United States
Department of
Agriculture

Forest Service

**Intermountain
Region**

**Targhee
National
Forest**

Final Environmental Impact Statement

Open Road and Open Motorized Trail Analysis

(Motorized Road and Trail Travel Plan)

Targhee National Forest - October 1999

FINAL ENVIRONMENTAL IMPACT STATEMENT
for the
TARGHEE NATIONAL FOREST
OPEN ROAD AND OPEN MOTORIZED TRAIL ANALYSIS
(Motorized Road And Trail Travel Plan)

Bonneville, Butte, Clark, Fremont, Jefferson,
Lemhi, Madison, and Teton Counties, Idaho
and
Lincoln and Teton Counties, Wyoming

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ABSTRACT: This Final Environmental Impact Statement (FEIS) documents the analysis of five alternatives, which were developed for possible management of summer motorized road and trail travel on the 1.8 million acres administered by the Targhee National Forest. Alternatives analyzed in detail are identified as 1M; 3M+Revised (3M+R); 3M(+); 3M; and 3M(-). Alternative 3M+R is identified as the preferred alternative. The preferred alternative was developed in response to many of the public comments on the DEIS for this proposal. The status (open or closed, etc.) of several routes, as shown in the DEIS Preferred Alternative (3M+) was changed due to specific comments received from the public and various agencies.

Date of transmission of this FEIS to the Environmental Protection Agency (EPA) and the public is: October 29, 1999.

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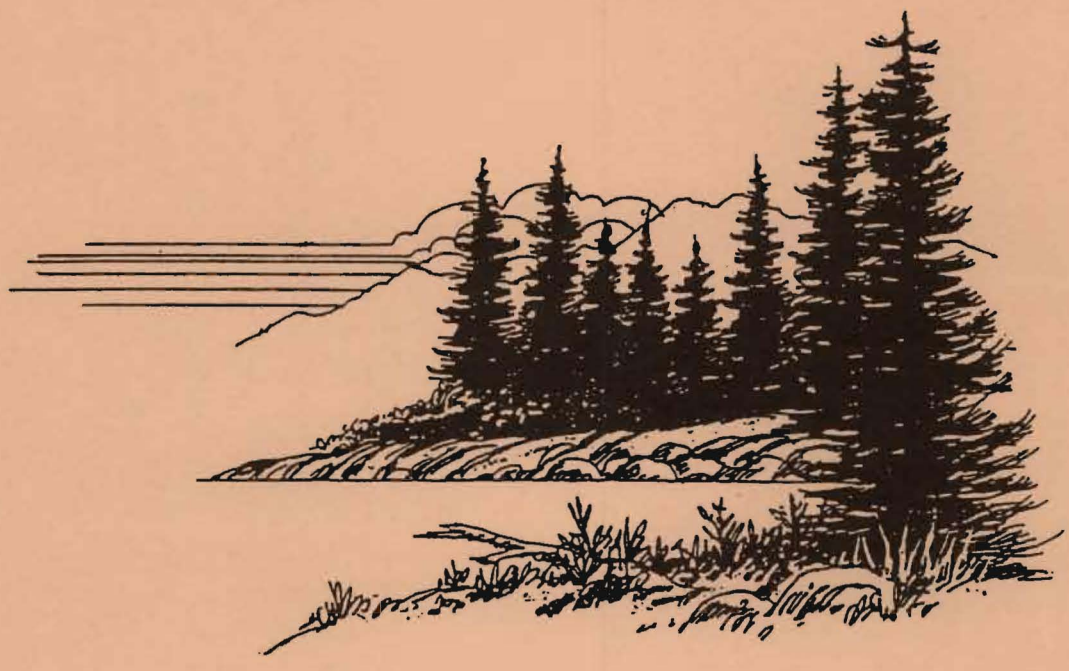


SUMMARY OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE TARGHEE FOREST - OPEN ROAD AND MOTORIZED TRAIL ANALYSIS (Motorized Road and Trail Travel Plan)

NOTE to READERS: Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document.

INTRODUCTION

The purpose of this document is to consider alternatives for and disclose the environmental effects of a summer, motorized road and trail Travel Plan that will implement the 1997 Revised Forest Plan direction for the Targhee National Forest. The purpose of this Travel Plan is to offer a balanced network of summer motorized roads and trails that meet the Forest's transportation needs and the open road and open motorized trail route density (OROMTRD) standards in the 1997 Revised Forest Plan (RFP). The need for this analysis and decision was directed by the Regional Forester in his 4/15/97 Record of Decision (ROD - pages 22 and 30) for the RFP. This is one of the first steps needed to meet the objectives in the Revised Forest Plan and move the Targhee National Forest toward the desired future conditions of that Plan. In accordance with the Regional Forester's direction, no decision contained in the Revised Forest Plan will be changed, reversed, or superceded by the decision that will result from this analysis, except minor changes noted herein. Therefore, it should be understood that winter travel and summer, motorized, cross-country travel as decided in the RFP will also be displayed in the final Travel Plan along with the open roads and trails determined from this analysis.

The Forest Supervisor will decide which combination of roads and trails will be open for summer motorized use to remain within the open road and trail density standards specified by management prescriptions in the Revised Forest Plan. This planning process was begun with a Draft Environmental Impact Statement which was released for public comment on December 4, 1998. This Final Environmental Impact Statement (FEIS) will summarize and review the previous (1997) open motorized road and trail decision. It will also consider alternative actions that would remain within the direction of the RFP and respond to the issues raised, and to the public comments on the DEIS.

The analysis in this EIS is based on much of the analysis in the 1997 Revised Forest Plan--Final Environmental Impact Statement (FEIS), and references that document. Throughout this FEIS, references to the RFP-FEIS will be indicated by: (RFP-FEIS, page x,y,z). Copies of the RFP-FEIS are available from the Targhee National Forest Supervisor's Office.

LOCATION AND SETTING

The Targhee National Forest (hereinafter usually referred to as "the Forest") is an administrative unit of the U.S. Department of Agriculture, Forest Service. The Forest lies almost entirely within the "Greater Yellowstone Area" (GYA). The Forest encompasses approximately 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Shoshone-Bannock Tribe has ancestral Treaty Rights to uses of the Forest. The Forest Supervisor's Office is located in St. Anthony, Idaho, with District offices located in Dubois, Island Park, Ashton, Idaho Falls, and Driggs, Idaho. The Forest is bordered by six other National Forests (N.F.). This FEIS addresses travel on the Targhee National Forest and the portions of the Bridger-Teton and Caribou National Forests administered by the Targhee Forest.

The majority of the Forest lies in eastern Idaho, and the remainder in western Wyoming (Figure S-1). Situated next to Yellowstone National Park (the Park) and Grand Teton National Park (GTNP), the Forest is home to a diverse number of wildlife and fish (including Threatened and Endangered species), and contains two designated wildernesses, scenic panoramas and intensively managed forest lands (RFP-FEIS, p. I-1-2).

Vicinity Map of Targhee National Forest on a National Scale

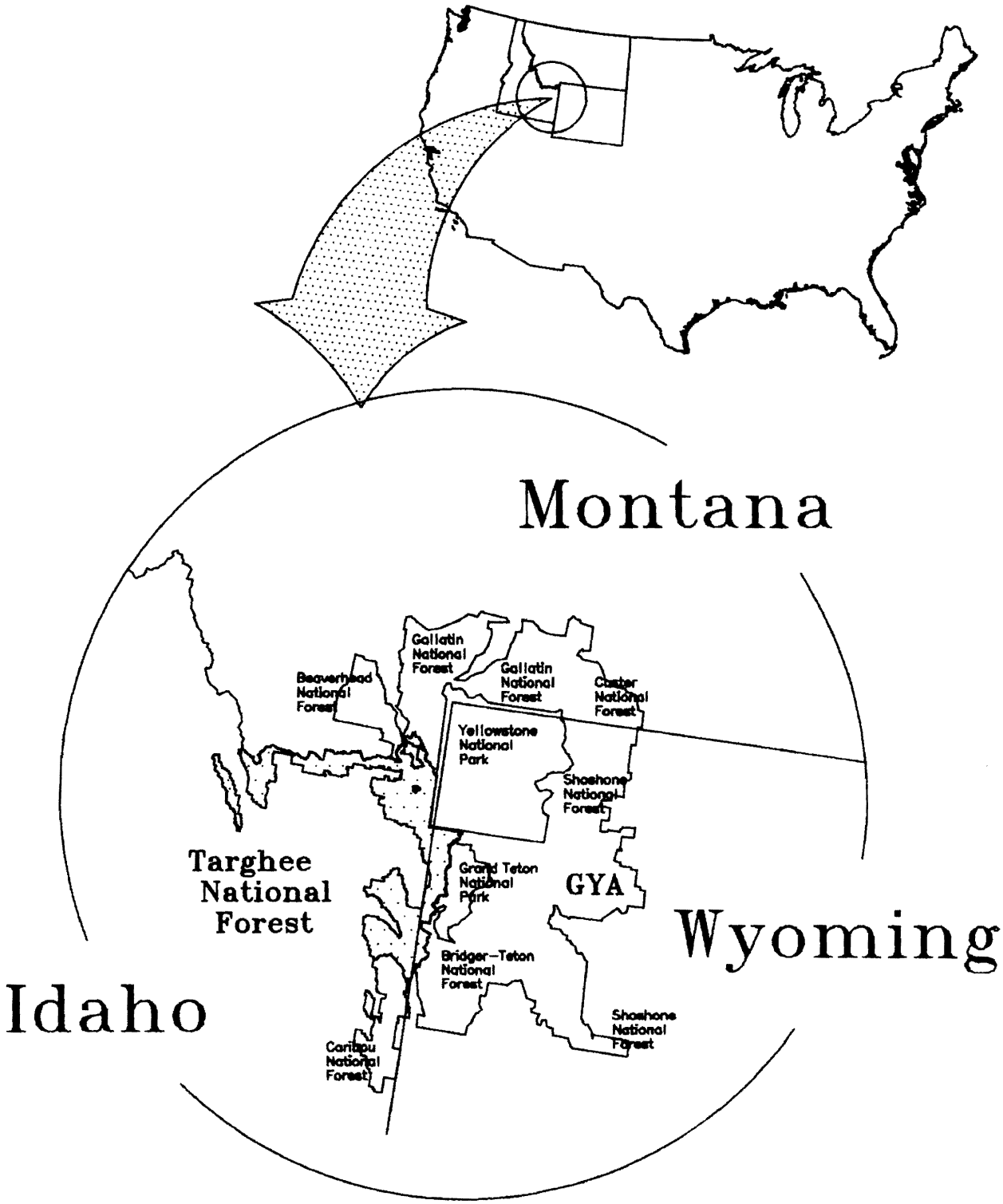


Figure S-1

ISSUES

The key issues identified through scoping and public comments on the DEIS are summarized as follows:

- Adverse effects of specific roads and trails open for summer motorized travel on: wildlife and fisheries (cutthroat trout) and their habitat; on roadless areas and recommended wilderness; and on water quality. These specific roads and trails were identified on an overlay of the 1997 Travel Plan map for reference in the analysis in the same manner as was done for the DEIS.

- Adverse effects of specific closed roads and trails on recreational and other access opportunities. These specific roads and trails were identified on the same map overlays as described above for use in this analysis.

- Revised Statute 2477 (RS 2477) road access. This issue involves potential access rights the Counties may have on roads and trails that may have existed prior to the establishment of the Forest. The assertions by the Counties that were available were mapped (see map #1 in map packet) for consideration in this analysis.

The following public comments were also received and considered. They were addressed in the Revised Forest Plan analysis, or are considered procedural comments and therefore will not be directly addressed in this analysis:

- A broad, programmatic document was used to make site-specific decisions on road closures.

- No new roads should be built, and existing roads should be decommissioned and rehabilitated.

- Existing trails should not be reconstructed for OHV (<50") use.

- Accessibility needs to be addressed better for the less-able.

- Range of alternatives considered in the Revised Forest Plan FEIS and Travel Plan ROD was not adequate, and road density factors used were too constraining, or not constraining enough.

- Appendix C Update and Draft Travel Plan need to be available for public review and comment.

All of the public comments to the DEIS and our responses to those comments are contained in Appendix E, along with copies of the letters from agencies. The specific road and trail comments addressing routes desired to be open or closed were mapped on an overlay of the 1997 Travel Plan map and considered throughout the alternative development and analysis.

ALTERNATIVES CONSIDERED

Based on available data, public issues and the Final EIS for the Revised Forest Plan, five alternatives were considered and analyzed in detail. These include: 3M(+)Revised (the Preferred Alternative hereinafter referred to as 3M+R); 1M; 3M+; 3M; and 3M- (minus). Alternative 3M presented below is the same alternative selected in the Revised Forest Plan FEIS (pages II-3-4 and II-7-8) and in the ROD for the 1997 Open Road and Open Motorized Trail Travel Plan (ROD - page 4).

The Preferred Alternative (3M+R) was created in response to issues and specific comments on the DEIS as described previously. The route-specific comments were mapped for analysis and consideration, and these overlay maps are on file in the Forest Supervisor's Office. These working maps are available for review. Restricted roads and roads decommissioned in the Bear Management Units (BMU's) in 1998 were included in the evaluation in light of public comments and administrative needs. Alternative 3M+R was created by adding open, motorized routes or closing routes in the 3M+ alternative which was the preferred alternative in the DEIS.

Alternatives 3M(+) and 3M(-) were created and analyzed in the DEIS in response to specific public issues and appeals and, represent minor additions (+) or deletions (-) to the 3M (Forest Plan) alternative. Alternative 1M was also considered in the DEIS and is the existing situation as modified by the Regional Forester's remand. These alternatives only address summer motorized access for roads and trails, since winter travel and summer, motorized, cross-country access were already decided in the Revised Forest Plan.

The five alternatives considered are briefly described as follows:

- Alternative 1(M) - "No Action" - This alternative is based on the existing situation. This alternative would leave the open, motorized roads and trails of the 1994/96 Travel Plans (old brown maps) in place for all of the Forest outside the bear management units (BMUs). Inside the BMUs, (see Figure III-6 in RFP-FEIS, page III-55) travel would be according to the Revised Forest Plan (Alternative 3M). Forest-wide, summer, cross-country travel would also be according to the Revised Forest Plan (Alternative 3M). This alternative is displayed on the Summer Transportation Map #2. Approximately 2,077 miles of open, motorized road; 51 miles of seasonally restricted road; 436 miles of decommissioned roads; and 725 miles of open, motorized trail are included in this alternative (Table S-1). Decommissioned roads would be the same as those shown for alternative 3M+R on maps 6(a-c) for the area inside the BMU's. No roads would be decommissioned outside the BMU's. Appendix C(M) to this FEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. This alternative would not be consistent with the Revised Forest Plan and would require a significant Forest Plan amendment to the open road and open motorized trail density standards to be implemented to accommodate the higher density. Its purpose here is to provide a baseline to compare site-specific effects with the other alternatives being considered.

- Alternative 3M(+)R - PREFERRED ALTERNATIVE - This alternative includes most of the features of alternative 3M(+) along with some additional routes (approximately 45 miles) opened in response to public comment on the DEIS, and some administrative needs. The alternative also shows some routes closed (approximately 17 miles) to motorized use in response to public comments on the DEIS. This alternative remains within the open motorized road and trail (ORMTRD) density standards of the Revised Forest Plan with the exception of the same non-significant Forest Plan amendments needed as described for alternative 3M(+) below. Alternative 3M(+)R is displayed on Summer Transportation Map #6(a-c). Roads and trails opened to motorized travel in addition to those in alternative 3M(+) are shown in bold green, and those changed to closed are shown in bold red on Map #6(a-c). This alternative has 1,756 miles of open, motorized road; 61 miles of seasonally restricted road; 830 miles of decommissioned roads; and 542 miles of open, motorized trail. The decommissioned roads are shown on Maps #6(a-c) as blue lines. These decommissioned roads are shown only on this alternative, but would be the same inside the BMU's for all alternatives, and would vary somewhat outside the BMU's for the other 3M alternatives. No RS-2477 assertion roads would be decommissioned. Appendix C(M) to the FEIS describes which roads and trails remain open to motorized travel and the reasons why routes were selected as open or closed. Summer, cross-country travel would be the same as Alternative 3M from the Revised Forest Plan. This alternative has the same prescription areas as Alternative 3M. A travel map would be implemented from this alternative in the same method as described for alternative 3M(+) below.

- Alternative 3M(+) - This alternative includes additional (approximately 94 miles) open roads and trails to those in alternative 3M. Approximately 39 of these additional miles were shown on Map #4 in the DEIS, and were considered in the analysis, but were not included in the data tables. This alternative is still within the route density standards of alternative 3M as decided in the Revised Forest Plan (with the exceptions noted below). Alternative 3M(+) is displayed on Summer Transportation map #4. As noted in Alternative 3M, which follows, it was discovered in this analysis that road density of 3M was below the level allowed for some of the prescription areas. Therefore, roads and trails were added in this alternative to respond to some of the specific requests in public scoping comments and appeal records as noted on the overlay maps and RS 2477 maps prepared for this analysis.

The roads and trails added are shown in green on Map #4 in the map packet. This alternative has 1,711 miles of open, motorized road; 62 miles of seasonally restricted road; 882 miles of decommissioned roads; and 536 miles of open, motorized trail. Appendix C(M) to this FEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. The total miles of open, motorized roads and trails in this alternative are similar to Alternative 3 in the Revised Forest Plan, but the open roads and trails are in different locations. Summer, cross-country travel would be the same as Alternative 3M from the Revised Forest Plan.

This alternative has the same prescription areas as Alternative 3M, and road densities are within the prescription density allowed, except as shown in Table S-2. Implementation of a new Travel Plan under this preferred Alternative (3M+) would require a non-significant amendment to the 1997 Forest Plan revision to cover the following, specific road density changes (Table S-2) for individual prescription areas which would vary from the Forest Plan prescription Access Tables (OROMTRD allowed).

All of the densities and associated motorized routes in Table S-2 were shown and approved in the Revised Forest Plan (Alternative 3M) Transportation Plan Map #11, except the Moody Creek road (80251). However, the road density variances were not noticed at the time the Revised Forest Plan was approved. The Moody Creek change is in response to an RS 2477 assertion listed after the Forest Plan was approved. Motorized use was approved by the RFP-FEIS in Indian Creek and was intended to be unrestricted as shown in the RFP-DEIS footnote, but when the footnote was prepared for the RFP-FEIS, an incorrect OROMTRD of 0.2 miles per square miles was put in the footnote to the Access Table. The working copy of the OROMTRD density map dated July, 1999 actually showed a density of 0.3 miles for the Indian Creek prescription area and all of the motorized routes in that density were displayed in the RFP-FEIS Transportation Plan for Alternative 3M. This 0.3 density is a reduction from the 0.5 in the DEIS due to trail closures in Indian Creek.

Many of these prescription area density variances occur to accommodate roads running along or through small prescription areas (approximately 5 square miles or less) which are affected disproportionately by the presence of the road. The Lionhead prescription amendment shown in Table S-2 in the DEIS was determined to be unnecessary, and has been deleted. Another amendment for Italian Peaks was overlooked in the DEIS, and has been added to Table S-2.

A Travel Plan (map and Closure Order) would be developed and implemented using the same format as the 1997 Travel Plan Map. The Travel Plan would include the details from the Transportation Plan (map #4 of map packet) for this alternative along with the Travel Plan Addendum (Appendix A), and road, trail, and cross-country matrices. This procedure would be followed using the appropriate data and maps for any alternative selected in the final EIS. Special features such as the Continental Divide National Scenic Trail will be added at that time.

- Alternative 3M - This alternative is the 1997 Travel Plan (summer - roads, trails and cross-country travel) as displayed by the summer Transportation Plan (map #3 - see map packet) for Alternative 3M in the Revised Forest Plan FEIS. This alternative has 1,617 miles of open, motorized road; 62 miles of seasonally restricted road; 950 miles of decommissioned roads; and 511 miles of open, motorized trail.

  The 1997 Appendix C Update to the RFP-FEIS and the roads and trails GIS data layer were corrected to delete duplicate segments, and to make other minor edits. These corrections resulted in approximately 40 miles of additional road inventory to that shown on the RFP. It was discovered during this analysis, that road density for this alternative was below densities allowed for some prescription areas and lower than calculated in the RFP-FEIS. This is mostly due to earlier GIS query data errors. It is also partially due to topography limitations and the design of prescription densities being just an initial goal to guide planning. During mapping of the alternative there was also a conscious effort to leave room for management flexibility, e.g.-- by not pushing elk vulnerability to the limit. Appendix C(M) to this FEIS describes which roads and trails remain

Table S -1. Comparison of Environmental Effects by Key Issue Indicators

Indicator	Issue	Alt. 1(M)	Alt 3M(+) Rev	Alt. 3M(+)	Alt. 3M	Alt. 3M(-)
ROADS (miles)	Access					
Open		2,077	1,756	1,711	1,617	1,613
Seasonal Restriction		51	61	62	62	62
Yearlong Restriction		399	309	291	303	303
Decomm. in BMU's		436	411	427	429	438
Decomm. outside BMU's		0	419	455	521	524
Total Miles		2,963	2,956	2,946	2,932	2,940
TRAILS (miles)	Access					
Open		725	542	536	511	454
Seasonal Restricted		0	0	0	0	0
Yearlong Restricted		651	881	861	879	933
Total Miles		1,376	1,423	1,397	1,390	1,387
Total Miles Rds/Trs.		4,339	4,379	4,343	4,322	4,327
Miles of motorized rd/tr. decommissioned & re-claimed	Soil and water quality	436	830	882	950	962
Miles of motorized rd/tr. on unstable soils	Soil and water quality	1,297	964	950	916	860
Miles of motorized rd/tr. in AIZ	Soil and water quality	868	717	713	683	647
Number of rd/tr. stream crossings	Water quality and fisheries	4,613	3,653	3,633	3,448	3,267
Miles of rd/tr. in cutthroat AIZ	Cutthroat trout habitat	251	231	232	229	211
Number of rd/tr. stream crossings in cutthroat AIZ	Cutthroat trout habitat	491	441	442	431	375
OROMTRD (mi./sq. mi.)	Grizzly habitat					
Henrys BMU - Sub. 1		0.53	0.56	0.54	0.55	0.54
Henrys BMU - Sub. 2		0.49	0.48	0.49	0.47	0.49
Plateau BMU - Sub. 1		0.58	0.60	0.58	0.59	0.58
Plateau BMU - Sub. 2		0.55	0.54	0.55	0.55	0.55
Bechler - Teton BMU		0.50	0.52	0.51	0.50	0.49
TMARD (mi./sq. mi.)	Grizzly habitat					
Henrys BMU - Sub. 1		0.72	0.77	0.72	0.74	0.71
Henrys BMU - Sub. 2		0.53	0.55	0.57	0.54	0.53
Plateau BMU - Sub. 1		0.97	0.99	0.97	1.00	0.96
Plateau BMU - Sub. 2		0.74	0.73	0.74	0.74	0.74
Bechler - Teton BMU		0.66	0.70	0.68	0.67	0.66
Elk Habitat Effectiveness	Wildlife effects	0.59	0.62	0.62	0.63	0.63
Elk Vulnerability 1/	Wildlife effects	85	85	85	87	87
Miles of motorized rd/tr. in roadless	Potential impact on roadless or on wilderness designation	776	572	548	520	469

1/ Percent of Forest meeting State Fish and Game agency goals or thresholds for elk vulnerability.

Table S-2. Proposed Non-Significant Forest Plan Amendment for Prescription Route Densities

DISTRICT	AREA NAME	PRESCRIP-TION (Rx)	RD DENSITY of Forest Plan	PROPOSED RD DENSITY	REASONS DENSITY EX-CEEDED
Dubois	Kyle Canyon	3.1.1(a)	0.0	0.1	Road on RFP map
	Spring Mtn Cyn	3.2(g)	1.0	1.1	Road on RFP map
	Italian Peak	1.3	0.0	0.4	Trail on RFP map
Palisades	Palisades Cr	1.3	0.0	0.1	Indian Cr trails in RFP map
	Kelly Cyn	5.1.4(d)	1.5	2.4	Small Rx area
	Moody Cr	5.1.4(b)	1.5	1.7	RS 2477 asser-tion
	Indian Cr	1.2	0.2	0.3	Access Table error - RFP
	Sheep Cr	3.2(d)	1.0	1.8	Small Rx area
	Poker Peak	3.1.1(a)	0.0	0.1	Adjacent road

open to motorized use and the reasons why routes were selected as open or closed for each alternative.

- Alternative 3M(-) - This alternative has slightly fewer open roads/trails than Alternative 3M. This alternative is essentially the same as Alternative 3M, but with the reduction of specific open roads and trails as requested in public scoping comment and appeal records. Roads and trails were eliminated in response to some of the specific requests noted on the overlay maps described previously in the issues analysis. The roads and trails eliminated are shown in red on map #5 in the map packet. This alternative has the same prescription areas as Alternative 3M and 3M(+), but road densities are lower in several prescription areas than in Alternative 3M. This alternative is similar to Alternative 4 in the Revised Forest Plan in total open motorized roads and trails, but the roads and trails are in different locations. Summer, cross-country travel is the same as Alternative 3M from the Revised Forest Plan. The Transportation Plan for this alternative is enclosed in the map packet for this FEIS as map #5. This alternative has 1,613 miles of open, motorized road; 62 miles of seasonally restricted roads; 962 miles of decommissioned roads; and 454 miles of open, motorized trail.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Other alternatives were considered that would address additional requests for opening or closing road and trail segments beyond the maximum route density or significantly below the density allowed for prescriptions. The formal administrative appeal requests, public scoping comments, and public comments on the DEIS were mapped and reviewed for alternative consideration and development as described in the issues analysis and alternatives development process above. Our analysis of these options was found to match the same range of alternatives considered in the Revised Forest Plan FEIS. For example, an alternative with more open roads and trails than 3M is represented by Alternatives 1, 2, and 3 of that FEIS. An alternative with fewer open roads and trails would be represented by Alternatives 4, 5, and 6. Since an infinite array of alternatives could be constructed from issues indicated by the comments and appeals, and since that array has already been considered in the previous Revised Forest Plan FEIS, it would not be helpful to reconstruct those alternatives in this analysis.

Furthermore, any alternative with a higher road/trail density than allowed by the Revised Forest Plan management prescription direction would be outside the standards established in the Revised Forest Plan and contrary to the Purpose and Need for this decision. The scope of this analysis is limited to alternatives that meet the open road and open motorized trail density standards decided in the recently revised Forest Plan, as directed by the Regional Forester (remand letter of 1/14/98). Because

these density standards have recently been decided and since no new issues concerning route density were identified, whether they should be adjusted is not ripe for decision at this time. Effectiveness monitoring is a requirement of the Revised Forest Plan. An evaluation of the effectiveness of these route density standards will be made at appropriate intervals in the annual Forest Plan monitoring report.

ANALYSIS AND CONCLUSIONS

As indicated in the Alternative 3M description, the 1997 Appendix C was updated for the seven alternatives originally considered in the Revised Forest Plan to show reasons roads and trails were open or closed. This analysis formed the basis for a new Appendix C(M) which was developed to analyze the five alternatives for this EIS. Each road and trail was considered and reasons for open or closed status were documented for each specific road or trail for each alternative. This resource analysis is further documented in each resource consequences section in Chapter IV of this EIS.

The analysis indicates that the Preferred Alternative (3M+R) has only slightly higher impact potential than Alternative 3M as described in the Revised Forest Plan. The effects of this alternative on natural resources would be significantly less than the existing situation (Alternative 1M). Alternative 3M+R addresses the RS 2477 assertions and other specific road concerns. The analysis indicates this alternative will not have significant effects on soil, vegetation, water quality, wildlife or fish habitat except in minor, localized areas. In addition, the analysis indicates that overall, public safety will be improved by better maintenance on remaining, open roads and trails. Also, decommissionning of roads is not expected to pose unreasonable safety risks to prudent summer or winter travellers.

Chapter

1

Purpose and Need for a Travel Plan Revision

CHAPTER I

PURPOSE AND NEED

READER'S GUIDE - In this chapter you will find:

- BACKGROUND INFORMATION
- LOCATION AND SETTING
- PURPOSE AND NEED

NOTE to READERS: Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document.

BACKGROUND INFORMATION

On April 15, 1997, the Intermountain Regional Forester issued a Record of Decision (ROD) for the 1997 Revised Forest Plan for the Targhee National Forest. This Revised Forest Plan contained travel management direction in the form of winter and summer Transportation Plans (open, motorized roads and trails) and management prescription direction for road density and cross-country travel. During the summer of 1997 a final Travel Map was prepared to represent this management direction and specifically to disclose which roads and trails would be open for summer, motorized use to meet the road density standards specified in the Revised Forest Plan. The 1997 Travel Map was approved by a Record of Decision (ROD) signed August 15, 1997, by Targhee Forest Supervisor, Jerry Reese.

