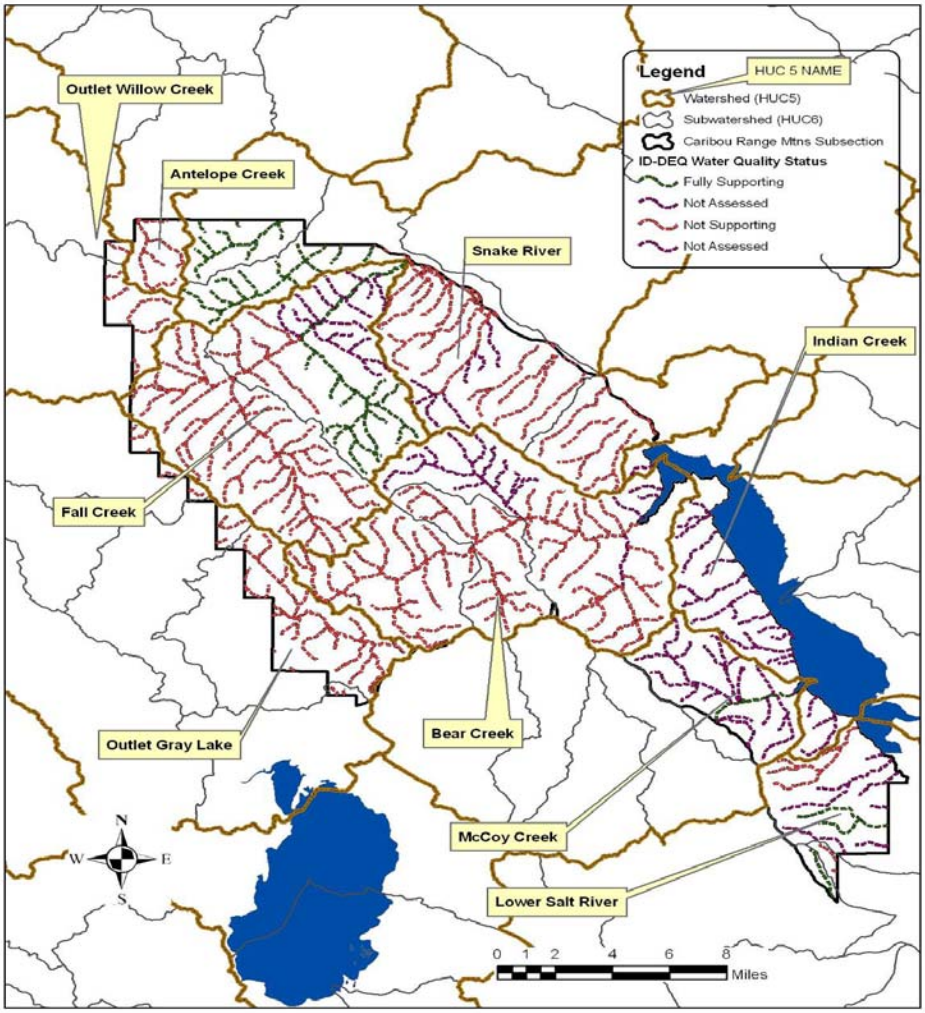

Figure 3.1 – Stream and Watershed (HUC5) boundaries located with the Caribou Range Mountains Subsection. Also Idaho DEQ water quality status for stream not supporting beneficial use as identified in the 2008 integrated report (IDEQ 2009b) and the draft 2010 integrated report (http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/2010_draft.cfm).

Table 3.5 – Summary of State assessment units not supporting designated uses (IDEQ 2009a&b) within and directly below project area.

Watershed (HUC 5)	Assessment Unit	Waterbodies Not Supporting	Use(s) Not Supported	Pollutant(s)	303(d) and/or TMDL Comment(s)[3]
Assessment units within the project area with some extending downstream of the project area:					
Bear Creek	ID17040104SK011_02	Bear Creek Tributaries below NF Bear Creek to Palisades Res. Also Elk Creek and tributaries	Cold water aquatic life use	Combined Biota/Habitat	Palisades TMDL (IDEQ, 2001). The Bear Creek sediment load is presently 790 tons per mile per year and the streambanks are 68% stable. The chronic sediment load should be reduced by 92% through increased streambank stability. **TARGET =** 80% streambank stability and 28% depth fines substrate sediment load.
	ID17040104SK011_04	Bear Creek Main Stem below NF Bear Creek to Palisades Reservoir	Cold water aquatic life use and Salmonid Spawning	Sedimentation	
	ID17040104SK013_02	Bear Creek Tributaries from source to NF Bear Creek	Cold water aquatic life use and Salmonid Spawning	Sedimentation	
	ID17040104SK013_03	Bear Creek Main stem from source to NF Bear Creek	Cold water aquatic life use	Sedimentation	
Snake River	ID17040104SK003_06	Snake River Main stem from Fall Creek to Black Canyon Creek	Cold water aquatic life use	Other flow regime alterations	Flow alteration is not a "pollutant" under the Clean Water Act. TMDL will not be prepare and is not required.
	ID17040104SK008_02	Snake River Tributaries from Palisades Res. Dam to Fall Creek	Cold water aquatic life use	Combined Biota/Habitat & Sedimentation	
	ID17040104SK008_06	Snake River Main stem from Palisades Res. Dam to Fall Creek	Cold water aquatic life use	Other flow regime alterations	Flow alteration is not a "pollutant" under the Clean Water Act. TMDL will not be prepare and is not required.
Fall Creek	ID17040104SK006_02 & ID17040104SK006_03	Fall Creek Tributaries - source to South Fork Fall Creek confluence	Cold water aquatic life use and Salmonid Spawning	Sedimentation & Temperature	Fall Creek TMDL (IDEQ, 2003) ***Fall Creek Sediment:*** Load allocation = 11 tons/mile/year sediment load. Existing erosion rate = 65 tons/mile/year. Reduction = -54 tons/mile/year or 83% erosion rate reduction. ***Fall Creek Temp.:*** Load allocation = 2.4 kWh/m2/day or 62% effective shade. Existing load = 4.6 kWh/m2/day or 30% effective shade. Proposed reduction = 47% reduction in solar load and stream temperature. To achieve the goals of salmonid spawning criteria, the solar load and stream temp. should be reduced by 47%. Achieved by
	ID17040104SK006_04	Fall Creek Main Stem below EF Fall to SF Fall Creek	Cold water aquatic life use	Sedimentation & Temperature	

[3]See http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/sba_tmdl_master_list.cfm

Watershed (HUC 5)	Assessment Unit	Waterbodies Not Supporting	Use(s) Not Supported	Pollutant(s)	303(d) and/or TMDL Comment(s)[3]
					increasing effective shade by 32% through riparian vegetation development. ***Camp Creek sediment:*** Load allocation = 10 tons/mile/year sediment load. Existing erosion rate = 189 tons/mile/year. Reduction = -179 tons/mile/year or 95% erosion rate reduction. Achieve the goals of 28% subsurface fine sediment and 80% streambank stability; the sediment load should be reduced by 95%.
Antelope Creek	ID17040104SK002_02	Antelope Creek - source to mouth	Cold water aquatic life use	Sedimentation	Palisades TMDL (IDEQ, 2001). The Antelope Creek sediment load is presently 82 tons per mile per year and the streambanks are 62% stable. The chronic ediment load should be reduced by 83% through increased streambank stability. **TARGET =** 80% streambank stability and 28% depth fines substrate sediment load
Lower Salt River	ID17040104SK022_02	Trout Creek - source to mouth	Salmonid Spawning	Sedimentation	No TMDL Developed at this time.
	ID17040105SK001_02b	Newswander Canyon	Cold water aquatic life use and Salmonid Spawning	Physical substrate habitat alterations & Sedimentation	No TMDL Developed at this time.
Outlet Grays Lake	ID17040205SK021_02	Clark Creek Headwaters (intermittent on Forest)	Cold water aquatic life use and Salmonid Spawning	Combined Biota/Habitat	Willow Creek TMDL (IDEQ, 2004). ***Sawmill Cr.:*** Temp. exceedances in salmonid spawning criteria at 20.9C (maximum daily) and 18.11C (maximum daily average). The TMDL prescribes 38% and 50% reductions in max. and avg. daily temperatures. Streambank erosion rate on Sawmill Creek is 340 tons/mile/year. It is expected that a rate of 19 tons/mile/year will occur if banks are restored to 80% stable. ***Corral Creek:*** estimated erosion rate is 226 tons/mile/year. The TMDL prescribes a sediment-loading rate of 18 tons/mile/year. Temp. exceedances occurred with a current maximum daily temp. load of 22.39□C. The temp. TMDL prescribes a 42% reduction in the max. daily avg temp. ***Brockman Creek:*** The est. current sediment-loading rate is 384
	ID170402055SK024_02	Brockman Creek tributaries from Corral Creek to mouth	Cold water aquatic life use, secondary contact recreaction, and Salmonid Spawning	Fecal Coliform, Sedimentation & Temperature	
	ID17040205SK024_03	Brockman Creek Main Stem Corral Creek to mouth	Cold water aquatic life use	Sedimentation & Temperature	
	ID17040205SK025_02	Brockman Creek tributaries from source to Corral Creek confluence	Cold water aquatic life use and Salmonid Spawning	Sedimentation & Temperature	
	ID17040205SK025_03	Brockman Creek Main Stem source to Corral Creek	Cold water aquatic life use	Sedimentation & Temperature	

Watershed (HUC 5)	Assessment Unit	Waterbodies Not Supporting	Use(s) Not Supported	Pollutant(s)	303(d) and/or TMDL Comment(s)[3]
		confluence			tons/mile/year. TMDL was developed prescribing an annual loading rate of 25 tons/mile/year, provided banks are restored to 80% stability.
	ID17040205SK026_02	Corral Creek – source to mouth	Cold water aquatic life use	Temperature	
	ID17040205SK027_02	Sawmill Creek – source to mouth	Cold water aquatic life use	Unknown	
	ID17040205SK028_02	Lava Creek - source to mouth (small headwater portion on forest)	Cold water aquatic life use	Temperature	
	ID17040205SK029_02	Hell Creek - source to mouth (small headwater portion on forest)	Cold water aquatic life use	Temperature	
Outlet Willow Creek	ID17040205SK032_02	Meadow Creek - source to Ririe Res.	Cold water aquatic life use and Salmonid Spawning	Sedimentation	Willow Creek TMDL (IDEQ, 2004). ***Meadow Creek:*** headwaters to SF Meadow Creek, streambank stabilities of 80% have been achieved. The current est. erosion rate from road and streambank erosion is 60 tons/mile/year. A sediment-loading rate of 34 tons/mi/year, from bank erosion, is anticipated if all streambanks are restored to 80% stability. A 50% reduction in road erosion should occur prescribing a road sediment-loading rate of 6 tons/mile/year.
	ID17040205SK031_02	Tex Creek - source to mouth	Cold water aquatic life use	Sedimentation & Temperature	Willow Creek TMDL (IDEQ, 2004). ***Tex Creek:*** temp. data show that there were elevated spawning temp. at 24.19°C (max. daily) and 17.96°C (max. daily avg.). The TMDL calls for a 46% and 50% reduction in max. and avg. daily temp. Sediment impacts on Tex Creek have not been quantified via subsurface sediment sampling. Based on historic knowledge a sediment TMDL is necessary for Tex Creek. The TMDL is based on road erosion. The current est. sediment-loading rate is 8 tons/mile/year. The TMDL prescribes a loading rate of four tons/mile/year hence, a 50% reduction in road erosion is recommended.

Table 3.6 – Trails located within the Aquatic Influence Zone of streams not supporting beneficial use (IDEQ, 2009b) displayed within associated watersheds.

Watershed (HUC5)	Subwatershed (HUC 6)	HUC NAME	(IDEQ 303d Assessment Unit)-Trail Numbers	Miles
1704010403		Bear Creek		
	170401040301	Upper Bear Creek	(***ID17040104SK013_02***) - 029,041,042,048,296 ; (***ID17040104SK013_03***) - 042,048	8.46
	170401040302	Middle Bear Creek	(***ID17040104SK011_04***) - 048 ; (***ID17040104SK013_02***) - 029,040,042,048,146 ; (***ID17040104SK013_03***) - 029,040,042,048,148	8.91
	170401040303	Lower Bear Creek	(***ID17040104SK011_02***) - 029,043,044,047,130,147,156,158, 159, ; (***ID17040104SK011_04***) - 029,043,044,047,048,049,197 ; (***ID17040104SK013_03***) - 029,047,048,049	11.88
1704010406		Snake River		
	170401040601	Sheep Creek-Snake River	(***ID17040104SK008_02***) - 024,035,036,037	4.43
	170401040602	Pritchard Creek-Snake River	(***ID17040104SK008_02***) - 035,039,059,141,142,161,	5.15
1704010407		Fall Creek		
	170401040702	Lower Fall Creek	(***ID17040104SK006_02***) - 028 ; (***ID17040104SK006_04***) – 028	2.00
1704010409		Antelope Creek		
	170401040904	Upper Antelope Creek	(***ID17040104SK002_02***) - 070,037	3.51
			TOTALS	**44.35**

Implementation plans[4] are documents guided by approved TMDL that provides details of the actions needed to achieve load reductions, outlines a schedule of those actions, and specifies monitoring needed to document action and progress toward meeting water quality standards. The Caribou-Targhee NF utilizes Watershed Analyzes as a means of identifying improvement actions to address water quality conditions as well as other resource improvement as guided by the Targhee Revised Forest Plan. Two watershed analyzes have been completed to date (1) Fall Creek Watershed Analysis January 2002 and (2) Bear Creek Watershed Analysis June 2003 (http://www.fs.fed.us/r4/caribou-targhee/watershed/anaylsis_index.shtml). A number of the

[4] http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/implementation_plans.cfm

recommendations dealing with trail and erosion control and riparian enhancement have been implemented as listed below:

1. **Flat Iron Pond FS Trail #018 –** Reconstructed entire length of trail to reduce erosion and improve user access. This project was completed in 2008.

2. **Echo/Indian Creek FS Trail #142** – Reconstructed entire length of trail, widening and improving tread for accessibility. Several sections of the trail were rerouted to reduce the ongoing erosion problem associated with long steep trail grades. Several bog bridges were installed to reduce effects on riparian areas as well. This project was completed in 2001.

3. **Deadhorse Ridge FS Trail #267** – Reconstructed 1.8 miles of trail from the junction of Echo/Indian Trail to Horse Creek to reduce erosion and improve access. This project was completed in 2006.