The August 15, 1997 decision for the Travel Map was appealed to the Regional Forester by individuals and groups representing both sides of the issues. Most of the appeals resulted from issuance of the 1997 "Updated Appendix C - Summer and Winter Access", which displayed the roads and trails to remain open to motorized travel. The same list of roads and trails was included as the original "Appendix C" in the RFP-FEIS. This Appendix C Update contained minor edits and revisions that were done to correct duplications of listings and to delete or add minor road segments in the Transportation Plan Map for Alternative 3-M (selected alternative) in the Plan Revision Final Environmental Impact Statement (FEIS). This update did not change the road and trail data or maps that were used in that analysis. On January 14, 1998, the Intermountain Regional Forester reversed (remand letter of 1/14/98) the Travel Map decision and directed that a supplemental environmental analysis be prepared and disclosed. The basis for his appeal decision was:

- Some procedural requirements for public involvement had not been fully met; specifically, some people may not have understood the decision to be made in the Travel Map and may not have had adequate opportunity to review and comment on the site-specific actions indicated in the Appendix C Update (1997 Travel Plan ROD).

- The roles of the counties and the Forest Service in management of roads with RS 2477 assertions were not completely assessed and analyzed.

Additionally the Regional Forester directed the Forest to "use the existing analysis and 1997 Travel plan maps as a basis for supplemental disclosure to meet National Environmental Policy Act requirements." This FEIS provides that disclosure.

A Draft Environmental Impact Statement (DEIS) was released for public review and comment on November 16, 1998. This FEIS considers the public comments in response to that DEIS, and is also tiered to and will refer to and incorporate much of the analysis from the 1997 Revised Forest Plan FEIS. This FEIS will also document subsequent analysis concerning affected environment and environmental consequences of alternatives developed in response to comments and issues presented by interested public and agencies.

LOCATION AND SETTING

The Targhee National Forest (hereinafter usually referred to as "the Forest") is an administrative unit of the U.S. Department of Agriculture, Forest Service. The Forest lies almost entirely within the "Greater Yellowstone Area" (GYA). The Forest encompasses approximately 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Shoshone-Bannock Tribe has ancestral Treaty Rights to uses of the Forest. The Forest Supervisor's Office is located in St. Anthony, Idaho, with District offices located in Dubois, Island Park, Ashton, Idaho Falls, and Driggs, Idaho. The Forest is bordered by six other National Forests (N.F.). This FEIS addresses travel on the Targhee National Forest and the portions of the Bridger-Teton and Caribou National Forests administered by the Targhee Forest.

The majority of the Forest lies in eastern Idaho, and the remainder in western Wyoming (Figure I-1). Situated next to Yellowstone National Park (the Park) and Grand Teton National Park (GTNP), the Forest is home to a diverse number of wildlife and fish (including Threatened and Endangered species), and contains two designated wildernesses, scenic panoramas and intensively managed forest lands (RFP-FEIS, p. I-1-2).

PURPOSE AND NEED

Introduction

The purpose of this document is to consider alternatives for and disclose the environmental effects of a Forest Travel Plan that will implement the 1997 Revised Forest Plan direction. The purpose of this Travel Plan is to offer a balanced network of motorized road and trails that meet the Forest's transportation needs and the open road and open motorized trail route density (OROMTRD) standards in the Revised Forest Plan. These OROMTRD standards were developed to improve habitat for elk and grizzly bear by reducing the number of open, motorized roads and trails per square mile. The need for this analysis and decision was directed by the Regional Forester in his 4/15/97 Record of Decision (ROD - pages 22 and 30) for the Revised Forest Plan . This is one of the first steps needed to achieve desired future conditions of that Plan. In accordance with the Regional Forester's direction, no decision contained in the Revised Forest Plan will be changed, reversed, or superceded by the decision that will result from this analysis, with the exception of minor changes described below. Therefore, winter travel and summer, cross-country travel as decided in the Revised Forest Plan will not be reconsidered in this analysis, but will be displayed in the final Travel Plan along with the open roads and trails determined from this analysis. Also, this analysis does not address mountain bike travel, which was decided in the RFP. Mountain bikes can be used on any trail on the Forest except in designated wilderness or where specific trails are posted and closed to such use.

The Forest Supervisor will decide which combination of roads and trails will be open for summer motorized use to remain within the density standards specified by management prescriptions in the Revised Forest Plan. A DEIS for this planning process was released for public comment on December 4, 1998. This FEIS will summarize and review the 1997 open motorized road and trail decision and consider alternative actions that would remain within the direction of the Revised Forest Plan and respond to the issues and DEIS comments.

Issues

In an effort to obtain public comments and concerns, news releases were sent to area newspapers and media on February 6, and April 1, 1998. An analysis process information letter was also mailed March 24, 1998 to the approximately 1200 appellants of the 1997 Travel Pan ROD. In response to these information releases and the Notice of Intent filed in the Federal Register (March 24, 1998), we received 40 letters providing comments and suggestions for consideration in the DEIS.

Vicinity Map of Targhee National Forest on a National Scale

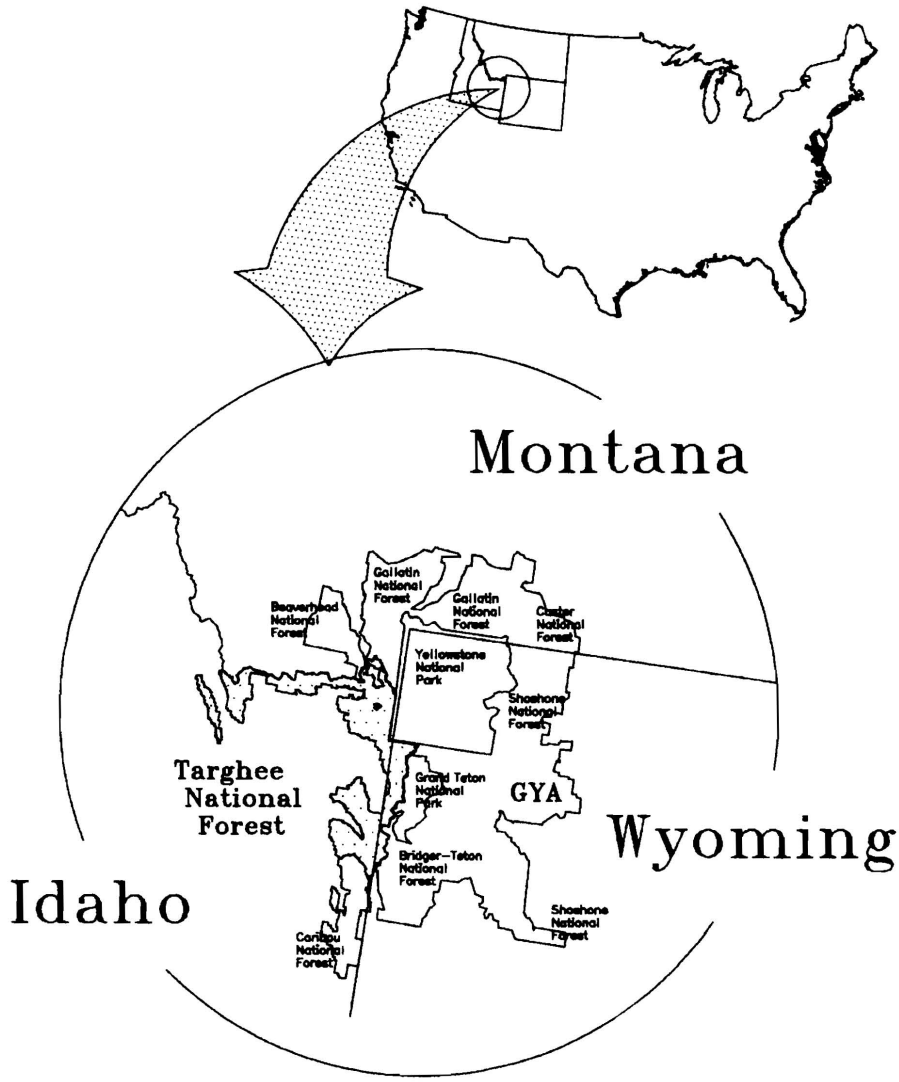


Figure I-1

In response to the DEIS and to four public meetings held throughout the area to discuss the DEIS, we received nearly 7,900 comments which included: 1,026 letters from individuals; one petition containing 44 signatures, and five form letters/postcard containing 6,800 signatures. Nearly 6,900 of the 7,900 comments were form letter/postcard or petition signatures. Petition and form letter/postcard signatures were counted as one substantive comment for each issue topic in the form letter or petition rather than separate, repetitious comments. From the letters, form letters/postcards and petitions, approximately 1,200 substantive comments were identified which are presented in Appendix E. These comments on the DEIS represent the same issues and concerns expressed in the scoping for the DEIS. We have summarized the comments into the following issue topics:

- Adverse effects of specific roads and trails open for summer motorized travel on: wildlife and fisheries (cutthroat trout) and their habitat; on roadless areas and recommended wilderness; and on water quality. These specific roads and trails were identified on an overlay of the 1997 Travel Plan map for reference in the analysis.

- Adverse effects of specific closed roads and trails on recreational and other access opportunities. These specific roads and trails were identified on the same map overlays as described above for use in this analysis.

- RS 2477 road access. This issue involves potential access rights the Counties may have on roads and trails that may have existed prior to the establishment of the Forest. The assertions by the Counties available were mapped (see map #1 in map packet) for consideration in this analysis.

The following public comments were also received and considered. They were addressed in the Revised Forest Plan analysis, or are considered procedural comments and therefore will not be directly addressed in this analysis:

- A broad, programmatic document was used to make site-specific decisions on road closures.

- No new roads should be built, and existing roads should be decommissioned and rehabilitated.

- Existing trails should not be reconstructed for OHV (<50") use.

- Accessibility needs to be addressed better for the less-able.

- Range of alternatives considered in the Revised Forest Plan FEIS and Travel Plan RODs was not adequate, and road density factors used were too constraining, or not constraining enough.

- Appendix C Update and Draft Travel Plan need to be available for public review and comment.

As indicated in the issues discussion above, we also mapped all of the requests for opening or closing roads and trails as contained in the appeals and public comments on the DEIS. The resulting overlay maps highlight existing roads and trails that were previously considered in Alternatives 1 through 6 for the Revised Forest Plan. The Revised Forest Plan scoping and issue analysis (RFP-FEIS, pages I-5-11), as well as public comments on that EIS, considered almost identical summer transportation plan maps and Appendix C analysis as contained in this new FEIS.

The public involvement Process Paper A from the RFP-FEIS is incorporated by reference. It summarizes the early public involvement efforts in the Forest Plan revision process from 1990 through 1995, until the release of the RFP-DEIS. Throughout that process roads and access were significant issues. The public involvement discussion in RFP "Appendix A, Response to Public Comments, Volume 1," is also incorporated by reference. That discussion details the extensive public involvement during the draft RFP review.

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 FEIS. This current analysis of specific road and trail issues indicates existence of the same polarization concerning access issues as identified during the original public scoping processes for the Revised Forest Plan.

In the Forest Plan appeals, many of the roads to be closed or decommissioned by the Revised Forest Plan, were requested to be left open, and many of the roads and trails to be left open were requested to be closed. Public comments on the Forest Plan and on the DEIS for this process concerning opening or closing roads were summarized into the issue topics identified previously. The displays (map overlays) of these appeal and public comment issues are on file in the Forest Supervisor's Office and are available for review upon request. These overlay maps were used as the basis for developing alternatives as described in the following chapter.

Chapter

II

Alternatives Including the Proposed Programmatic Action (Preferred Alternative)

CHAPTER II

ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE

READER'S GUIDE - In this chapter you will find:

- ALTERNATIVES CONSIDERED
- ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

NOTE to READERS: Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document.

ALTERNATIVES CONSIDERED

Based on available data, public issues and the Final EIS for the Revised Forest Plan, five alternatives were considered and analyzed in detail. These include: 3M+Revised, the new Preferred Alternative--hereinafter referred to as 3M+R; 1M; 3M+; 3M; and 3M-(minus). Alternative 3M presented below is the same alternative as selected in the Revised Forest Plan FEIS (pages II-3-4 and II-7-8) and in the 1997 ROD for the Open Road and Open Motorized Trail Travel Plan (ROD - page 4).

The new alternative (3M+R) was created in response to issues and specific comments on the DEIS as described in Chapter I. The route-specific comments were mapped for analysis and consideration, and these overlay maps are on file in the Forest Supervisor's Office. These working maps are available for review. The 3M+R alternative was created by adding open motorized routes or closing routes in the 3M+ alternative, which was the Preferred Alternative in the DEIS.

Alternatives 3M(+) and 3M(-) were created and analyzed in the DEIS in response to specific public issues and appeals and represent minor additions (+) or deletions (-) to the 3M (Forest Plan) Alternative. Alternative 1M was also considered in the DEIS and is the existing situation as modified by the Regional Forester's remand. For a complete analysis and discussion of each alternative and its consequences, see Table II-1 and Chapter IV of this FEIS, and Appendix C(M). Appendix C(M) was developed by using ratings from Alternative 3M from the 1997 Appendix C Update and by adding ratings for the four new alternatives considered.

These alternatives only address summer motorized access for roads and trails because winter travel and summer cross-country access were already decided in the Revised Forest Plan. It should also be understood that cleanup of GIS layers resulted in slight changes in existing road and trail totals, and thus in representation of Alternative 3M from the RFP-FEIS. Also, it is not possible to have all totals for the alternatives presented here match exactly due to difficulties with the GIS layer overlays as data queries are created. Small segments of roads and trails exist or are created during the overlay process that cannot be accounted for or made to match. These discrepancies are minor and the data used was the best available from any source.

It should also be noted that more miles of road show on each alternative map referenced below than in Alternative 1 - existing situation (map #2, RFP-FEIS) for the Revised Forest Plan, because the yearlong restricted roads were not shown on the RFP-FEIS maps.

The five alternatives considered are briefly described as follows:

- Alternative 1(M) - "No Action" - This alternative is based on the existing situation. This alternative would leave the open, motorized roads and trails of the 1994/96 Travel Plans (old brown maps) in place for all of the Forest outside the bear management units (BMUs). Inside the BMUs, (see Figure III-6 in RFP-FEIS, page III-55) travel would be according to the Revised Forest Plan (Alternative 3M). Forest-wide, summer, cross-country travel would also be according to the Revised Forest Plan (Alternative 3M). This alternative is displayed on the Summer Transportation Map #2. Approximately 2,077 miles of open, motorized road; 51 miles of seasonally restricted road; 436 miles of decommissioned roads; and 725 miles of open, motorized trail are included in this alternative (Table II-1). Decommissioned roads would be the same as those shown for alternative

3M+R on maps 6(a-c) for the area inside the BMU's. No roads would be decommissioned outside the BMU's. Appendix C(M) to this FEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. This alternative would not be consistent with the Revised Forest Plan and would require a significant Forest Plan amendment to the open road and open motorized trail density standards to be implemented to accommodate the higher density. Its purpose here is to provide a baseline to compare site-specific effects with the other alternatives being considered.

- Alternative 3M(+)R - PREFERRED ALTERNATIVE - This alternative includes most of the features of alternative 3M(+) along with some additional routes (approximately 45 miles) opened in response to public comment on the DEIS, and some administrative needs. The alternative also shows some routes closed (approximately 17 miles) to motorized use in response to public comments on the DEIS. This alternative remains within the open motorized road and trail (ORMTRD) density standards of the Revised Forest Plan with the exception of the same non-significant Forest Plan amendments needed as described for alternative 3M(+) below. Alternative 3M(+)R is displayed on Summer Transportation Map #6(a-c). Roads and trails opened to motorized travel in addition to those in alternative 3M(+) are shown in bold green, and those changed to closed are shown in bold red on Map #6(a-c). This alternative has 1,756 miles of open, motorized road; 61 miles of seasonally restricted road; 830 miles of decommissioned roads; and 542 miles of open, motorized trail. The decommissioned roads are shown on Maps #6(a-c) as blue lines. These decommissioned roads are shown only on this alternative, but would be the same inside the BMU's for all alternatives, and would vary somewhat outside the BMU's for the other 3M alternatives. No RS-2477 assertion roads would be decommissioned. Appendix C(M) to the FEIS describes which roads and trails remain open to motorized travel and the reasons why routes were selected as open or closed. Summer, cross-country travel would be the same as Alternative 3M from the Revised Forest Plan. This alternative has the same prescription areas as Alternative 3M. A travel map would be implemented from this alternative in the same method as described for alternative 3M(+) below.

- Alternative 3M(+) - This alternative includes additional (approximately 94 miles) open roads and trails to those in alternative 3M. Approximately 39 of these additional miles were shown on Map #4 in the DEIS, and were considered in the analysis, but were not included in the data tables. This alternative is still within the route density standards of alternative 3M as decided in the Revised Forest Plan, except as noted below. Alternative 3M(+) is displayed on Summer Transportation map #4. As noted in Alternative 3M, which follows, it was discovered in this analysis that road density of 3M was below the level allowed for some of the prescription areas. Therefore, roads and trails were added in this alternative to respond to some of the specific requests in public scoping comments and appeal records as noted on the overlay maps and RS 2477 maps prepared for this analysis.

  The roads and trails added are shown in green on Map #4 in the map packet. This alternative has 1,711 miles of open, motorized road; 62 miles of seasonally restricted road; 882 miles of decommissioned roads; and 536 miles of open, motorized trail. Appendix C(M) to this FEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. The total miles of open, motorized roads and trails in this alternative are similar to Alternative 3 in the Revised Forest Plan, but the open roads and trails are in different locations. Summer, cross-country travel would be the same as Alternative 3M from the Revised Forest Plan.

  This alternative has the same prescription areas as Alternative 3M, and road densities are within the prescription density allowed, except as shown in Table II-2. Implementation of a new

Table II-1. Comparison of Environmental Effects by Key Issue Indicators

Indicator	Issue	Alt. 1(M)	Alt 3M(+) Rev	Alt. 3M(+)	Alt. 3M	Alt. 3M(-)
ROADS (miles)	Access					
Open		2,077	1,756	1,711	1,617	1,613
Seasonal Restriction		51	61	62	62	62
Yearlong Restriction		399	309	291	303	303
Decomm. in BMU's		436	411	427	429	438
Decomm. outside BMU's		0	419	455	521	524
Total Miles		2,963	2,956	2,946	2,932	2,940
TRAILS (miles)	Access					
Open		725	542	536	511	454
Seasonal Restricted		0	0	0	0	0
Yearlong Restricted		651	881	861	879	933
Total Miles		1,376	1,423	1,397	1,390	1,387
Total Miles Rds/Trs.		4,339	4,379	4,343	4,322	4,327
Miles of motorized rd/tr. decommissioned & re-claimed	Soil and water quality	436	830	882	950	962
Miles of motorized rd/tr. on unstable soils	Soil and water quality	1,297	964	950	916	860
Miles of motorized rd/tr. in AIZ	Soil and water quality	868	717	713	683	647
Number of rd/tr. stream crossings	Water quality and fisheries	4,613	3,653	3,633	3,448	3,267
Miles of rd/tr. in cutthroat AIZ	Cutthroat trout habitat	251	231	232	229	211
Number of rd/tr. stream crossings in cutthroat AIZ	Cutthroat trout habitat	491	441	442	431	375
OROMTRD (mi./sq. mi.)	Grizzly habitat					
Henrys BMU - Sub. 1		0.53	0.56	0.54	0.55	0.54
Henrys BMU - Sub. 2		0.49	0.48	0.49	0.47	0.49
Plateau BMU - Sub. 1		0.58	0.60	0.58	0.59	0.58
Plateau BMU - Sub. 2		0.55	0.54	0.55	0.55	0.55
Bechler - Teton BMU		0.50	0.52	0.51	0.50	0.49
TMARD (mi./sq. mi.)	Grizzly habitat					
Henrys BMU - Sub. 1		0.72	0.77	0.72	0.74	0.71
Henrys BMU - Sub. 2		0.53	0.55	0.57	0.54	0.53
Plateau BMU - Sub. 1		0.97	0.99	0.97	1.00	0.96
Plateau BMU - Sub. 2		0.74	0.73	0.74	0.74	0.74
Bechler - Teton BMU		0.66	0.70	0.68	0.67	0.66
Elk Habitat Effectiveness	Wildlife effects	0.59	0.62	0.62	0.63	0.63
Elk Vulnerability 1/	Wildlife effects	85	85	85	87	87
Miles of motorized rd/tr. in roadless	Potential impact on roadless or on wilderness designation	776	572	548	520	469

1/ Percent of Forest meeting State Fish and Game agency goals or thresholds for elk vulnerability.

Table II-2. Proposed Non-Significant Forest Plan Amendment for Prescription Route Densities

DISTRICT	AREA NAME	PRESCRIP-TION (Rx)	RD DENSITY of Forest Plan	PROPOSED RD DENSITY	REASONS DENSITY EX-CEEDED
Dubois	Kyle Canyon	3.1.1(a)	0.0	0.1	Road on RFP map
	Spring Mtn Cyn	3.2(g)	1.0	1.1	Road on RFP map
	Italian Peak	1.3	0.0	0.4	Trail on RFP map
Palisades	Palisades Cr	1.3	0.0	0.1	Indian Cr trails in RFP map
	Kelly Cyn	5.1.4(d)	1.5	2.4	Small Rx area
	Moody Cr	5.1.4(b)	1.5	1.7	RS 2477 assertion
	Indian Cr	1.2	0.2	0.3	Access Table error - RFP
	Sheep Cr	3.2(d)	1.0	1.8	Small Rx area
	Poker Peak	3.1.1(a)	0.0	0.1	Adjacent road

Travel Plan under this preferred Alternative (3M+) would require a non-significant amendment to the 1997 Forest Plan revision to cover the specific road density changes (Table II-2) for individual prescription areas which would vary from the Forest Plan prescription Access Tables (OROMTRD allowed).

All of the densities and associated motorized routes in Table II-2 were shown and approved in the Revised Forest Plan (Alternative 3M) Transportation Plan Map #11, except the Moody Creek road (80251). However, the road density variances were not noticed at the time the Revised Forest Plan was approved. The Moody Creek change is in response to an RS 2477 assertion listed after the Forest Plan was approved. Motorized use was approved by the RFP-FEIS in Indian Creek and was intended to be unrestricted as shown in the RFP-DEIS footnote, but when the footnote was prepared for the RFP-FEIS, an incorrect OROMTRD of 0.2 miles per square miles was put in the footnote to the Access Table. The working copy of the OROMTRD density map dated July, 1999 actually showed a density of 0.3 miles for the Indian Creek area, and all of the motorized routes in that density were displayed in the RFP-FEIS Transportation Plan for Alternative 3M. This 0.3 density is a reduction from the 0.5 in the DEIS due to trail closures in Indian Creek.

Many of these prescription area density variances occur to accommodate roads running along or through small prescription areas (approximately 5 square miles or less) which are affected disproportionately by the presence of the road. The Lionhead prescription amendment shown in Table II-2 in the DEIS was determined to be unnecessary, and has been deleted. Another amendment for Italian Peaks was overlooked in the DEIS, and has been added to Table II-2.

A Travel Plan (map and Closure Order) would be developed and implemented using the same format as the 1997 Travel Plan Map. The Travel Plan would include the details from the Transportation Plan (map #4 of map packet) for this alternative along with the Travel Plan Addendum (Appendix A), and road, trail, and cross-country matrices. This procedure would be followed using the appropriate data and maps for any alternative selected in the final EIS. Special features such as the Continental Divide National Scenic Trail will be added at that time.

- Alternative 3M - This alternative is the 1997 Travel Plan (summer - roads, trails and cross-country travel) as displayed by the summer Transportation Plan (map #3 - see map packet) for Alternative 3M in the Revised Forest Plan FEIS. This alternative has 1,617 miles of open, motorized road; 62 miles of seasonally restricted road; 950 miles of decommissioned roads; and 511 miles of open, motorized trail.

The 1997 Appendix C Update to the RFP-FEIS and the roads and trails GIS data layer were corrected to delete duplicate segments, and to make other minor edits. These corrections resulted in approximately 40 miles of additional road inventory to that shown in the RFP. It was discovered during this analysis, that road density for this alternative was below densities allowed for some prescription areas and lower than calculated in the RFP-FEIS. This is mostly due to earlier GIS query data errors. It is also partially due to topography limitations and the design of prescription densities being just an initial goal to guide planning. During mapping of the alternative there was also a conscious effort to leave room for management flexibility, e.g. - by not pushing elk vulnerability to the limit. Appendix C(M) to this FEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed for each alternative.

- Alternative 3M(-) - This alternative has slightly fewer open roads/trails than Alternative 3M. This alternative is essentially the same as Alternative 3M, but with the reduction of specific open roads and trails as requested in public scoping comments and appeal records. Roads and trails were eliminated in response to some of the specific requests noted on the overlay maps described previously in the issues analysis. The roads and trails eliminated are shown in red on map #5 in the map packet. This alternative has the same prescription areas as Alternative 3M and 3M(+), but road densities are lower in several prescription areas than in Alternative 3M. This alternative is similar to Alternative 4 in the Revised Forest Plan FEIS in total open motorized roads and trails, but the roads and trails are in different locations. Summer, cross-country travel is the same as Alternative 3M from the Revised Forest Plan. The Transportation Plan for this alternative is enclosed in the map packet for this FEIS as map #5. This alternative has 1,613 miles of open, motorized road; 62 miles of seasonally restricted roads; 962 miles of decommissioned roads; and 454 miles of open, motorized trail.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Other alternatives were considered that would address additional requests for opening or closing road and trail segments beyond the maximum route density or significantly below the density allowed for prescriptions. The formal administrative appeal requests, DEIS scoping comments, and public comments on the DEIS were mapped and reviewed for alternative consideration and development as described in the issues analysis and alternatives development process above. Our analysis of these options was found to match the same range of alternatives considered in the Revised Forest Plan FEIS. For example, an alternative with more open roads and trails than 3M is represented by Alternatives 1, 2, and 3 of that FEIS. An alternative with fewer open roads and trails would be represented by Alternatives 4, 5, and 6. Since an infinite array of alternatives could be constructed from issues indicated by the comments and appeals, and since that array has already been considered in the previous Revised Forest Plan FEIS, it is not necessary to reconstruct those alternatives in this analysis.

Furthermore, any alternative with a higher road/trail density than allowed by the Revised Forest Plan management prescription direction would be outside the standards established in the Revised Forest Plan and contrary to the Purpose and Need for this decision. The scope of this analysis is limited to alternatives that meet the open road and open motorized trail density standards decided in the recently revised Forest Plan, as directed by the Regional Forester (remand letter of 1/14/98). Because these density standards have recently been decided, and since no new issues concerning route density were identified, whether they should be adjusted is not ripe for decision at this time, with the exception of the non-significant RFP amendment described earlier. Effectiveness monitoring is a requirement of the Revised Forest Plan. An evaluation of the effectiveness of these route density standards will be made at appropriate intervals in the annual Forest Plan monitoring report.

Chapter

III

Affected Environment

CHAPTER III

AFFECTED ENVIRONMENT

READER'S GUIDE - In this chapter you will find:

A description of the following components of the Forest:

- INTRODUCTION TO ECOSYSTEM MANAGEMENT
- PHYSICAL ELEMENTS OF THE ENVIRONMENT
- BIOLOGICAL ELEMENTS OF THE ENVIRONMENT
- FOREST USE AND OCCUPATION
- PRODUCTION OF COMMODITY RESOURCES

This chapter describes the existing environment that will be affected by implementation of any of the alternatives. It describes the existing physical, biological and social environment of the Forest and the surrounding area. Most of the following information is a summary of the information contained in the 1997 Revised Forest Plan (RFP) FEIS (pages III-1 through III-100). References to the Revised Forest Plan FEIS, will be shown throughout this document as (RFP-FEIS, page x,y,z). In some cases, a topic or resource summary is not presented in detail, because the topic is not relevant to the issues or alternative analysis. In these cases, a reference to the resource topic location in the RFP-FEIS is all that is provided. We have also added some new information to update the status of resource conditions.

NOTE to READERS: Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document.

INTRODUCTION TO ECOSYSTEM MANAGEMENT

Principles

In recent years the Forest Service has embraced the concept of Ecosystem Management (EM). This is an approach to natural resource management that strives to ensure healthy, productive, sustainable ecosystems by blending the needs of people (e.g. - roads and trails as discussed in this EIS) and environmental values in a given area such as the Forest. An ecosystem is a complex system of living and nonliving components that interact and change continually. Healthy ecosystems (Glossary - RFP-FEIS, page G-19) are those that are in Properly Functioning Condition (PFC). Ecosystems that are in PFC display resilience to disturbance to the structure, composition and process of their biological and physical components. They retain all of their parts and functions for future generations even though vegetation patterns, human uses or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetation patterns over time in a landscape are important steps towards implementing EM.

The Targhee Forest remains committed to ecosystem management principles as outlined in the Revised Forest Plan and as analyzed in the FEIS for that Plan. Those processes and principles include adaptive management; PFC; range of variability (ROV); use of geographic scales (ecological units known as subsections); and ecological processes and patterns including succession, fire, insects and disease, vegetation types, connectivity, etc. (RFP-FEIS- pages III-1-17).

One change in condition is the approval of the Fire Management Plan for the Jedediah Smith Wilderness which was implemented with the Revised Forest Plan approval in 1997. Since that time, one fire was approved for management in the summer of 1997. It burned less than one tenth of an acre.