4. **Long Gulch/Indian FS Trail #059** – Reconstructed to reduce erosion and improve user access. The trail was rerouted across the slope gaining elevation with the installation of a switchback. This helped reduce the erosion problem which was caused due to steep grade. The trail was also rerouted out of the drainage bottom on the Indian Creek side of the trail and on to the side slope to reduce the erosion and riparian problems occurring from the trail being located in the bottom of the drainage. This project was completed in 2003.

5. **Flat Iron FS Trail #141** – The trail was reduced in width from a full sized road bed to a ATV accessible trail this was accomplished by installing a large metal gate that will only allow 50 inch vehicles through. The trail was relocated in several sections to reduce steepness of grade and improve drainage further reducing erosion. An ATV accessible bridge was built across Indian Creek to reduce sediment and improve the riparian corridor. This project was completed in 2001.

6. **South Fork/Rash Canyon Trail FS#261** – Reconstructed entire length of trail to reduce erosion and improve user access. This project was completed in 2007. An ATV accessible bridge was constructed in 2008 across the South Fork of Fall Creek to reduce sediment into the stream and improve user access.

7. **South Fork Fall Creek Trail FS#030** – Two bridges were constructed to replace old non-functional bridges. Project was completed in 2008.

8. **Nelson Creek Trail FS#167** – New bridge constructed to replace old native material bridge. A new 18 inch diameter culvert was installed to replaced an old small diameter culvert. Project completed in 2009.

9. **Porcupine Cree Trail FS#259** – Trail was widened and improved for about 2.3 miles to improve access from the trailhead at FS Road #077 to the saddle on the ridge dropping into Pritchard Creek. This project was completed in 1994.

10. **Fourth of July/Red Ridge Trail FS# 263** – Reconstructed section of trail from four corners, rerouting trail across the slope to reduce the grade and improve drainage, thus reducing erosion by approximately 1.25 miles of trail constructed. This project was completed in 2006.

11. **Horse Creek Trail FS#140 –** Constructed Trail Bridge across Fall Creek to reduce the effects of sediment into the stream. This project was completed in 2008.

12. **South Fork Bear Creek** – Rerouted ¾ of a mile of trail out of the riparian area and constructed three bog bridges across swampy areas. This was completed in 2008. In 2009 another ¾ of the trail was rerouted out of the riparian area as well.
    Garden/Pritchard Trail FS#138 – Installed five culverts across water crossings and installed three bog bridges across swampy areas. Improved the trail tread on the majority of the trail. This was completed in 2009. Project will be completed in 2010-2011 with more tread improvements.

13. **Thunder Mountain Trail FS#002** – Rerouted sections of trail to reduce grade and reduce erosion. Constructed three trail bridges across water crossing to reduce sediment flows into the stream.

Through a Memorandum of Understanding (MOU) with the State of Idaho, the Forest is responsible for implementing non-point source pollution control measures during all management activities (USDA Forest Service 2009). The State's anti-degradation policy also pronounces that the designated uses and the level of water quality necessary to protect those uses shall be maintained and protected. Forest Service Policy is to maintain or improve water quality (RFP and FSM 2500[5] (2520.3)). The State recognizes BMPs as an effective process for protecting beneficial uses and ambient water quality. Project-specific BMPs are listed in Appendix D.

Existing Conditions

The soils in the Caribou Range Mountains Subsection are derived mainly of colluvium and alluvium from sedimentary parent materials, i.e. limestone, dolomite, sandstone, mudstone and shale. Soils are generally greater than 60 inches deep to bedrock on the foothills, on the low-relief mountain sides and portions of the high-relief mountain sides. Soils are usually less than 60 inches deep on ridges and steeper high-relief mountains. Surface soil textures are variable but are mainly fine to medium textured often with rock fragments included (USDA 1998).

Two Land Type Associations (LTAs) are found within the Caribou Range Mountains Subsection. They are LTA 701-High Caribou Mountains-Conifer Forest, and LTA 702-Low Caribou Mountains-Shrub Steppe. Ecological Units (EUs) that occur in these LTAs include EU1219, EU1303, EU1332, EU1333, and EU1970 describe in the Targhee Ecological Unit Inventory (USDA 1999). Many soils in the analysis area are susceptible to erosion hazard and compaction when vegetative cover is removed. Erosion hazard increases with slope steepness (see Soils Tables in Appendix C).

Hydrology and Soils analysis and field visits concentrated on the trails that have been proposed to be modified or relocated and those that are new proposed trails. Proposed changes include changing the class of vehicle (e.g. motorcycle to ATV), relocating, re-routing or modifying all or portions of the trail to be more compatible with the surrounding terrain, or closing the trail. Additionally, several new trails have been suggested to be included in the trail system. Most of these trails have either been previously "pioneered" by users, or are old roads or trails that were not previously designated as

[5] Section 2520.3: "Apply management practices that meet requirements for protecting, maintaining, restoring, or improving watershed conditions."

system trails. The following is a synopsis of field reviews of trails included in the Caribou Range Mountains Subsection Travel Planning Assessment (2008). Detailed trail conditions can be found in the project record.

Existing Trails

- **Thunder Mountain 002** – No changes have been recommended to this trail in all alternatives. It is 5.4 miles of non-motorized trail. This trail crosses two ecological units: 1303, and 1332. Although the soils are somewhat erodible, this trail is mostly in good shape. It could use some minor relocation.

- **Black Mountain 004 –** This trail accesses radio towers on top of Black Mountain. It is a four-wheel drive road about 1.5 miles past the towers. The remainder is a trail that connects with the McCoy Creek road. Total length of the trail is 9.9 miles. However, the last 2.2 miles of trail is a single-track very steep trail that would need relocation and construction to make it an ATV trail. This portion of the trail is located on ecological unit 1303 which has severe ratings for trails due to steep slopes and erosion potential.

- **Williams Creek 001 –** This 5.1 mile trail is a single-track non-motorized trail that takes off at the mouth of McCoy Creek and parallels the reservoir until it crosses Williams Creek then climbs up the ridge above Williams Creek. No changes are recommended to the trail in all alternatives.

- **Flat Iron Pond 018 –** Is an existing 2.0 mile long ATV trail that is in good condition. It connects trail 059 with Flat Iron Hollow road. No changes are recommended to this trail in any alternatives.

- **Basin 252 –** Is a single-track motorized trail about 0.8 miles long and follows the ridge between Pritchard and Garden creeks. It crosses 3 ecological units, 1219, 1303 and 1970 which all have high erosion potential. Two alternatives propose to the leave the trail open and one proposes to close it. On-site evaluations determined that the trail is not eroding bad and receives little use because it dead-ends. No soil concerns but closure would benefit.

- **Pritchard Creek Cut-off 253 –** Is a 2.2 mile motorized single-track trail that is very steep and rocky. It lays in the bottom of a draw as one climbs out of Pritchard Creek toward the ridge. It has been down-cut in the upper portions of the trail and seems more suited for horse and foot travel - although motorcycles use it often. From the ridge toward Garden Creek the trail is extremely steep and it is recommended that this trail be relocated to the original trail - which is in better condition and has less grade. This trail is about 0.5 miles up Garden Creek and somewhat difficult to see due to the shrub cover. This trail is in ecological unit 1219. No changes have been suggested on all alternatives.

- **Jim Hill 254 –** Is a 2.5 mile long single-track motorized trail that is currently being used by ATVs. It is in reasonable shape and would be suited to ATV travel. Some minor relocation of the trail would make it less impact on resources. Currently no changes are recommended in any alternative.

- **Tag Alder 255 –** Is a 1.0 mile long motorized single-track trail that parallels trail 264.

Currently no changes are proposed for this trail in any alternative. Unless this trail is needed for horse travel, it is recommended to close this trail.

- **Pritchard-Neilsen Creek 256 –** Is a 1.5 mile long non-motorized trail that begins at a very steep grade. ATVs and motorcycles are currently using this trail and some soil erosion was noted. One alternative proposes to change this trail to an ATV trail and reconstruct about 1.0 miles of this trail. This reconstruction should solve resource concerns.

- **Garden Creek 257 –** Is a 3.6 mile long motorized single-track trail that travels up Garden Creek until it intersects with trail 138. No changes are proposed for this trail and it appears to be in reasonably good shape.

- **Pritchard Creek 258 –** Is a 4.5 mile motorized singe-track trail that travels up Pritchard Creek and joins with trails 259, 138, 256, 066. The upper 1.0 mile of this trail is proposed to be converted to an ATV trail to connect with trail 256 in alternative C. This portion of the trail is an old logging road and should not cause any additional resource problems. No construction should be required and it is currently being used by ATVs.

- **Porcupine Creek 259 –** Is a 2.8 mile motorized single-track trail that travels up Porcupine Creek and drops into Pritchard Creek from Fall Creek. Alternative C converts 2.0 miles to an ATV trail. The trail already exists and no soil and water concerns were identified.

- **Bear Creek Sheep 260 –** Is a 11.8 mile motorized single-track trail and 1.0 mile non-motorized trail that travels up the bottom of Bear Creek. Approximately 2.2 miles of this trail is currently being used by ATVs. The proposal to make this portion of the trail an ATV route should not adversely effect soil resources and closing 5.1 miles of this trail would benefit soil productivity.

- **Bear Creek by-pass 297 –** Is a non-motorized foot and horse trail that parallels Bear Creek Trail #273 – which is motorized. It is 1.6 miles in length and is used to avoid motorized travelers on the Bear Creek trail. Resource concerns are the stream crossings that occur. Alternatives B and C propose keeping this trail.

- **South Fork Fall Creek 030 –** Is a 6.6 mile long trail of which 2.6 miles are single-track motorized and 4.0 miles are open to ATVs. No changes are proposed for this trail in any alternative.

- **South Fork Rash Canyon 261 –** Is a 2.5 mile trail that is open to ATVs and motorcycles. It has been well constructed and is heavily used. No resource concerns were identified and no changes have been proposed for this trail.

- **Fourth of July Ridge 262 –** Is a 5.5 mile long motorized single-track trail that has been pioneered by ATVs. ATV use is now occurring on this trail and it is proposed to change the designated use to ATV. No resource concerns have been identified with this proposal.

- **Fourth of July Red Ridge (263) –** Is a 5.9 mile long motorized single-track trail that has some steep sections. No changes have been proposed for this trail.

- **Red Ridge 264 –** Is a 10.3 mile motorized single-track trail that is accessed at Long Gulch or Calamity. No changes are proposed for this trail.

- **Yeaman Creek 265 –** Is a 4.2 mile non-motorized trail that follows Yeaman Creek and intersects Red Ridge Trail #264. No changes are proposed for this trail.

- **Russell Creek 266 –** Is a 3.8 mile motorized single-track trail that is currently being used by ATVs. There are no soil resource concerns with this trail if converted to a non motorized trail. It lies in ecological unit 1219 - which has erosion potential - so some drainage should be expected for this trail.

- **Dead Horse Ridge 267 –** Is a 7.5 mile long trail - of which 1.5 miles are open to ATVs and 6.0 miles are open for single-track motorized. The proposal is to open an additional 0.5-1.5 miles to ATV use - requiring some reconstruction. This trail occurs in ecological unit 1303 - which has erosion potential. More maintenance may be required with this trail in some areas.

- **Indian Creek 268 –** Is a 5.4 mile long trail – of which 3.9 miles are single-track motorized and 1.5 miles are for non-motorized use. No issues were identified.

- **White Springs 269 –** Is a one mile long single-track motorized trail that would be closed in one alternative because there exists a parallel track near the same location. This closure recommendation would improve resource conditions and while continuing to provide access.

- **Little Elk Mountain 270 –** Is a 3.9 mile long single-track motorized trail that accesses Little Elk Mountain from South Fork of Bear Creek. It changes from single-track to a non-motorized trail. No soil or water issues with this proposal.

- **Deadman Creek 042 –** Is a 4.4 mile long single-track motorized trail that also accesses Little Elk Mountain from South Fork of Bear Creek. No changes are proposed for this trail.

- **Current Creek 271 –** Is a 1.5 mile long single-track motorized trail that creates a loop trail for Muddy Creek Trail #272. One alternative changes this trail to non-motorized. No soil and water issues were identified.

- **Muddy Creek 272 –** Is 1.8 miles long for single-track motorized travel. No changes are proposed for this trail.
- **Bear Creek 273 –** Is a trail designated as single-track motorized. It is located along the north side of Bear Creek. No changes are proposed.

- **South Fork Bear Creek 274 –** Is a 7.6 mile long single-track motorized trail that has had some improvements made recently. It has some areas that are steep but is in mostly good condition. No changes are currently proposed for this trail.

- **North Fork Bear Creek 049 –** Is a 5.8 mile long single-track motorized trail that parallels North Fork Bear Creek. No changes are proposed.

- **Long Gulch/Indian Creek 059 –** Is a 1.7 mile long double-track trail for ATVs that accesses

trail #141 by way of Long Gulch Road #059. This trail is in good condition and no changes are proposed.

- **Elk Mountain Ridge 130 –** Is a single-track motorized trail of 3.6 miles in length that runs along the ridge top of Elk Mountain. This trail is in good condition and on gentle slopes. No changes are being proposed for this trail.

- **Garden/Pritchard 138 –** Is a single-track motorized trail of 2.8 miles long. This trail has some steep areas but no changes are proposed for this trail.

- **Horse Creek 140 –** Is a 3.1 mile long single-track motorized trail that is proposed to be reconstructed as an ATV trail in both alternatives B and C. This trail is currently being used by ATVs and is in fairly good condition. The recommended change should not affect the conditions that currently exist.

- **Flat Iron 141 –** Is an existing ATV trail of 2.1 miles in length. It accesses the Long Gulch trail and the Echo/Indian Creek trail. It is in good condition and no changes are proposed.

- **Echo/Indian Creek 142 –** Is an excellent ATV trail of 6.2 miles in length. It is in very good condition and well maintained. No changes are proposed.

- **Golden Gate 144 –** Is a 1.6 mile long single-track motorized trail that is proposed to be changed to a non-motorized trail in Alternative C. This would support soil and water goals.

- **Hunter 146 –** Is also a 0.8 mile long single-track motorized trail that is proposed to be changed to non-motorized in Alternative C. This would support soil and water goals.

- **Elk Mountain 147 –** Is a 3.5 mile single-track motorized trail that accesses the Elk Mountain Ridge trail. No changes are proposed.