Subsections

Several resources are described in this chapter using the ecological units known as subsections as was done in the RFP-FEIS. These units exhibit unique patterns in soils, landform, topography and potential natural vegetation, among other characteristics. The Forest encompasses part or all of the following seven subsections (RFP-FEIS-Figure III-1, page III-3):

- Lemhi/Medicine Lodge
- Centennial Mountains
- Island Park
- Madison-Pitchstone Plateaus
- Teton Range
- Big Hole Mountains
- Caribou Range Mountains

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Soils and Geology

Soils and geology are described (RFP-FEIS, pages III-17-19) and summarized for each ecological subsection as follows:

Lemhi/Medicine Lodge - This subsection consists of fault block mountains, which exhibit a northwest-southeast trend. The dominant rock types are limestone and sandstone. The landscape is dissected by parallel drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly, medium textured surface layers and extremely gravelly, medium textured subsurface layers. These soils have a low to moderate inherent fertility, are droughty, are high in carbonates and have a high erosion hazard.

The principal management activities affecting soil quality are roads, grazing concerns along incised drainages and OHV use. Secondary management activities affecting soil quality include water developments and mining impacts which have not been reclaimed.

Centennial Mountains - This subsection consists of a fault block mountain range, which exhibits an east-west trend along the Continental Divide. The dominant rock types are rhyolite, sandstone and shale. The landscape is dissected by dendritic and parallel drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium to medium-fine textured surface layers and gravelly to extremely stony medium to medium-fine subsurface layers. These soils have a moderate to moderately high inherent fertility, are susceptible to compaction and puddling, have a moderate to high erosion hazard, exhibit plant competition concerns and demonstrate slumping hazards on mountain sideslopes and escarpments at higher elevations.

Principal management activities that are concerns affecting soil quality include roads and OHV use, dispersed recreation impacts, grazing concerns along drainages and water developments. Secondary management activities that are affecting soil quality include mining impacts which have not been reclaimed, past timber/firewood harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue.

Island Park - The Island Park Caldera was formed by the collapse of a large rhyolite shield volcano. After the collapsing of the caldera, volcanic activity continued, resulting in basalt flows covering much of the caldera floor. The entire subsection has been overlain by wind blown silts (loess). The dominant rock types are rhyolite and basalt. The landscape is dissected by dendritic and parallel drainage systems on the caldera rim and associated tablelands. The caldera floor has very little dissection.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium textured surface layers and medium fine to extremely cobbly medium textured subsurface layers. These soils have a moderately low to moderate inherent fertility. Soils on the caldera floor have plant competition concerns on deeper soils, reforestation concerns on more shallow soils, and a moderate susceptibility to compaction. Soils on the caldera rim have a moderate susceptibility to compaction, moderate to high erosion hazard, low bearing strength and plant competition concerns.

Principal management activities affecting soil quality (caldera rim) are roads, OHV use, and extensive past timber/firewood harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue. Principal management activities (caldera floor) are the same as for the rim, plus dispersed recreation, which is especially heavy near summer home areas, and grazing along certain riparian areas and meadow complexes.

Madison-Pitchstone Plateaus - This subsection consists of a large consolidated ash flow that came out of the Park and overtopped the east rim of the Island Park Caldera. The landscape is dissected by dendritic and parallel drainage systems.

The soils in the northern part are greater than 60 inches to bedrock, having medium textured surface layers and stratified gravelly coarse textured to extremely gravelly coarse textured subsurface layers. The soils in the southern part are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly to extremely cobbly medium textured subsurface layers. These soils have a moderately low inherent fertility, are droughty and have windthrow hazards. They are highly erodible if the subsoil is exposed, as it is in the northern part of this subsection due to the North Fork Fire.

Principal management activities affecting soil quality include roads and OHV use, dispersed recreation, effects associated with timber harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue.

Teton Range - This subsection includes a north-south trending mountain range. The dominant rock types are granite, limestone, sandstone, dolomite, slate, gneiss and quartzite. The landscape is dissected by parallel drainage systems.

This subsection consists of two primary landscape settings. These include foothills on lower to mid elevations and mountain side-slopes at mid to high elevations. Soils on these landscapes are 40 to greater than 60 inches to bedrock, having nongravelly to very gravelly medium textured surface layers and gravelly to extremely stony medium textured subsurface layers. These soils have low to moderately low inherent fertility, low to moderate compaction hazard, moderate to high erosion hazard, reforestation concerns and low to high mass instability hazards.

Principal management activities affecting soil quality include roads, grazing along drainages, OHV use and dispersed recreation. Secondary management activities affecting soil quality include the effects of timber harvest which have resulted in road construction, compaction, organic matter removal or displacement and loss of woody residue.

Big Hole Mountains - This subsection consists of a mountain range of multiple, parallel overthrusts (faults) and benches of mixed rocks and eolian material that have been modified by thrust faulting.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly moderately coarse to moderately fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns and areas of low bearing strength.

Principal management activities affecting soil quality are roads, OHV use, dispersed recreation and grazing along drainages. Secondary management activities affecting soil quality include erosion along sheep driveways, effects resulting from timber harvest and big game feeding areas along Rainey Creek.

Caribou Range Mountains - The Caribou Range Mountains Subsection is a southeast to northwest trending overthrust (multiple faults) mountain range. The northeast side of the range is moderate relief mountains on mixed sediments. The southwest side of the range is low relief foothills and basins on fine-textured marine sediments. The dominant rock types are a mix of sedimentary materials with a loess influence. The landscape is dissected by dendritic drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having medium textured surface layers and moderately-coarse to fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns and areas of low bearing strength.

Principal management activities affecting soil quality include roads, OHV use, dispersed recreation and grazing along drainages. Secondary management activities affecting soil quality includes erosion along sheep driveways and effects from timber harvest.

Air Quality (see RFP-FEIS, page III-20)

Caves (see RFP-FEIS, page III-20)

Lands (see RFP-FEIS, page III-20)

Minerals (see RFP-FEIS, page III-22-23)

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

This section is divided into various types of ecosystems so that the relationships between biological elements within the same system can be better understood. Aquatic, riparian and terrestrial ecosystems (upland forested and upland nonforested) will be considered.

Riparian and Aquatic Ecosystems

Riparian

Riparian areas lie adjacent to water and are composed of vegetation communities influenced by water (RFP-FEIS, page III-23-25).

Grazing is considered to have shifted the species composition on 8,988 acres (32 percent) of riparian communities across the forest. Under current range management, 5,338 of these acres are moving toward higher ecological conditions with increasing plant biodiversity. Some 3,650 acres are remaining in less stable, lower ecological conditions, with lower plant diversity (Table III-6, RFP-FEIS, page III-24). Where grazing decreases species diversity, shallow, fine-rooted species such as Kentucky bluegrass (*Poa pratensis*) become dominant and replace the deeper, thicker-rooted native herbaceous species, thus decreasing streambank stability. Specific riparian conditions are presented by subsection as follows:

Lemhi/Medicine Lodge - The principal ecological concern affecting riparian quality in this subsection is that upland vegetation has expanded into riparian zones due to past over-utilization

and/or a drop in the water table levels. A secondary ecological concern affecting riparian quality in this subsection is that within some riparian areas willows are dying out and are not being regenerated.

Principal management influences affecting riparian quality include past overuse by ungulates (domestic and wild), dispersed recreation, OHV use and roads in or adjacent to riparian areas and associated stream crossings.

Centennial Mountains - Principal ecological concerns affecting riparian quality include the expansion of upland vegetation into riparian zones due to past over-utilization and/or a drop in the water table levels and some areas of fine-textured subsoils which have a moderate to high slumping potential. A secondary ecological concern affecting riparian quality is that within some riparian areas, willows are dying out and are not being regenerated.

Principal management concerns affecting riparian quality are overuse in some areas by ungulates (domestic and wild), dispersed recreation, OHV use and roads in or adjacent to riparian areas and associated stream crossings. Secondary management concerns affecting riparian quality include past mining sites that have not been rehabilitated, past timber harvest that left inadequate buffers and fuel wood gathering.

Island Park - The principal ecological concern affecting riparian quality is that there are areas where willows are dying out and are not being regenerated.

Principal management concerns affecting riparian quality include high use recreation areas (including summer home, dispersed and developed recreation areas), OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers and fuelwood gathering. A secondary management concern affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Madison-Pitchstone Plateaus - The principal ecological concern affecting riparian quality is in the area of the North Fork Burn. Principal management concerns affecting riparian quality include dispersed recreation, OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers and fuelwood gathering. A secondary management activity affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Teton Range - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse and OHV use, trails in close proximity to or within riparian areas and associated crossings, isolated areas of overuse by ungulates (domestic and wild), roads in or adjacent to riparian areas and associated stream crossings. Secondary management activities affecting riparian quality include past timber harvest which left inadequate buffers and fuelwood gathering.

Big Hole Mountains - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse and OHV use, trails in close proximity to or within riparian areas and associated crossings and areas of overuse by ungulates (domestic and wild). Secondary management activities affecting riparian quality include sheep driveways, past timber harvest which left inadequate buffers, fuelwood gathering and IDFG feed grounds in Lower Rainey Creek.

Caribou Range Mountains - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, OHV use, trails in close proximity to or within riparian areas and associated

crossings, areas of overuse by ungulates (domestic and wild), sheep driveways and roads in and adjacent to riparian areas and associated crossings.

Water

It is important to determine which streams are naturally "unstable" (i.e., dynamic) due to landforms, bed and bank materials, etc. and which ones have instability induced by management practices. An attempt is made in the text to make this determination where possible (RFP-FEIS, page III-26-31).

Water Yield - Total annual water yield on the Forest is about 1.4 million acre-feet. Water is lost or used in many ways, including evaporation, infiltration, use by plants and animals and diversion from stream channels. Because of these and many other factors, the amount of water reaching the Forest boundary will be less than what is produced.

Water Quality - The biggest pollutant on the Forest is excess sediment, derived from within-channel erosion and upland erosion reaching stream channels. The main source of management-produced sediment is roads, specifically those segments within riparian areas, including stream crossings. Forest roads generally contribute an estimated 85 to 90 percent of the management-produced sediment reaching streams in disturbed Forest land (Burroughs 1990 - RFP-FEIS, page R-2). Currently there are 4,613 stream crossings and 868 miles of road in Aquatic Influence Zones (AIZs) on all lands within the Forest boundary (including inholdings). The number of stream crossings is higher in this analysis than in the RFP-FEIS because this data includes motorized trail and road crossings. The RFP-FEIS only considered road crossings.

The amount of water meeting State water quality goals on the Forest is unknown. Idaho Code Section 39-3601 et seq. (effective July 1, 1995) approved adoption of new water quality standards. Streams targeted for the new regulations are those listed as Water Quality Limited (WQL) under section 303(d) of the Clean Water Act. This list is updated every two years: the 1998 303(d) (i.e., WQL) list had not been published at the time the DEIS was written, so only the streams on the 1996 list were discussed in the DEIS. Information regarding streams on the 1998 303(d) list is included in this (final) document.

The Forest is in the process of validating WQL streams to determine where we have water quality concerns, and if they exist, to find the source of the concerns. Many of the water bodies currently listed have limited data, so there is a great deal of speculation as to whether they should remain listed. Until we can verify the condition of these streams, particularly the condition of fish habitat and fish populations, the Forest is employing especially stringent management requirements in the WQL watersheds. We have begun baseline monitoring in at least one WQL watershed where new management activities are planned. Impacts to WQL streams are analyzed at the project level, where site-specific BMPs can be tailored to a given situation. Specific subsection conditions for stream channels and water quality are summarized as follows:

Lemhi/Medicine Lodge - Major streams in this subsection are Medicine Lodge Creek and its tributaries. There are many perennial streams that have their headwaters in the Bitterroot and Beaverhead Ranges, that eventually flow through broad valleys. Channel stability ranges from fair (-) to good (+). This subsection has generally declining trends in channel stability, sometimes even where grazing has been excluded.

On-Forest 303(d) streams (1998 list) include Edie Creek, Irving Creek, Fritz Creek, and Warm Springs Creek. Idaho DEQ sampled sites on streams in this subsection to assess changes in water quality from management. On Irving, Edie and Fritz Creeks, water quality was similar above and below where forest management was occurring. All sites showed impacts from grazing at the time of the survey.

The south end of Road 192 is along Warm Springs Creek - a 303(d) stream listed for nutrients and sediment. Nutrient testing by the Forest Service in 1995 showed no elevated levels of either nitrate/nitrite or orthophosphate on the National Forest portion of the stream. This portion of stream is upstream of Warm Springs and is intermittent (dries up in summer). The road is close to the stream here for approximately one mile, but does not appear to be

causing water quality concerns. The greatest impacts to the stream, by far, are downstream of the Forest boundary. The rest of the road is up on a hillside with occasional, improved stream crossings; no significant impacts are noticeable from this section.

Road 193 (East Fork Irving Creek) is a two-track road up to the Forest boundary. On the Forest, the road is in poor condition. It is a 4-wheel drive road, rocky, and is in the valley bottom (and in the stream in several locations). Long-range plans are to make a trail head at the Forest boundary and no motorized vehicles will be allowed on the trail.

Centennial Mountains - Streams having headwaters along the front of the Centennial Mountains generally flow south and their water comes from both snowmelt and spring sources.

Channel stability ratings generally range from fair (-) to good (+) with stable or declining trends throughout most of the subsection. The only standout is a poor rating on part of West Dry Creek, though there is no apparent management related reason. Some portions of the Henry's Fork Headwaters rated as excellent. The most frequent management problems are livestock damage and roads.

The only 303(d) stream in this subsection (1998 list) is Cow Creek, which is intermittent.

Monitoring by the State of Idaho in the Henry's Fork headwaters showed limited impacts to beneficial uses in these streams. The final Upper Henry's Fork Subbasin Assessment (IDEQ, 1998) determined that Henry's Lake, which had been on the previous 303(d) lists due to oxygen depletion, should be delisted. The Henry's Lake Clean Lakes Project demonstrated that low winter oxygen concentrations in the lake are due to naturally high levels of phosphorus in the lake and its subbasin, and that the other major concern (low salmonid spawning and fry recruitment) is being addressed via other means. The U.S. Environmental Protection Agency (EPA) will make the final determination on delisting. Sampling at Big Springs in 1994 found water quality to be excellent and water temperatures consistently low.

Island Park - Many streams here show a strong influence from groundwater, having relatively low variation in flow throughout the year.

Channel stability ratings range from fair (-) to excellent. Management impacts stem from roads, livestock and recreation, which vary in significance in different places.

On previous 303(d) lists, the Henry's Fork from Buffalo River to Riverside was listed for sediment. Concerns about high levels of instream sediment were associated with a 1992 incident in which Island Park Reservoir was drawn down to accommodate a rotenone treatment in the reservoir, and during which large amounts of stored sediment were flushed downstream. The final Upper Henry's Fork Subbasin Assessment (IDEQ, 1998) determined that various data provided sufficient reason to delist the reach. These data include macroinvertebrate indices showing good to excellent water quality, an improvement in the quality of bed materials in the Last Chance area since 1992 (increase in median particle size), and encouraging spawning information. The Subbasin Assessment states that "Development of a total maximum daily load for sediment is unnecessary [i.e., the segment may be delisted] because the primary source of sediment loading was a distinct event associated with the drawdown of Island Park Reservoir in 1992" and goes on to provide guidance to avoid such events in the future. EPA will make the final determination on delisting. The Buffalo River was sampled in the late 1970s and water quality was found to be good.

Madison-Pitchstone Plateaus - Surface drainage here is not very well-developed, due to the underlying volcanic rocks which allow more water to percolate than to run off. These streams originate in or near the Park and exhibit strong groundwater influence.

Channel stability ranges from fair (+) to excellent. The North Fork Fire in 1988 caused major changes in channel stability to Moose Creek. Road systems were a watershed concern in this area even before the fire. After the fire, erosion from uplands accelerated due to loss of vegetation and burning effects on soils, which caused more water to run off slopes. While the

burn area is recovering, accelerated erosion is still taking place, and high amounts of sediment are still being delivered to Moose Creek (Simon, 1999)

There are no WQL streams on the Forest in this subsection. Five of the streams in the subsection (Rock, Robinson, Fish and Porcupine Creeks and Warm River) had been named by Idaho as Stream Segments of Concern before this designation was eliminated in 1995. Water quality has been generally good on these streams.

Teton Range - Streams in this subsection originate along the west slope of the Teton Mountains. They are steep, dynamic and characterized by coarse substrate (up to boulders in size) due to the proximity of this material to the stream channel. Glaciation has been an important influence on stream systems here.

Channel stability ranges from fair (-) to good (+). Impacts to channels stem mostly from natural causes such as avalanche debris, unstable bank materials and failed beaver dams. Localized management effects are related to roads, recreation and livestock.

There are no 303(d) listed streams on the Forest in this subsection. On-Forest water quality monitoring has been extremely limited here, largely due to the limited amount of management activities in the Jedediah Smith Wilderness and recent lack of activity downstream of the Wilderness.

Big Hole Mountains - Streams here contribute to either the Teton River or the South Fork Snake River. They are generally confined within steep-sided valleys or canyons, and are high-energy systems, able to move a considerable amount of sediment. Snowmelt is important in these streams, so they have high spring peak flows which later drop to their late summer levels.

Channel stability ranges from poor to good (+). Impacts exist in most drainages from recreation use, especially trails along the streams and dispersed camping. Management impacts associated with cattle and roads are also very common.

Streams on the 1998 303(d) list include:

Teton River (headwaters to Trail Creek--listed for habitat alteration),
Packsaddle Creek (listed for discharge alteration and sediment),
Horseshoe Creek (confluence of North and South Forks to Teton River--listed for discharge alteration),
Little Elk Creek (unknown pollutant),
North Fork Indian Creek (Wyoming state line to Indian Creek--unknown pollutant),
Sheep Creek (unknown pollutant)

Most of these streams are newly listed and their listing has not been investigated yet. In-depth water quality sampling was conducted on Big Elk Creek in the late 1970s. Water temperatures were consistently good, and turbidity was consistently low. Little Elk Creek was sampled once, and had readings similar to Big Elk. In general, it appears that stream channel stability is a concern in many places, but (based on available data) water quality impacts are not evident.

Moody Creek is listed from the Forest boundary to Teton River for nutrients. Numerous nonpoint sources of sediment have been noted on Forest lands in the drainage, such as ghost roads and motorized trails (including trespass travel on roads and trails that have been closed), dispersed campsites, system roads that are adjacent to streams (e.g., Road 218 along South Moody Creek) and that have problems with road-related structures (e.g., culverts), and temporary roads in old logging units that were not rehabilitated when the timber sales were closed.

Trail 122 (N. Fork Indian Creek) is a major concern from a number of viewpoints. The old trail is in the creek for much of its length, and the new trail is very steep and narrow, with sections

that are located on narrow ledges. The new trail creates conflicts, especially when motorized vehicles or horses meet in the narrow sections of trail. This has led some users to revert to using the old trail. It is a difficult trail to re-route, but work is planned for the year 2000.

Caribou Range Mountains - Geology has played an important role in this subsection. The underlying geology of folded and faulted sedimentary rocks has produced perpendicular drainages, and the streams follow the weaknesses in the rocks.

All reaches rated from fair (-) to good (+) in channel stability. Grazing, powerline clearing, roads in riparian areas and heavy recreational use are all listed as problems in the Fall Creek drainage. Most streams here have not been surveyed. Streams on the 1998 303(d) list include:

Bear Creek (headwaters to North Fork Bear Creek-- unknown pollutant),
Elk Creek (headwaters to West Fork Elk Creek-- unknown pollutant),
Fall Creek (headwaters to South Fork Fall Creek-- unknown pollutant),
Meadow Creek (sediment),
Tex Creek (sediment),
Hell Creek (nutrients, sediment),
Lava Creek (sediment, temperature),
Brockman Creek (nutrients, sediment),
Corral Creek (sediment, temperature), and
Sawmill Creek (sediment, temperature).

The Forest has been gathering data on these streams, and the information is being shared with IDEQ as it is gathered. Idaho DEQ sampled several streams in 1994; Antelope, Sawmill, Lava, Hell, Willow and Brockman Creeks. Conclusions have not yet been drawn from their data regarding support of beneficial uses.

The 303(d) segment of Antelope Creek is downstream of the Forest boundary. The existing 037 road has long been acknowledged to be causing adverse effects to water resources, as has the Nelson Creek road (070). An Environmental Assessment was begun in 1992 to address the Nelson Creek road, but prohibition of access by an adjacent private landowner has resulted in the project being put on hold. Concerns on both roads include proximity of roads to streams, wet-weather use (which has resulted in extensive rutting), areas of slumps that were cut by the roads, poor-quality stream crossings, and a sediment dam in Antelope Creek (all these were noted in 1992).

Concerns were raised about the eastern end of Road 066 (Blacktail Canyon) in 1998, during project planning for a forest products project: impacts to the stream were discussed then. The road is adjacent to the creek, is very steep for much of its length (along Blacktail Canyon), and is deeply rutted, delivering sediment directly to the stream. A decision was made at that time to keep the road open, but to improve the one ford crossing and to reduce erosion from the road surface by spot applications of gravel, construction of drivable dips on the steeper portions to allow water to run off the road, and grading of the road surface (grading away from the channel). Blacktail is tributary to Fall Creek, the upper portion of which was added to the 303(d) list in 1998. The west end of the road (near Big Dry Hollow) is close to Tex Creek (a 303(d) stream which is perennial here) for approximately one mile. The road here is unimproved and has not been maintained for a number of years. There is a buffer of approximately twenty to forty feet between the road and the stream along this section. No stream channel condition inventories have been conducted here, but there may be sediment delivery to the stream from this section of road. The Tex Creek crossing on Road 157 is a ford, which would provide direct sediment input to the stream.

Road 173 (S. Fk. Lava Creek) comes off the Skyline Road. It is on a dry ridge, with intermittent channel crossings, if any. No significant impacts to water resources result from this road.

Road 077 (Fall Creek/Skyline/Brockman Road): The Skyline portion of this road was rehabilitated in 1998. It is generally on a ridgetop location and with the improvement of one poor crossing, no significant impacts are likely resulting from this section of road. The Fall Creek section has long been an acknowledged concern for water resources. The section downstream of Blacktail Canyon is very close to the stream in many places, and because the stream meanders across the entire valley bottom, it would be difficult to relocate the sections of road that are of concern without major relocation of the entire road. Some culverts feed directly into the stream in this section. Bonneville County maintains the road and drainage structures, and there is gravel on the road surface up to the South Fork Fall Creek. The multiple concerns and heavy use of this drainage (dispersed recreation, OHV use, grazing) make it difficult to quickly remedy the concerns. The crossing of Road 376 at June Creek will be improved in 1999, which will reduce impacts to the channel from the existing ford crossing. The drainage has been recommended for in-depth watershed analysis: no action has been taken yet, but such analysis is being considered. On the Brockman Creek section of road, there is one spot that floods in spring due to the low road elevation, but the road is generally far from the creek.

Road 083 (S. Fk. Bear Creek) comes off the Skyline Road. It has a native (un-rocked) surface, which allows for rutting, and has several short sections where it encroaches on Brockman Creek and South Fork Bear Creek. This road is a probable source of sediment to these streams, due to the nature of the local geology which commonly leads to rutting during wet periods and generation of large quantities of dust at other times. This is a low priority for remediation at this time, but in the course of conducting inventory on Forest roads for Forest Plan compliance, a more careful examination will take place.

Approximately 0.4 mile of Road 151 (Sawmill Creek) is on the Forest. Most of the road is on State land. The road was somewhat improved for logging by the State, and may be improved further if proposed mineral extraction takes place. It is, however, located close to Sawmill Creek and is a source of sediment to the stream.

Trail 040 (Bear Creek, White Spring) was poorly designed: there are some very steep sections that make use difficult. The trail receives little use; as a result it receives little maintenance and is overgrown. There are several crossings downstream of White Spring. While there are resource concerns associated with the trail, it is likely not causing significant impact to water resources.

Trail 041 (Bear Creek, Little Elk Mountain) is in good condition and is well-located. Most of the trail is on a ridge, far from the stream, with only a short section near the bottom located near Bear Creek. This trail is not a significant impact to water resources.

Trail 042 (Bear Creek, Deadman Creek): The lower section of this trail (approximately 2 miles) is close to Deadman Creek and may be causing impacts to water quality and stream channel condition. The rest of the trail is well-located and in good condition. Use is infrequent, which reduces impacts from the trail.

Trail 047 (Bear Creek) has very few crossings and is in good condition. While packstrings use several ford crossings (there are some locations where the trail is awkward for horses, and so fords are used to bypass these areas), there are no crossings that need to be used by motorized vehicles. This trail is not a major impact to Bear Creek.

Fisheries

Streams delineated as "fish-bearing" are those stream segments that are used by any fish species to satisfy all or a portion of its requirements such as spawning, rearing of young, adult feeding and winter survival. Of the 39 primary watersheds on the Forest, 17 have been designated as native trout watersheds; Elk Creek (003), Palisades Creek (004), Rainey Creek (005), Pine Creek (006), Heise (007), Henry's Fork Headwaters (008), Robinson Creek (013), Trail Creek (017), Mahogany Creek (022), Moody Creek (024), Bitch Creek (032), Burns-Pat Canyon (035), McCoy-Jensen Creeks (036),

Elk-Bear Creeks (037), Fall Creek (038), Prichard Creek (039) and Brockman Creek (040) (RFP-FEIS, page III-31-34).

The land area immediately surrounding the various water bodies is referred to as the aquatic influence zone (AIZ). These zones control the biological diversity and integrity of the aquatic environment. It is within these zones that the ecological functions and processes necessary for the maintenance of healthy fisheries habitat take place. Aquatic habitat conditions are expressed in terms of water quality, quantity, and timing of flow; conditions within the stream channel (pools, woody material, etc.); and health of associated plant communities. Since the hydrologic, geomorphic and ecological processes that shape the various water types differ by hydrologic unit, the sensitivity of fisheries habitat to disturbances also varies by hydrologic unit. Human-induced disturbances within the AIZ, including streamflow diversion, livestock grazing, road construction, timber harvesting, and recreation use can disrupt natural processes and functions. Where these are intense or prolonged, fisheries distribution, abundance and productivity can be impaired.

A complete list of the fish species on the Forest by hydrologic unit is shown in Table III-8 of the RFP-FEIS (page III-32). Descriptions of the condition and trends of aquatic and riparian habitats are shown in Table III-6 of the RFP-FEIS (page III-24).

Yellowstone cutthroat trout (large-spotted and fine-spotted form) is selected to represent the many species of fish occupying the Forest. This species requires high water quality and high habitat diversity for survival. Since these conditions are indicative of healthy aquatic ecosystems, with associated healthy riparian plant communities and functioning watersheds, it is assumed that by providing for these habitat needs, the habitat needs of all other aquatic life would be provided as well.

Birch, Medicine Lodge and Beaver-Camas Hydrologic Units - Fish populations within the Birch, Crooked, Medicine Lodge and Beaver-Camas Creek systems are now physically and genetically isolated from the Snake River system and from each other.

Fish-bearing streams on Forest lands are small, steep to moderate-gradient and fed by snowmelt runoff and baseflow from groundwater sources. The natural capabilities of this area to produce abundant or diverse fisheries resources is relatively limited. Specific conditions are presented by following hydrologic units:

Upper Henry's Hydrologic Unit - All drainages flow into Henry's Lake or the Henry's Fork of the Snake River above the confluence of Fall River. Spring-fed creeks provide an environment capable of producing abundant aquatic insect and plant biomass. Where fisheries life history requirements are met, these streams are among the most productive trout fisheries in the world.

Fisheries resources in this hydrologic area are very productive and varied. Duck and Targhee Creeks are important economically and scientifically as they provide key spawning habitats for the Henry's Lake native cutthroat trout fisheries and associated Idaho Fish and Game managed hatchery.

Lower Henry's Hydrologic Unit - All drainages flow into the Henry's Fork of the Snake River near the confluence of Falls River. The fisheries resources of importance within this area are primarily small headwater streams and alpine lakes spread across a small portion of the landscape.

Teton Hydrologic Unit - This area drains the western aspect of the Tetons and the northern aspect of the Big Hole Mountains. Fish-bearing streams originating in the Teton Mountains are steep, dynamic and strewn with large boulders. Stream channels developed from the sediment and rock that was delivered through glaciation. Within the Big Hole Mountains, fish-bearing streams are relatively small, moderate-gradient and fed by snowmelt runoff and baseflow from groundwater sources.

Palisades Hydrologic Unit - All drainages originate along the south aspect of the Big Hole Mountains and the north aspect of the Caribou Mountains and are tributary to the South Fork of the Snake River.

The fisheries resources found here are very productive and varied. Many of the streams flowing into Palisades Reservoir, and Palisades, Rainey, Pine and Burns Creeks, provide key spawning and rearing habitats for the native cutthroat trout fisheries.

Currently, there is an emphasis on restoration of Rainey, Pine, and Burns Creeks in partnership with Bureau of Reclamation, Idaho Department of Fish and Game, and One Fly Foundation. These measures include stream and riparian area condition surveys, trail/road restoration, instream habitat improvements, and filtering non-native fish from important cutthroat trout spawning and early rearing streams.

Cutthroat Trout

Cutthroat trout is a sensitive species and has been selected as a management indicator. The U.S. Fish and Wildlife Service was petitioned to list Yellowstone cutthroat trout in August, 1998. Table III-9 of the RFP-FEIS (page III-34) illustrates cutthroat trout population status and distribution on the Forest by hydrologic unit. Yellowstone cutthroat trout currently occupy 41 percent of their historic habitat. Within Idaho, approximately 45 percent of the historic habitat is presently occupied. German brown, rainbow, and brook trout have been stocked into many drainages and compete with cutthroat trout Table III-8 of the RFP-FEIS (page III-32). Rainbow trout have been introduced into every hydrologic unit on the Forest and have hybridized with cutthroat trout, causing genetic contamination of cutthroat trout populations, and threatening their long-term survival.

The Targhee National Forest is currently in its third year of intensive surveys for the distribution of Yellowstone cutthroat trout. The major streams on three of the four Districts on the Forest have been inventoried. The remaining major streams on the Forest will likely be completed during the Summer of 1999. These data have been used to identify the Yellowstone cutthroat trout stronghold streams on the Forest.

The following display depicts the fish communities identified in the streams surveyed for cutthroat trout distribution up to the end of 1998:

SPECIES	MILES OCCUPIED
cutthroat/brook trout	262
cutthroat trout	184
cutthroat/rainbow/brook trout	89
cutthroat/rainbow	154

Wildlife Associated with Aquatic and Riparian Habitats

Wildlife management indicator species include bald eagles, trumpeter swans, spotted frogs, common loons and harlequin ducks. Table III-10 in the RFP-FEIS (page III-35) illustrates the distribution of these species and their habitats by subsection. A brief overview of these species and habitats follows. Additional information is available in the RFP-FEIS (pages III-34-39) and Process Paper D.

Bald Eagle

Southeast Idaho and Forest Overview - The data we compiled on bald eagle nesting populations in southeast Idaho dates back to 1972. In 1972, there was one recorded bald eagle nest along the South Fork of the Snake River, which was not on the Forest. As of 1998, total known nesting territories in southeast Idaho numbered 47. The first recorded bald eagle nest on the Forest occurred in 1975 along the Palisades Reservoir. From 1975 to 1998, the bald eagle nesting populations on the Forest increased to 19 nesting pairs.

Bald Eagle Recovery Plan - The bald eagle is currently listed as threatened under the Endangered Species Act (ESA). The Forest is within the "Greater Yellowstone Bald Eagle Management Zone" as outlined in the Pacific States Bald Eagle Recovery Plan (USFWS 1986 - RFP-FEIS, page R-16). All of the Recovery Plan goals have been exceeded with the current bald eagle populations. In July 1999, the USFWS proposed to remove the bald eagle from the ESA. They proposed this action because the available data indicates this species has recovered (Federal Register 64(128):36453-36464).

Trumpeter Swan

From less than 200 birds in 1930, the Rocky Mountain Population (RMP) increased to about 2,500 birds by 1996, the highest in over a century (Maj and Shea 1996 - RFP-FEIS, page R-8). About 80 percent of the RMP winters in southeast Idaho along the Henry's Fork of the Snake and southeast Montana along the Madison River.

For the period 1982 to 1994, 31 lakes and ponds on the Forest have been used at least during one or more summers; 17 of these 31 have had at least one nesting attempt; 13 of these 31 have successfully produced young during one or more years (RFP-FEIS, page III-36-37).

Spotted Frog

We do not know and are not able to provide a spotted frog population estimate for the Forest. An amphibian survey conducted on the Forest in 1992 and 1993 provides an overview on the distribution of spotted frogs on the Forest (Clark and Peterson 1994 - RFP-FEIS, page R-3). This amphibian survey documented spotted frogs at 51 sites, distributed within five subsections.

Common Loon

Common loon abundance on the Forest is highest during spring and fall migrations. Common loons have been documented using four reservoirs, nine lakes and an unnamed pond within five subsections (RFP-FEIS, page III-38).

The following lakes and ponds within the Island Park and Madison-Pitchstone Plateaus subsections have been identified as capable of providing suitable breeding habitat for common loons: Loon Lake, Moose Lake, Indian Lake, Thompson Hole, Junco Lake, Fish Lake, Begman Reservoir and an unnamed pond. Only Indian Lake, Thompson Hole and Bergman Reservoir have documented nesting and rearing of young.

Harlequin Duck

Harlequin ducks have been observed along four creeks within three subsections on the Forest: Big Elk Creek, Teton Creek, Darby Creek and McCoy Creek. Successful reproduction has been documented at Big Elk Creek, Teton Creek and Darby Creek. One to two pairs have been documented along each creek, therefore we estimate the breeding population on the Forest to be between three and six pairs. However, not all streams with potential suitable habitat have been surveyed, so this is considered a minimum estimate of breeding pairs (RFP-FEIS, page III-38-39).

Harlequin ducks are only present on the Forest during the nesting and brood-rearing seasons; they migrate to the coasts of Oregon and Washington to winter.

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems (see RFP-FEIS, page III-39)

TES and Biodiversity Indicator Plant Species

Fifteen sensitive plant species and one threatened plant species (RFP-FEIS, page III-42) are currently listed on the Forest TES plant species list (Process Paper F - RFP-FEIS) and occur in a broad range of habitats (Table III-11 - RFP-FEIS, page III-43). Twenty-two rare Idaho and Wyoming plant species occur on the Forest and are indicator of biodiversity and unique habitats on the Forest (Process Paper G - RFP-FEIS).

One sensitive plant species, *Astragalus paysonii*, occurs in forest ecosystems of lodgepole pine and mixed Douglas-fir/lodgepole pine communities. The plant is found in disturbed or open areas in mature stands or in early seral lodgepole pine stands following fire. Fire suppression has been identified as a cause of decline of this species over its range (Fertig et al. 1993 - RFP-FEIS, page R-4). Currently, there is one known location for the species on lands managed by the Forest within the Caribou Range Mountains subsection.

One threatened plant species (Table III-11 - RFP-FEIS, page III-43) is known to exist on the Forest. Listed in 1992 and discovered on the Forest in 1996, Ute ladies'-tresses (*Spiranthes diluvialis*) occurs on the Palisades Ranger District along the South Fork of the Snake River. The species is suspected to occur elsewhere on the Forest within riparian and wetland habitats below 7,000 foot elevation.

Upland Nonforested Ecosystems

Herbaceous and shrub ecosystems dominate the landscape in the Lemhi/Medicine Lodge Subsection and are significant in the Centennial, Big Hole Mountains and Caribou Range Mountains Subsections (RFP-FEIS, page III-42).

Fire suppression has modified the historical 10-25 year frequency of fire in the low to mid elevation areas. Fire suppression coupled with grazing and drought cycles has increased shrub canopy cover and decreased herbaceous species composition within the sagebrush/grass and mountain brush community types.

Noxious Weeds (see RFP-FEIS, page III-46)

Wildlife Associated with Terrestrial Habitats

Wildlife management indicator species include; elk, gray wolf, grizzly bear, primary cavity nesting species (eight species), northern goshawk, red squirrel and peregrine falcon. Table III-16 (RFP-FEIS, page III-50) illustrates their distribution by subsection. A brief overview of these species and habitats follows. Additional information for these species and other wildlife species is available in the (RFP-FEIS, pages III-47-50) and Process Paper D.

Elk Populations

We do not know the total population of elk which use the Forest (RFP-FEIS, page III-47). The number of elk changes with seasons. Elk populations are lowest during the winter period because they migrate to lower elevation winter ranges. Many of the winter ranges occur off Forest lands. Elk populations on the Forest are highest during the spring, summer and fall periods, as elk migrate back from winter range areas. Some elk migrate through the Forest and summer in the Park.

For the Idaho Game Management Units which encompass the Forest (Figure III-4, RFP-FEIS, page III-48), elk populations have sustained annual harvests which have ranged between 940 to 3,111 animals harvested between 1979 to 1995. Elk harvests have shown a general increasing trend from 1979 to the present. The average annual harvest for the period 1979 to 1995 was 1,915 animals.

For the Wyoming Elk Hunt Areas which encompass the Forest (Figure III-4, RFP-FEIS, page III-48), elk populations have sustained annual elk harvests which have ranged between 66 to 205 animals harvested for the years 1979 to 1995. Elk harvests have shown a general increasing trend from 1979 to the present. The average annual harvest for the period 1979 to 1995 was 134 animals.

Age and sex composition data reported for elk populations on or adjacent to the Forest range from 29 to 53 calves per 100 cows, and the mid to low teens to 22 bulls per 100 cows (USDI Fish and Wildlife Service 1994 - RFP-FEIS, page R-15). Using an average age and sex composition of 40 calves per 100 cows and 20 bulls per 100 cows, the pre-harvest elk population to sustain the average elk harvests from 1979 to 1995 is calculated to be 10,250 animals (the post harvest elk population would be 8,201). This is considered a minimum population estimate because it does not include the need to account for animals dying from natural causes and unreported wounding losses.

Elk Vulnerability (EV)

At the present time, 48 percent of the Forest meets State Fish and Game thresholds for EV (RFP-FEIS, page III-49).

Elk Habitat Effectiveness (EHE)

EHE is defined as the percentage of available habitat that is usable by elk outside the hunting season (RFP-FEIS, page III-49).

An EHE of 100 percent (usually displayed as 1.0) would require no motorized roads and trails within a watershed, and 50 to 60 percent of the watershed being in hiding cover. The existing values for EHE range from a low of 0.46 in a portion of the Centennial Mountains to a high of 0.74 in the Madison-Pitchstone Plateaus Subsection just south of the Park; an average Forest-wide EHE value is 0.57.

Elk & Deer Winter Range

Generally, elk and deer winter range are those areas at lower elevations with lower snow accumulations, used by elk and deer during the winter months (Lyon and Christensen 1992, RFP-FEIS, page R-7). Map number 24 (RFP-FEIS map packet) displays these winter ranges on the Forest. There are 313,825 acres of crucial mid-to-late elk and deer winter range on the Forest. Currently, 78 percent of the winter range acres are meeting DVCs for condition, 13 percent of the winter range acres are improving and moving toward DVCs, and 9 percent of the winter range acres are not improving.

All elk and deer winter range is closed to cross-country snowmachine use (RFP-FEIS, page IV-30).

There is one feed ground for wintering elk and deer on the Forest; this is in Rainey Creek, within the South Fork/Palisades winter range area. The number of animals fed at this site varies each winter, primarily based on the severity of the winter. Because of recent documentation of the disease brucellosis, the State Fish and Game Department is considering other management options to winter feeding.

Grizzly Bear Population and Habitat

Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem (YGBE), (RFP-FEIS, page III-53). The YGBE has been divided into Bear Management Units (BMUs). Portions of the Forest are within the following BMUs: Henry's Lake (Subunits 1 and 2), Plateau (Subunits 1 and 2), and Bechler/Teton (Figure III-6 - RFP-FEIS, page III-55).
The following are recovery goals for the YGBE (U.S. Fish and Wildlife Service 1993, RFP-FEIS, pages III-53-54):

> "Fifteen females with cubs over a running 6-year average both inside the recovery zone and within a 10-mile area immediately surrounding the recovery zone; 16 of 18 BMUs occupied by females with young from a running 6-year sum of observations, no two adjacent BMUs shall be unoccupied; and known, human-caused mortality not to exceed 4 percent of the population estimate based on the most recent 3-year sum of females with cubs. Furthermore, no more than 30 percent of this 4 percent mortality limit shall be females. These mortality limits cannot be exceeded during any two consecutive years for recovery to be achieved."

As of the end of 1998, the status of the grizzly bear population in relation to the recovery goals was as follows, (USFWS, April 1999):

- The running 6-year average for unduplicated females with cubs was 26.0, compared to the recovery goal of 15.

- Average annual human-caused mortality was 8.2 bears, compared to the recovery goal mortality limit which is to be < 13.4 bears (< 4 percent mortality limit of the population estimate).

- Average annual human-caused female mortality was 3.7 bears, compared to the recovery goal mortality limit which is to be < 4.0 bears (< 30 percent of the total known mortalities).

- The distribution of females with young was 18 of 18 BMUs, compared to the recovery goal of 16 of 18 BMU's.

The important grizzly bear habitat parameter being considered in this EIS is motorized access within grizzly bear management units (BMU's). Managing motorized access is one of the most influential parameters affecting habitat security for grizzly bears (IGBC 1998). The 1997 Revised Forest Plan established motorized access standards for the BMU's on the Targhee National Forest as follows:

	Henry's Lake BMU Subunit 1	Henry's Lake BMU Subunit 2	Plateau BMU	Bechler-Teton BMU
TMARD	1.0 mi./sq. mi.	1.0 mi./sq. mi.	1.0 mi./sq. mi.	1.0 mi./sq. mi.
OROMTRD	0.6 mi./sq. mi.	0.6 mi./sq. mi.	0.6 mi./sq. mi.	0.6 mi./sq. mi.

TMARD = total motorized access route density.
OROMTRD = open road and open motorized trail route density
Henry's Lake BMU Subunit 1: The Targhee National Forest portion of Subunit 1, excluding MS 3 habitat.
Henry's Lake BMU Subunit 2: The Targhee National Forest portion of Subunit 2.
Plateau BMU: The Targhee National Forest portion of this BMU, excluding MS 3 habitat.
Bechler-Teton BMU: The Targhee National Forest portion of this BMU.

Prior to the 1997 Revised Forest Plan, TMARD and OROMTRD in the BMU's were above these standards as follows (Targhee N. F., Process Paper D, 1997):

	Henry's Lake BMU Subunit 1	Henry's Lake BMU Subunit 2	Plateau BMU Subunit 1	Plateau BMU Subunit 2	Bechler-Teton BMU
TMARD	1.24 mi./sq. mi.	0.85 mi./sq. mi.	1.77 mi./sq. mi.	1.87 mi./sq. mi.	1.26 mi./sq. mi.
OROMTRD	0.83 mi./sq. mi.	0.77 mi./sq. mi.	0.91 mi./sq. mi.	0.73 mi./sq. mi.	0.76 mi./sq. mi.

Prior to the 1997 Revised Forest Plan, about 457.8 miles of road in the BMU's were restricted to motorized access using gates and earthen berms (Targhee N. F., Process Paper D, 1997). Near the beginning of the Targhee Forest Plan Revision, the issue of effective road closures was debated and discussed at several public meetings and was included in the early public scoping comments. Also at this time, Idaho and Wyoming state fish and game departments expressed their view that many existing road closures were not effective. However, no analysis had been done to assess the effectiveness of existing road closures. Therefore, in the fall and winter of 1992 and 1993, the Forest requested that each Ranger District assess the status of roads, including the effectiveness of existing closures, using the most knowledgeable district personnel and the knowledge of local state fish and game conservation officers. Specific criteria for identifying open and effectively closed roads were to be followed in this assessment. This was the first effort to compile information on the effectiveness of road closures. For the three Ranger Districts which have grizzly bear management units, this assessment indicated that 23% of the existing road closures were not effective during the late spring, summer and fall periods.

During the summer of 1994, the Teton Basin Ranger District monitored 28 closed roads in the Bechler-Teton BMU on the Targhee National Forest. They found that 19 out of 28 closed roads (68%) were not effective in stopping motorized access. They cited the following reasons: gates were physically damaged, left open, unlocked, or easily driven around.

During the summer of 1998 and prior to decommissioning, Forest Service personnel monitored the apparent effectiveness of the gates. Of the roads that were previously gated, 50% were effectively closed to motorized vehicles such as cars and pick-ups. However, only 10% were effectively closed to all motorized access including ATV's or motorcycles. Many of the gates were in poor condition, but even if maintained yearly they would not be able to stop motorized use behind the gates. Refer to the Access Management section of this Chapter for additional information on analysis of road closure effectiveness.

In summary, the key grizzly bear habitat issues being addressed in this EIS are: 1) Which specific roads and trails need to be restricted to motorized use or decommissioned to achieve the motorized

access standards established in the 1997 Revised Forest Plan. 2) The need to make the restrictions or decommissioning effective, so that the standards are truly achieved.

Gray Wolf Populations and Habitat

Possible sightings of gray wolves have occurred on the Forest and are summarized in the AMS and Process Paper D. There have been no reported sightings of packs or evidence of successful breeding (RFP-FEIS, page III-60-61).

The portion of the Forest west of Interstate 15 is within the Central Idaho Nonessential Experimental Population Area. The portion of the Forest east of Interstate 15 is within the Yellowstone Nonessential Experimental Area (Figure III-7, RFP-FEIS, page III-59). All wolves found in the wild within the boundaries of these management areas, after the first wolf releases, will be considered nonessential experimental animals (USDI Fish and Wildlife Service 1994a and b, RFP-FEIS, page III-60).

This gray wolf reintroduction does not conflict with existing or anticipated Federal agency actions or traditional public uses of park lands, wilderness areas or surrounding lands (USDI Fish and Wildlife Service 1994b). Land use restrictions may be temporarily used by land or resource managers to control intrusive human disturbance, primarily around active den sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in a recovery area. After six or more breeding pairs become established in a recovery area, land-use restrictions would not be needed. (USDI Fish and Wildlife Service 1994a).

Wolf recovery will not result in wolf travel corridors or linkage zones being established. The size and proximity of the areas where wolves will be managed for recovery are large enough, close enough and have enough public land between them that additional areas (travel corridors) are not required in the foreseeable future to maintain a viable wolf population after the three subpopulations become established (USDI Fish and Wildlife Service 1994a).

Primary Cavity Nester Populations (see RFP-FEIS, page III-61)

Primary Cavity Nester Habitat (see RFP-FEIS, page III-62)

Forest Owl Populations (see RFP-FEIS, page III-62)

Furbearer Populations (see RFP-FEIS, page III-63)

Canada Lynx

Lynx habitat in the western mountains consists primarily of two structurally different forest types occurring at opposite ends of the stand age gradient. Lynx require early seral forests that contain high numbers of prey (especially snowshoe hares) for foraging and late seral forests that contain cover for kittens (especially deadfalls) and for denning. Intermediate seral stages may serve as travel cover for lynx, but function primarily to provide connectivity within a forest landscape. Although such habitats are not required by lynx, they fill in the gaps between foraging and denning habitat within a landscape mosaic of forest seral types.

According to a recent report (USFWS, 1998), lynx were distributed throughout northern Idaho in the early 1940s This report indicates the only documented reports of lynx on the Targhee National Forest have occurred on the Wyoming portion in the Palisades Mountains. However, in 1993, 1997 and 1998, lynx tracks were documented in the Centennial Mountains subsection in four watersheds (TNF files). In 1999, an individual lynx was seen and tracks were documented in the Big Hole Mountains area.

Northern Goshawk Populations (see RFP-FEIS, page III-65)

Red Squirrel Populations and Habitat (see RFP-FEIS, page III-67)

Peregrine Falcon Populations

The Forest is within the American Peregrine Falcon Recovery Plan - Rocky Mountain/Southwest Population (USDI Fish and Wildlife Service 1977/revised 1984, RFP-FEIS, page R-16). The objectives for the Recovery Plan are: a minimum of 183 breeding pairs with the following distribution: Arizona-46, Colorado-31, Idaho-17, Montana-20, Nebraska-1, New Mexico-23, North Dakota-1, South Dakota-1, Texas-8, Utah-21 and Wyoming-14 (RFP-FEIS, page III-67).

At the present time, there are 535 known peregrine falcon pairs within the area covered by the Recovery Plan, surpassing the recovery objective by 352 pairs (USDI Fish and Wildlife Service 1999).

In 1998, there were seven occupied peregrine falcon eyries on or adjacent to the Forest.

The current population and reproductive levels has been sufficient to support considerable population growth which exceeds recovery goals. The U. S. Fish and Wildlife Service removed the American peregrine falcon from the list of endangered and threatened wildlife on August 25, 1999 (USDI Fish and Wildlife Service 1999).

Bighorn Sheep Populations and Habitat (see RFP-FEIS, page III-69)

Neotropical Migratory Bird Populations and Habitat (see RFP-FEIS, page III-70)

Predator Control (see RFP-FEIS, page III-70)

Unique Ecosystems

Research Natural Areas (RNAs) (see RFP-FEIS, page III-71)

FOREST USE AND OCCUPATION

Access Management

Road System

The Forest road system provides access for recreation, industry and administration (RFP-FEIS, page III-73-74). Land transportation by motorized vehicles is the principle means of travel on the Forest. Seven major highways run through the Forest and all primary access begins from one of these highways. Average daily traffic counts collected by the Idaho State Highways Department (Gillespie 1994, RFP-FEIS, page R-4) suggest the heaviest traffic occurs on the highways between Idaho Falls and the northeast part of the Forest (Figure III-8, RFP-FEIS, page III-72). Many of the Forest's roads were constructed in the mid-1970's as part of the timber salvage program and provided access to recreationists, firewood gatherers and hunters. The roads have also proved useful for fire suppression activities. However, initial attack for fire in recent years in isolated areas has been done with the aid of a helicopter.

The Forest road system is essentially in good shape, with annual maintenance on arterial and collector roads and some local roads depending on resources needs and funding available. Further information on the Forest Development Road System can be found in the Transportation section of the Analysis of the Management Situation.

There are approximately 2,994 miles of existing roads. Of this total, 2,077 miles are open. Of these open roads, 10 percent are classified as arterials. They are often two-lane and paved or have a good gravel surface and can handle unrestricted traffic at moderate speeds. Branching from the arterial roads are the collectors. Collector roads are medium standard roads that constitute about 25 percent of the mileage in the transportation system. Collector roads are stable enough for most traffic during normal season of use. Small single-lane roads, known as local roads, are found throughout the Forest and make up 65 percent of the road system. These minimum standard roads provide access for specific purposes, such as harvesting timber, maintaining electronic communication sites, reaching a trailhead, and accessing developed campgrounds. They allow limited passing, but the road conditions require that vehicles move slowly. Many of the local roads associated with old timber sales or roads causing resource damage are currently closed to vehicular traffic much of the time.

Two-track roads exist that are referred to as low standard roads (sometimes called "ghost roads"). These isolated roads were created by repeated use by the public and are not maintained for public use. Some vehicles cannot travel on these roads. Road surfaces are generally rough and irregular with no drainage. Some of these roads are closed to motorized use.

The current road system has created resource conflicts with wildlife, fish and watershed resources. Road restrictions or decommissioning have been requested by agencies and individuals to reduce resource conflicts. Law enforcement problems have also increased over the years due to the need to enforce restrictions. The following information for 1997 and 1998 was compiled by our supervisory law enforcement officer:

Gate and Sign Closure Violations:

FY 1997	*237 incidents* *3 violation notices*
FY 1998	*140 incidents* *1 violation notice*
FY 1997 & 1998 - F&G	*47 incidents* *98 verbal and written citations*

FY 1997 & 1998 Property Damage:

Damage to gates (includes locks & chains)	*92 incidents*
Damage to signs	*387 incidents*
Property Damage	*$ 6,595.00*
Resource Damage	*$12,600.00*

Documented Intrusions Behind Gates:

FY 1997	*196 incidents* *1 violation notice*
FY 1998	*92 incidents* *1 violation notice*

The above information demonstrates that in many places gates are not an effective means of closing roads to motorized use. The issue of effective road closures was important enough that a standard exists in the 1997 Revised Forest Plan stating that road closures will be located and designed to effectively control motorized use. The HOW of proposed closing of particular roads was described in Appendix B of the DEIS.

The Forest has begun restricting and/or reclaiming roads to reduce resource conflicts. Many of the local spur roads built during the timber salvage program are now restricted. Motorized use was restricted on 377 miles of road from 1981-1991 and an additional 1,245 miles in 1992-1993.

Forest-wide there are 2,077 miles of open roads. In addition, motorized use is restricted on some roads as follows: 51 miles of roads have seasonal restrictions; 399 miles of roads have yearlong restrictions (Table II-1). Approximately 85 percent of the miles of roads planned for decommissioning inside the grizzly bear management units have been decommissioned during the summer of 1998. Prior to any decommissioning being done, an ID team looked at and considered many methods of how to decommission roads. Also, a week was set up with a contractor to try many of the methods on the ground. Specialists from the Forest Service, U.S. Fish and Wildlife Service, and Idaho Fish and Game looked at what had been done and agreed to the method used in decommissioning roads. It was agreed that use of large earth berms, surface ripping and placement of rocks and dead trees would be essential to decommission the roads in a way that would effectively close them to meet the requirements of the Biological Opinion. A contract was let in August. The work areas and

accomplishments were field supervised by three engineering specialists on the Forest. For additional information on need for effectively decommissioned roads, see the Grizzly Bear section of this Chapter.

Concern has been expressed by County officials of several counties regarding Revised Statute (RS) 2477 roads and trails under the 1866 Act. The intent of/requirements under this Act have not yet been clarified by additional legislation or Forest Service policy. During the last few years, County representatives have prepared lists and maps displaying RS 2477 assertions for roads and trails they believe were in existence (as required by the law) prior to the establishment of the Forest. District Rangers and Staff worked closely with County Commissioners to identify and negotiate RS 2477 assertions. These RS 2477 assertions are on file in the Forest Supervisor's Office, and the routes are displayed in Map #1 (map packet). Counties are free to add to these lists or make corrections at any time. The determination of who will have control and have maintenance responsibility for these routes will be adjudicated over time when final policy is determined. Until that occurs, management control and maintenance responsibility remains with the Forest.

The National Forest Scenic Byways Program was developed to increase public awareness and understanding of the National Forest and State activities and recreation opportunities. Presently there are two Scenic Byways that pass through the Forest, the Mesa Falls and Teton Scenic Byways. The Mesa Falls Scenic Byway follows old State Highway 47 from Ashton to where it ties back to US Highway 20. About 20 of the total 29 miles are located on the Forest. The Teton Scenic Byway Route travels east from Idaho Falls to Swan Valley along Highway 26, then north to Victor on Highway 31, from Victor to Tetonia on Highway 33 to the intersection of Highway 32, and then to Ashton on Highway 32.

The Forest has been working with the Federal Highway Administration on improving Forest Highways. Funding provided by the Federal Highways Administration allows the Forest to make improvements on roads which normally could not be made. Roads that are identified for improvements are required to accommodate current conditions and impending future growth and road uses. Without improvements, the highways cannot satisfy current and future traffic demands, safety requirements, Forest Service land and resource management objectives and maintenance capabilities of the various agencies.

The roads that have been slated for improvement and the expected year for reconstruction are: Forest Highway number 62, Mesa Falls (1999-2000); Forest Highway number 76, Fred's Mountain or Grand Targhee road (2000-2001); and part of the Yale-Kilgore road (est. 2002).

Summer Access for Off-Highway Vehicles (OHV) and All-Terrain Vehicles (ATV)

Approximately seven percent of the Forest (121,000 acres) is currently open for summer cross-country motorized and mechanized vehicle access (RFP-FEIS, page II-20, Alternative 3M data). There are currently 2,077 miles of open road and 725 miles of open trail available for use by recreationists with OHV's due to the Regional Forester's remand direction to return to 1997 open road conditions. The Forest conducted an analysis of motorized access and road/trail density in the spring of 1995 and again in 1998 to accurately inventory these opportunities. This inventory and analysis is documented in Appendix C(M).

There are very few trails designed specifically for motorized ATVs (<50") or mountain bikes, although some are suitable in their present condition. Approximately 110 miles are designated as ATV trails. The Forest is currently reconstructing four to six miles of trail each year for ATVs (<50"). This is being done after site-specific NEPA documentation. There is a significant increase in demand for such opportunities. Both types of use are increasing at a rate of five to ten percent per year (based on registration and sales data) on the Forest and adjacent lands. The highest concentration of these activities is in the Big Hole and Caribou Range Mountains Subsections, where there is significant use by motorcycles and mountain bikes. There are currently moderate conflicts arising between two-wheel and four-wheel ATV users in the Bigholes and Palisades/Caribou areas which are making planning for reconstruction somewhat difficult. As noted in the Soil and Riparian section, there are areas of concern for ATV effects on soil and vegetation. Although there are a few areas of new ATV hill-climbs occurring, there are no serious adverse consequences as a result of ATV use. However, it is possible that

motorized use is affecting some big game wildlife habitat potential or vulnerability to hunting pressure. Also, some conflict between ATV users and hunters is now being experienced.

Winter Access (see RFP-FEIS, page III-75)

Many snowmachines currently use roads in the winter which are open for summer, motorized travel. Winter access management direction was determined in the 1997 Revised Forest Plan and is not being reconsidered in this analysis.

WILDERNESS AND RECREATION RESOURCES

Recreation, tourism and National Forest use are important to the area economy (RFP-FEIS, page III-75-81). Demand for recreation opportunities and specifically use of motorized and mechanized recreation vehicles has increased many times over the levels of 20-30 years ago, when much of the road and trail system was created. This has created an unanticipated "pressure" on our ability to maintain supply equal to demand and historical use patterns. The Idaho Department of Commerce estimates that tourism in Idaho is a two billion dollar industry, with 23 million visitors each year. The visitors to the Forest may account for over 10 percent of this industry. Table III-26 in the RFP-FEIS (page III-76) displays current recreation and wilderness information by ecological subsection.

Wilderness and Recommended Wilderness

There are currently two designated wildernesses on the Forest. These are the Jedediah Smith Wilderness (123,451 acres) and the Winegar Hole Wilderness (10,715 acres). The Jedediah Smith is mostly in the Teton Range Subsection with the balance in the Madison-Pitchstone Plateaus Subsection. Winegar Hole is totally within the Madison-Pitchstone Plateaus Subsection. Winegar Hole is largely primitive with very little recreational use. This is mostly due to access difficulty, since there are only four miles of trail in the area. Use of this area is mostly for hunting big game.