- **Warm Springs 148 –** Is a 3.4 mile long single-track motorized trail that takes off from the South Fork of Bear Creek trail to access the Elk Mountain trail. No changes are proposed.

- **Five Pines 157 –** Is a 1.8 mile single-track motorized trail located on the ridge up to Little Elk Mountain. ATVs have pioneered this trail most of the way to the top. No changes are proposed but law enforcement may be required. No resource damage is occurring.

- **Big Springs 159 –** Is a 3.4 mile long non-motorized trail that takes off from the Jensen Road and is used by horses and foot travel. No changes are proposed and no resource concerns are evident.

- **Landslide 161 –** Is 2.2 miles of non-motorized trail that located along Landslide Creek. No changes are proposed and no resource concerns were identified.

- **Antelope Creek 166 –** Is a trail 1.4 miles long that is currently open to ATVs and has been pioneered up through Antelope Creek. Alternative C proposes to close this trail to motorized use and leave it open to horse and foot travel. This action would improve soil and water

resource conditions in this area. Law enforcement would be necessary.

- **Nelson Creek 167 –** Is a 1.8 mile long ATV trail that accesses the Hoffman Campground and is in good condition. Use has lead to pioneering of other trails in the area. Alternative B proposes to close this trail to all uses which would benefit soil and water resources.

- **Van Point 197 –** Is 5.8 miles of non-motorized trail that takes off from the Bear Creek road to access Van Point. No changes are proposed for this trail and it is in good condition.

- **Little Current Creek 199 –** Is 1.4 miles of non-motorized trail that is proposed to be closed in Alternative C due to non-use. It is difficult to find this trail and it receives little use. It is currently covered with shrubs and is healing on its own.

- **Red Ridge Repeater 208 –** Is a 0.4 mile long single-track motorized trail that is proposed to be converted to non-motorized in Alternative C. This is a dead end trail at the repeater.

New Trail Proposals

- **Nelson/Blacktail Trail NT1/DP1 –** Is a 2.0 mile long ATV trail proposal in both Alternative B and C. This is a user-created trail that is well located except for three stream crossings that should be redesigned. Also, 0.5 miles of the trail needs to be reconstructed. The rest of the trail is in good shape and causing little or no problems.

- **Squaw Creek NT2 –** Is 3.5 miles of single-track motorized trail that is proposed in Alternative B. This trail has been pioneered by motorized vehicles and a tread currently exists. Some areas (1.5 miles) would need to be relocated to make it a system trail.

- **Willow/Beaver NT3/DP3 –** Is 3.0 miles of a new ATV trail that is proposed in Alternatives B and C. This trail would require 1.0 miles of construction and a bridge to cross Fall Creek. The remaining 2.0 miles of this trail would utilize an old non-system road - reducing the impact foot print and improving water and soil conditions. Proper design would mitigate soil and water resource concerns.

- **Hawthorn/McNeel Creek NT4 –** Is a proposed 5.0 mile long new ATV trail that traverses unstable soils and would require 1.5 miles of construction. On-site evaluations noted many landslides in the area of the proposed trail and maintenance may be a concern.

- **Patterson Creek NT9/DP4 –** Is 1.0 miles of new ATV trail construction that would follow the forest boundary to avoid private property. This trail would be located on gentle slopes and require one stream crossing. It would benefit access to the forest trail system from the west side.

- **Bitters/McNeel Creek NT8/DP5 –** Is 7.7 miles of new trail with two proposals. Alternative B proposes this trail to be constructed as an ATV trail with 4.5 miles requiring new or reconstruction. Most of the northern end of this trail is extremely steep and may require even more miles of construction. Soil and water issues are high erosion potential, sedimentation into McCoy Creek and unstable soils. Alternative C proposes that this trail be an ATV route for 4.0 miles with the remaining northern 3.7 miles for non-motorized use only. This would

require only 0.5 miles of trail reconstruction and be more in line with soil and water concerns.

- **South Fork Fall Creek/Fall Creek Road NT5 –** This is Alternative B's proposal for a new single-track motorized trail of 1.0 miles in length. This trail would require 0.5 miles of reconstruction along Fall Creek so motorcycles would not have to travel on the main road. Soil and water concerns are sedimentation into Fall Creek from the trail.

- **Antelope Creek Rd to Ballys Hole NT6 –** Is a new 0.5 mile long ATV trail proposed in Alternative B that has been pioneered and currently exists. No soil and water concerns. d trail in Alternative B that would only require 0.5 miles of reconstruction. Erosion is the primary concern that could occur from this trail.

- **Tag Alder Convert Road to Trail R280 –** Is 1.0 miles of road that would be converted to an ATV trail in Alternative B. This road accesses a gravel pit. Beyond this point ATV travel is proposed to access ATV trail #255. No soil and water concerns.

- **Trail Creek –** Close a 1.0 mile portion of Road #R058 in Alternative B.

- **Calamity/Gravel Flats DP6 –** Alternative C would change 1.2 miles of ATV routes into system trails in the Gravel Flat area below the Dam. These currently exists. No concerns on soil and water - except one crossing on Alder Creek.

- **Lightning Ridge DP7 –** Alternative C proposes to add this existing non-motorized trail to the trail system. No soil and water concerns.

- **Palisades Westshore DP8 –** Alternative C proposes 5.2 miles of new non-motorized trail - of which 2.5 miles would require reconstruction. This trail would parallel the west shore of Palisades Reservoir. No soil and water concerns.

- **Moose Pond DP9 –** In alternative C proposes to add 2.0 miles of non-motorized trail to the travel system. No construction is required. No soil and water concerns.

- **Indian Fork Connector (DP10) –** Alternative C proposes to construct 0.8 miles of new ATV trail in the Indian Fork area to avoid private land and maintain access to trail #157. No soil and water concerns except at stream crossings.

- **North Fork Bear Creek By-Pass DP11** – Alternative C proposes to add 1.0 miles of single-track motorized route by construction. No soil and water concerns.

- **Lone Pine Road DP14 –** Alternative C proposes to obliterate and rehabilitate this road. No soil and water concerns.

- **Rash Canyon Road DP15 –** Alternative C proposes to change the travel plan designation from a road (FS Road #170) to an ATV trail. This change would benefit soil and water resources including water quality of listed 303d streams by reducing impacts caused by full size pickups and jeeps. There are several stream crossings in this canyon that need to be redesigned.

- **Blacktail Canyon Road DP16 –** Alternative C proposes to change the travel plan designation from a road (FS Road #066) to an ATV trail. This change would benefit soil and water resources including water quality of listed 303d streams by reducing impacts caused by full size pickups and jeeps. No stream crossings are required.

Issue 3 - Wildlife

Wildlife Associated with Aquatic and Riparian Habitats

Wildlife management indicator species (MIS) for aquatic and riparian wildlife in the Caribou Range Mountains Subsection include bald eagles, trumpeter swans, spotted frogs, common loons and harlequin ducks. Table III-10 in the Revised Targhee Forest Plan (RTFP) FEIS (page III-35) illustrates the distribution of these species and their habitats by subsection. These five species are also classified as Intermountain Region (R4) Forest Service "Sensitive" Species as well as MIS. Additionally, individual bald eagles and their nests are protected by the Eagle Act as well as by the Migratory Bird Treaty Act which is administered by the US Fish and Wildlife Service.

- **Bald Eagle**

  Southeast Idaho and Forest Population Overview – As of 2009, a total of 75 nest territories were reported for the Idaho portion of the Greater Yellowstone Ecosystem (GYE). In the Snake Unit portion of that 55 territories, and in the Continental Unit 20 territories were reported (Whitfield, et al 2009). The Snake Unit includes Palisades Reservoir and South Fork of Snake River northward to include the lower Henry's Fork of Snake and Teton Rivers. Out of the 55 territories that are monitored in the Snake Zone there are 10 territories which over lap with the Caribou Range Mountains Subsection Project Area on or close to Palisades Reservoir. Additionally, another two nest territories overlap the subsection along the river from Palisades Dam to Swan Valley Bridge.

  This Forest population falls within the Greater Yellowstone Bald Eagle Management Zone as outlined in the Pacific States Bald Eagle Recovery Plan (USFWS 1986). All Recovery Plan goals have been exceeded by the current bald eagle population. In July 1999, the USFWS proposed to remove the bald eagle from the Endangered Species Act (ESA) because the data indicated the species had recovered (Federal Register 64(128):36453-36464). On July 9, 2007 the USFWS removed the bald eagle from the federal list as being threatened (Federal Register Vol. 72, No. 130: 37346-37372), and it is now listed as a Forest Service Sensitive Species in the Intermountain Region, R4.

  Bald Eagle History & Recovery – The historical decline was caused by an accumulation of effects. In early US history they were common, but negative factors included competition with people who hunted and fished, and eagles were regularly shot or displaced along rivers and lakes. In Alaska alone it is estimated that 100,000 birds were killed from 1917 to 1953 by competing fishermen. By the late 1800s the population had declined sharply and by 1930s law-makers got involved.

  In 1940 the federal Bald Eagle Protection Act was passed to reduce harassment, but increasing pesticides in the environment continued to impact population growth. By 1960s and 1970s many States had protective laws and in 1967 bald eagles were endangered under a

federal law pre-dating the 1973 ESA. On July 4, 1976 it was listed as "endangered" under the current ESA law. In July 1995 they were downlisted to threatened status (IDFG 2009; Rutledge 2009; USDI, FWS 2009), and in 2007 were delisted.

Current Mortality Factors – Overall, mortality factors are much reduced compared to the past. Cumulative effects continue to be documented at different levels for bald eagle deaths and still include gun shot wounds (vandals, feather hunters, blackmarket, fishermen), electrocution, lead poisoning from eating wounded game, poison bait left for predators, pesticides, collisions with vehicles while scavenging roads, starvation when food is scarce and "disturbance" by human activities and construction (IDFG 2009; Rutledge 2009; USDI, FWS 2009).

Disturbance Factors and Timing (from USFWS Bald Eagle Website) - Human activity can disturb, and at least temporarily, displace bald eagles which can cause mortality. Birds in the nesting season are more sensitive to disturbance than migrating or wintering eagles. The most "critical time period" is courtship and nest building which for the Palisades Reservoir birds is about February and March. Egg-laying, incubation and hatching is about March to May and this is a "very sensitive" period (USDI FWS 2010; sensitivity guides). The rearing and fledgling period is about May to early August on the reservoir.

In terms of observed timing, Miller (Whitfield et al 2009) reported seeing adults in apparent incubating posture on the Edwards Creek nest (18-IS-17) on the west side of Palisades Reservoir on April 5, 2009. Later, on June 15 she saw young moving on this nest. Then, on June 28, Whitfield observed 2 large nestlings on the nest (Whitfield et al 2009; annual report).

Sensitivity also varies among individuals within each phase. Some pairs, for example, nest successfully near human activity, while others abandon nest sites in response to activities much farther away. This variability may be related to a number of factors, including visibility of the activity, its duration and noise level, extent of the area affected by the activity, the eagle pair's prior experiences with humans, and tolerance of the individual nesting pair. Despite this variability, the sensitivity of bald eagles can be generally described within each nesting phase. Refer to USFWS bald eagle "disturbance" sensitivity website (USDI FWS 2010).

During the "very sensitive" egg laying and hatching periods, human activity of even limited duration, may cause desertion and abandonment. Adults are less likely to abandon the nest near and after hatching. However, flushed adults leave eggs and young unattended, and eggs are susceptible to cooling, loss of moisture, overheating, and predation, and young are vulnerable to the elements (USDI FWS 2010). Chilled or overheated eggs will die as will young hatchlings which lack homeothermic (heat control) capability. This can be hard to detect, but would be suspected in areas with human disturbance factors. An eagle pair which was active earlier during the nest building phase, but then abandoned, is a possible indicator of disturbance.

When nestlings are about 4 to 6 weeks old they are only "moderately sensitive" to disturbance. The likelihood of abandonment and vulnerability of the nestlings to elements gradually decreases. However, nestlings miss feedings, which may affect their survival, or prematurely leave the nest due to disruption (USDI FWS 2010).

Summer Season: Nestlings older than 8 weeks old on to the fledgling (flight) stage in the summer season are again in a "very sensitive" period and at higher risk for mortality. While gaining flight capability, nestlings 8 weeks and older may flush from the nest prematurely due to disruption and die (USDI FWS 2010). During this June – August period this would be to the ground or water where they are vulnerable to predators or drowning.

Caribou Range Mountains Subsection Nest Sites and Territories – There are 12 nest territories in this project area. They include King Creek near and west of the Salt River on the south end. Going north along the west shore of Palisades Reservoir there is Burns Creek, Trout Creek, Hoffman East, Hoffman West/ McCoy Creek, Williams Creek, Sulfur Bar Creek, Edwards Creek, Van Point South and Van Point North. Below Palisades Dam there are the Palisades and Swan Valley nests making a total of 12 territories on or overlapping the Caribou Range Mountains Subsection. This project deals with the current and newly proposed trails, both motorized and non-motorized, and not roads.

The King Creek territory overlaps with the existing Hawthorne Hollow non-motorized non-system trail (has no trail number). This nest site is about 400 feet or less from the trail with forested habitat in between. Northward there are four other nest Zone I territories to McCoy Creek. Except for Trout Creek, these nest sites lie between FS road #087 and the reservoir shoreline (Burns, Trout, Hoffman East, McCoy). There are no trails being proposed with this project within these four Zones, but there are other human activities near and adjacent to the nests including FS road 087 use, camping along the shore, Hoffman Summer Homes and McCoy Creek Campground.

North of McCoy Creek to the Landslide Creek mouth along the west shore are three more nest territories (Williams, Sulfur Bar, Edwards). At Williams Creek, a new non-motorized "system" trail segment (Alternative C- #DP8; previously a horse trail used about 40 years prior) is proposed along the west shore of the reservoir. It will overlap with the Williams Creek Zone I area. Going northward along the shore this same trail segment (#DP8) will run closely adjacent to the current Sulfur Bar nest and Edwards nest site and thus within the Zone I areas for each of these breeding pairs. The need for a new trail will end at the mouth of Landslide Creek where the existing FS trail #197 begins.

Trail #197 continues northward from the Landslide Creek mouth along the reservoir shoreline to Van Creek and cuts across Van Point to the mouth of Bear Creek. The existing FS trail #197 is about 0.7 miles west of the current Van Point South nest site, and about 0.5 miles west of the Van Point North nest site.