The Jedediah Smith is intensively used in the summer with approximately 60,000 visits for hiking, backpacking and horseback riding. This is a spectacular mountainous area on the west slope of the famous Teton Mountain Range. These wilderness areas are two of twelve designated in the Greater Yellowstone Area (GYA) which total 3.8 million acres, and provide significant areas of biodiversity important to the Greater Yellowstone Ecosystem (GYE).

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains approximately 129,100 acres. Of these acres, over 79,800 are administered by the Bridger-Teton N.F. and 49,300 acres are administered by the Forest. In addition, there are 110,520 acres of this roadless area in Idaho which have had no action taken on them. However, a large part of the Palisades Roadless area was recommended for wilderness designation in the 1997 Revised Forest Plan. The studies on the Wyoming portion have not been conducted. Much of the Palisades Roadless area is under special use permit for heli-skiing operations which have been in existence for over 15 years. This heli-skiing operation is a recreational business operating out of Jackson, Wyoming. The Palisades area is also used by a large number of snowmobilers, except in the steep, avalanche prone areas.

Portions of Diamond Peak, Italian Peak, Lionhead, and Winegar Hole and Palisades Roadless Areas (171,000 acres) were recommended for wilderness consideration in the 1997 Revised Forest Plan, but no legislative action has been taken to date.

Roadless Areas

There are 16 areas on the Forest which qualify as roadless or roadless adjacent to designated wilderness. These areas are described in the Process Paper Q and Forest Plan map number 25 (RFP-FEIS). These areas total about 841,000 acres. This acreage is approximately 30,000 acres less than the 1993 inventory. This is due to improved calculation from computer digitizing the area boundaries. The new roadless area acreages are shown in the Rating of Wilderness Characteristics Factors Table in Process Paper Q (RFP-FEIS). Within these roadless areas, some 243,000 acres are closed to summer OHV use. The majority of the roadless acres are contained in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole Mountains and Caribou Range Mountains Subsections. The 1993

roadless inventory showed a net increase in qualifying acres over the inventory in the 1985 Forest Plan. This is because several of the roading and timber harvest projects proposed in that Plan were never completed. These areas were added to the previously inventoried areas. In contrast, the Signal Peak, Warm River South and East and Moody Creek areas incurred enough development to require them to be removed from the inventory. In 1990, the Centennial Mountains Wilderness Suitability Study EIS (Mt. Jefferson) was completed and none of the Forest portion was recommended wilderness. The Mt. Jefferson area was thereby released for management according to the 1985 Forest Plan direction.

There is an existing appeal settlement agreement with the Caribou N.F. concerning Bear Creek and Caribou City roadless areas on that Forest. The agreement states that no timber entry is scheduled before the year 2000 and that none will be made.

Wild, Scenic and Recreational Rivers (see RFP-FEIS, page III-77)

Visual Resources

The Forest has some very unique and outstanding scenery. It encompasses peaks over 10,000 feet, arid lands, timbered highlands, lakes and waterfalls. During the past decade, the greatest change in visual resources occurred among the vast expanses of mature lodgepole pine found in the Madison-Pitchstone Plateaus and Island Park Subsections. Large portions of this mature timber were clearcut. Some of this timber harvest occurred near major travel routes and use areas such as campgrounds, resorts, summer home areas and private lands. This changed many of the solid timbered areas to open meadow-like mosaics of scattered timber stands. Even though this was a drastic change from the past, it also provided variety in terms of scenic views and vistas. In some instances, this type of harvest enhanced areas from a visual standpoint.

Developed Recreation Sites (see RFP-FEIS, page III-78)

Dispersed Recreation

The largest number of dispersed activity and camping sites are in the Caribou Range and western Centennial Mountains Subsections as shown in Table III-26 (RFP-FEIS, page III-76). The next largest numbers of sites are in the Lemhi/Medicine Lodge and Big Hole Mountains Subsections. These sites receive approximately 1,147,000 visits and result in 992,000 Recreation Visitor Days (RVD) annually. Dispersed sites have few or no structural facilities for recreation. They are used for general camping and to provide access to fishing, hunting, OHV areas and trails. Some of these sites have received increased use and as a result, have increased the number of camping spots, such as at Horseshoe Lake which has increased from three to seven sites in the last decade. Many dispersed activity uses are increasing at a rate of approximately four percent.

The capacity in Persons At One Time (PAOT) of these sites is greater than the developed sites on the Forest. There are 106 heavy use dispersed sites on the Forest, and some of these dispersed campsites are showing damage to vegetation and soils. Field reviews during the summer of 1996 and 1997 indicate a few of these sites are in need of management actions to stabilize or minimize such impacts. Monitoring studies during the summer of 1997 indicate that only a small percentage of these dispersed campsites have soil disturbance in excess of the Forest-wide soil standard in the Revised Forest Plan. These more disturbed sites have had management action recommendations developed that will be implemented on a trial basis over the next few years.

Outfitters and Guides (see RFP-FEIS, page III-79)

Special Uses (see RFP-FEIS, page III-79)

ECONOMIC AND SOCIAL ENVIRONMENT

The area primarily affected by the Forest in terms of economic and social concerns comprises Bonneville, Clark, Fremont, Jefferson, Madison and Teton counties in Idaho (RFP-FEIS, page III-79-92). Together these counties make up the great majority of the Forest's total administrative area and account for the largest part of Forest-related employment, personal income and payments to local governments. These counties are recognized as being the Area of Primary Forest Economic Influence

(APFEI) (Table III-27 - RFP-FEIS, page III-80). Information for the Shoshone-Bannock reservation at Fort Hall is also provided.

Some observations can be readily made. Bonneville county has the highest median household income and the highest incidence of college graduates. Clark county has the highest incidence of Social Security recipients. Fort Hall's median household income is somehow comparable to the counties listed and yet its unemployment rate seems inconsistently high. This may be the result of having more wage-earners per household and/or some distortion in the estimate of unemployment. Fremont county's high rate of unemployment was possibly associated with timber harvests which were declining from peak levels. Jefferson county had the highest incidence of owner-occupied housing units and high school graduates. Because most of these counties have very small populations, statistics must be thought through. Teton county's infant death rate for instance, actually reflects the death of only a single infant. Teton county has the highest rate of heating with wood and the lowest unemployment rate.

The Forest is of lesser economic importance to other area counties including Teton and Lincoln counties in Wyoming and the Idaho counties of Bannock, Bingham, Butte and Lemhi. Bannock and Bingham counties have no lands administered by the Forest. The Forest does manage significant amounts of land in Butte, Lemhi, Lincoln, and Teton (Wyoming) counties. However, management of the Forest as depicted in the various alternatives under consideration is not expected to have significant effects on these counties. Even though these counties are not included in the APFEI they still have important links to the Forest. The Grand Targhee Ski Resort, for instance, is located in Teton County, Wyoming. It is an important source of income and employment. Services and supplies for the facility must come through Teton County, Idaho, however.

People from outside this area also have strong ties to the Forest. Besides Idaho, Wyoming and Montana the Forest receives many visitors from Utah, California, and the rest of the nation. The designation of an area of influence does not diminish the interests others have in the area or the attention paid to their input.

Most of the area's population lives in cities like Idaho Falls, Blackfoot and Rexburg. The area's population is relatively small and concentrated in Bonneville County which contains Idaho Falls, the area's largest city with a population in excess of 42,000. It regularly ranks as Idaho's second- or third-largest city.

Perhaps the most striking characteristic of the area's population is the growth that has occurred in Bonneville and Madison counties during recent decades; and Teton county in recent years. Since 1950 the population within the APFEI has more than doubled, from 63,334 in 1950 to 137,991 in 1994 (REIS 1996, RFP-FEIS, page R-9). Bonneville and Madison counties have increased over 2.5 times during that same period. Teton county's population has increased by more than six percent annually from 1990 to 1995. Available information indicates this population growth is traditional (based on employment growth), rather than being the cause of employment growth (Taylor and Fletcher 1995, RFP-FEIS, page R-11).

Employment and Income (see RFP-FEIS, page III-81)

Payments to Local Governments (see RFP-FEIS, page III-84)

Amenity Interests

Many people in the area, and outside the area, enjoy the Forest for the recreational opportunities it provides, for the scenic vistas it offers, for its aesthetic values, for its importance to wildlife and fish and for the contributions it makes to the greater ecosystem. Interests include those associated with the effects of clearcutting on the visual landscape and on area plants, fish, and wildlife; spiritual concerns; land ethics; and environmental concerns in general.

Tribal Interests

The Forest lies within the aboriginal territory of the Shoshone-Bannock Tribes. The Tribes collectively comprise a single, federally recognized Indian tribe with a governing body, the Fort Hall Business

Council, which is duly recognized by the Secretary of the Interior. Tribal members are successors-in-interest of Indian signatories to the Fort Bridger Treaty. In part, that treaty led to the creation of the Fort Hall Indian Reservation in the Idaho Territory as a permanent tribal homeland. The 544,000-acre reservation lies generally between Blackfoot and American Falls, Idaho.

Article 4 of said treaty secured for the Tribes in perpetuity the continuation of a wide variety of "use rights" to off-Reservation lands. More specifically, by virtue of Article 4 of the treaty, the Tribes expressly reserved the right to hunt "...on the unoccupied lands of the United States so long as game may be found thereon" including such lands owned by the federal government outside the boundaries of the Reservation. The courts decided in the Tinno decision (State v. Tinno 1972) that the right to hunt also included a right to fish (Shoshone-Bannock Tribes 1992b, RFP-FEIS, page R-10). Hanes (1995, RFP-FEIS, page R-5) observed, "The court agreed that the Indian peoples expected rights to harvest food on the unsettled lands as a means of subsistence and an integral part of their way of life."

The Tribes have historically used the Forest for hunting, fishing and gathering. American Indians historically used at least 838 species of plants on the Forest, covering virtually every type of plant community. These activities are important economically as well as socially and culturally. Part of the economic importance to the Tribes lies in their use of hunted meat to provide food for the elderly and the disabled. "The philosophy and management direction from the Tribes has always been for subsistence hunting and this is reflected in the Tribes Big Game Regulations," (Shoshone-Bannock Tribes 1992a, RFP-FEIS, page R-10).

Rights to believe, express, and exercise traditional religions are protected by various federal laws, including the American Indian Religious Freedom Act of 1978. This includes, but is not limited to, access to sites, the use and possession of sacred objects and the freedom to worship through ceremonial and traditional rites. Additionally, rights reserved under treaty may possess an inherent measure of resource protection. (U.S. v. Washington (759 F.2d 1353, 1985) in Shoshone-Bannock Tribes 1992b.)

The Forest has worked with representatives of the Tribes to coordinate the Revision with them. Representatives of the Tribes have stressed the following points:

- Treaties are the supreme law of the land (U.S. Constitution, Article 6, Clause 2). Treaty rights cannot be negotiated at the Department level of the United States government. Consultations with the Tribes are on a government-to-government basis.

- The multiple jurisdictions they have to work with make any attempts at working with the Forest an extremely frustrating exercise. Their territory lies within the boundaries of many National Forests, on lands administered by the Bureau of Land Management, on state lands and on lands privately held. This complicates even relatively simple matters like interpretive signs.

- The processes the Forest uses to handle archaeological sites and cultural values do not fully address the Tribes' concerns. It is important to protect sites, to keep them unpublished and to recognize that providing access to sites invites vandalism. It is important for the Forest to consult with the Tribes on a case-by-case basis when providing protection to sites. It is important that vandalism of sites be vigorously prosecuted to serve as a deterrent.

- The Revision must recognize the: sacredness of the land; need for protection; obligation to consult with the Tribes as outlined in the American Indian Religious Freedom Act, the NEPA and NFMA; and many aspects of reserved rights including, but not limited to, the priority nature of rights reserved under the treaty, as well as an inherent measure of resource protection to satisfy these rights.

- The Forest must be recognized for its religious and spiritual significance to the Tribes. That significance is not limited to vision quest sites or traditional camp sites. The Forest and even the lands beyond its borders are important in their entirety. As with many other religions, tribal members are not free to share all the dimensions of their faith.

The Tribes also have a significant economic interest in the Forest. These include subsistence activities like hunting, fishing and gathering. They also include important aspects of Tribal life like sharing the fruits of the land. Riverine ecosystems are important to the Tribes not only for their resources but also for the role they play in the Tribes' religion. The Forest will continue to work and coordinate with the Tribes.

Heritage Resources

Heritage resources are described for each of the subsections as follows:

Lemhi/Medicine Lodge - This area contains over 200 heritage resources of predominately American Indian sites including habitation sites and rock art.

Centennial Mountains - The Centennial Mountains contain the highest frequency of heritage resource sites on the Forest. Over 400 heritage resources of predominately American Indian sites have been identified.

Island Park - Heritage resources in the Island Park area are primarily related to the Tie Hack Period (cutting trees for railroad ties) and early Forest Service history. The 140 sites identified are composed primarily of tie hack camps associated with the Yellowstone Railroad, Forest Service administrative sites such as guard stations, ranger stations, fire lookouts and recreational cabins dating to the early 1900s.

Madison-Pitchstone Plateaus - The Madison-Pitchstone Plateaus contains one of the lowest frequencies of heritage resource sites on the Forest. Relatively extensive inventory has identified only 25 sites.

Teton Range - The Teton Range has high frequencies of American Indian sites in the upper reaches of the drainages. Over 79 heritage resource sites have been identified.

Big Hole Mountains - This area contains over 100 heritage resource sites with most sites located along the northwestern edge of the Big Hole Mountains.

Caribou Range Mountains - The Caribou Range is one of the least inventoried areas of the Forest, however, 50 heritage resources have been identified.

Quality of Life

The Center for Business Research and Science (CBRS) and the Center for Rural Economic Development (CRED) of Idaho State University have conducted recent surveys of Quality of Life perceptions among area residents in Fremont County and the City of Idaho Falls. These two areas are vastly different in terms of population, income structure, employment opportunities and other demographic characteristics. In both surveys, many of the questions relate to concerns people have with regard to their everyday lives - things like shopping and local government services. The amount of information presented which relates to the Forest is limited. The surveys do provide some insight into how area residents perceive their living environments.

The Center for Business Research and Science (CBRS) and the Center for Rural Economic Development (CRED) of Idaho State University have conducted surveys of Quality of Life perceptions among area residents in Fremont County and the City of Idaho Falls. The amount of information presented which relates to the Forest is limited.

Fremont County respondents were most satisfied with Air Quality and Open Spaces and Green Spaces and least satisfied with Employment Opportunities and the Availability of Retail Shopping. Forty-three percent felt that Tourism was the type of ideal business they would like to see locate in Fremont County. Some 34 percent felt the same way about General Manufacturing. The most important factors in determining Quality of Life were Employment Opportunities, Level of Individual Well-Being, and Public Education. (CBRS, CRED a and b)

City of Idaho Falls respondents identified a Low Local Tax Rate, Medical Services, and Salary and Wage Levels as favorable characteristics of their community. When faced with making choices, people preferred to Limit Economic and Population Growth (32 percent) and Increase Taxes and the Local Cost of Living (31 percent). Their least desirable courses of action were to Permit Degrading of the Environment (30 percent) and Increase Taxes and the Local Cost of Living (27 percent). (CBRS)

Minorities and Women (see RFP-FEIS, page III-92)

Coordination with Other Agencies (see RFP-FEIS, page III-92)

PRODUCTION OF COMMODITY RESOURCES

Timber

The amount of forested land by species group, age class and subsection on the Forest was displayed in Table III-3 in the RFP-FEIS (page III-12).

Table III-33 in the RFP-FEIS (page III-93) displays the average mature volume of saw timber growing on the Forest by species and subsection.

Tentatively Suitable Forest Land (see RFP-FEIS, page III-93)

Future Supply and Demand (see RFP-FEIS, page III-97)

Reforestation/Timber Stand Improvement (see RFP-FEIS, page III-98)

LIVESTOCK GRAZING

Livestock Grazing

Livestock grazing has been a use of both forested and non-forested plan communities throughout the Forest since before 1900 (RFP-FEIS, page III-98-100). Approximately 73 percent (1,371,066) of the 1.87 million acres under Forest grazing administration are identified as being in grazing allotments. Of these acres, about 782,005 (53 percent) are capable for livestock grazing. Approximately 496,049 acres (27 percent) are presently closed to grazing. There are 145 allotments (76 cattle and 69 sheep) on the Forest where livestock grazing occurs; of which 109 have AMPs.

As documented in the Annual Operating Plans and/or the Allotment Management Plans, all of the allotments open to grazing have grazing systems in place which implement various grazing strategies. These plans include grazing utilization standards that implement direction from the Revised Forest Plan (page III-29).

The current permitted livestock use reported on the Forest is 148,775 AUMs. Permitted livestock consists of 22,066 cattle and 71,985 sheep. Currently 182 permittees hold 277 grazing permits which authorize grazing on the Forest. Presently, based on 1993 data; the numbers of livestock actually using the forest are 20,362 cattle for 84,212 AUMs and 54,478 sheep for 44,006 AUMs.

To better manage livestock, many structural improvements have been constructed using equal (50 percent Forest Service and 50 percent permittee) contributions from the Forest Service and the grazing permittees. These improvements include: 563 miles of fence; 670 water developments; 72.5 miles of pipeline; 8 wells; 16 corrals; 7 stock bridges; 2 herder cabins; 74 cattleguards; and 25 miles of stock trail. The Forest portion of these improvements is generated from grazing receipts (range betterment funds) and usually is in the form of materials and supplies. Range improvement structures are maintained by the grazing permittees.

Chapter IV

Environmental Consequences

CHAPTER IV

ENVIRONMENTAL CONSEQUENCES

READER'S GUIDE - In this chapter you will find:

A description of the consequences of implementing the alternatives with respect to the following components and key issues:

- **ECOSYSTEM MANAGEMENT**
- **PHYSICAL ELEMENTS OF THE ENVIRONMENT**
- **BIOLOGICAL ELEMENTS OF THE ENVIRONMENT**
- **FOREST USE AND OCCUPATION**
- **PRODUCTION OF COMMODITY RESOURCES**
- **IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

The consequences are described in some or all of the following terms - Consequences Common to All Alternatives; Consequences Which Vary by Alternatives; and Cumulative Effects. Cumulative effects analyses have been written at the end of each resource section. While evaluating potential cumulative effects, each resource specialist was considering the following impact factors which are a result of the 1997 Revised Forest Plan (RFP) analysis or are future projections:

- Implementation of the 1997 RFP will result in: reduced open roads; reduced cross-country motorized travel; reduced riparian impacts; and less road building and timber harvest due to new management direction and standards and guidelines.
- Hundreds of miles of roads will be decommissioned and reclaimed.
- Private land development and road building adjacent to and within the Forest will continue to increase and will probably be the single, largest additional impact. However, this impact will be relatively minor in scope or effect.

No other factors were known to exist or have future potential that would affect the total picture in terms of possible consequences for resources or ecosystems. Mitigation measures applicable to this analysis are to be found in the RFP standards and guidelines and in Appendix B of this FEIS.

As indicated in the Summary (Alternatives Considered Section) and in Chapter II, each road and trail was analyzed for potential consequences and whether it should remain open or become restricted or decommissioned. This latter analysis is documented in Appendix C. Specific resource concerns with individual routes are documented in this Chapter. Effects of road decommissioning on resources such as soil, water, and wildlife were also considered and documented.

NOTE to READERS: Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document.

ECOSYSTEM MANAGEMENT

The RFP-FEIS, pages IV-1 through IV-12 describes the ecological processes and patterns which would result from management actions of the Revised Forest Plan. Road and trail transportation management were also considered during that analysis, and management goals and objectives and standards and guidelines were developed to minimize environmental consequences of motorized travel.

PHYSICAL ELEMENTS

Soils and Geology

Indicators:

1. Road and trail acres removed from productive land base

2. Miles of roads and trails transecting soil types having mass stability concerns

3. Acres placed back into productive land base

Consequences Common to All Alternatives - Soil disturbance from dispersed camping and OHV use will continue to be a challenge to soil quality management. Demand for these uses will continue to escalate with corresponding concerns.

Consequences Which Vary by Alternative -

Land removed from the productive land base, due to roads and trails, would be greatest under Alternative 1M - approximately 9,228 acres (Table IV-1) or roughly .5 percent of the Forest's land base. Of these acres, approximately 1,527 acres (17 percent) would naturally recover over the long-term due to having year-long restrictions.

Alternative 3M+R would result in approximately 7,806 acres removed from the productive land base or roughly .43 percent of the Forest's land base. Of these areas, approximately 1,227 acres (16 percent) would naturally recover over the long-term due to having year-long restrictions.

Alternative 3M(+) would result in approximately 7,588 acres removed from the productive land base or roughly .4 percent of the Forest's land base. Of these acres, approximately 1,191 acres (16 percent) would naturally recover over the long-term due to having year-long restrictions. Alternative 3M would result in approximately 7,334 acres removed from productive land, or .5 percent of the Forest's land base. Of these acres, approximately 1,237 acres (17 percent) would naturally recover over the long-term due to having year-long restrictions. Alternative 3M(-) would have the fewest acres removed from the productive land base - approximately 7,295 acres. Of these, approximately 1,248 acres (17 percent) would naturally recover over the long-term due to having year-long restrictions.

Table IV-1. Alternative Effects on Soils and Productivity

Alternative	1M	3M+R	3(M+)	3M	3M(-)
Acres removed from productivity for short-term	9,228	7,806	7,588	7,334	7,295
Acres removed from productivity for long-term	7,701	6,579	6,397	6,097	6,047
Mi. rd/tr. on unstable soils	1,297	964	950	916	860
Mi. rd/tr. on unstable soils >40 percent	725	533	514	491	458
Ac. back in productivity short-term	1,635	2,986	3,154	3,444	3,462
Ac. back in productivity long-term	3,053	4,163	4,278	4,562	4,615

These lands (minus the acres with year-long restrictions in the long-term) would be effectively removed from the Forest's total productive land base for the life of the road and trail and would be

susceptible to erosion and subsequent sedimentation. A high percentage of these acres occur within the Aquatic Influence Zones (AIZs), thus having a short delivery distance to a stream channel. One objective under the watershed activity schedule is to inventory roads, trails, culverts, fords and stream crossings within the AIZ's by the year 2007. This inventory will identify problem areas and suggest remedial actions (RFP-FEIS page IV-13-14).

Thus, in the short-term the ranking (greatest to least) of Alternatives that would remove acres from the productive land base would be: 1M, 3M+R, 3M(+), 3M, and 3M(-). In the long-term (taking into consideration the recovery of year-long restricted access routes) the ranking of acres removed from productivity (greatest to least) would also be 1M, 3M+R, 3M(+), 3M, and 3M(-).

Miles of roads/trails transecting soil types having mass instability concerns would be greatest under Alternative 1M; approximately 1,297 miles of which 725 miles (56 percent) occur on slopes over 40 percent. Alternative 3M+R would result in approximately 964 miles of road on unstable soils, of which 533 miles (55 percent) occur on slopes over 40 percent. Alternative 3M(+) would result in approximately 950 miles of roads on unstable soils, of which 514 miles (54 percent) occur on slopes over 40 percent. Alternative 3M would result in approximately 916 miles of which 491 miles (53 percent) occur on slopes over 40 percent. Alternative 3M(-) would result in approximately 860 miles of which 458 miles (53 percent) occur on slopes over 40 percent. Roads planned for decommissioning[1] on unstable soils would increase through the range of alternatives with 1M having the least and 3M(-) having the most.

Thus, in both the short and long-term the ranking of Alternatives having the greatest to least potential effect on mass instability concerns would be: 1M, 3M+R, 3M(+), 3M, and 3M(-).

Acres placed back into productivity (stabilized and revegetated) through road reclamation/ decommissioning would be ranked (greatest to least): 3M(-), 3M, 3M(+), 3M+R, and 1M. This would occur in the short-term with active road decommissioning and reclamation. Taking into account long-term recovery resulting from roads having year-long restrictions (these would recover with time) the ranking (greatest to least) would be: 3M(-) - 4,615 acres, 3M - 4,562 acres, 3M(+) - 4,278 acres, 3M+R - 4,163 acres, and 1M - 3,053 acres. Decommissioned roads would have a lower inherent site productivity than adjacent undisturbed sites but overall benefits from decommissioning and year-long closures is beneficial to soil and watershed conditions.

Overall, in ranking the alternatives as to their benefits to soil productivity and soil hydrologic function (soil quality) the ranking (most beneficial to least beneficial) would be: 3M(-), 3M, 3M(+), 3M+R, and 1M. This is mainly because of the potentials associated with roads on soils having mass instability concerns; especially on slopes that are over 40 percent and due to short and long-term reclamation differences. The difference between Alternatives on acres taken out or placed back into productivity are fairly close and thus do not play as significant a role in making this determination of ranking Alternatives.

Cumulative Effects - Effects indicated above and for all foreseeable projects would be very similar to those stated in the RFP-FEIS and including those for cross-country travel, since there is no change in cross-country from that indicated by the Revised Forest Plan. Overall, soil quality on the Forest should improve over the existing situation under all alternatives (RFP-FEIS, page IV-15). This effect is due to the decommissioning and reclamation and yearlong restrictions of roads which will allow for recovery of soil productivity and hydrologic function. Soil quality standards and guidelines have been established to help direct soil quality improvement, maintenance and/or enhancement within managed portions of the Forest. These standards and guidelines have been incorporated in the 1997 Revised Forest Plan. Monitoring of the effectiveness of road closure (decommissioning) will be directed by the RFP monitoring action item on page V-39 of the RFP.

[1] Decommissioned Road: Any road which has been treated in such a manner so as to no longer function as a road or trail for summer motorized use. This can be accomplished through one or a combination of several means including: recontouring to original slope, placement of logging, road, or forest debris, planting of shrubs, trees, etc. See Appendix B of the DEIS for processes to be used on the Forest.

Air Quality

Consequences Which Vary by Alternative - Alternative 1M allows the most open motorized routes, however this is not as much potential activity as described for Alternative 1 in the RFP-FEIS (page IV-15). Alternative 1M has the most potential for adverse effects to air quality from dust. The three 3M alternatives have somewhat less potential for air quality impacts from open roads.
Another consequence which would vary would be potential for severe wildfire as indicated in the RFP-FEIS (page IV-15). As more roads are decommissioned from Alternative 1M toward Alternative 3M(-), the potential for severe wildfire increases because access for fire crews becomes more restricted.

Caves

Consequences Common to All Alternatives - Impacts on cave resources would result from normal recreational use that would be similar for all alternatives (RFP-FEIS page IV-16).

Lands

Consequences Common to all Alternatives - There would be no impacts on lands from any alternative (RFP-FEIS page IV-16).

Minerals

Consequences Which Vary by Alternative - Since overall access will decrease from Alternative 1M through Alternative 3M(-), access for potential mineral exploration or development could likewise be limited somewhat.

BIOLOGICAL ELEMENTS

Aquatic and Riparian Ecosystems

Analysis of consequences specific to these motorized travel alternatives is covered under the soils, water, and fisheries sections. The Revised Forest Plan FEIS addressed the major aquatic and riparian issues which dealt mostly with improving riparian vegetation conditions to meet Desired Vegetative Condition (DVC) and Properly Functioning Condition (PFC) objectives along the hydric greenline (HGL) - (RFP-FEIS, pages IV-17-19). Overall, aquatic and riparian conditions (DVC and PFC) will improve as the alternative range moves from 1M toward 3M(-). The effects of Alternative 1M would result in slow improvement of vegetative composition and percent of riparian areas meeting DVC. The three 3M alternatives would all have a slightly improved rate of recovery of these ecosystems over the recovery rate of Alternative 1M.

Water

Direct Effects

Indicators:

1. Miles (and acres) of road and motorized trail in Aquatic Influence Zone (AIZ)

2. Number of stream crossings

Consequences Common to All Alternatives - Land disturbance and impacts to riparian resources will take place under all alternatives; however, the magnitude of the impacts will vary between alternatives as discussed below. Decommissioning of roads and trails in the AIZ will result in soil disturbance where ripping has taken place, with short-term creation of sediment sources which will have the potential to deliver sediment to streams for approximately 3 years, or until they are stabilized. Determination of exact amounts of sediment is very difficult due to the wide variety of soils, slopes, vegetation, etc. that exist on the Forest. Based on research in central Idaho and additional estimates (USFS.1981), ripping of roads can reduce erosion by up to approximately 95% after the first season following closure (this assumes that all drainage measures are in place and that revegetation is successful the first year). This is because ripping of roads and providing proper

drainage results in increased infiltration of precipitation into the road surface and decreased surface runoff. The latter process is responsible for erosion. Increased infiltration also results from the presence of vegetation on the roads. Vegetation further increases infiltration by intercepting incoming precipitation (reducing compaction due to raindrop splash) and by slowing down water that does flow down the tipped surface, allowing it to infiltrate.

Decommissioning would provide a long-term benefit to aquatic and riparian resources once it became effective (i.e., when the vegetation is established). Closing roads by installation of gates may slowly provide benefits over time, by not allowing continued rutting of road surfaces and by allowing for eventual revegetation, but recovery is slower than if a road is ripped. Since road prisms will not be removed where they exist in floodplains (Appendix B - Road Decommissioning Protocol), floodplain and stream functions could continue to be adversely affected by the confinement presented by these features, even with road decommissioning.

Road and trail networks would be the same under all alternatives along the following WQL streams: Camp Creek, Little Elk Creek, Bear Creek, Elk Creek, Fall Creek, Sheep Creek, Meadow Creek, Tex Creek, Hell Creek, Lava Creek, Corral Creek, Sawmill Creek, Edie Creek, and Irving Creek.

Consequences Which Vary by Alternative - Direct impacts to streams and riparian areas are of three general types (p. IV-19, RFP-FEIS):

1. Changes in riparian soil, vegetation and streambank characteristics;

2. Direct in-channel alterations (e.g., putting a structure into a stream or altering its geometry);

3. Changes in the amount of sediment delivered to streams and therefore the load that the stream must transport. (Note: some of this may be a result of indirect effects)

Roads and trails in AIZs have the potential to cause the impacts listed in numbers 1 and 3, above. The greatest overall potential for direct impacts would exist under Alternative 1M, with 868 miles (3038 acres) of roads and trails in AIZs (Table IV-2), followed by Alternatives 3M+R 717 miles (2510 acres), 3M(+) 713 miles (2496 acres), 3M 683 miles (2391 acres), and then 3M(-) 647 miles (2264 acres). A decrease in roads and trails within the AIZ means a proportional decrease in the potential for sediment delivery to streams, for delivery of other pollutants and for detrimental impacts to riparian areas (RFP-FEIS, page IV-20).

Stream crossings, including both fords and those that have crossing structures (mainly culverts), have the potential to cause the impacts listed in numbers 1, 2, and 3 (above) during construction, and numbers 2 and 3 in the long run. Unprotected ford crossings may cause accelerated sediment delivery to streams via five major processes (Brown, 1994):

a. undercutting of banks due to vehicle bow-wave attack on banks (waves created by the vehicle);

b. creation of wheel ruts (on approaches) and the concentration of surface runoff after a precipitation event ;

c. backwash created by water draining from a vehicle as it emerges after fording a stream;

d. the existence of tracks, and therefore areas of exposed surface; and

e. compaction and subsequent reduction in infiltration rates of soils, leading to increased surface runoff.

Although culverts and bridges reduce or eliminate these effects, placement and maintenance of structures still creates sediment sources, and approaches to crossings may still be rutted during precipitation events or early in spring. For all these reasons, stream crossings are used as an indicator of potential impacts to water resources. Potential for adverse impacts associated with

stream crossings is highest under Alternative 1M, with 4,613 crossings. This potential then decreases from Alternative 3M(+)R, to a low under 3M(-) which has a total of 3,267 stream crossings. The number of stream crossings is higher in this analysis than in the RFP-FEIS because this data includes motorized trail and road crossings. The RFP-FEIS only considered road crossings.

Table IV-2. Indicators of Potential Effects to Water Quality

Alternatives	1M	3M+(R)	3M(+)	3M	3M(-)
Miles of rd./tr. in AIZ	868	717	713	683	647
Acres of rd./tr. in AIZ	3,038	2,510	2,496	2,391	2,264
Number of stream crossings	4,613	3,653	3,633	3,448	3,267

- Alternative 1M vs. 3M(+)R - Alternative 1M would have more open, motorized roads and trails than 3M(+) and the other 3M alternatives along Fritz Cr., Henrys Fork, Brockman Cr., East and West Camas Cr., and Sheridan, North Moody, and Kelly Canyon. These streams are either listed by the State as existing Water Quality Limited (WQL) streams or are streams recognized as being potentially impacted by adjacent roads. Therefore, there is more potential for adverse effect to WQL streams in Alternative 1M than in the other alternatives. However, improvement of the Skyline Road in Alternative 1M would reduce the risk of impacts to water quality in at least one location.

- Alternative 3M(+) vs. Alternative 3M+(R) - A net total of approximately 3.5 more miles of road would be open along intermittent channels under Alternative 3M+(R) versus Alternative 3M(+). There would also be a net increase of approximately 1.5 miles of road along probable perennial streams under Alternative 3M+(R). Alternative 3M+(R) has the same road and trail network as 3M(+) with the following differences relative to water resources:

  - There are a number of roads proposed under Alternative 3M+(R) on the Dubois Ranger District that are located up drainages tributary to Birch Creek. These are in drainages with intermittent channels that only have flowing water during spring runoff or in direct response to precipitation events.

  - Under 3M+(R) there are approximately 1.5 more miles of road in Garner Canyon (in the Island Park area), which is an area of past road and mining-related impacts.

  - Approximately one mile of new road is proposed under 3M+(R) along lower Taylor Creek.

  - Alternative 3M+(R) has new motorized trail open along Fish Creek, Hawley Gulch, and in Kirkham Hollow. This is an area that has been identified as having road- and motorized trail-related concerns that are impacting water resources, including adverse impacts from a culvert at Road 318, as well as adverse impacts from grazing (which are being addressed in a NEPA document that is currently being developed.

  - Under 3M(+)R, motorized trails in Burnt Timber Canyon, Deadhorse Canyon, the 046 cutoff trail, and the 056 trail are removed in the Indian Creek area near Palisades Reservoir. North and South Fork Indian Creek trails and the Long Spring Canyon road and trail would remain under this alternative.

  - Approximately 0.5 mile of road in the Packsaddle Lake area is added under Alternative 3M+(R).

- Alternative 3M(+) vs. Alternative 3M - Under Alternative 3M(+), there would be approximately 16 more miles of road and motorized trail along intermittent tributaries to perennial streams than under Alternative 3M, and an associated increased potential to deliver sediment to streams. Most of these miles are on the Dubois Ranger District. There are also approximately 15 more miles along probable perennial stream reaches than under 3M and again, most of the miles are

proposed on the Dubois Ranger District. The most noteworthy differences between Alternative 3M(+) and Alternative 3M would include the following conditions in 3M(+) which would not exist in Alternative 3M:

- Proposed open roads and trails up Fritz Creek under 3M(+) are in the headwaters of a perennial stream that has its lower reaches (from the Forks to Medicine Lodge Creek) listed as Water Quality Limited (WQL).

- The four wheel drive road/trail up Grouse Canyon under 3M(+) would be along a perennial stream which flows into a listed WQL stream (Warm Springs Creek).

- Two roads/trails would exist under 3M(+) up intermittent tributaries to West Camas Creek, which flows into Camas Creek - a listed WQL stream.

- A road/trail crosses the headwaters of tributaries to Horseshoe Creek under 3M(+); Horseshoe Creek is WQL listed.

- There would be approximately one more mile of road along Cow Creek under 3M(+). This stream has been added to the WQL list (1998).

- Approximately 13 miles of existing powerline road (two-track) in the Warm River area would be added under Alternative 3M(+). This road is generally located away from streams and other water sources.

- Alternative 3M(+) vs. Alternative 3M(-) - All roads or motorized trails being proposed for removal under Alternative 3M(-) are on the Palisades and Teton Basin Ranger Districts. Approximately 21 miles are proposed to be dropped along probable perennial reaches of stream, while an additional 10 miles are proposed for removal along intermittent tributaries to perennial streams. Noteworthy segments of road and trail being dropped under Alternative 3M(-) include the following:

  - Patterson Creek: the road is confining the creek and is frequently flooded at the lower end. Under Alternative 3M(-) the road would be closed and the impacts to riparian-dependent resources reduced.

  - Henderson Creek: AIZ Road Inventory Forms cited this road as confining the stream channel. Closing it would benefit riparian-dependent resources.

  - Murphy Creek, Pole Canyon, and Patterson are included in the WQL reach of the Teton River that includes the headwaters to Trail Creek confluence.

  - North and South Indian Creeks (from the Wyoming state line to Indian Creek) were added to the 1998 303(d) list for Idaho. Elimination of the trails along these creeks and across the headwaters would benefit riparian-dependent resources by removing motorized use that currently takes place along (and sometimes in) these creeks. The 046 cutoff trail would also be eliminated under this alternative.

  - There is a gully in the bottom of Long Spring Canyon that developed in the existing road during spring runoff in 1997. Watershed specialists advised moving the trailhead further down the canyon to avoid large-scale vehicle use where the gully occurred. An improved road/trail could exacerbate runoff-related problems, while in contrast, leaving the area undeveloped and rehabilitated under 3M(-) would reduce the probability of similar impacts.

Cumulative Effects - While general impacts from roads may be discussed (e.g., compaction and increased gradients on cut and fill slopes tend to reduce infiltration and increase surface runoff; incision of slopes by construction may intercept subsurface flow, transforming it to rapid surface flow, etc.), site-specific impacts are difficult to predict (Megahan, 1984). King and Tennyson (1984) studied

the effects of logging roads on several streamflow variables. Two statistically significant changes occurred following road construction: an increase in moderately high flows in one watershed (due to intercepted water, which added to normal runoff) and a decrease in high flows in another watershed (intercepted flows altered normal snowmelt runoff patterns so that runoff was "desynchronized": timings were offset so runoff didn't all occur at the same time).

Consideration must also be given to the fact that few new roads have been constructed on the Forest in recent years. Most Forest roads were built before 1990, and any cumulative impacts to streamflows would already be taking place. Channel adjustment to those changes has likely already resulted, and would be difficult to attribute to cumulative effects of roads when so many direct impacts are more easily traced, and given variability in precipitation from year to year. Direct channel encroachment by roads and sediment delivery are probably the most common causes for changes in channel form and function.

Effects discussed in the previous text would be cumulative in the sense that all roads remaining under each of the alternatives, regardless of when they were constructed, would contribute to any resulting effects to streams and riparian areas. Potential for sediment delivery to streams, and changes in other channel and water quality parameters (e.g., water temperature) would all be reflected in the indicators chosen. Actual implementation of Best Management Practices and Revised Forest Plan (RFP) objectives, standards, and guidelines will largely determine the on-the-ground success of management in protecting aquatic and riparian-dependent resources. This will be independent of the alternative chosen. All alternatives would meet State water quality standards (RFP-FEIS, page IV-21) Forest-wide if properly implemented, except for localized areas with possible sedimentation concerns.

Fisheries

Indicators:

1. Miles of open and closed road and motorized trail within AIZ's occupied by cutthroat trout.

2. Number of stream crossings of open and closed road and motorized trail within cutthroat trout streams.

Consequences Common to All Alternatives

1. Miles of Open and Closed Road and Motorized Trail - Impacts to AIZ's along cutthroat trout streams from land management activities associated with livestock grazing, grazing by recreational stock, camping in designated and dispersed sites, fishing, firewood cutting, and vehicular travel on and off of designated routes will continue under all alternatives. These activities are secondary impacts associated with roads and motorized trails and tend to increase with increased access (Furniss, et al. 1991). RFP standards and guidelines do not fully protect AIZ's; they merely limit the amount and type of impacts which are permissible (refer to RFP pps. III-106-112). Additional impacts may occur which are associated with inadvertent, unauthorized or planned events such as human caused fire, forest insect and disease due to fire exclusion, or violations of vehicular travel regulations. Also, impacts associated with natural processes such as natural levels of wildfire, forest insects and disease, and erosion will continue regardless of alternative implemented.

Under any of the alternatives, there are at least 545 stream crossings and 189 miles of road and motorized trail within AIZ's occupied by cutthroat trout. These roads, motorized trails, and stream crossings will continue to degrade cutthroat trout habitat as long as they exist (unless completely decommissioned, e.g. removed). Roads, motorized trails, and their associated stream crossings tend to modify stream structure and function (Furniss et al. 1991, King 1989). Roads located within stream floodplains effectively reduce the size and shape of the floodplain. When a stream no longer has access to its floodplain, stream energy is adjusted (equalized) by increasing stream velocity, resulting in downcutting or lateral scour of the stream channel. When roads impinge on stream floodplains, streams sinuosity is reduced. Pool quality and quantity are reduced when stream courses are straightened. Sediment is increased through road construction and maintenance and through stream erosion caused when roadbeds cause stream confinement. When sediment is increased beyond what the stream can transport, it can alter the productivity and character of the stream. As pool size is

reduced due to sediment deposition, the number of large age class fish that the stream can support is also reduced (McIntyre 1991). Unnaturally high amounts of sediment deposited in streams can settle in spawning gravel and kill cutthroat eggs and embryos and reduce fry development (Thurow 1991, Hausle and Coble 1976, and Furniss et al. 1991). Sediment also reduces the productivity of aquatic invertebrates used as forage by cutthroat trout (Cordone and Kelly 1960). When trees and shrubs are removed within road rights-of-way, woody debris is removed from the stream ecosystem. This reduces the amount of woody substrate in the stream and reduces many aquatic invertebrates. Woody debris also forms pools and creates areas of spawning gravel deposition. Pools provide necessary hiding and resting cover for cutthroat trout.

It should be noted that none of the alternatives will increase road and trail related impacts beyond what is occurring in the existing condition because no new road or trail will be constructed under any of the alternatives in this analysis. A selection of any of the action alternatives may result in a decrease in road and trail related impacts due to elimination of cross-country motorized use and some road decommissioning.

2. Number of Stream Crossings Within Cutthroat Trout Streams - Same as above.

For further details of other potential consequences, refer to RFP-FEIS, page IV-19.

Consequences Which Vary by Alternative

1. Miles of Open and Closed Road and Motorized Trail - Table IV-3 displays the number of stream crossings; miles of open/closed road and motorized trail; and miles of decommissioned road within AIZ's occupied by cutthroat trout that would be allowed under each of the alternatives. Alternative 1M would allow the most total miles of road and motorized trail at 251. Alternative 3M+ (Revised) would allow 231 miles. Alternative 3M+ would allow 232 total miles. Alternative 3M would allow 229 total miles. Alternative 3M- would allow the fewest at 211 total miles. Conversely, under Alternative 1M, 6 miles of roads would be decommissioned, while under Alternative 3M+(Revised) 16 miles would be decommissioned; under Alternative 3M+, 17 miles would be decommissioned; and under Alternatives 3M and 3M-, 22 miles would be decommissioned in cutthroat trout AIZ's. Approximately one mile of road along Ching Creek would be open under Alternatives 1M, 3M+(Revised), and 3M+ but closed under Alternatives 3M and 3M-. Nearby Moose Creek would have 0.7 mile of open road in Alternative 3M+ that would be closed in all other alternatives.

Indian and Pine Creeks are believed to be cutthroat trout spawning and rearing tributaries of the South Fork Snake River. Approximately 9 miles of trail are proposed for motorized use closure in South Fork Indian Creek under Alternative 3M+(Revised). Approximately 2.5 miles of those are located along streams. Approximately 1.5 miles of trail are proposed for motorized use closure along streams in the Pine Creek Watershed under Alternative 3M+(Revised).

There is a difference between alternatives in the amount of motorized trail access in cutthroat trout habitat. No motorized trail would be decommissioned under any alternative. Motorized trails in cutthroat trout habitat, which vary by alternative, affect primarily Calamity, Rainey, North Indian, and South Indian Creeks as described in Table IV-4. Rainey Creek is a very high priority stream for protection because it is one of four main spawning tributaries supporting the cutthroat trout fisheries on the South Fork Snake River. The specific type and amount of impact of increased motorized access to the streams listed above would depend upon the specific road or trail surface, road or trail location, type of stream crossing(s), amount and type of use, season of use, level of user compliance, watershed health and stability, and fish population health on each site.

Up to 22 miles of road would be decommissioned within cutthroat AIZ (Table IV-3). This would include culvert and culvert fill removal and seeding of bare soil adjacent to streams, but not road fill removal within the stream floodplain (Appendix B - Road Decommissioning Process Guidelines). Where road fill would remain in the stream floodplain, stream structure and function would continue to be impaired. Where this is extensive, the rate of recovery of stream structure and function would be very slow and total recovery of the area may not occur (would remain nearly the same). Where roads occur primarily at stream crossings, (as opposed to paralleling the stream), recovery of decommissioned road segments would be relatively rapid (3-5 years) and complete. It is expected that trees and

shrubs would become established within the abandoned rights-of way within approximately 7-10 years. These trees and shrubs would provide shade within 20-30 years and provide woody material to the stream environment within 100-400 years. Recruitment of large wood to the stream would improve stream structure and function.

Table IV-3. Number of Stream Crossings and Miles of Open/Closed Road, and Motorized Trail Within AIZ's Occupied by Cutthroat Trout by Alternative

Alternative	1M	3M+(Revised)	3M(+)	3M	3M(-)
Number of stream crossings	491	441	442	431	375
Open & year-round restricted road miles	158	148	153	154	154
Open trail miles	93	83	79	75	57
Decommissioned road miles	6	16	17	22	22

Table IV-4. Miles of Motorized Trail Within AIZ's Occupied by Cutthroat Trout Streams Showing the Greatest Differences Between Alternatives

Alternative	1M	3M+(Revised)	3M(+)	3M	3M(-)
STREAM -					
Calamity	2	2	2	2	1
Rainey	16	24	23	12	9
North Indian	11	11	11	11	0
South Indian	9	7	9	9	0

2. Number of Stream Crossings Within Cutthroat Trout Streams - The number of stream crossings existing under each alternative is displayed in Table IV-3. The number of stream crossings increases as the miles of open and year-round restricted roads increase. The general impacts of stream crossings are similar to that of roads and motorized trails within the AIZ and are described above. Specifically, stream crossings are of three general types: ford, culvert, and bridge.

Stream fords tend to generate sediment at the crossing site, and if not properly designed or constructed, can channel streamflow down the road or trail. Culverts may halt fish movements during low water conditions and during spawning migrations (Furniss et al. 1991). Culverts may become clogged and cause the stream to scour out portions of roads which causes excessive sediment delivery to streams. Culvert crossings tend to impinge upon the stream floodplain and may alter the stream gradient. Culverts occasionally wash out due to inadequate size or inadequate maintenance. Culvert failures usually result in increased sediment input to the stream. The effects of excessive sediment input are described above. Properly designed and maintained bridges tend to produce the least impact to stream structure and function and fisheries.

For further details of potential consequences, refer to RFP-EIS IV, pages 19-21

Cumulative Effects (for Indicators 1 and 2) - The difference in cumulative effects between alternatives is not great. However, cumulative adverse impacts to cutthroat trout habitat and populations would increase as the miles of road and stream crossings increase. Most of the healthy cutthroat trout populations occur within unroaded or slightly roaded drainages.

Cutthroat trout are also affected by roads outside the AIZ, livestock grazing, fishing, streambank trampling by fishermen, OHV use, logging, firewood cutting, past logging within AIZ's, and so on.

Although it is unlikely that any of the proposed alternatives would threaten the population viability of native cutthroat trout over the next 10-15 years, differences in rate of recovery of degraded habitats and overall habitat quality would result from implementation of the various alternatives (see Appendix D of this FEIS). Fisheries habitat quality, including that for native cutthroat trout, would be the lowest under Alternative 1M. Alternative 1M would result in a slow rate of recovery of degraded habitats. The 3M Alternatives would result in a moderate rate of recovery of degraded habitats and slightly higher levels of fish habitat quality.

Wildlife Associated with Aquatic and Riparian Ecosystems

Process Paper D and the FEIS for the Revised Forest Plan are incorporated by reference and present additional information about wildlife populations and habitat which will not be repeated in this EIS, because it is not pertinent to the issues of this analysis.

Bald Eagle Habitat

Consequences Common to All Alternatives - All of the bald eagle nesting territories on the Targhee National Forest contain roads and/or trails open to motorized use either within their primary use areas (Zones I and II) or their total home range areas. Most of these roads and trails were present prior to the time when the bald eagles established their territories.

The first recorded bald eagle nest territory on the Targhee National Forest occurred in 1975. From 1975 through 1998, the number of bald eagle nesting territories on the Targhee N.F. increased to 19. This increase occurred with the existing miles of roads and trails open to motorized use. None of the alternatives increase the miles of roads and trails open to motorized use in any bald eagle nesting territory.

Within bald eagle territories, there is a small decrease in roads open to motorized use in the alternatives as follows:

> Alternative 1: There are four bald eagle territories within grizzly bear habitat (near Henry's Lake and upper Henry's Fork) which will have a few roads decommissioned within the territories.
>
> Alternatives 3M+(Revised), 3M, 3M+ and 3M(-): There are 16 out of 19 bald eagle territories which will have a few roads decommissioned within the territories.

None of the proposed road decommissioning is done specifically for bald eagle habitat, because the bald eagle population has been increasing and using these territories with the existing motorized access in place.

Forest-wide standards and guidelines for bald eagles provide management direction for roads and trails in bald eagle habitat, and this management direction is the same in all Alternatives. The following management prescriptions also provide suitable habitat for bald eagles: 2.9.1, 2.9.2, 2.3, 2.4, 2.5, and 2.8.3. All existing bald eagle nesting territories will be maintained in all alternatives.

Vehicular traffic (including watercraft) traveling along prescribed routes or within strict spatial limits and at relatively predictable frequencies is least disturbing to bald eagles (Greater Yellowstone Bald Eagle Working Group, 1996).

In a study along the Snake River in Wyoming (reported in Greater Yellowstone Bald Eagle Working Group, 1996), some bald eagle pairs' primary use areas were on the most heavily impacted section of the River. Despite continuous and often highly intensive human use, eagles shifted their activity patterns in apparent response to periods when their presence would be least obvious to humans - very early morning and evening. Eagles used perches on the shoreline of the Snake River with much greater frequency and duration than those on the opposite shore, where a heavily used state highway and associated boat ramps, campgrounds, and vehicle pullouts were situated.

Some bald eagles are more tolerant of human activity in the Greater Yellowstone area than others. There are apparently "urban" and "rural" eagles. Mean distance at which resident eagles flushed from human activity was greater when relative exposure to human activity was less. Thus, eagles in the vicinity of continuously inhabited areas of high human density may become habituated to human presence and tolerant of certain human activities more than their rural counterparts. Urban eagles may be exposed to more human activity at gradually increasing levels, usually within clearly defined limits (towns, villages, roads) while human activity to which rural eagles are exposed is distributed and moving randomly (campgrounds, hikers, boats) at varying intensities and often seasonal and abrupt. Whether individual eagles become progressively more tolerant to human activity over time or if areas subjected to excessive human activity are occupied by more tolerant eagles is unknown (Greater Yellowstone Bald Eagle Working Group, 1996).

Even though there are slight differences in miles of roads open for motorized use in bald eagle habitat in the alternatives, we cannot measure or predict any differences in effects on the existing bald eagle population or habitat.

Cumulative Effects - The Forest-wide standards and guidelines for bald eagle nest zones and primary use areas apply to human activities which the Forest Service has authority to manage. Bald eagle nest zones and primary use areas occur on adjacent National Forests, BLM lands, state and private lands. Along the South Fork of the Snake River, a "Snake River Activity/Operations Plan" was approved by the BLM and the Forest Service in 1991. Bald eagle habitat management was a key component of that Plan.

Management actions of other agencies, such as management of fishing and fish populations by the State Fish and Game agencies, and management of river flows by the Bureau of Reclamation and the SE Idaho irrigators, may have positive or negative affects on the bald eagle population. In some places, such as where summer homes have been built or are being built on private lands, additional roads and trails have been or are being built in bald eagle habitat. However, at this time, we have no indication that this additional access has been or will be detrimental to maintaining a recovered bald eagle population in SE Idaho.

According to records which we have been able to compile from 1972 to the present, the bald eagle population has increased in SE Idaho and currently exceeds recovery plan goals.

Trumpeter Swan Habitat

Consequences Common to All Alternatives - The response of trumpeter swans to roads and trails varies greatly. Some swans are more tolerant of human activity than others. Swans in the vicinity of continuously inhabited areas of high human density may become habituated to human presence and tolerant of certain human activities, such as the swans which have historically nested along U. S. Highway 20 in Island Park. Vehicular traffic along prescribed routes or within strict spatial limits and at relatively predictable frequencies is least disturbing to swans. Whether individual swans become progressively more tolerant to human activity over time or if areas subjected to excessive human activity are occupied by more tolerant swans is unknown.

We did evaluate the proximity of trumpeter swan nest sites to existing open roads, and looked at two main factors: the number of years swans have occupied the nest sites and the productivity of the nest sites. This evaluation is displayed in Table IV-5. We found there was no clear trend between the proximity of open roads and the occupancy or productivity of the nest sites. For example, for sites which have been occupied by swans for at least 10 or more years, some of these sites have open roads immediately adjacent, while others have open roads up to 1.0 mile away. Three of the five sites with the highest production have adjacent open roads, while two of the five sites are 0.67 and 0.75 miles from an open road. Two sites that are within wilderness areas have only been occupied 3 or 4 years and have no production.

For the five alternatives being considered in this EIS, there is no difference in the miles of open roads and motorized trails which would have an effect on trumpeter swan habitat. Forest-wide goals, standards and guidelines provide the same management direction and protection for trumpeter swans in all alternatives. All trumpeter swan habitat is also within the aquatic influence zone management

prescription. This management prescription has eight guidelines specifically dealing with roads and trails. Suitable habitat will be maintained in all alternatives.

Table IV-5. Evaluation of Proximity of Trumpeter Swan Nest Sites to Open Roads

Trumpeter Swan Nest Site	Years Occupied 1982-1996	Production 1/ 1982-1996	Distance to Nearest Open Road
Boundary Pond	7	14	adjacent open roads (within 1/8 mi.)
Swan Lake	14	35	U. S. Highway 20 immediately adjacent
Lily Pond	8	3	0.75 mi.
Hatchery Butte	5	13	0.67 mi.
Railroad Pond	10	7	adjacent open road
Mesa March	12	19	0.75 mi.
Bear Lake	14	9	1.0 mi.
Upper Goose Lake	3	0	1.5 mi.
Long Meadows	7	0	2.0 mi.
Thompson Hole	13	23	adjacent open road
Twin Lakes	5	1	0.5 mi.
Chain Lakes	10	1	0.5 mi.
Putney Meadows	4	1	0.5 mi.
Unnamed Pond	1	1	adjacent open road
Widget Lake	4	0	2.5 mi. (lake is in wilderness)
Rock lake	3	0	1.0 mi. (lake is in wilderness)
Indian Lake	15	3	adjacent open road

1/ Production is the total number of cygnets (young) counted at the site from 1982-1996.

Cumulative Effects - Cumulative effects are the same as discussed in the FEIS (page IV-22) for the Revised Forest Plan which indicates many of the lakes and ponds historically used by trumpeter swans are naturally filling in with sediment and are becoming too shallow for swan use.

Spotted Frog Habitat

Consequences Common to All Alternatives - The aquatic influence zone management prescription provides the same management direction for spotted frog habitat in all alternatives. This management prescription has eight guidelines specifically dealing with roads and trails. This management direction provides suitable habitat conditions for spotted frogs. With our existing knowledge of habitat and populations, we expect the existing known distribution and abundance of spotted frogs on National Forest lands will be maintained in all alternatives.

Cumulative Effects - In some places, such as on private lands, additional roads and trails have been or could be built in wetland and riparian habitats which could adversely affect spotted frog habitat and populations. Other cumulative effects are the same as discussed in the FEIS (page IV-22-23) for the Revised Forest Plan.

Common Loon Habitat

Consequences Common to All Alternatives - All alternatives are the same in respect to roads and trails in the proximity of potential common loon habitat on the Forest. The aquatic influence zone management prescription provides the same management direction for common loon habitat in all alternatives. This management prescription has eight guidelines specifically dealing with roads and trails. The Revised Forest Plan has an objective to evaluate the potential to provide and maintain suitable breeding habitat for common loons at specific sites on the Forest. If this evaluation proves that these sites are suitable breeding habitat for common loons, the Forest is to develop common loon management plans for these sites. Current habitat conditions will be perpetuated at these sites in all alternatives.

Cumulative Effects - Recreational fishing activity is encouraged by the State Fish and Game Departments at some of the lakes which have had documented common loon observations. Recreational

activity during the loon nesting and brood rearing seasons can be detrimental, especially on small lakes and ponds where birds would not be able to find seclusion away from human activity.

Harlequin Duck Habitat

Consequences Common to All Alternatives - There are four creeks on the Forest which have had documented harlequin duck observations, including the rearing of broods. Portions of these four creeks have existing roads and trails adjacent to them. All of the alternatives maintain the presence of existing roads and trails along these four creeks. A Forest-wide guideline, which applies to all alternatives, establishes management direction to avoid establishing new trails, new roads, or new recreation facilities within 300 feet of any stream reach with documented harlequin duck breeding activity. Also, the aquatic influence zone management prescription provides the same management direction for harlequin duck habitat in all alternatives. This management prescription has eight guidelines specifically dealing with roads and trails. Existing habitat conditions for harlequin ducks will be maintained in all alternatives.

Cumulative Effects - Portions of the four creeks with harlequin duck activity have livestock grazing, existing recreational facilities, are open to fishing and other dispersed recreation activity. The effects of these activities is unknown. However, harlequin duck presence has existed with these existing activities.

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems

These ecosystems were addressed by the RFP-FEIS (page IV-24-25) and these alternatives will have little or no effects.

TES and Biodiversity

Consequences Common to All Alternatives - Site-specific activities such as culvert or fill material removal along roads to be decommissioned will be evaluated prior to disturbance to insure compliance with direction and policy of no loss to the threatened Ute ladies'-tresses (*Spiranthes diluvialis*) or sensitive species and protection of habitats of high plant biodiversity, e.g. peatlands. With our existing knowledge of Ute ladies'-tresses occurrence on the Forest (floodplain of the South Fork of the Snake River), we expect that the existing known distribution and abundance of the species will be maintained in all alternatives.