E**agle Act (USDA, FWS 2009)** – It is important to understand the current legal environment after the 2007 delisting. The Bald and Golden Eagle Protection Act (1940) with amendments provide for protection of individual eagles. As recently as the fall of 2009 the final rule was published by the FWS in the Federal Register, and USDA, Forest Service issued a letter (USDA FS 2009; Nov '09) to guide protection of individuals and site specific nest production. The FWS announced the final rule on two new permit regulations which allows for the take of eagles and eagle nests under the Eagle Act. The final rule was published September 11, 2009 (USDI FWS 2009).

Bald Eagles were removed from the endangered species list in 2007 because their populations

recovered sufficiently. However, the protections under the Eagle Act continue to apply. When the Bald Eagle was delisted, the Service proposed regulations to create a permit program to authorize limited take of Bald Eagles and Golden Eagles where take is associated with otherwise lawful activities.

When requested by a proponent a permit will authorize limited, non-purposeful take of Bald Eagles and Golden Eagles; authorize individuals, companies, government agencies (including tribal governments), and other organizations to disturb or otherwise take eagles in the course of conducting lawful activities such as operating utilities and airports. Most permits issued under the new regulations will authorize "*disturbance"*. In limited cases, a permit may authorize the physical take of eagles, but only if every precaution is taken to avoid physical take. Removal of eagle nests would usually be allowed only when it is necessary to protect human safety or the eagles.

Population information will guide the Service in determining how many permits may be issued in any local FWS region, including other types of permits the Service has already issued. Priority is given to Native American requests, and permits may not be available in all locations, such as the southwest US where the population is low. Once a permit is issued to "disturb" a specific bald eagle or nest, there are monitoring requirements that relate to the local quota (USDI FWS 2009; permit website).

Revised Targhee Forest Plan (RTFP) - Nest sites and territories in the Caribou Range Mountains Subsection project area are managed by the forest-wide standards and guidelines for bald eagle habitat as shown in the Forest Plan (RTFP 1997; III-18,19). Direction which would related to this project may include items: 1A, 1B, 1C, 1D, 1E, 1G, 2, 4, and 5. Most of these standards and guides apply as related to human and recreation activities which may disturb bald eagles or production in Zones I, II or III during the spring and summer season, as well as migration and winter.

West Side of Palisades Reservoir – All nest sites on the reservoir are located on the west side where northeast facing conifer forest are predominant. Large trees, primarily older Douglas-fir, provide nest sites near the shoreline. In regard to the Caribou Summer Travel Plan Amendment being proposed here, Alternative C calls for the old horse trail on the west side of Palisades Reservoir to be rebuilt from Williams Creek northward to the mouth of Landslide Creek. Refer to Alternative C map. Alternatives A and B do not propose to rebuild the old trail. It is estimated that the proposed Alternative C trail has not been maintained since the 1960's. If rebuilt, this trail will pass close by three active nest trees: Williams Creek, Sulfur Bar and Edwards territories. Whitfield (2010) reported that in 1980 there were plans to rebuild this old trail section along and above the reservoir shoreline (see Alter. C map), but the proposal was dropped to protect nesting bald eagle territories there. At that time the bald eagle was federally listed as an endangered species.

- **Trumpeter Swan**
  From less than 200 birds in 1930, the Rocky Mountain Population increased to about 507 birds in the US breeding segment of the Rocky Mountain Population in 2006 (US Fish and Wildlife Service, Trumpeter Swan Survey of the Rocky Mountain Population, Fall 2006, page 2).

Table III-10 (Forest Plan FEIS, RTFP 1997) indicates that the Caribou Range Mountains Subsection shows suitable habitat for Trumpeter Swans, but "no birds have been documented". This is not correct as there are both foraging birds, and in recent years, nesting swans as well in this subsection.

A nesting pair is currently documented in the south end of the Caribou Range Mountains Subsection at the Alpine Wetland Complex (upper end of Palisades Reservoir). This wetland area will continue to be closed to motorized use and no new trails are proposed here under any of the project alternatives. Swans do occur on the reservoir and along the reservoir shorelines. They also occur in good numbers on the South Fork of the Snake River below Palisades Dam along the Caribou Range Mountains Subsection border during the winter. No summer system trails are being proposed along the river banks. Under Alternative C, non-motorized trail #DP8 is proposed on the west side of the reservoir. See discussion of this trail above under Bald Eagle.

- **Spotted Frog and Boreal Toad**
  Surveys conducted in 1992 and 1993 documented spotted frogs in five of the seven subsections of the Targhee National Forest. The Caribou Range Mountains Subsection did not have documented presence but suitable habitat exists. Boreal toads have been found in the Caribou Range Mountains Subsection at Brockman and Alpine Wetland (Alford 2010).

- **Common Loon**
  While the Forest Plan FEIS identified the Caribou Range Mountains Subsection within the distribution range of the loon, it did not identify any potential breeding areas (RTFP-FEIS III-35). Migrating loons are seen on the Palisades Reservoir during the spring migration period, and are on rare occasion seen on the South Fork of Snake River. No nesting habitat is known or suspected in the project area. Palisades Reservoir has too much fluctuation in water level to support nesting loons.

- **Harlequin Ducks**
  Harlequins migrate inland from the ocean to nest along swiftly flowing mountain streams in eastern Idaho and western Wyoming which is at the southern end of its breeding range in the western US. Healthy macro-invertebrates in the stream are important. They have a strong site affinity and return to the exact locations each year. They are also very sensitive to disturbance. Groves (1998; pers. comm.) indicated that if a harlequin can see you it is disturbed. It is probable that historical human use from pioneer times has reduced nesting on the Forest. Nesting populations are known on the Palisades and Teton Basin Ranger Districts and Grand Teton National Park. The closest nesting from the project area is about seven miles away on tributaries to the South Fork of Snake River and Palisades Reservoir.

    - **Bear Creek** – The portion of Bear Creek in the project area was surveyed in 1990. The surveyed portion is suitable for nesting, but the rating was low, and no ducks were found (Atkinson and Atkinson 1990). The upper portion of the South Fork of Bear Creek in the project area would provide less suitable nesting habitat, because it is even narrower than the middle portion surveyed by Atkinson and Atkinson (1990). There is no indication that the lower elevation (wider) portion of Bear Creek toward the mouth with Palisades Reservoir (which is a more suitable width for nesting) was surveyed.

- **McCoy Creek** – Ducks were reported on McCoy Creek in 1989 (Cassirer and Groves 1990). Atkinson and Atkinson (1990) reported birds on McCoy Creek, but habitat was classified as marginal for various reasons including human disturbance. Surveys in years since (2003) have found no birds (Keysor 2004; pers. comm.). Nest producing birds are found on other tributaries of the Snake system in the immediate region so the possibility always exists that they may occur.

There is no known documentation of ducks in the proposed project area other than those described above.

Management Direction: RTFP Forest Plan direction (USDA 1997) says to avoid establishing new trails, new roads, or new recreation facilities within 300 feet of any stream reach with documented harlequin duck breeding activity.

Wildlife Associated with Terrestrial Habitats

Wildlife management indicator species (MIS) for the Caribou Range Mountains Subsection include: Rocky Mountain Elk, Gray Wolf, Northern Goshawk, Canada lynx, Three-toed Woodpecker and other cavity nesters, various owls, and various furbearers. Table III-16 (RTFP - FEIS, page III-50) lists these species and illustrates their distribution across this subsection. This table indicates that verifiable sightings, documented suitable habitat or unverifiable, but reliable sightings exist for all management indicator species associated with terrestrail habitats within this subsection. A brief overview of these species and habitats follows. Additional information for these species and other wildlife species is available in the RTFP - FEIS (pages III – p.47-70), the Caribou-Targhee National Forest Plan Monitoring and Evaluation Report 1997-2004 (various pages), and Process Paper D. Other "MIS Habitats" are considered including Elk and Deer Winter Range, Big Sagebrush/ Grassland Habitat, and Special and Unique Habitats.

Additionally, other terrestrail species not already listed have special consideration as Forest Service Sensitive Species, but are not designated as Targhee MIS species, however most are also selected as MIS. They are all shown below.

- **Elk (MIS)**
  Rocky Mountain Elk is a management indicator species for big game under the Revised Targhee Forest Plan (USDA 1997). Elk are a key species managed by the State for hunting, and the Caribou Range Mountains Subsection project area is primarily within Idaho Game Hunt Unit 66. Additionally, Hunt Unit 69 is at the northwest corner of the Subsection and Unit 66A is at the south end adjoining the Wyoming stateline near the south end of Palisades Reservoir. Units 66, 66A and 69 are referred to as the Tex Creek Zone. The very southeast part of the Caribou Range Mountains Subsection has a small portion in Wyoming at the mouth of McNeel Creek and at Alpine Wetland area. These areas contain some of the most important big game winter range on the Palisades Ranger District along with important summer range (USDA 2001 and 2003; WS Analyses).

  The elk population using the Caribou Range Mountains Subsection during the warm season will spend the winter months in the Tex Creek Wildlife Management Area (WMA) and in the designated Fall Creek winter range in the north end of the Caribou Range Mountains Subsection. In the fall season elk migrate across the project area toward the Tex Creek WMA

winter area providing a popular hunting opportunity for hunters from Idaho Falls and the Upper Snake River Valley. Elk also use the winter ranges on the south-facing slopes of the National Forest in the Fall Creek basin. The closeness to the urban center in East Idaho often creates heavy hunting pressure in the Subsection. IDFG (2010; newsletter) estimates around 4000 elk in the Tex Creek winter range, with a calf cow ratio of 43:100. IDFG (2010; PR) objective for the Tex Creek Zone is to winter 2000-3000 cows and 425-625 bulls, of which 250-350 will be adult bulls. The most recent surveys (2006-2007) indicate that cows are within the objective and bulls are above the objective (IDFG 2010; PR).

Elk habitat quality is often measured in two ways; elk vulnerability (EV) and elk habitat effectiveness (EHE). EV is a measure of bull elk susceptibility to being harvested during the hunting season. EV is measured using two parameters: Hunter-day densities and motorized trail and road densities. Hunter-day density is controlled by the State of Idaho Department of Fish and Game and is not analyzed in this document. Instead motorized trail and road densities and impact on elk vulnerability is displayed using GIS techniques shown in Appendix I per Anderson 2009).

Using the analysis by Anderson (2009) the existing condition of elk security habitat is illustrated in Alternative A, Figure 3.2, Appendix M. Note the current condition (Alternative A Figure 3.2) illustrates 47 habitat security area polygons with the smallest being less than 715 acres (26 polygons) and these will have the highest EV. Six habitat security polygons exceed 3350 acres each in the current condition (Alternative A). Elk are protected the most in these larger habitat areas and the vulnerability (EV) will be the lowest in them. There are also 15 polygons in the intermediate sizes ranging from 715 to 3350 acres as shown in Alternative A - Existing Condition, Figure 3.2.– Existing condition of security habitat in the Caribou Range Mountains Subsection showing the currently approved motorized trails and roads in the 2001 Palisades Ranger District Travel Plan. Largest “green” polygons represent the most security elk habitat in the subsection. (Figure from Anderson 2009; Alternative A, Appendix M.

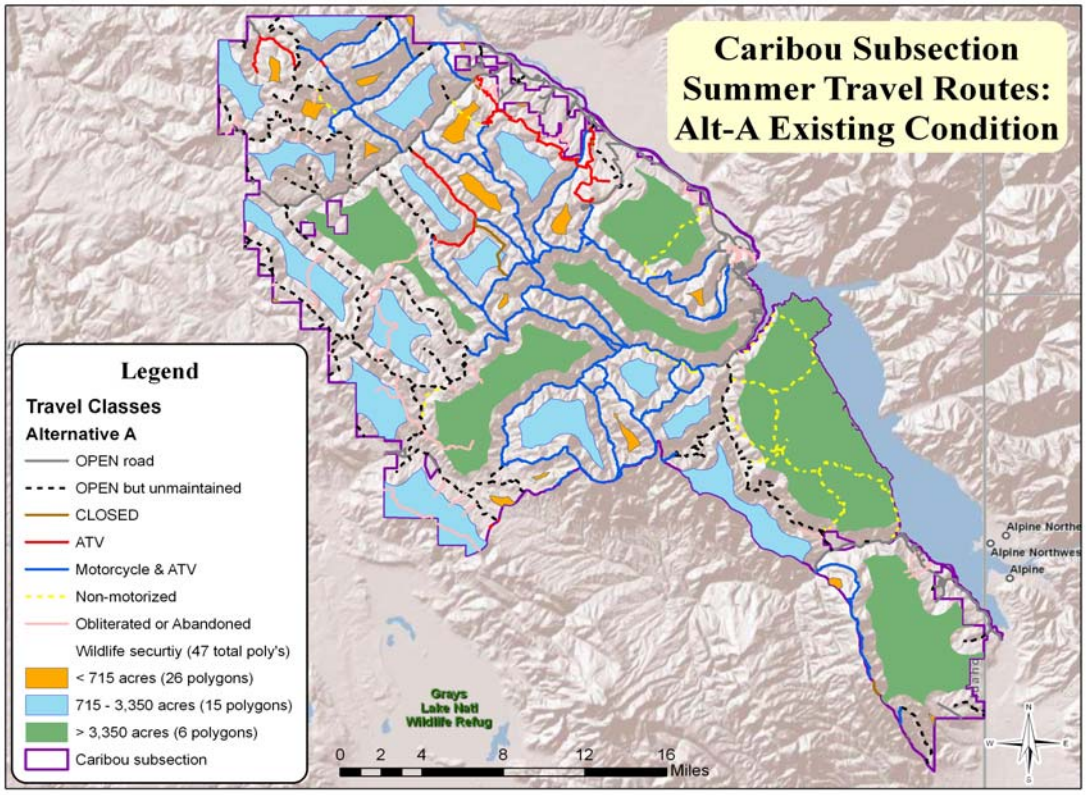

Figure 3.2 – Existing condition of security habitat in the Caribou Range Mountains Subsection showing the currently approved motorized trails and roads in the 2001 Palisades Ranger District Travel Plan. Largest "green" polygons represent the most security elk habitat in the subsection. (Figure from Anderson 2009; Alternative A, Appendix M).