Cumulative Effects - Forest-wide, implementation of all alternatives is not likely to significantly or adversely affect the protection of TES or biodiversity indicator plant species. However, the potential of cumulative adverse impacts to these species and their habitat would increase as the miles of road increase. These species can also be affected by livestock grazing, natural forest or riparian habitat succession, OHV use, vegetation manipulation (e.g. logging, prescribed fires), exotic plant introduction not associated with roads, wildfires and so on.

Impacts to Ute ladies'-tresses known populations along the South Fork of the Snake River such as livestock grazing, management of river flows and recreation have been addressed in a joint Forest/BLM Biological Assessment, separate from the DEIS.

Upland Nonforested Ecosystems

Consequences Common to All Alternatives - Implementation of any of the five alternatives is not likely to significantly or adversely affect the management of the upland nonforested vegetation.

Consequences Which Vary by Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the five alternatives is not likely to significantly or adversely affect the management of upland nonforested vegetation.

Noxious Weeds

Consequences Common to All Alternatives - The effects of noxious weed management are disclosed in the 1987 Targhee National Forest Noxious Weed EA and Decision Notice and are incorporated by reference into this analysis and the 1997 FEIS for the Revised Forest Plan (RFP-FEIS page IV-27). Regardless of which alternative is selected, management of noxious weeds does not change.

Consequences Which Vary by Alternative - Obviously, motorized vehicles on roads and trails that are open for travel contribute to the spread of noxious plants. On the Targhee National Forest, most of the infestations of noxious weeds are along roads open to motorized vehicles, rather than trails. Therefore, Alternative 1M would tend to have more potential for noxious weed infestations than any of the four 3M alternatives which have less open, motorized roads. Decommissioned roads will be monitored for new infestations and appropriate control measures will be taken.

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect noxious weed management activities.

Wildlife Associated with Terrestrial Ecosystems

Process Paper D and the FEIS for the Revised Forest Plan are incorporated by reference and present additional information about wildlife populations and habitat which will not be repeated in this EIS, because it is not pertinent to the issues of this analysis.

Elk Vulnerability (EV)

Elk vulnerability (EV) is defined as a measure of elk susceptibility to being killed during the hunting season (Lyon and Christensen 1992; IDFG letter May 12, 1995). EV models (Unsworth et al. 1993) have been proposed as a predictive tool that managers can use to predict mortality rates and monitor elk vulnerability (IDFG letter May 12, 1995). There are two primary variables in this EV analysis: 1) the density of open motorized roads, open motorized trails, and motorized cross-country travel; 2) the density of hunters, expressed in terms of hunter-day densities.

For the Idaho portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general antlered elk rifle hunting season. For the Wyoming portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general license any elk rifle hunting season. State Fish and Game Departments have goals or thresholds for percent bull elk mortality. For the Idaho portion of the Forest, EV thresholds for percent bull elk mortality vary by Game Management Unit, as shown in Table IV-6.

Table IV-6. EV Thresholds for Percent of Bull Elk Mortality

Game Management Unit	Principal Watersheds (see Figure IV-1)	EV Threshold (% Bull Elk Mortality)
58	030A, 030B, 031A, 031B	50%
59A	027/028*, 029	50%
59	027/028*, 026A	50%
60	009B, 011*, 014/034	46% **
61	026B, 025, 009A, 008, 010, 011*, 012*	46% **
62A	011*, 012*, 013*	46% **
62	013*, 016I, 015I, 021I	60%
64	023/024	60%
65	022, 017I	60%
66	036*, 037, 038, 039*	60%
67	002I, 003I, 004I, 005, 006, 007/033*	50%
69	007/033*, 039*, 040	60%
* These watersheds are within two or more Game Management Units		
** In a letter dated March 5, 1999, the Idaho Department of Fish and Game informed the Forest that the EV threshold for Game Management Units 60, 61, and 62A had been changed from 60% to 46%.		

For the Wyoming portion of the Forest, these goals or thresholds are 50 percent. The State Fish and Game Departments also have goals pertaining to the number of branch antlered bulls in the harvest and the population (which is explained in Process Paper D).

The primary effect over which the Forest Service has control in this EV analysis is the density of open motorized roads, open motorized trails, and motorized cross-country travel. (Motorized cross-country travel was previously decided in the Revised Forest Plan, and is not under consideration in this EIS. The amount of motorized cross-country travel allowed in the Revised Forest Plan is included in this EV analysis.) The combined density of open motorized roads, open motorized trails, and motorized cross-country travel is referred to as 'motorized access density' (MAD). Process Paper D of the RFP-FEIS describes the details of EV analysis.

Consequences Which Vary by Alternative - Table IV-7 displays the hunter-day densities, the MAD, and the estimated percent bull elk mortality for each principal watershed (Figure IV-1) on the Forest for each alternative. In Alternatives 1M, 3M+, and 3M+ Revised, 5 watersheds (009B, 010, 011, 014/034, 026B) exceed the EV thresholds of the State Fish and Game Departments, which is about 15% of the Forest. In Alternatives 3M, and 3M-, 4 watersheds (009B, 010, 011, 014/034) exceed the EV thresholds of the State Fish and Game Departments, which is about 13% of the Forest.

There are several reasons why EV thresholds are exceeded in these watersheds:

> Two of these watersheds (009B and 014/034) have the highest hunter densities on the Forest. In these two watersheds EV thresholds cannot be achieved unless hunter densities are reduced along with reductions in motorized access.
>
> Portions of watersheds 010 and 011 include the highly developed summer home areas of Island Park, and road densities cannot be reduced in these areas. Watersheds 010 and 011 do contain areas with low motorized access which help reduce some of the elk vulnerability.

When the 1997 Revised Forest Plan was completed, these 5 watersheds had an EV threshold of 60%. In a letter dated March 5, 1999, the Idaho Department of Fish and Game informed the Forest that the EV threshold for these areas had been changed from 60% to 46%. It would not be possible to achieve the new EV threshold without substantial additional reductions in public access.

Cumulative Effects - This analysis does not include bull elk mortality associated with archery seasons, controlled hunt seasons, black powder hunt seasons, or other special seasons which the State Fish and Game Departments may authorize. Watersheds which are at or near the threshold level in this analysis may actually exceed the thresholds when mortality from other seasons is considered.

Hunter-day densities were provided by the State Fish and Game Departments. If hunter-day densities change in the future, due to changes in hunting seasons, motorized access restrictions, or human populations, then this analysis will need to be updated.

The degree of public compliance with, and/or enforcement of the Forest Travel Plan is also an important factor related to EV. Noncompliance will result in higher EV.

Elk Habitat Effectiveness (EHE)

EHE is defined as the percentage of available habitat that is usable by elk outside the hunting season (Lyon and Christensen 1992). For this EHE analysis, it is the spring, summer, and early fall habitat that is usable by elk outside the general elk rifle hunting seasons. EHE is not a measure of elk populations and it is not a measure of habitat carrying capacity (Lyon and Christensen 1992).

There are two primary variables in this EHE analysis: 1) the density of open motorized roads and open motorized trails; 2) elk hiding cover (measured as a percentage of an area in cover). (The amount of elk hiding cover was previously decided in the Revised Forest Plan, and is not under consideration in this EIS.) Process Paper D describes the details of EHE analysis.

Table IV-7. Hunter-day Density, Motorized Access Route Density, and Estimated Percent Bull Elk Mortality for the General Rifle Hunting Season for Each Principal Watershed for Each Alternative.

Watershed 1/	Hunter-Day density 2/	Alt. 1M MAD 3/	Alt. 1M Estimated percent Bull Elk Mortality	Alt. 3M+ Revised MAD	Alt. 3M+ Revised Estimated percent Bull Elk Mortality	Alt. 3M+ MAD	Alt.3M+ Estimated percent Bull Elk Mortality	Alt. 3M MAD	Alt. 3M Estimated percent Bull Elk Mortality	Alt. 3M-MAD	Alt. 3M-Estimated percent Bull Elk Mortality
002 I	8.5	1.37	36	1.21	33	1.21	33	1.21	33	1.14	32
003 I	8.5	0.65	26	0.48	24	0.48	24	0.48	24	0.48	24
004 I	8.5	0.38	23	0.24	21	0.24	21	0.23	21	0.24	21
005	8.5	0.9	29	0.6	25	0.59	25	0.43	23	0.23	21
006	8.5	1.28	34	0.85	28	0.79	28	0.77	27	0.75	27
007/033	8.5	1.5	37	1.25	34	1.23	34	1.23	34	1.23	34
008	13.69	1.13	40	1.15	40	1.14	40	1.14	40	1.14	40
009A	13.69	0.64	33	0.63	33	0.61	32	0.61	32	0.61	32
009B	37.1	2.9	90**	2.55	89**	2.55	89**	2.55	89**	2.55	89**
010	13.69	2.47	61**	2.43	60**	2.43	60**	2.4	60**	2.41	60**
011	19.95	2.81	75**	2.62	72**	2.63	73**	2.6	72**	2.61	72**
012	7.81	1.05	30	1.04	30	1.02	30	0.94	29	0.94	29
013	8.59	0.8	28	0.83	28	0.83	28	0.8	28	0.8	28
014/034	30.66	0.72	62**	0.73	62**	0.72	62**	0.6	60**	0.6	60**
015 I	13.68	0.71	34	0.81	35	0.81	35	0.7	34	0.7	34
016 I	13.68	0.69	34	0.7	34	0.72	34	0.69	34	0.69	34
017 I	8.5	1.32	35	0.77	27	0.77	27	0.77	27	0.77	27
021 I	13.68	0.82	35	0.82	35	0.83	36	0.82	35	0.82	35
022	8.01	1.56	38	1.35	34	1.34	34	1.31	34	1.17	32
023/024	10.53	2.33	54	1.53	41	1.64	43	1.48	40	1.41	39
025	13.69	1.38	44	0.85	36	0.83	36	0.76	35	0.76	35
026A	9.51	2.12	49	1.55	40	1.59	40	1.55	40	1.54	40
026B	13.69	2.54	62**	1.75	50**	1.69	49**	1.46	45	1.41	44
027/028	9.51	0.99	32	0.89	30	0.87	30	0.72	28	0.72	28
029	9.51	1.18	34	1.02	32	1.02	32	0.86	30	0.86	30
030A	2.56	0.96	22	0.78	20	0.75	20	0.75	20	0.75	20
030B	2.56	1.8	33	1.52	29	1.47	28	1.46	28	1.46	28
031A	2.56	0.46	17	0.47	17	0.47	17	0.47	17	0.46	17
031B	2.56	1.82	33	1.16	24	1.16	24	0.99	23	0.99	23
036	19.99	1.18	51	0.9	47	0.9	47	0.9	47	0.9	47
037	19.99	0.99	48	0.83	46	0.82	46	0.83	46	0.82	46
038	19.99	1.61	58	1.37	54	1.36	54	1.36	54	1.36	54
039	19.59	1.38	54	1.28	52	1.28	52	1.28	52	1.28	52
040	19	1.36	53	1.05	48	1.05	48	1.05	48	1.05	48
016 W	4.97	0.37	19	0.41	19	0.38	19	0.37	19	0.37	19
015 W	4.97	0.58	21	0.59	21	0.58	21	0.58	21	0.58	21
021 W	4.97	0.38	19	0.34	18	0.34	18	0.35	19	0.34	18
020 W	4.97	0.66	22	0.51	20	0.51	20	0.51	20	0.51	20
019 W	4.97	0.99	25	0.76	23	0.76	23	0.82	23	0.76	23
018 W	4.97	0.82	23	0.76	23	0.76	23	0.78	23	0.76	23
017 W	5.65	0.45	20	0.23	18	0.23	18	0.23	18	0.23	18
004 W	9.86	0.38	24	0.24	23	0.24	23	0.23	23	0.24	23
003 W	9.86	0.22	23	0.12	21	0.1	21	0.11	21	0.1	21
002 W	9.86	1.76	44	1.12	34	1.32	37	1.32	37	0.65	28

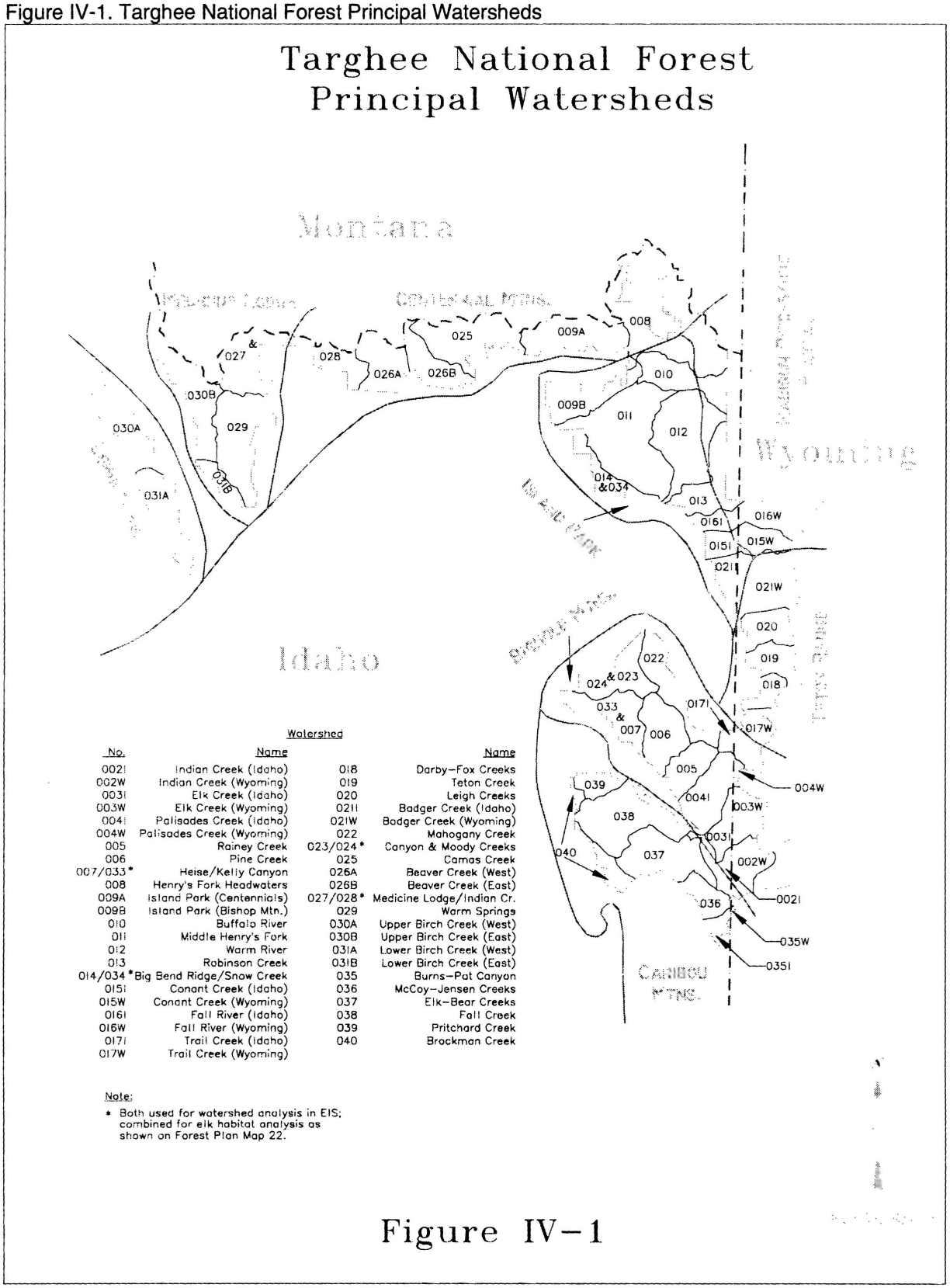
1/ Refer to Figure IV-1 for locations of watersheds.

2/ Hunter-Days per square mile. Hunter-Day densities were provided by the State Fish and Game Agencies. They are the same for all alternatives. Details are presented in Process Paper D.

3/ MAD = motorized access route density per square mile. MAD includes the density of open roads, open motorized trails, and cross-country travel in each watershed. Details are presented in Process Paper D.

**Watersheds which exceed State Fish and Game agency goals/thresholds for elk vulnerability

Figure IV-1. Targhee National Forest Principal Watersheds



Watershed

No.	Name	No.	Name
002I	Indian Creek (Idaho)	018	Darby–Fox Creeks
002W	Indian Creek (Wyoming)	019	Teton Creek
003I	Elk Creek (Idaho)	020	Leigh Creeks
003W	Elk Creek (Wyoming)	021I	Badger Creek (Idaho)
004I	Palisades Creek (Idaho)	021W	Badger Creek (Wyoming)
004W	Palisades Creek (Wyoming)	022	Mahogany Creek
005	Rainey Creek	023/024*	Canyon & Moody Creeks
006	Pine Creek	025	Camas Creek
007/033*	Heise/Kelly Canyon	026A	Beaver Creek (West)
008	Henry's Fork Headwaters	026B	Beaver Creek (East)
009A	Island Park (Centennials)	027/028*	Medicine Lodge/Indian Cr.
009B	Island Park (Bishop Mtn.)	029	Warm Springs
010	Buffalo River	030A	Upper Birch Creek (West)
011	Middle Henry's Fork	030B	Upper Birch Creek (East)
012	Warm River	031A	Lower Birch Creek (West)
013	Robinson Creek	031B	Lower Birch Creek (East)
014/034*	Big Bend Ridge/Snow Creek	035	Burns–Pat Canyon
015I	Conant Creek (Idaho)	036	McCoy–Jensen Creeks
015W	Conant Creek (Wyoming)	037	Elk–Bear Creeks
016I	Fall River (Idaho)	038	Fall Creek
016W	Fall River (Wyoming)	039	Pritchard Creek
017I	Trail Creek (Idaho)	040	Brockman Creek
017W	Trail Creek (Wyoming)		

Note:

* Both used for watershed analysis in EIS; combined for elk habitat analysis as shown on Forest Plan Map 22.

Figure IV–1

Consequences Which Vary by Alternative - Table IV-8 displays cover values and motorized access values (based on the density of open roads and open motorized trails), and EHE for each principal watershed on the Forest for each alternative. In Alternative 1M, EHE ranges from 0.45 to 0.80 in the watersheds, with a Forest-wide average of 0.59. In Alternatives 3M+ and 3M+Revised, EHE ranges from 0.50 to 0.79 in the watersheds, with a Forest-wide average of 0.62. In Alternatives 3M and 3M-, EHE ranges from 0.50 to 0.80 in the watersheds, with a Forest-wide average of 0.63.

Cumulative Effects - All roads and trails receiving motorized use are incorporated in this EHE analysis. All previous timber harvesting, plus all future proposed timber harvesting are incorporated in this EHE analysis. The effects of planned and unplanned fires is not incorporated into this EHE analysis, as it was not possible to predict where, when, and how many acres would potentially burn.
The degree of public compliance with, and/or enforcement of the Forest Travel Plan is also an important factor related to EHE. Noncompliance will result in lower EHE.

Effects of Motorized Use on Trails

During the Revised Forest Plan, there was considerable debate about whether the effects of motorized use on trails was equal in magnitude to the effects of motorized use on roads. We are not aware of any new research which would shed new light on this debate. The discussion and analysis about this debate presented in the FEIS for the Revised Forest Plan, and in Process Paper D, is still valid in our opinion. Therefore, this analysis also considers motorized roads and trails having equal effects on wildlife as indicated in the RFP-FEIS. See the Comment/Response section "Wildlife - Elk Vulnerability" for additional information about motorized use on trails.

Additional Information About EV and EHE

During public review of the DEIS, many questions were asked about the necessity to have motorized access restrictions when winter elk population counts are currently at or near all time high levels. We refer readers to the Comment/Response sections of "Wildlife - Elk Habitat Effectiveness" and "Wildlife - Elk Vulnerability" for answers to these questions as well as other questions raised by the public related to EV and EHE.

Elk and Deer Winter Range

Motorized access during the winter period on elk and deer winter ranges was decided in the Revised Forest Plan. Those decisions are not changed in any of these alternatives. The effects on elk and deer winter ranges are the same as described in the Revised Forest Plan (page IV-30). As stated in the Revised Forest Plan, improvements in the number of acres meeting DVC's and increased restrictions on cross-country snowmachine use will result in improved winter range conditions for deer and elk, but populations may not increase over existing levels.

Grizzly Bear Habitat

The following overview on the effects of motorized access is summarized from the Interagency Grizzly Bear Committee Task Force Report, 1994 and 1998.

> "History has demonstrated that grizzly bear populations survived where frequencies of contact with humans were very low. Populations of grizzly bears and other large carnivores persisted in those areas where large expanses of relatively secure habitat were retained and where human induced mortality was low. In the lower 48 conterminous states, this is primarily associated with National Parks, Wilderness areas and large blocks of public lands.
>
> By managing motorized access on the landscape, the following grizzly bear management objectives can be met:
>
> - Minimize human interaction and potential grizzly bear mortality.

Table IV-8. Cover Value, Motorized Access Value, and Estimated Elk Habitat Effectiveness for Each Principal Watershed for Each Alternative.

Watershed 1/	Cover Value 2/	Alt. 1M MAV 3/	Alt. 1M Estimated EHE	Alt. 3M+ Revised MAV	Alt 3M+ Revised Estimated EHE	Alt. 3M+ MAV	Alt. 3M+ Estimated EHE	Alt. 3M MAV	Alt. 3M Estimated EHE	Alt. 3M-MAV	Alt. 3M-Estimated EHE
002 I	0.44	0.58	0.54	0.59	0.55	0.59	0.55	0.59	0.55	0.61	0.56
002 W	0.38	0.55	0.50	0.66	0.58	0.60	0.53	0.60	0.53	0.86	0.70
003 I	0.37	0.76	0.63	0.82	0.67	0.82	0.67	0.83	0.68	0.82	0.67
003 W	0.42	0.91	0.75	0.95	0.78	0.96	0.78	0.96	0.78	0.96	0.78
004 I/ W	0.38	0.85	0.70	0.91	0.73	0.91	0.73	0.91	0.73	0.91	0.73
005	0.43	0.64	0.58	0.76	0.66	0.76	0.66	0.83	0.70	0.91	0.75
006	0.39	0.57	0.52	0.66	0.58	0.69	0.60	0.70	0.60	0.70	0.61
007/033	0.35	0.55	0.49	0.58	0.51	0.58	0.51	0.58	0.51	0.58	0.51
008	0.63	0.62	0.62	0.61	0.62	0.62	0.62	0.62	0.62	0.62	0.62
009A	0.54	0.79	0.72	0.79	0.72	0.80	0.73	0.80	0.73	0.80	0.73
009B	0.61	0.54	0.55	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
010	0.71	0.54	0.58	0.54	0.58	0.54	0.58	0.55	0.58	0.55	0.58
011	0.65	0.55	0.58	0.57	0.59	0.57	0.59	0.58	0.59	0.58	0.59
012	0.68	0.72	0.71	0.72	0.71	0.73	0.72	0.76	0.74	0.76	0.74
013	0.71	0.69	0.70	0.68	0.69	0.68	0.69	0.69	0.70	0.69	0.70
014/034	0.63	0.68	0.67	0.72	0.69	0.72	0.70	0.77	0.73	0.77	0.73
015 I	0.65	0.73	0.71	0.69	0.68	0.69	0.68	0.73	0.71	0.73	0.71
015 W	0.57	0.81	0.74	0.81	0.74	0.81	0.74	0.81	0.74	0.81	0.74
016 I	0.57	0.73	0.69	0.73	0.68	0.72	0.68	0.73	0.69	0.73	0.69
016 W	0.65	0.86	0.80	0.84	0.79	0.85	0.79	0.86	0.80	0.86	0.80
017 I	0.52	0.57	0.56	0.72	0.66	0.72	0.66	0.72	0.66	0.72	0.66
017 W	0.42	0.84	0.70	0.92	0.76	0.92	0.76	0.92	0.76	0.92	0.76
018 W	0.32	0.85	0.66	0.87	0.68	0.87	0.68	0.86	0.67	0.87	0.68
019 W	0.33	0.78	0.63	0.88	0.69	0.88	0.69	0.86	0.67	0.88	0.69
020 W	0.39	0.77	0.65	0.83	0.69	0.83	0.69	0.83	0.69	0.83	0.69
021 I	0.62	0.67	0.66	0.67	0.66	0.67	0.66	0.67	0.66	0.67	0.66
021 W	0.57	0.85	0.77	0.86	0.78	0.86	0.78	0.86	0.78	0.86	0.78
022	0.47	0.55	0.53	0.55	0.53	0.55	0.53	0.56	0.54	0.57	0.54
023/024	0.51	0.46	0.47	0.53	0.52	0.53	0.53	0.55	0.54	0.56	0.55
025	0.46	0.58	0.55	0.69	0.62	0.69	0.62	0.76	0.67	0.72	0.64
026A	0.3	0.54	0.46	0.60	0.50	0.59	0.50	0.60	0.50	0.60	0.50
026B	0.32	0.51	0.45	0.59	0.50	0.59	0.51	0..6-	0.58	0.69	0.57
027/028	0.27	0.63	0.51	0.67	0.54	0.68	0.54	0.74	0.57	0.74	0.57
029	0.23	0.62	0.48	0.68	0.52	0.68	0.52	0.74	0.55	0.74	0.55
030A	0.32	0.68	0.56	0.76	0.61	0.76	0.61	0.76	0.61	0.76	0.61
030B	0.36	0.65	0.56	0.76	0.63	0.78	0.64	0.78	0.65	0.78	0.65
031A	0.3	0.82	0.64	0.81	0.63	0.81	0.63	0.81	0.63	0.82	0.64
031B	0.31	0.56	0.48	0.70	0.57	0.70	0.57	0.77	0.61	0.77	0.61
035	0.34	0.66	0.56	0.69	0.58	0.69	0.58	0.68	0.57	0.69	0.58
036	0.48	0.59	0.56	0.69	0.63	0.69	0.63	0.69	0.63	0.69	0.63
037	0.39	0.61	0.54	0.67	0.59	0.67	0.59	0.67	0.59	0.67	0.59
038	0.32	0.56	0.48	0.58	0.50	0.58	0.50	0.58	0.50	0.58	0.50
039	0.33	0.56	0.49	0.57	0.50	0.57	0.50	0.57	0.50	0.57	0.50
040	0.32	0.58	0.50	0.64	0.54	0.64	0.54	0.64	0.54	0.64	0.54

1/ Refer to Figure IV-1 for locations of watersheds.

2/ Cover Value is based on the amount of elk hiding cover provided by vegetation in each watershed. If 50 to 60 percent of the watershed vegetation provides elk hiding cover, the cover value is 1.0; the cover value declines from 1.0 when there is more than 60 percent or less than 50 percent of the watershed vegetation providing elk hiding cover. Details are presented in Process Paper D.

3/ MAV = motorized access value. MAV is based on the density of open roads and open motorized trails in the watershed. An MAV of 1.0 would mean no open roads and open motorized trails in a watershed. As the density of open roads and open motorized trails increases, the MAV value declines. Details are presented in Process Paper D.

- Minimize displacement from important habitats.

- Minimize habituation to humans.

- Provide relatively secure habitat where energetic requirements can be met.

Historically, management of motorized use has been primarily accomplished through restriction of certain types of motorized use on established access routes. Restrictions on vehicle use through timing and type of vehicle have been commonplace. Evaluation of the effects of motorized access have been based primarily on the density of open roads.

Recent research has indicated that evaluation of open road density alone is not a complete measure of the effects of motorized access on use of habitat by grizzly bears. In addition to open road density, total motorized access route density along with the presence of core areas, are important elements in the management of human access within grizzly bear recovery zones. Core areas are free of motorized traffic and high levels of human use. (Designated core areas were established in the Revised Forest Plan by specific management prescriptions, and are not changed by any alternative in this EIS.)

The management of human use levels through access route management is one of the most powerful tools available to balance the needs of grizzly bears and many species of wildlife with the needs and activities of humans. It has been documented in several research projects, both completed and ongoing, that unregulated human access and development within grizzly bear habitat can contribute to increased bear mortality and affect bear use of existing habitat. It is also documented that human use of grizzly bear habitat within many recovery zones continues to increase.

Habitat security conditions cannot be defined entirely by motorized access route density. Other factors such as vegetation (food, cover), concentrated human use locations (e.g. town sites, campgrounds), heavily used non-motorized trails and areas of high levels of dispersed human use will also influence the effectiveness of area in regards to habitat security. However, motorized access routes and the human use associated with these routes are one of the most easily defined and measurable factors that we can evaluate. Motorized access is also one of the more influential parameters affecting habitat security."

In January 1996 a study was completed on the relationships among grizzly bears, roads, and habitat in the Swan Mountains, Montana (Mace et al. 1996, in press). The following is quoted from the summary of that study:

> "Seasonal use by grizzly bears of areas within a 0.5 km buffer surrounding roads was evaluated. Most grizzly bears exhibited either neutral or positive selection for buffers surrounding closed roads and roads receiving <10 vehicles/day, but avoided buffers surrounding roads having >10 vehicles/day."