EHE is the percentage of available habitat that is usable outside of the hunting season. The closer this figure is to 100 percent, the higher the quality of elk security habitat and its ability to retain elk. This is measured using two parameters: Elk hiding cover and motorized trail and road densities. Elk hiding cover is not being measured in this analysis, but was estimated for the Subsection in USDA 2001 and USDA 2003 (Fall Cr. & Bear Cr. Watershed Analyses available at Caribou-Targhee Forest website: http://www.fs.fed.us/r4/caribou-targhee/watershed/anaylsis_index.shtml). The hiding cover estimate was from 33% (Fall Cr.) to 47% (Bear Cr.). Motorized trail and road density is presented in Table 2.3 in Chapter 2.

Using the analysis by Anderson (2009) the existing condition of elk security habitat also reflects the EHE present in the Subsection. This is illustrated and discussed above for EV in the Alternative A figure; Append. I). EHE values will be the highest, approaching 100 percent, in the six largest polygons over 3350 acres in size. For example the largest security habitat polygon is the Poker Peak area on the west side of Palisades Reservoir and it is currently non-motorized. It's no surprized that for the Caribou Range Mountains Subsection this is one of the most popular hunting areas along with the Bear Creek drainage polygons and Black Mountain polygon which are also limited in motorized trail use.

Caribou Range Mountains Subsection Elk Studies – Radio-collared telemetry studies of elk from the adjacent Tex Creek Wildlife Management Area (WMA) have been conducted

over the past three decades in the Caribou Range Mountains Subsection project area. These studies (Brown 1982, Thomas 2001, Atwood 2009, 2010) provide data of elk using the Caribou Range Mountains Subsection project area in relation to habitat factors such as motorized route density. The l978-1980 IDFG data (Brown 1982) indicated elk wintering at Tex Creek WMA spent the summer in Units 66A (56%) with the rest going to Units 66 (19%), 69 (16%) and 76 (9%). About 81% moved through the Caribou Range Mountains Subsection project area to other more non-motorized areas.

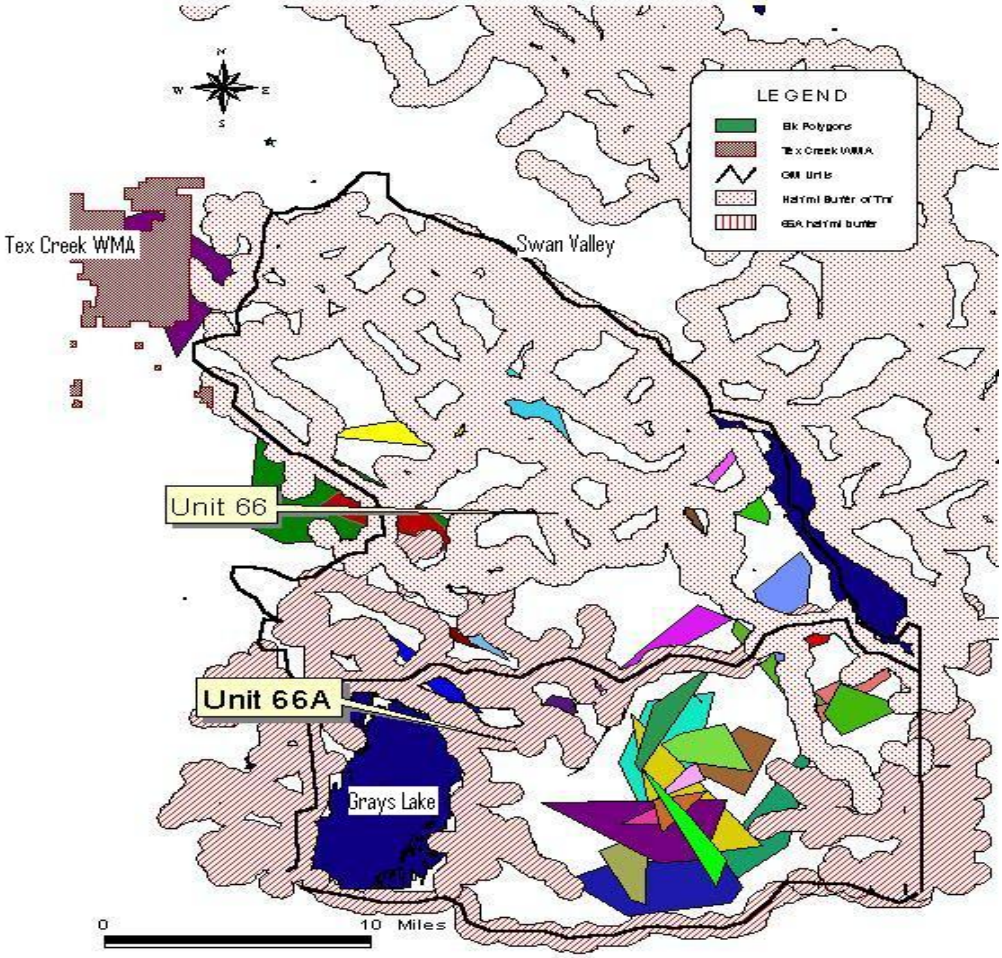

Figure 3.3 – Map data illustrated here were collected by Idaho Dept. of Fish and Game in 1998-2000 (Thomas 2001) and results were similar to that reported in Brown 1982 and again by Atwood (2009, 2010) in that elk radio-collared at the Tex Creek WMA sought out the more remote Caribou Mountain roadless area in Unit 66A.

The Brown (1982) work was duplicated in l997-1999 with results showing a similar trend in distribution and movement with most elk passing through the Caribou Range Mountains Subsection (Unit 66) in the spring going to summer range in the more remote and non-motorized area near Caribou Mountain in Unit 66A as shown in the 2001 figure (Thomas 2001). More information on the Brown (1982) and Thomas (2001) studies can be found summarized in the Fall Creek Watershed Analysis document (USDA 2001) and the Bear Creek Watershed Analysis document (USDA 2003; http://www.fs.fed.us/r4/caribou-targhee/watershed/anaylsis_index.shtml).

The IDFG Atwood research in 2007 and 2008 focused on competition between elk and mule deer in the Tex Creek Zone and Caribou Range Mountains Subsection area (Atwood 2009; thesis). Data from the radio-marked elk during this period (IDFG 2010; database) are plotted on the map figure shown in relation to roads and motorized trails on Caribou National Forest (USDA 2010; GIS database), and this motorized layer (Alternative A map) represents the motorized use at the time radio-marked elk were present in 2007-2008.

Atwood (2010; personal communications) also reported that GPS radio-marked elk data indicated a strong correlation between elk movement at the beginning of elk gun season in October to the end of November when the hunts end. Data show that elk in the Caribou Range Mountains Subsection will move three miles or more from motorized routes during this season.

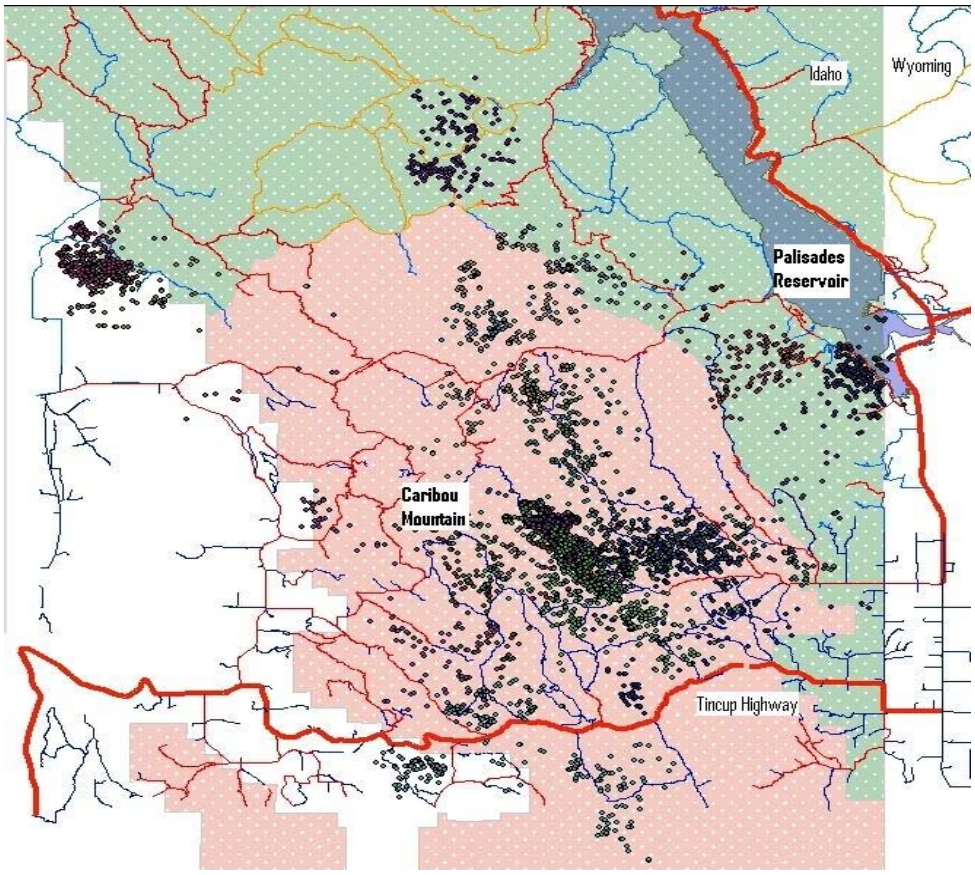

Figure 3.4 – Black dots show radio-marked elk wearing GPS collars from June 1 to September 30 in 2007 and 2008 during the Idaho Dept. of Fish and Game Atwood Study in the Tex Creek Zone (Game Units 66, 66A and 69). The Caribou Range Mountains Subsection project area is the "green" area west and northwest of Palisades Reservoir. Roads and Trails: Red are roads; Yellow are motorized trails; and Blue are non-motorized trails.

Idaho Fish and Game Objectives: The objective for the Tex Creek Zone have been met or exceeded with over 4000 elk counted and reported. The cow/calf ratio is good at 43:100. The goal to winter up to 625 bulls and 3000 cows in the zone is being accomplished. Bulls are reported above the objective and increased hunter opportunity is being offered (IDFG 2010; newsletter and progress reports).

- **Gray Wolf (MIS, Sensitive & Endangered)**
  Currently (2010) the gray wolf has been re-listed as a Federally listed experimental non-essential endangered species. However in March 2011 an agreement was made, pending court approval, between litigating parties (including the US Fish and Wildlife Service) to allow interim delisting of the gray wolf in the states of Idaho and Montana as it was in 2009 (USDI FWS, 2011). This project is in Idaho with a small part in Wyoming, and it falls within the Yellowstone Wolf Recovery Area which is part of the Northern Rocky Mountain (NRM) wolf population. At the end of 2009 there were at least 1,706 wolves in 242 wolf packs (115 breeding pairs) in the NRM population. Recovery objectives are currently exceeded in the Yellowstone area with 455 wolves. By all measures the NRM wolf population is biologically recovered. Prior to re-listing in 2010 hunting seasons were conducted by State Fish and Game Departments.

  Fall Creek Basin - As of 2008 there was one "unofficial" pack in Fall Creek basin in the proposal area, but no established packs or breeding pairs ever qualified under the FWS definitions by the end of the year. A black female was suspected of denning in Fall Creek for two years. By the fall of 2008 upwards to 8 wolves had been removed by USDA, Wildlife Services (6 removed fall '08) for depredations on livestock. In February 2009 a lone wolf track was detected on Road 376 in Fall Creek during a RTF Plan Furbearer transect run. No denning activity is currently reported here.

  Surrounding Area - Four packs have been documented with ranges that include portions of the Targhee Zone, two of these packs have produced pups, and at least one den site was located on the Forest. Because they are all around the proposed project area, future and current wolf occurrences in the Caribou Subsection are probable. In 2007 tracks of a lone wolf was detected on a District furbearer transect at Calamity in the subsection. Other tracks and individual wolves and small groups continue to be reported on and near the District and subsection, but no confirmed packs have re-established as of the end of 2010 (Alford 2010 and prior). Depredation has occurred on dogs and domestic sheep as recently as 2009 on allotments in the Palisades Backcountry managed by the District.

- **Canada Lynx (MIS, Threatened)**
  This proposal is outside any designated Lynx Analysis Unit (LAU). All of the Caribou Range Mountains Subsection is managed under the amended Revised Targhee Forest Plan (1997), and is classified as "lynx linkage" habitat for traveling animals. The Northern Rockies Lynx Amendment (NRLA) amended the RTFP in 2007 and has the management direction for lynx habitat on the Caribou-Targhee National Forest.

  No dens are currently known on the Palisades Ranger District. The closest known active den was about 25 miles east on the Bridger-Teton National Forest in about 2001. A confirmed lynx sighting was reported in 1999 about 12 miles away in the Big Holes Subsection, and there have been other unconfirmed reports of lynx in the recent decade in the Big Hole Mountains as well as in the Caribou Range Mountains Subsection (lower Fall Creek). Historical evidence indicates that lynx were trapped on and near the Caribou National Forest to the south - about 20 miles from the subsection - as late as the 1960s (Lewis and Wenger 1998). Lynx hair studies in the Big Holes about 7-10 years ago showed no lynx hair hits. The closest positive lynx hair snare with DNA was about 32 miles away on west slope of Tetons east of the Big Hole study area.

"LINK" objectives, standards or guidelines in the 2007 NRLA are applicable to "Linkage Habitat" to provide habitat protections measures as necessary (ROD, Attachment 1, page 8). The primary focus for the Caribou Range Mountains Subsection designation for lynx is to provide suitable and capable "linkage habitat" for traveling lynx through a suitable habitat corridor. This has been happening near the south end of the Caribou Range Mountains Subsection for radio-marked lynx dispersing from the Colorado transplant project as they have moved northward through the area in recent years, as recently as this winter (2010) as documented by the Colorado Division of Wildlife (Berg 2010).

The three factors which affect lynx are snow compaction, denning and security habitat, and habitat fragmentation from motorized roads and trails. The project area is not managed for lynx denning habitat, but in terms of lynx "linkage" habitat management focuses on providing mid to late-seral plant stages for traveling cover. The NRLA does not consider motorized trails in the standards and guides, but does discuss impacts caused by removing vegetation and by larger travelways such as highway construction.

The "ALL" objectives, standards or guidelines in the 2007 NRLA are also applicable to "Linkage Habitat" as well as LAUs to provide habitat protections measures as necessary (ROD, Attachment 1, page 1). Objective ALL O1 is to maintain or restore lynx habitat connectivity in and between LAUs, and in linkage areas. Standard ALL S1 states that new or expanded permanent development and vegetation management projects must maintain habitat connectivity in an LAU and/ or linkage area, and Guideline ALL G1 indicates that methods to avoid or reduce effects on lynx should be used when constructing or reconstructing highways across federal land.

- **Grizzly Bear (MIS, Threatened)**

  - **Listing Status** - In 2007 the US Fish and Wildlife Service determined that the Greater Yellowstone Area (GYA) grizzly bear population had recovered from a low of 136 in 1975 to 500 in 2006, and it was removed from the federal list as a threatened species. In September 2009 following litigation the Federal District Court issued an order enjoining and vacating the delisting (USDI FWS 2010). In compliance with this order, the Yellowstone grizzly population is once again a threatened population under the Endangered Species Act. As of 2010 it was also identified by the Fish and Wildlife Service (USDI FWS 2010; species list) that federal projects in Bonneville County, Idaho fall within ESA Section 7 consultation procedures. All of the Caribou Subsection project area is within Bonneville County. However, the Caribou Summer Travel Plan project is outside any designated grizzly Bear Management Unit (BMU) or the Primary Conservation Area (PCA) around Yellowstone National Park. The Caribou Subsection area is about 30 miles from the PCA.

  - **Management Direction** - The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests, referred to as the Forest Plan Amendment, provided new management direction for grizzly bear habitat when the grizzly bear was delisted in 2007. The 2007 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area (ICST 2007), referred to as the Conservation Strategy, is the scientific basis for the development of the Forest Plan

> Amendment that amended six GYA National Forest Plans, as well as land and resource management plans for other federal land management agencies. The Conservation Strategy was developed to be the document which guided management and monitoring of the Yellowstone grizzly bear population and its habitat upon recovery and delisting. Though the grizzly bear delisting was vacated by the Federal District Court in Missoula on September 21, 2009 in Greater Yellowstone Coalition v. Servheen 07-CV-134-DWM (D. Mt.), the information contained within the Conservation Strategy is still the best available science that can be used to guide grizzly bear management decisions.

The Court's decision negated the most current Forest Plan Amendment for grizzly bear, therefore making the Revised Targhee Forest Plan (USDA 1997; RTFP) the current applicable direction for grizzly bear management on National Forest lands managed under that plan. This would include the Caribou Subsection. To incorporate the best science, the analysis of the effects of this project on grizzly bears is based on direction contained in the Conservation Strategy and the 1997 RTFP. According to the Conservation Strategy the Idaho State Management Plan will govern how bears will be managed outside the PCA once the bear is delisted (again).

Grizzly Bear Conservation Strategy Standards & Guides - The agencies that signed the Memorandum of Understanding Detailing Agency Agreement to implement this Conservation Strategy have agreed to implement regulatory mechanisms, interagency cooperation, population and habitat management and monitoring, and other provisions of the Conservation Strategy as per the details and responsibilities described in the document. Note below the underline "outside the PCA" wording which may apply to this project area. In addition to standards and guides given below refer also to Appendix G, Motorized Access Management Inside and Outside the Primary Conservation Area in the Conservation Strategy (ICST 2007). Table 1 in Appendix G identifies a criteria rule set for securing habitat in a PCA. An exception is made for the Caribou-Targhee Forest in the GYA so that when the standards and guides of the RTFP (1997) are fully implemented and adopted in regard to motorized access management, it will meet the intent of maintaining secure habitat levels.

> ***1. Population levels & monitoring (S).*** Inside the PCA and outside the PCA in biologically suitable and socially acceptable habitats, maintain a recovered grizzly population sufficient to meet management objectives of the Conservation Strategy and state management plans. The Conservation Strategy requires continued monitoring of the standards prescribed by the 1993 Grizzly Bear Recovery Plan and some additional standards. Population standards found within the Conservation Strategy pertain to the total grizzly bear population, number of unduplicated females with cubs-of-the-year, and annual mortality (p.25-37 and Appendix C).
>
> ***2. Secure habitat (S).*** Inside the PCA, maintain the percent of secure habitat in BMU subunits at or above 1998 levels. Projects that change secure habitat must follow the Application Rules (p.39-44 & Appendix F).
>
> ***3. Developed sites (S).*** Inside the PCA, maintain the number and capacity of developed sites at or below 1998 levels, with the following exceptions: any proposed increase, expansion, or change of use of developed sites from the 1998 baseline in the PCA (Figure A-7 in ROD) will be analyzed and potential detrimental and positive impacts on grizzly bears will be documented through biological evaluation or assessment. Projects that change the number or capacity of developed sites must follow the Application Rules (p.42-43, 45 & Appendix F).
>
> ***4. Livestock grazing (S).*** Inside the PCA, do not create new active commercial livestock grazing

allotments, do not increase permitted sheep animal months from the 1998 baseline (Figure A-9), and phase out existing sheep allotments as opportunities arise with willing permittees (p.43,45 & Appendix F).

5. Livestock grazing (G). Inside the PCA, cattle allotments or portions of cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees. Outside the PCA in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, livestock allotments or portions of allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees (p.43,45 & Appendix F).

6. Nuisance bears (S). Coordinate with state wildlife management agencies to apply Conservation Strategy nuisance bear standards (p.59-60).

7. Food storage (S). Inside the PCA, minimize grizzly bear/human conflicts using food storage, information and education, and other management tools.

8. Food storage (G). Outside the PCA in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, emphasize proper sanitation techniques, including food storage orders, and information and education, while working with local governments and other agencies.

9. Winter motorized access (G). Inside the PCA, use local area restrictions to address conflicts with winter use activities, where conflicts occur during denning, or after bears emerge in spring.

10. Food sources (G). Inside and outside the PCA in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the PCA (p.45-52).

11. Habitat Connectivity (S). Inside & outside the PCA, federal land mgmt. agencies will evaluate habitat connectivity for new road construction/reconstruction using NEPA (p.56).

Management Direction derived from Revised Targhee Forest Plan (1997) Standards & Guides:

1. Is the project within the grizzly bear recovery line (or PCA)? If yes, which Bear Management Unit (BMU) and Subunit is it within? (If the project is outside of the recovery line, go directly to item #4.)

2. What is the existing OROMTRD and TMARD on the Targhee NF portion of the BMU and Subunit? (see Forest-wide standard #3 on bottom of page III-24 in the Revised Plan). Will OROMTRD and TMARD be maintained with the project?

3. Which Management Prescription Area(s) is the project within? Discuss in detail how the project relates to applicable standards and guidelines in the Management Prescription(s).

4. If the project is outside of the recovery line (or PCA), discuss any applicable grizzly bear concerns (if any) here. (Note: Outside of the recovery line (PCA), the Revised Forest Plan did not establish any standards or guidelines specific to maintaining grizzly bear habitat.)

5. Are there other site specific concerns which need to be discussed for this project related to grizzly bear habitat? Include additional mitigation measures (any additional mitigation measures should also be included in the NEPA document.)

6. Any other items not included in the above? (Include discussion of cumulative effects if pertinent and not covered in the above.)

Palisades Ranger District Habitat and Occurrence - Currently, about 84-90 percent of females with cubs occupy the Yellowstone PCA and about 10 percent of females with cubs

have expanded out beyond the PCA within the Yellowstone distinct population segment boundary. Grizzly bears now occupy 68 percent of suitable habitat within the PCA boundary and according to FWS may soon occupy the remainder of the suitable habitat (USDI FWS 2009). The expanding population has become more apparent on the Palisades RD within the past 3 years.

Suitable habitat for grizzly bear has been identified by complex models in the GYA including Caribou Subsection project area. Podruzny et al. (2002) used the Mahalanobis distance model (based on known den sites in the GYA and devised by the Interagency Grizzly Bear Study Team) to created maps showing suitable grizzly bear denning habitat. Refer to USDA FS 2004 HMH BA for map showing suitable denning habitat in the GYA and Caribou Subsection area (USDA Forest Service 2001, Podruzny et al. 2002). Merrill et al. (1999) and Merrill and Mattson (2003) used models and maps based on Idaho and GYA grizzly bear and habitat data to reported an area of 493,693 acres (2036 sq.km) around Palisades Reservoir as among the three most suitable grizzly habitats in Idaho and the GYA outside the recovery area (PCA). Features in these models included vegetation types, elevations, slopes, remoteness from humans and mortality factors.

Observations - In fall of 1989 a sow with 3 cubs was confirmed by photographs in the Big Holes Subsection (IDFG CDC 2010 and prior, USDA FS 2010 and prior;database record) and again in the fall of 2007 a radio-marked male was photographed on a bear bait in the same area (Hanauska-Brown 2007). This area was about 9 miles east of a confirmed track set identified by a IDFG Conservation Officer in the Caribou Subsection project area near Swan Valley, Idaho (Merrill 1992). The 1989 bear event caused the IDFG to place a warning to hunters for Hunt Unit 67 on the big game proclamation.

In August 2009 a grizzly was found in the Palisades Backcountry (Big Hole Subsection) about 12 miles from the Caribou Subsection killing 13 domestic sheep (USDA 2010 and prior). Occasional observations have been recorded in the Caribou Subsection with the last confirmed report being in 1992 (Merrill 1992, IDFG CDC 2009 and prior). Other reports in the subsection have come in from about 1987 to 2010 (USDA FS 2010; database; Alford 2010 and prior). At least one report was considered reliable by Idaho Dept. of Fish and Game (Hanauska-Brown 2005). In spring of 2010 a male grizzly was remotely photographed on a bear bait about 7 miles from the Caribou Subsection and within 3 miles of the South Fork Snake River.

The latest report of a sow and 2 cubs was reported in the Caribou Subsection project area by a credible source who works around bears daily (i.e. YNP ranger who had assisted with the grizzly bear program). This was in October 17, 2010 (Aber 2010) and this has been collaborated by unconfirmed reports by other hunters in the same steep, forested and high elevation area (Liss 2010). Currently, there are no known "confirmed" sows with cubs in the Caribou Subsection or District. The October 2010 report discussed above has not been "verified", therefore, no "resident" grizzly bears are considered to be documented in the Caribou Subsection project area. The October 2010 observation is considered "probable" until more evidence can be collected and verified.

- **Big Horn Sheep (Sensitive)**

  Bighorn sheep are not currently known in this subsection, but were here historically (Russell 1965; 1834-43). The closest recent record was a dead sheep found along HW 26 in the late

1980s about one mile from the subsection (Alford 2009). These recent animals are believed to be coming from either the Teton herd on the west slope of the Teton Range or from the Bridger-Teton National Forest Wyoming Range.

- **Furbearer Species and Prey Species**

    - **Wolverine** - Most forest furbearers are found in this subsection. The wolverine (FS Sensitive and MIS) is uncommon and there are documented observations over the years, mostly from radio-marked animals (WCS 2009 and prior) ranging from wolverine denning areas in the Teton Range.

    - **Fisher** - Fisher (FS Senitive and MIS) is rare in the Greater Yellowstone Ecosystem of which this project area is a part, and occurrence here is not known. The closest report was about 13 miles away in the Big Holes Subsection (IDFG CDC 2009 & prior).

    - Marten & Squirrel - Pine marten (MIS) and red squirrel (MIS) are regularly documented on USFS furbearer transects (USDA FS 2009; database). Pygmy Rabbit (FS Sensitive) is not found on Palisades Ranger District nor on the Caribou Range Mountains Subsection . Further information on these species can be found in the RTFP – FEIS (1997), page III-63 and 67, TMR-2006, pages 119-148, and Biological Evaluation (Alford 2010).

- **Bats (Sensitive)**
  Both the Western big-eared bat and Spotted bat have been documented on the Palisades Ranger District (Bybee 2005), but not in the Caribou Range Mountains Subsection . Habitat includes both open and closed forests, particularly riparian, with a mix of dry land plant species, rocks, crevices and cliffs.

- **Avian Species (all MIS & Sensitive)**

    - **Raptors and Forest Owls** - This group includes the northern goshawk, peregrine falcon, great gray owl, boreal owl and flammulated owl. These species are all found in this subsection. Further information on these species can be found in the RTFP-FEIS (1997), pages III 47-70 and Biological Evaluation (Alford 2010), various pages.

  There are five known goshawk territories with nest areas or post fledging family areas in, or adjacent to the subsection, but more are expected yet not discovered. There are six peregrine falcon eyries on or near the Palisades Ranger District, but only one is known on the Caribou Range Mountains Subsection. Both great gray owl and flammulated owl territories are known to be in the subsection and boreal owl is suspected - based on surveys (USDA, FS 2009; database). Trail use (both new and current) within the known nest areas will be considered.

- **Primary Cavity Nester Populations and Habitat (MIS, Sensitive)**
  Cavity nesters are MIS species and are common in the Caribou Range Mountains Subsection proposed project area. The three-toed woodpecker is FS sensitive and is found particularly in burned over "Fire Use Fire" areas such as in Bear Creek (2007) and Flagg Knoll Fire (2008). Further information on these species and on this habitat can be found in the RTFP-FEIS, pages III-61 and 62, TMP-2006 pages 87-91, and Biological Evaluation (Alford 2010).

- **Other Avian Species (Sensitive, Federal Candidates)**

  - **Grouse** - Sage Grouse and Columbian Sharp-tail Grouse are listed as FS Sensitve Species, but not listed as MIS species in the RTFP-FEIS (1997). Sage Grouse is also federally listed as a "candidate" species as is the Yellow-billed Cuckoo (USDI FWS website 2009). Both sage grouse and sharp-tail grouse have been detected on Skyline Ridge (Road #077) and in the Fall Creek Basin (near FS road #376) where some of the new trail proposals are being made. These species will be discussed in the environmental consequences section as well as the Biological Evaluation and assessment for this project to consider any habitat potentially impacted by new trails or reconstruction/ use of current trails.

  - **Cuckoo** - Habitat for the Yellow-billed Cuckoo (Federal Candidate species) is found in the cottonwood bottom along the South Fork of the Snake River managed by the Forest Service in the Caribou Range Mountains Subsection in Swan Valley, ID. It is contiguous with similar cottonwood islands managed by the Bureau of Land Management. Cuckoo habitat is confined to the river corridor, and cottonwood habitat of sufficient size for nesting in side tributaries of the Caribou Range Mountains Subsection is not found. The large acreage of habitat in Swan Valley (up to 250 ac. BLM/FS) was surveyed at least once in 2002 and no detection was made (Reynold 2003; Alford 2010 and prior).

- **Neotropical Migratory Birds and Habitat**
  Forest Data and Natural History: Neotropical migratory birds (NTMB) use all habitats within the project area during the breeding season. The area has nesting habitat for both forest and rangeland birds which winter south of the border in Mexico and beyond. A major percentage of Idaho's 243 breeding bird species are here (Idaho Partners In Flight 2000; Id. Bird Cons. Plan). Of the 119 species of neotropical migrant birds in Idaho, it is estimated that at least 65-70 percent are found there. A study in similar habitats on the Palisades Ranger District found 78 species (Kiene 1998).

  The northern goshawk, peregrine falcon, and flammulated owl are three neotropical migrants which are treated in more detail because they are also FS sensitive species as well as Targhee Forest MIS species. Other than these species no monitoring of migratory bird numbers or diversity has been conducted within the project area, therefore local population trends are unknown. However, by habitat relationship data (Idaho PIF 2000) it can be determined which species are found here. It is estimated by mist netting and trapping of neotropical migrants in east Idaho that birds arrive to the Targhee National Forest summer breeding area about May 10 each year (Carlisle 2007; IBO/BSU surveys).

Idaho Bird Conservation Plan Habitats and Species

- **Lodgepole Forests:** The Idaho PIF Bird Conservation Plan (2000) has not identified any high priority species using lodgepole pine as their primary breeding habitat. However, 31 species breed in lodgepole and five species use it as their primary breeding habitat. Many species with the highest percent population scores (Idaho PIF 2000; Appendices 2 and 3) breed in lodgepole and therefore land resource managers within Idaho have a responsibility to maintain or improve the quality of this habitat. There is a lodgepole forest component in the

project area and it is estimated to be low.

- **Mountain Brush:** This habitat is found scattered among other conifer, aspen and sagebrush types around the project area. The mountain brush habitat includes mesic upland deciduous shrub communities which occur in northern Idaho and warm mesic shrubs which are upland shrublands that occur naturally or are initiated by fire or clearcutting. The warm mesic shrublands include alder, serviceberry, Oregon grape, snowberry, ceanothus, ninebark, chokecherry, rose, currant, willow, elderberry, and spirea. There may also be mountain big sagebrush. This type occurs throughout Idaho. No high priority species use the mountain brush habitat as their primary breeding habitat. There are many acres of mountain brush habitat in the project area and it is estimated to be over 10 percent.

- **Sagebrush Habitat:** This is a high priority habitat for birds in Idaho. There are 13 high priority and target bird species for management in sagebrush in the state and those of most concern are the sage obligate species. There are nine species which use sagebrush as their primary breeding habitat. Many of these are migratory. There are many acres of either tall sage grass/brush habitat and grass/brush in the total landscape area, and it is estimated to be 1/3 or more of the subsection.

- **Aspen Forest:** Clones are scattered throughout the project and are experiencing conifer encroachment which is altering species abundance and biodiversity. The current drought plus associated insects and disease is working to affect this successional balance. Over 30 bird species breed in aspen forests in Idaho, but there are no bird species that occur only in aspen stands. However, some species, for example the Red-naped Sapsucker, Warbling Vireo, Orange-crowned Warbler, Northern Waterthrush, Cordilleran Flycatcher, Blue Grouse, and Ruffed Grouse are particularly attracted to aspen stands for at least part of the year. Goshawk commonly nest in aspen stands and the flammulated owls will nest in aspen snag cavities (Alford 2007; Bandolin 2000 Id. PIF pers. comm.). Aspen provides a deciduous component within coniferous or shrub steppe habitats, increasing plant and animal species diversity. Aspen trees are especially important for cavity nesters because of their susceptibility to heart rot. Thirteen cavity nester species are associated with aspen. The diverse, and often moist understory attracts insects that are important to the insectivores. There are many acres of aspen habitat in the project landscape, and including that which has succeeded to conifer mix is up to 1/4 to 1/3 of the subsection.

- **Riparian Habitat:** This is a high priority bird habitat in Idaho and it is present within the landscape of the project area. Thirteen high priority bird species use riparian as a primary breeding habitat. Of the 243 bird species breeding in Idaho, 113 or 46 percent use riparian for nesting. Many of the other 130 species also use riparian habitat as a source of water, as migration corridors, or for other purposes. Of the 119 NTMB, 68 or 57 percent use riparian habitat. The acres of riparian compared to other habitats discussed are very low, but are the highest use per acre than any other habitat. Human uses in riparian habitat are expected to affect neotropical bird production the most.

- **Low Elevation Mixed Conifer Forest:** This is a broad category PIF habitat which includes Douglas fir as well as other conifer species, and it is found in the project area. Idaho PIF lists 83 bird species that use this habitat as breeding habitat, of which 35 use it as a primary breeding habitat. Nine high priority bird species use this habitat as their primary breeding habitat. These include Lewis' Woodpecker, Williamson's Sapsucker, Dusky Flycatcher, Varied Thrush, Townsend's Warbler, Northern Goshawk, Western Tanager, Sharp-shinned Hawk, and Brown

Creeper. In addition, many of the species with the highest percent population scores (Idaho PIF 2000; Appendices 2 and 3) breed in this habitat. There are many acres of mixed conifer, Douglas-fir, lodgepole and spruce habitat in the project landscape area, and it is estimated to represent up to 1/3 of the subsection.

Management Direction: Migratory birds are not listed as a group in the RTFP (USDA 1997) for analysis, and only a few are federally listed by the FWS or as a FS Sensitive species, however, because of federal direction and the Migratory Bird Treaty Act protections they are discussed.

Executive Order (EO) 13186, signed January 10, 2001, lists several responsibilities of federal agencies to protect migratory birds. Direction includes:

> *1) Support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions.*
>
> *2) Ensure that environmental analyses of Federal actions required by the NEPA or other established environmental review processes to evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern.*
>
> *3) Identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. With respect to those actions so identified, the agency shall develop and use principles, standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the Service. These principles, standards, and practices shall be regularly evaluated and revised to ensure that they are effective in lessening the detrimental effect of agency actions on migratory bird populations. The agency also shall inventory and monitor bird habitat and populations within the agency's capabilities and authorities to the extent feasible to facilitate decisions about the need for, and effectiveness of, conservation efforts.*

Additional direction comes from the Memorandum of Understanding (MOU) between USDA Forest Service and USDI Fish and Wildlife Service, signed and updated December 8, 2008. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the FS and FWS, in coordination with state, tribal and local governments. The MOU identifies specific Forest Service activities for bird conservation, pursuant to EO 13186. The updated MOU includes 11 measures that the Forest Service shall do. Measures 1, 3 and 6 in the MOU related to planning documents and projects requiring NEPA analysis would apply to this travel plan effort, particularly 3c.

1. *Address the conservation of migratory bird habitat and populations when developing, amending, or revising management plans for national forests and grasslands, consistent with NFMA, ESA, and other authorities listed above. When developing the list of species to be considered in the planning process, consult the current FWS Birds of Conservation Concern (updated 2002 and available at www.fws.gov/migratorybirds/reports/BCC2002.pdf), State lists, and comprehensive planning efforts for migratory birds (see Definitions for a list of comprehensive plans). Evaluate and consider management objectives and recommendations from conservation planning efforts for migratory birds. Acknowledge special designations that*

may apply to all or part of the planning area, such as Globally Important Bird Areas in the United States, and acknowledge such designations in the appropriate plan documents.

3. Within the NEPA process, evaluate the effects of agency actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors. To the extent practicable:

- *a. Evaluate and balance long-term benefits of projects against any short- or long-term adverse effects when analyzing, disclosing, and mitigating the effects of actions.*
- *b. Pursue opportunities to restore or enhance the composition, structure, and juxtaposition of migratory bird habitats in the project area.*
- *c. Consider approaches, to the extent practicable, for identifying and minimizing take that is incidental to otherwise lawful activities, including such approaches as:*

1. altering the season of activities to minimize disturbances during the breeding season;
2. retaining snags for nesting structures where snags are underrepresented;
3. retaining the integrity of breeding sites, especially those with long histories of use and;
4. giving due consideration to key wintering areas, migration routes, and stop-overs.
5. minimizing or preventing the pollution or detrimental alteration of the environments utilized by migratory birds whenever practical by assessing information on environmental contaminants and other stressors relevant to migratory bird conservation.

- *d. Coordinate with the appropriate FWS Ecological Services office when planning projects that are likely to have a negative effect on migratory bird populations. Cooperate in developing approaches to minimize negative impacts and maximize benefits to migratory birds.*

6 . Initiate and support management studies and research to identify the habitat conditions needed to conserve migratory birds, and to evaluate the effects of management activities on habitats and populations of migratory birds.

Issue 4 - Recreational Use

The Caribou Range Mountains Subsection provides a wide variety of recreational opportunities because of the varied terrain and proximity to populated communities. Concerning motorized use, the north end of the subsection contains more roads and trails. Terrain is less steep and provides more opportunities for motorized recreational experiences, while the south half of the subsection contains steep high mountain terrain. Portions of the southern part of the subsection are designated non motorized and contain several foot and horse trail. The remaining part of the subsection contains trails along most drainages and along many ridge tops which are generally open to motorized trail vehicles less than 50 inches in width. Terrain is generally not suitable for ATV use on the southern end, whereas the northern end is flat enough to allow ATV travel. Trails are often steep and rocky with limited opportunities for motorized use in the southern half of the subsection. Current travel management planning reflects this situation. Current management direction recommends much of the south end for single-track motorized uses, while recommending ATV travel on more of the north end. While some minor exceptions do exist concerning motorized use, travel restrictions are generally reflective of the terrain limitations. The current Travel Management Plan does not distinguish between single-track motorized use and ATV use. If a trail is open for motorized travel it is open to any vehicle less than 50 inches in width. The Travel Plan does make recommendations for ATV travel on certain trails, but does not restrict ATVs if a trail is open to "motorized" use.

User Opportunities

Table 3.7 shows current trail opportunities in the Caribou Range Mountains Subsection.

Table 3.7 – Types of Trail Use

Miles of recommended ATV trails**1/**	23.2
Miles of single-track motorized trails**2/**	129.7
Miles of non-motorized trails	34.1
Total Number of Trail Miles	187.0

1/ ATV *trails are also open for single-track motorized use (motorcycles) and all non-motorized use.*
2/ *Single-track motorized (motorcycles) trails are also open to all non-motorized use, but not recommended for ATV use.*

User Quality

When referring to user quality we are referring to how well the trail meets the needs and desires of the user. Condition of the trail would be part of the user quality. How well the trail is maintained and constructed to meet user needs are both considerations in user quality. Another consideration is how the trail links with other trails in the system. In other words, does the trail provide a variety of experiences and loops for the user?
As a general rule the Palisades District maintain the trail systems on a three year rotation. This means the trail is reviewed and at least cleared by the District Trail crew at least once every three years. Heavier used trails are maintained more frequently, while little used trails may not be maintained on the three year rotation cycle. Trail maintenance varies depending on the funding available, size of trail crew, and time allowed for maintenance. The trail would receive water protection measures such as cross ditching, remarking, and trail tread work. Small trail relocation projects may be done at the time of maintenance to allow water drainage and to better protect the natural resources of the immediate area. Overall, the Palisades Ranger District trails are in satisfactory to good condition. However, there are trail segments on the District that need to be relocated to meet user needs and protect natural resources.

Trail location is another part of the user quality. Many of the trails that are now used were created by following game or domestic livestock trails and so were never constructed to any standard. Because the trails were never properly constructed, trail sections may be steep or located improperly causing minor resource damage by motorized and non-motorized uses. As trails are maintained these segments are repaired.

Motorized and non-motorized users prefer trails that can be connected to form loops, thus increasing trail riding and hiking opportunities while providing greater recreational experiences. Many of the Caribou area trails provide that type of quality experience. Some of the motorized loop trails vary in difficulty and therefore challenge user abilities. Some loops have required easier trails to connect with more technical or difficult trails in order to create the loop – which may have created some difficulties with riders with less experience. However, the existing loop trails are far more desirable than trails where travel is in and out on the same trail. The loop systems have decreased user congestion as well as reduced conflicts between different types of users.

User Conflict

User conflicts appear to have been relatively small or limited in the past. Most of the conflicts that did and do now occur seem to be between motorized and non-motorized users. With increased population growth in surrounding communities there appears to be a corresponding increase in user conflicts between different user groups, i.e. ATV and motorcycle riders. This could be accounted for because of the increase in user visitations and therefore the potential for more inter-action between users. There seems to be less tolerance between the various user types and the activities they prefer. In particular, most of the single-track trail users spoken with in the field and at the office, express a desire to keep single-track trails narrow since ATVs tend to destroy single-track trails not designed and constructed for the wider ATVs.

More and more complaints are being heard from trail users regarding ATV and motorbike use. These range from damage to trails from ATVs and motorcycles to the incompatibility between single-track motorized and ATVs on narrow trails. Non-motorized users in general comment about the loss of solitude and quietness when motorized vehicles are encountered. Some express concern about safety when encountering motorized vehicles. It appears from comments received, that the non-motorized users express more concerns about the damage the motorized vehicles (ATVs in particular) do to the narrow trails. This could be interpreted as "user conflicts" if damage to the trail prism is factored into how much more difficult it is for non-motorized users to negotiate the trails. Some complaints from horse users have been heard regarding motorized vehicles in general (spooking horses when passing each other). Also, user conflicts are sometimes observed by forest employees when working in various forest areas. To date, no records (other than verbal comments received) have been kept on the number of complaints received – either verbal or written.

Illegal Uses and Law Enforcement

Illegal motorized use has been a problem in the past throughout the subsection. The problem seems to be growing as public use increases – particularly in the Caribou Mountains area (northern part) of the subsection. The types of illegal activities differ between the north and south ends (the areas divided north of the Bear Creek Trail) of the Caribou Range Mountains Subsection. Since much of the south end (Bear Creek areas) has more difficult terrain, ATV use is much less of a problem. The North end (Pritchard Creek area) has more gentle terrain and offers more riding opportunity for ATVs. New user-created trails are generally not a serious problem in areas where terrain limits ATV travel. Therefore, few new trails are created.

The Caribou Range Mountains Subsection has many legal motorized trails so bikers and ATV users have better opportunities to travel much of the area on legal trails. Where users are able to access much of the area and terrain is less steep, problems occur with many new user-created trails being developed. Cross-country motorized travel is not permitted in this area but if one illegal user begins a new trail, other users follow – thus creating unwanted trails that create resource damage. After extended use the new illegal trail appears to be a legal trail. Unless these trails are signed closed and or decommissioned and closed, they otherwise appear open to public use.

Travel plan enforcement funding has been very limited in the past. Enforcement has largely fallen to the regular employees as other duties - to be done only as time from normal duties permits. This has lead to limited effectiveness in travel plan enforcement. When enforcement is emphasized and additional personnel made available to check trails, it is effective. This was demonstrated in 2004

and 2007/8 when a temporary employee was hired to do travel plan enforcement. After citations were issued, compliance to the travel plan improved. In 2005 funding did not permit the position to be filled and compliance fell off. During the 2006 field season, funding was available and enforcement efforts were much more effective. Since Forest Service funding varies from year to year, efforts are continually being made to generate new sources of funding in order to help with enforcement efforts. When partnership agreements can be secured and funds made available, additional personnel can be hired to monitor use and enforce motorized and non-motorized activities in the subsection.

Area of Concern – Open Road and Open Motorized Trail Route Density (OROMTRD)

Motorized route density standards were established in the 1997 Revised Forest Plan (RFP) – Final Environmental Impact Statement (FEIS) and the October 1999 Final Environmental Impact Statement (FEIS) for the "Open Road and Open Motorized Trail Analysis" (Motorized Road and Trail Travel Plan) for the Targhee National Forest. The 1999 document was intended to clarify and correct errors in the previously established density standards in the 1997 RFP. During analysis of this Environmental Assessment (Caribou Range Mountains Subsection Summer Transportation Travel Plan), it was found that some management prescription areas apparently still do not meet the density standards under Alternative A – Existing Situation (No Action). These discrepancies are results of mapping formality and more state-of-the-art GIS capabilities (computer programs) that has generated somewhat different but probably more accurate data. The area in question is as follows:

- The OROMTRD in the Poker Peak - Prescription 3.1.1(a) Area is currently exceeded by 6.8 miles of road. This is a boundary road and does not enter the prescription area. This mapping error cannot be corrected without a definition change in the RFP.

See Chapter Two for further discussions by Alternative.

Area of Concern – Inventoried Roadless Areas

The following descriptions summarize management direction for:

- **Inventoried Roadless Areas**

  These areas are discussed in the FEIS for the 1997 Revised Forest Plan (RFP) for the Targhee National Forest (see pages III-77, Roadless Areas – Scale: Forest wide; pages IV-49 and IV-50, Roadless Areas; and pages B-1 thru B-4, Appendix B, All roadless areas in the project area were included in the 2008 Idaho Roadless Rule. This plan did not affect or change trail use within the roadless areas.

  1. **Bear Creek -** The Bear Creek roadless area includes 118,600 acers. Management direction from the Revised Targhee Forest Plan applies to 97,600 acres of this area. The Revised Caribou Forest Plan provides direction for the remaining portion of this area. In 1979, nearly all of the area was open to motorized use – including cross-country travel (see the 1979 Targhee National Forest Travel Map on file in the project record).

     In the 1985 Forest Plan, most of the area continued to be open to motorized use – including cross-country travel (1985 Forest Plan, pages 438 to 479 and the 9/15/85 Forest Travel Plan – all on file in the project record).

The 1997 Revised Forest Plan FEIS, Table IV-14, page IV-48 states that Bear Creek Roadless Area did not make the minimum rating (10) to qualify for wilderness recommendation, the determination was made to manage the area for motorized use, rather than roadless.

The 1997 RFP divided the area into various Management Prescription Areas as follows:

- 6.1(b) – Range Management
- 2.4 – Eligible Scenic River
- 5.4(c) – Elk Summer Range
- 2.7(a) – Elk and Deer Winter Range
- 2.9.2 – South Fork Eligible Recreation River
- 5.1.3(b) – Timber Management (No Clearcutting, Urban Interface Fuels Management

These management prescriptions allow motorized travel on system trails designated for motorized use (see Appendix A and the 1999, 2001 Forest Travel Maps on file in the project record). Cross-country motorized use is prohibited across the entire area.

The Idaho Roadles Rule assigned three management themes to this roadless area: Backcountry Restoration, General Forest Rangeland and Forest Plan Special Areas.

2. **Poker Peak -** The Poker Peak roadless area includes 19,600 acers. In 1979, nearly all of the area was open to motorized use – including cross-country travel (see the 1979 Targhee National Forest Travel Map on file in the project record).

   In the 1985 Forest Plan, most of the area continued to be open to motorized use – including cross-country travel (1985 Forest Plan, pages 438 to 479 and the 9/15/85 Forest Travel Plan – all on file in the project record).

   The 1997 Revised Forest Plan FEIS, Table IV-14, page IV-48 states that Poker Peak Roadless Area did not make the minimum rating (10) to qualify for wilderness recommendation, the determination was made to manage the area for non-motorized use.

   The 1997 RFPdesignated the area into one Management Prescription Areas as follows:

   - 3.1.1 (a) – Non-Motorized

   This management prescriptions does not allow motorized travel on system trails (see Appendix A). Cross-country motorized use is prohibited across the entire area (see the 2001 Travel Map for the Palisades Ranger Districts - on file in the project record).

   The Idaho Roadless Rule assigned this area to the Primitive and Forest Plan Special Area management themes.

3. **Caribou City -** The Caribou City roadless area includes 93,300 acers. The Revised Targhee Forest Plan management direction applies to 11,800 acres of this area. The Revised Caribou Forest Plan provides direction for the remaining portion of the

project area. In 1979, nearly all of the area was open to motorized use – including cross-country travel (see the 1979 Targhee National Forest Travel Map on file in the project record).

In the 1985 Forest Plan, most of the area continued to be open to motorized use – including cross-country travel (1985 Forest Plan, pages 438 to 479 and the 9/15/85 Forest Travel Plan – all on file in the project record).

The 1997 Revised Forest Plan FEIS, Table IV-14, page IV-48 states that Caribou City Roadless Area did not make the minimum rating (10) to qualify for wilderness recommendation, the determination was made to manage the area for motorized use, rather than roadless.

The 1997 RFPdesignated the area into one Management Prescription Areas (on the Caribou-Targhee National Forest) as follows:

- 5.4(c) – Elk Summer Range

This management prescription allows motorized travel on system trails designated for motorized use (see Appendix A and the 1999, 2001 Forest Travel Maps on file in the project record). Cross-country motorized use is prohibited across the entire area .

The Idaho Roadless Rule assigned this area to Backcountry Restoration and General Forest Rangeland management themes.

4. **Pole Creek -** The Pole Creek roadless area includes 6100 acers. The Revised Targhee Forest Plan provides management direction for 2600 acres of this area. The Caribou National Forest Plan provides direction for the remaining portion of this area. In 1979, nearly all of the area was open to motorized use – including cross-country travel (see the 1979 Targhee National Forest Travel Map on file in the project record).

   In the 1985 Forest Plan, most of the area continued to be open to motorized use – including cross-country travel (1985 Forest Plan, pages 438 to 479 and the 9/15/85 Forest Travel Plan – all on file in the project record).

   The 1997 Revised Forest Plan (Targhee) FEIS, Table IV-14, page IV-48 states that Pole Creek Roadless Area did not make the minimum rating (10) to qualify for wilderness recommendation, the determination was made to manage the area for motorized use, rather than roadless.
   The 1997 RFPdesignated the area into one Management Prescription Areas (on the Caribou-Targhee National Forest) as follows:

   - 5.1.4(c) – Timber Management

   This management prescription allows motorized travel on system trails designated for motorized use (see Appendix A and the 1999, 2001 Forest Travel Maps on file in the project record). Cross-country motorized use is prohibited across the entire area .

   The Idaho Roadless Rule assigned all of this area to the Backcountry Restoration theme.

5. **Bald Mountain -** The Bald Mountain roadless area includes 17,000 acers . In 1979, nearly all of the area was open to motorized use – including cross-country travel (see the 1979 Targhee National Forest Travel Map on file in the project record).

   In the 1985 Forest Plan, most of the area continued to be open to motorized use – including cross-country travel (1985 Forest Plan, pages 438 to 479 and the 9/15/85 Forest Travel Plan – all on file in the project record).

   The 1997 Revised Forest Plan FEIS, Table IV-14, page IV-48 states that Bald Mountain Roadless Area did not make the minimum rating (10) to qualify for wilderness recommendation, the determination was made to manage the area for motorized use, rather than roadless.

   The 1997 RFP divided the area into two Management Prescription Areas as follows:
   - 6.1(b) – Range Management
   - 2.7(a) – Elk and Deer Winter Range

   These management prescriptions allow motorized travel on system trails designated for motorized use (see Appendix A and the 1999, 2001 Forest Travel Maps on file in the project record). Cross-country motorized use is prohibited across the entire area.

   The Idaho Roadless Rule assigned this area to Backcountry Restoration and General Forest Rangeland management themes.

Other Management Considerations

Range Management

Included in the Caribou Range Mountains Subsection are 21 grazing allotments, five cattle and 16 sheep allotments. Currently all of the allotments except King Creek Cattle, Trout Creek Sheep have either or both motorized and non motorized trails located within the allotment boundaries. With Alternatives B and C these two allotments would also have motorized trails within their boundaries.

In most circumstances non motorized system trails do not interfere with livestock management on the allotment. There are locations where motorized travel disrupts livestock distribution resulting in overuse of specific areas of the allotments. More often the conflict between livestock management and motorized use occurs when the permittees are in the process of moving the cattle. Forest trail users, especially motorized equipment can spook the livestock and scatter them requiring the riders to restart their round-up of the livestock. Most cattlemen whom have allotments with high use motorized trails do not attempt to move cattle on week-ends due to the conflict with motorized travel.

Other concerns with motorized travel, especially single-track trails is the erosion that occurs. High horsepower motorcycles equipped with aggressive lug tires has a negative effect on trails especially during periods that the trail is wet, for example in the spring of the year during snow melt and after heavy rain events. Some motorized single-track trails in the Caribou Range Mountains Subsection as well as other areas of the District have become so entrenched that hikers and livestock travel is very difficult. From a vegetation and watershed stand point the illegal cross-country travel that is occurring is becoming a big problem. A large portion of the cross-country travel comes in the form

of hill climbs where the illegal trail is created up a steep slope to normally a dead end route. Due to the steepness of the climb route and the trenching caused by the aggressive lug tire soon a gully is formed which continues to deepen with each snow melt or heavy rain event.

Plant Species Diversity

Threatened, Endangered or Sensitive Plant Species

The following descriptions summarize management direction for Threatened, Endangered and Sensitive Plants:

- **Threatened or Endangered Plant Species**
  - **Ute ladies'-tresses (*Spiranthes diluvialis*)**
    Ute ladies'- tresses is a Threatened plant listed under the Endangered Species Act (ESA). This species is listed for the Palisades District of the Caribou-Targhee National Forest. It is not listed for any other district on the Forest.

- **Sensitive Plants**

  There are ten plant species listed as Sensitive by the Regional Forester for the Targhee National Forest. Potential habitat exists within the project area for two of the sensitive plants: Sweet-flowered rock jasmine (*Androsace chamaejasme* var. *carinata*) and Payson's bladderpod (*Lesquerella paysonii*); One sensitive plant, Payson's milkvetch (*Astragalus paysonii*) is known to occur within the anlaysis area at the abondoned Haffman Campground. A determination of "May impact individuals or habitat, but will not likely contribute to a trend toward Federal listing or cause a loss of viability to the population or species" was made for these three sensitive plant species. A Biological Evaluation was prepared for this project and is on file in the project record.

Heritage Resources

Archaeological and ethnographic sources indicate the historic and prehistoric utilization of the Caribou Range Mountains Subsection for camping, hunting, fishing, gathering, grazing, mining, harvesting timber and travelling. For the purpose of this analysis, the Caribou-Targhee National Forest's Cultural Resources Project and Site records were used to determine previous analyses, and the nature and distribution of known sites. No fieldwork was conducted for this project since no specific ground-disturbing schedule has been set and it is a multi-year project based on the availability of funds. When specific projects are identified to be implemented based on funding, surveys will be conducted to evaluate their effects on cultural resources.
Cultural resources may be identified as those resources either directly or indirectly related to the material lifeways of a cultural group, or groups as specified by the Code of Federal Regulations (CFR), 36 CFR 296.3. Cultural resources may refer to sites, areas, buildings, structures, districts, and objects which possess scientific, historic, and social values. The significance or the National Register of Historic Places (NRHP) eligibility of cultural reources is determined by the Forest Archaeologist in consultation with the State Historic Preservation Officer (SHPO).

Of the 205,944 acres within the analysis area approximately 2 percent (or 4118 acres) has undergone previous cultural resource surveys as part of 35 ground-disturbing activities associated with timber sales, prescribed burns, range, recreation, and stream improvements, road building, and mining projects. Completed project files are located at the Caribou-Targhee National Forest Supervisor's Office.

In order to locate and record any archaeological and historic properties areas of high cultural site probability within the proposed ground-disturbing projects associated with this travel plan will be surveyed and evaluated by an archaeologist. If significant prehistoric and historic sites are identified and proposed actions will potentially have an adverse effect on them, then mitigation measures will be implemented in consultation with the SHPO(s) and the Shoshone-Bannock Tribes. Evidence of historic ranching and mining activities and Native American camping are present throughout the area and will need further evaluation as time and/or site specific projects dictate.

Archaeological investigations of known and as yet undiscovered cultural resources may offer insights into the historic and prehistoric land uses and settlement patterns of the area. The predicted percentage of high and low cultural site probability acres is based on topographical landforms, slope percentages, and other associated natural features. The resulting estimations are subject to change as a predictive site distribution model is developed and refined.

In order to protect and preserve cultural resources, detailed description and locations are exempt from disclosure under the Freedom of Information Act as stated in the Forest Service Policy (FSH 6209.13, section 11.12) in accordance with the Archaeological Resources Protection Act (ARPA) of 1979 (16 usc 170hh) and the National Historic Preservation Act (NHPA) of 1966 (16 USC 470w-3). Such information is disclosed in full to the SHPO(s) in order to facilitate decisions about the NRHP eligibility of cultural sites.

Notification and involvement of the Shoshone-Bannock Tribes and Eastern Shoshone of Wind River Reservation concerning Native American cultural resource matters will be carried out as specified by the Code of Federal Regulations 36 CFR 296.7, 36 CFR 800 section101(d)(6)(B) and in accordance with Presidential Memorandum concerning Government-to-Government consultation signed April 29,1994.