Consequences Common to All Alternatives - Motorized access in the grizzly bear management units was a key issue in the Revised Forest Plan. The Revised Forest Plan established motorized access standards for each bear management unit on the Forest as displayed in Chapter III. These motorized access standards were reviewed by the U. S. Fish and Wildlife Service during consultation, and were addressed in their Biological Opinion. All of the alternatives in this EIS meet these standards (see Biological Assessment Update - Appendix D). There are some small differences between the alternatives, which are displayed in Table IV-9(a-e); however, all alternatives would comply with grizzly bear recovery objectives.

Table IV-9a. Motorized Access for the Targhee Portion of Henry's Lake BMU, Subunit 1

	Alt 1M	Alt 3M+ Revised	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles					
Open Road Miles	61.91	64.93	62.63	64.00	62.65
Restricted Road Miles	22.42	25.01	21.45	22.30	20.1
Decommissioned Road Miles	55.82	50.21	56.07	53.85	57.40
Open Motorized Trail Miles	0.00	0.00	0.00	0.00	0.00
Restricted Motorized Trail Miles	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Miles	84.33	89.94	84.08	86.30	82.75
Open Road and Open Motorized Trail Route Miles	61.91	64.93	62.63	64.00	62.65
Motorized Road and Trail Access Density (mi./sq. mi.)					
Open Road Density	0.53	0.56	0.54	0.55	0.54
Restricted Road Density	0.19	0.21	0.18	0.19	0.17
Open Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Restricted Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Density	0.72	0.77	0.72	0.74	0.71
Open Road and Open Motorized Trail Route Density	0.53	0.56	0.54	0.55	0.54
1/ Information in this table does not include the MS3 portion and non-National Forest portion of Henry's Lake Flat.					

Table IV-9b. Motorized Access for the Targhee Portion of Henry's Lake BMU, Subunit 2.

	Alt 1M	Alt 3M+ Revised	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles					
Open Road Miles	22.16	24.23	22.40	20.70	22.16
Restricted Road Miles	2.45	4.05	4.42	4.60	2.45
Decommissioned Road Miles	19.61	15.94	17.40	18.92	19.61
Open Motorized Trail Miles	6.37	4.01	6.39	6.50	6.39
Restricted Motorized Trail Miles	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Miles	30.98	32.29	33.21	31.80	31.00
Open Road and Open Motorized Trail Route Miles	28.53	28.24	28.79	27.20	28.55
Motorized Road and Trail Access Density (mi./sq. mi.)					
Open Road Density	0.38	0.42	0.38	0.35	0.38
Restricted Road Density	0.04	0.07	0.08	0.08	0.04
Open Motorized Trail Density	0.11	0.07	0.11	0.11	0.11
Restricted Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Density	0.53	0.55	0.57	0.54	0.53
Open Road and Open Motorized Trail Route Density	0.49	0.48	0.49	0.47	0.49

Table IV-9c. Motorized Access for the Targhee Portion of Plateau BMU, Subunit 1.

	Alt 1M	Alt 3M+ Revised	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles					
Open Road Miles	76.19	77.79	75.81	75.00	76.17
Restricted Road Miles	51.97	53.23	52.35	55.30	51.98
Decommissioned Road Miles	98.97	96.11	98.97	96.83	98.98
Open Motorized Trail Miles	3.39	3.38	3.39	4.60	2.32
Restricted Motorized Trail Miles	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Miles	131.55	134.4	131.55	134.90	130.47
Open Road and Open Motorized Trail Route Miles	79.58	81.17	79.2	79.60	78.49
Motorized Road and Trail Access Density (mi./sq. mi.)					
Open Road Density	0.56	0.57	0.56	0.56	0.56
Restricted Road Density	0.38	0.39	0.38	0.41	0.38
Open Motorized Trail Density	0.02	0.02	0.02	0.03	0.02
Restricted Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Density	0.97	0.99	0.97	1.00	0.96
Open Road and Open Motorized Trail Route Density	0.58	0.60	0.58	0.59	0.58

Table IV-9d. Motorized Access for the Targhee Portion of Plateau BMU, Subunit 2.

	Alt 1M	Alt 3M+ Revised	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles					
Open Road Miles	65.28	64.13	65.47	64.70	65.18
Restricted Road Miles	22.72	22.72	22.72	23.30	22.72
Decommissioned Road Miles	117.35	118.50	117.16	117.35	117.45
Open Motorized Trail Miles	0.2	0.2	0.2	0.2	0.2
Restricted Motorized Trail Miles	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Miles	88.2	87.05	88.39	88.20	88.10
Open Road and Open Motorized Trail Route Miles	65.48	64.33	65.67	64.90	65.38
Motorized Road and Trail Access Density (mi./sq. mi.)					
Open Road Density	0.55	0.54	0.55	0.54	0.55
Restricted Road Density	0.19	0.19	0.19	0.20	0.19
Open Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Restricted Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Density	0.74	0.73	0.74	0.74	0.74
Open Road and Open Motorized Trail Route Density	0.55	0.54	0.55	0.55	0.55

Table IV-9e. Motorized Access for the Targhee Portion of Bechler-Teton BMU.

	Alt 1M	Alt 3M+ Revised	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles					
Open Road Miles	146.73	152.88	151.3	144.10	144.24
Restricted Road Miles	46.71	53.96	49.07	50.90	49.07
Decommissioned Road Miles	144.03	130.63	137.1	142.47	144.16
Open Motorized Trail Miles	2.75	2.64	2.64	4.10	2.64
Restricted Motorized Trail Miles	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Miles	196.19	209.48	203.01	199.10	195.95
Open Road and Open Motorized Trail Route Miles	149.48	155.52	153.94	148.20	146.88
Motorized Road and Trail Access Density (mi./sq. mi.)					
Open Road Density	0.49	0.51	0.51	0.48	0.48
Restricted Road Density	0.16	0.18	0.16	0.17	0.16
Open Motorized Trail Density	0.01	0.01	0.01	0.01	0.01
Restricted Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Density	0.66	0.70	0.68	0.67	0.66
Open Road and Open Motorized Trail Route Density	0.50	0.52	0.51	0.50	0.49

1/ Only includes acres within the Targhee National Forest.

As explained in Chapter III, some existing motorized access restrictions (gates and earth berms) were not effective in stopping motorized use. The 1994 and 1998 IGBC taskforce reports on grizzly bear/motorized access management provided the following definitions for restricted roads and decommissioned (reclaimed/obliterated) roads:

> Restricted Road--a road on which motorized vehicle use is restricted seasonally or yearlong. The road requires *effective* physical obstruction.
>
> Decommissioned (Reclaimed/Obliterated) Road--a route which is managed with the long term intent for no summer motorized use, and has been treated in such a manner so as to no longer function as a road or trail. An effective means to accomplish this is through one or a combination of several means including: recontouring to original slope, placement of logging, or forest debris, planting of shrubs or trees, etc.

In order to stop summer motorized use on restricted and decommissioned roads, our experience and records indicated that larger physical obstructions, larger size and larger amounts of forest debris, and repeated treatments at several places along a road will be necessary. If restricted roads or decommissioned roads continue to have summer motorized use, grizzly bear habitat improvement will not be realized.

Since completing the 1997 Forest Plan Revision, the Interagency Grizzly Bear Study Team accomplished an initial analysis of adult female grizzly bear home ranges. For adult female bears which had $\geq$ 20% of their home ranges on lands outside of Wilderness areas and outside of National Parks (that is, bears that had the opportunity to use areas with open roads), they found the following statistics for their home ranges:

> Percent of core area (no motorized access): 84.81%, with a std of $\pm$12.35%
> Percent of area with open road density >1 mi./sq.mi.: 6.31%, with a std of $\pm$5.01%
> Percent of area with total road density > 2 mi./sq.mi.: 6.22%, with a std of $\pm$6.12%

This analysis by the Interagency Grizzly Bear Study Team uses a GIS moving window technique, which is different than the technique we had available when completing the 1997 Forest Plan Revision. The Interagency Grizzly Bear Study Team analyzed the preferred alternative for the Forest Plan Revision using the same GIS moving window technique. This analysis shows the following results:

Bear Management Unit	Percent of Core Area	Percent of area with open road density >1 mi./sq.mi.	Percent of area with total road density >2 mi./sq.mi.
Bechler-Teton	75%-78%**	13%	4%
Plateau Subunit 1	68%	19%	10%
Plateau Subunit 2	81%-87%**	7%	2%
Henry's Lake Subunit 1	48%	42%	24%
Henry's Lake Subunit 2	47%	45%	25%

(**ranges in the table represent differences by season)

In the above display, the unshaded percentages are within the standard deviation of the female home range analysis. The shaded percentages are outside the standard deviation of the female home range analysis.

For the Bechler-Teton BMU, the shaded area is 2% outside of the standard deviation for open road density of female home ranges; since this BMU has been occupied with females with young, this does not appear to be a problem.

For Plateau Subunit 1, the percent of core area is 4% outside of the standard deviation of female home ranges, and the percent of area with open road density is 8% outside of the standard deviation of female home ranges. The reason for this is that this subunit contains some of the highly roaded summer home area and private land area in Island Park, and for social reasons we will not close the motorized access in these areas.

The Henry's Lake Subunits 1 and 2 are farther outside the standard deviation of female home ranges for all parameters because of the large amount of private lands on Henry's Lake Flat and the highly roaded summer home areas both on National Forest land and private land within these subunits. If the private land area and highly roaded summer home areas are removed from the analysis, the remaining National Forest land is within 4 to 5 percent of the standard deviation for these parameters.

In summary, we have followed the 1994 and 1998 IGBC taskforce reports on grizzly bear/motorized access management which said: 1) use the best available information; 2) use analysis of female grizzly bear home ranges when this becomes available; 3) integrate social and other land management considerations. The recent analysis of female grizzly bear home ranges and the preferred Forest Plan Revision alternative by the Interagency Grizzly Bear Study Team illustrate to us that our analysis was sound and the revised Forest Plan direction is appropriate for balancing grizzly bear recovery with reasonable public access to the Targhee.

Cumulative Effects - Cumulative effects is the same as presented and discussed in the Revised Forest Plan, Process Paper D, and the Biological Opinion from the U. S. Fish and Wildlife Service, and will not be repeated here.

Gray Wolf Habitat

Consequences Common to All Alternatives - The Revised Forest Plan established Forest-wide standards and guidelines implementing the nonessential experimental population rules established by the U. S. Fish and Wildlife Service. This management direction is not changed by any of these alternatives. The U. S. Fish and Wildlife Service stated the following concerning roads (U. S. Fish and Wildlife Service 1994a and 1994b):

"Based upon (1) current open road information, (2) the success of wolf packs in highly roaded habitats in Montana, and (3) that these roaded areas of public land being proposed for wolf recovery are adjacent to large (about 4-5 million acres) roadless areas, it appears unlikely that road density guidelines must be employed as a wide-spread land management strategy to support wolf recovery.

This gray wolf reintroduction does not conflict with existing or anticipated Federal agency actions or traditional public uses of park lands, wilderness areas, or surrounding lands (USDI Fish and Wildlife Service 1994b). The intent of the experimental rule is that land-use restrictions not be routinely used solely to enhance wolf recovery. However, land-use restrictions may be temporarily used by land or resource managers to control intrusive human disturbance, primarily around active den sites between April 1 and June 30, when there are 5 or fewer breeding pairs of wolves in a recovery area. After 6 or more breeding pairs become established in a recovery area, land-use restrictions would not be needed (USDI Fish and Wildlife Service 1994a)."

Cumulative Effects - Cumulative effects is the same as presented and discussed in the Revised Forest Plan, Process Paper D, and the Biological Opinion from the U. S. Fish and Wildlife Service, and will not be repeated here. Application of the Forest-wide standards and guidelines is expected to allow wolf pairs to receive the protection of the nonessential experimental population rule (RFP-FEIS, page IV-34).

Primary Cavity Nesting Habitat

Consequences Common to All Alternatives - The management direction established in the Revised Forest Plan for primary cavity nesting species is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS (pages IV-39-40) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS. This management proposal is expected to have little effect on cavity nesting habitat.

Forest Owl Habitat

Consequences Common to All Alternatives - The management direction established in the Revised Forest Plan for forest owl species is not changed by any of the alternatives in this EIS. The effects

presented in the Revised Forest Plan FEIS (page IV-40) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Furbearer Habitat

Consequences Common to All Alternatives - Road access concerns were discussed for American marten, fisher, lynx and wolverine in the publication titled: "The Scientific Basis for Conserving Forest Carnivores: American Marten, Fisher, Lynx and Wolverine in the Western United States (USDA U. S. Forest Service 1994). However, no specific recommendations for road density standards or guidelines for these species were presented.

At this time, the analysis of furbearer habitat presented in the Revised Forest Plan FEIS (page IV-40) and Process Paper D is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Road access concerns relating to Canada lynx have recently been summarized by the U. S. Fish and Wildlife Service in their proposal to list the lynx as threatened in 16 States (U. S. Fish and Wildlife Service 1998). However, no specific recommendations for road density standards or guidelines for Canada lynx were presented.

A Lynx biological team, charged with developing Canada Lynx Conservation Assessment and Strategy, (a team from four agencies - Bureau of Land Management, Forest Service, National Park Service, and Fish and Wildlife Service), provided the following: Preliminary information suggests that lynx may not be directly influenced by roads through displacement or avoidance, except at very high traffic volumes. Therefore, at this time, there is no compelling evidence to recommend management of total road density for the conservation of lynx. However, many species of wildlife (e.g., grizzly bears) are affected by roads, and it is likely that at some threshold, lynx may be affected by roads as well. Further research directed at determining the effects of high road density on lynx is needed.

In two presentations at the Western Forest Carnivore Committee Meeting, May 12-13, 1999, in Post Falls, Idaho, direct reference was made to roads and human activity on lynx: 1) Preliminary information from a study of lynx ecology in Swan Valley, Montana, indicated that lynx do not avoid human activity. This study area includes heavily roaded areas with adjacent wilderness areas. 2) In an overview of the Draft Interagency Lynx Conservation Strategy, (as yet unpublished), the statement was made that current information indicates that the presence of people does not displace lynx and there is no indication at this time that forest roads are a problem.

In Chapter 10 of the recently released Lynx Science Report, results of a lynx study showed that road densities in the study area did not have a significant effect on habitat selection, and lynx crossed roads at frequencies that did not differ from random expectation (USDA Forest Service 1999).

At this point in time, we conclude the following:

1) Existing scientific analysis indicates that lynx may not be directly influenced by roads through displacement or avoidance, except at very high traffic volumes. Therefore, at this time, there is no compelling evidence to recommend management of total road density for the conservation of lynx. Further research directed at identifying the effects of high roads density on lynx is needed.

2) Preliminary communication from the Lynx biological team suggested that in lynx habitat areas where high total roads densities exist (>2 miles per square mile), that roads could be prioritized for restriction or reclamation. With the OROMTRD standards in the 1997 Revised Forest Plan, 93 percent of the Forest has an OROMTRD of less than or equal to 2.0 miles per square mile.

Based on the above review, all alternatives being considered in this EIS will maintain suitable habitat for marten, fisher, Canada lynx, and wolverine.

Goshawk Habitat

Consequences Common to All Alternatives - All known goshawk territories on the Forest have open motorized roads and trails within portions of their territories. At this time, we do not know of any studies which document the effects of roads and trails on goshawks (Process Paper D).

The management direction established in the Revised Forest Plan for goshawk habitat is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS. The proposed management activity would maintain effective habitat and viable populations are expected to be sustained (RFP-FEIS, page IV-41).

Red Squirrel Habitat

Consequences Common to All Alternatives - The effects presented in the Revised Forest Plan FEIS (page IV-41) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Peregrine Falcon Habitat

Consequences Common to All Alternatives - All of the peregrine falcon nesting territories on the Forest have roads and trails within them. The presence of these roads and trails has not adversely affected the growth of the peregrine falcon population. The U. S. Fish and Wildlife Service (1994) has provided the following overview:

Other known negative factors, such as illegal shooting and collisions with wires, fences, cars, and buildings, are much less significant to the western American peregrine falcon at the population level. On an individual nest-site basis, human-caused disturbance or habitat alterations close to an active peregrine falcon nest can be a problem. For example, in some areas, rock-climbing is a growing sport and has resulted in nest failure. Breeding-season closure of rock-climbing cliff areas also in close proximity to nesting American peregrine falcons has recently prevented adverse effects. Power lines, especially distribution lines, cause peregrine falcon mortality; but the rate must be low, because many peregrine falcons nest successfully each year near power lines, especially in urban areas. Land-use practices adjacent to American peregrine falcon eyries that do not result in extensive habitat changes or excessive disturbance sometimes appear to have little adverse effect on nesting success. Generally, the recent apparent increase in the number of pairs of American peregrine falcons in the West provides evidence that significant adverse factors affecting the western subspecies at the population level are being alleviated or have been reduced.

The management direction established in the Revised Forest Plan for peregrine falcon habitat is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS. Suitable habitat will be maintained for all existing nesting pairs plus any new nesting pairs which may become established.

Bighorn Sheep Habitat

Consequences Common to All Alternatives - The management direction established in the Revised Forest Plan for bighorn sheep habitat is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS (page IV-41-42) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Neotropical Migratory Birds

Consequences Common to All Alternatives - The effects presented in the Revised Forest Plan FEIS (page IV-43) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Predator Control

Consequences Common to All Alternatives - Implementation of any of the four alternatives is not likely to significantly or adversely affect predator management activities. The effects of predator management activities on the Targhee National Forest are incorporated by reference in this analysis from the FEIS for the 1997 Revised Forest Plan (page IV-43). Predator control activities that will occur in travel restricted areas will be coordinated and approved by the District Ranger prior to the activity and authorized by a "travel permit". This process was initiated in the spring of 1998 and is not expected to adversely affect the open road and trail densities for any management prescription area.

Consequences Which Vary by Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect predator control management activities.

Unique Ecosystems - Research Natural Areas

Consequences Common to all Alternatives - Forest-wide standards and guidelines (RFP-FEIS page III-4) apply equally with all four alternatives. Also, site-specific direction is identified in the Establishment Records for existing Research Natural Areas (RNA's). Proposed RNA's will have a site specific analysis conducted at a later date to determine their suitability for RNA status. Regardless of which alternative is selected the number of proposed and existing RNA's and their management does not change by alternative.

Consequences Which Vary by Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect Research Natural Area management activities.

FOREST USE AND OCCUPATION

Access Management

Road and Trail System and Motorized Access

Consequences are presented for summer motorized road and trail travel only. The range of alternative consequences has been found to be very similar to the consequences found in the Revised Forest Plan for those alternatives. The following indicator data, when compared to the data in the RFP-FEIS, shows that RFP Alternative 1 and 2 closely resemble Alternative 1M; Alternative 3 (RFP) is close to Alternative 3M(+); and Alternative 3M (RFP) closely resembles Alternative 3M and 3M(-) in this analysis.

Indicators:

1. Miles of open, motorized roads

2. Miles of seasonally restricted roads

3. Miles of yearlong restricted roads

4. Miles of road decommissioned inside and outside the BMU's

5. Miles of open, motorized trails

6. Miles of seasonally restricted trails

7. Miles of yearlong restricted trails

Consequences Common to All Alternatives - There will be some reduction from current levels in miles of open, motorized roads and trails in all alternatives. This would result in increased needs and costs

for law enforcement and signing to manage the system of restricted roads and trails (RFP-FEIS page IV-44). The decommissioning work necessary to close the roads in each alternative will also result in some reduction in hiking, hunting access, horseback riding and winter snowmachine use on roads where large amounts of rock or tree placement and ripping or trenching occur. These adverse impacts will occur mostly in the grizzly bear unit road closure areas which are currently used for snowmachining and hunting. To lessen impacts to disabled (permit from State wildlife agency) hunters, the Forest has decided to implement an access policy to retrieve big game shot within 1000' of designated routes. The intent is to allow hunters, with a State Fish and Game issued disabled hunter permit, to only retrieve any big game they may shoot which are beyond the 300' corridor, and up to a total of 1000' from such designated roads. Disabled hunters must obtain the required permit from the State Fish and Game Department, and display it on the rear-view mirror or dashboard of their primary access vehicle parked within 300' of designated routes. Only ATV's less than 50 inches in width will be allowed to go beyond the 300' corridor, up to the 1000' maximum to retrieve game. This policy applies only to the areas of the Targhee National Forest outside the Bear Management Units. Therefore, this special disabled retrieval access will only be allowed outside the following Hunt Unit areas:

> Unit 61 east of Howard Cr.; Unit 62A east of railroad grade; Unit 62 (entire part of unit on Forest); Unit 73 (Wyo.) down to Dry Ridge.

This policy will allow disabled hunters to access small, isolated portions of the Forest within 300' of designated roads that have good visibility of openings in which game may be sighted. This policy is similar to the current policy of allowing limited access beyond a limited number of pre-determined gates which District Rangers have designated for disabled hunt areas. This policy would apply to all alternatives.

Consequences Which Vary by Alternative - Table IV-10 shows the comparison of alternatives in terms of the indicators listed above. Alternative 1M has the most open roads and trails and the least decommissioned roads. The three 3M alternative variations show only minor differences between them in open roads or trails and decommissioned roads, but have significantly fewer open roads and trails and significantly more decommissioned roads than Alternative 1. As a result of the review of decommissioned roads and other restricted roads in the Alternatives Considered Section, approximately 20 miles of roads were opened in Alternative 3M+R that were not open in alt. 3M.

Table IV - 10. Road and Trail Access by Alternative (Miles)

Indicator	Issue	Alt. 1(M)	Alt 3M(+) Rev	Alt. 3M(+)	Alt. 3M	Alt. 3M(-)
ROADS (miles)	Access					
Open		2,077	1,756	1,711	1,617	1,613
Seasonal Restriction		51	61	62	62	62
Yearlong Restriction		399	309	291	303	303
Decomm. in BMU's		436	411	427	429	438
Decomm. outside BMU's		0	419	455	521	524
Total Miles		2,963	2,956	2,946	2,932	2,940
TRAILS (miles)	Access					
Open		725	542	536	511	454
Seasonal Restricted		0	0	0	0	0
Yearlong Restricted		651	881	861	879	933
Total Miles		1,376	1,423	1,397	1,390	1,387
Total Miles Rds/Trs.		4,339	4,379	4,343	4,322	4,327

Costs for signing designated routes; decommissioning of roads; and providing law enforcement will increase significantly from Alternative 1M through Alternative 3M(-). In addition, the average cost to build a low standard road on the Targhee during the 1970's and 1980's was about $8000 per mile. With an economic life of 30 years and 8% interest, the amortized cost is about $300 per mile per year. As haul roads, these low standard roads served the purpose for which they were built and the costs to build them were justified.

The average cost spent to maintain the road system on the Targhee is currently about $281 per mile per year. This is about the same as the amortized cost of building low standard haul roads during the past 20 years. Roads that are closed but not decommissioned will still have some necessary maintenance costs. Roads that are decommissioned will have no further costs. This effect and others mentioned in the RFP-FEIS, page IV-45-46 will vary for these five alternatives in the same order as the range of alternatives discussed in the Plan Revision.

Appendix C(M) shows the specific resource or administrative reasons why each road is open, restricted, or closed for each alternative. This information was considered throughout the analysis for each resource in this EIS.

The RS 2477 assertions by the Counties were mapped (Map #1) and compared to the preferred alternative 3M+R. As Table IV-11 shows, some new roads and trails have been asserted since the DEIS. These are due to Lemhi County initiating some assertions and other Counties adding to their previous assertions. These assertions apply to all alternatives, and additional assertions could be received at any time. The assertions previously shown in the DEIS have been adjusted to reflect county or public requests which were not intended as assertions but were simply county or personal requests. The majority of the assertions would be open (Table IV-11) to motorized travel as shown on this map. None of these routes will be decommissioned prior to adjudication. Alternative 1M would have slightly more open routes that would match assertions and Alternatives 3M+, 3M, and 3M(-) would have slightly less. Many of the assertions not covered by open, motorized routes on Map #1 are trails rather than roads and many of these are not open in the current travel plan. Some are even non-maintained trails that are known to exist, but will not be shown on the Travel Plan Map because they will not be adopted as system trails at this time. There are many assertions that are not covered by open roads in Alternative 3M+(R). Many of these assertions are parallel to logging roads that were built and decommissioned in the last 40 years in accordance with the NEPA decision for timber sales in these areas. We do not propose to reopen these roads because alternate routes are available.

Table IV-11. Status of RS-2477 Assertions - Previous Assertions (DEIS) & Additional (FEIS)

STATUS	OPEN	CLOSED	NON-EXISTING	TOTALS
Roads				
DEIS	453	38	14	505
FEIS (additional)	54	23	1	78
Trails				
DEIS	196	127	11	334
FEIS (additional)	52	51	0	103
Totals	755	239	26	1,020

Cumulative Effects - As acres and roads/trails open to summer motorized access decrease from Alternative 1M through Alternative 3M(-), the density of motorized users on designated routes will generally increase on the remaining open routes (RFP-FEIS, page IV-46). The increased interaction may result in increased user or resource conflicts and additional resource impacts. This could result in an overall effect of loss of enjoyment of the recreation activity for some people in some of the areas. A secondary effect of decreasing motorized access and decommissioning roads would be reduction of motorized hunting and fishing opportunities and increase in non-motorized opportunities. This might not be too significant a difference in Alternative 1M, but could be more significant as reductions toward Alternative 3M(-) are implemented.

There would also be adverse effects from closing roads and trails in terms of maintenance (including funding) and possible reductions in recreation opportunities as indicated on page IV-46 of the RFP-FEIS. Although none of the four-wheel ATV trails would be closed, some two-wheel motorcycle trails would be closed in alternative 3M+R. In addition, emergency access for fire or rescue would be reduced. As indicated in the comment responses, (Subject Code 15, letter number 6340) the earthen berms constructed to decommission roads could be removed very easily in an emergency to facilitate

fire control or search and rescue, etc. No groomed snowmachine trails would be impacted by decommissioning roads.

The future effects of RS 2477 assertions in addition to those already open roads and trails in the existing transportation system (red routes on Map #1) have not been included in resource consequence discussions. These cannot be determined at this time, because it will depend on the adjudication. If these routes were opened or closed by counties to motorized travel, there could be increased or decreased adverse effects, respectively, on motorized route density; elk habitat; soils; vegetation; water quality; and fisheries habitat.

A Forest Travel Plan would be implemented as a result of the decision reached in the FEIS for this proposal. As a result of the analysis to date, the preferred alternative would be the proposed travel plan. That plan would include the Transportation Plan Map #4; the proposed Forest Plan amendments; the Travel Plan Addendum and Access Tables Appendix A. The entire package would be combined and prepared similar to the 1997 Travel Plan Map with a legend and other information to help Forest users understand travel opportunities. If another alternative were selected in the FEIS-Record of Decision then that alternative would be implemented as described here.

Public Safety

Overall safety of the roaded transportation system is expected to improve because fewer open roads mean fewer miles to maintain. Limited Forest road maintenance dollars would be used over fewer roads and the quality and frequency of the maintenance would be expected to improve, and with this, traveller safety. This relatively improved safety potential would increase slightly from 1M through 3M(-), corresponding to the decreasing number of road miles needing periodic maintenance.

As roads are decommissioned, there is a slight potential risk to summer non-motorized travelers which vary by alternative, increasing from alternative 3M- through 1M, corresponding to the increasing number of miles of roads closed or reclaimed. This is because previous road conditions which provided relatively unimpeded access would be modified by earth berms, surface ripping, or other physical barriers, such as trees or rocks. These modifications would make access more difficult and, potentially, could increase risk to motorized user safety in the near term. However, to a prudent non-motorized traveler, this potential risk would be expected to be manageable as any other potential risk associated with cross-country travel or travel on primitive trails. The closure methods (gates, earth berms, etc.) would normally be concentrated toward the decommissioned road's terminus at the junction with an adjacent open route. Because of this, risks to non-motorized travelers or livestock would not vary much from normal cross-country travel. It may actually be more safe because many roads are not decommissioned their entire length and they could provide safe travel opportunities similar to or better than primitive trails because of the wider surface.

For winter motorized users, such as snowmobilers, there would be a slight elevated risk to safety in the early snow season when snow depths are low and physical barriers most exposed. This would likely occur in the first year or two following decommissioning. However, late winter 1999 monitoring by Targhee personnel indicated that once snow depths reached mid-winter levels, newly installed earth berms and physical barriers were actually used as play areas by snowmachines. Many roads that are to be decommissioned in BMUs are already gated. Therefore, there would be very little change from alternative 1M by any alternative within those areas because snowmachiners have long been accustomed to maneuvering around closed gates in the early season but then travelling over gates during mid to late winter snow accumulations. Also, as winter users become more familiar with closure barrier locations, the potential risk would be expected to diminish to present levels (alternative 1M) within 2-3 seasons and beyond, much as it has with the present gate system.

To our knowledge, there has only been one alleged personal injury accident documented on the Forest, which involved an earth berm constructed to close a road. This alleged accident involved a snowmachine and occurred on berms built several years ago. Snowmachine accidents typically involve high-speed collisions with trailside trees, streambanks, or other snowmachines, rather than involving such obstacles as those created to decommission roads. In addition, we are aware of numerous summer accidents involving ATV's, boats, horses, etc., that have caused serious injury and

death due to natural obstacles or hazards along roads, trails and streams. To our knowledge, none of the summer accidents on the Forest have involved road closure structures such as earth berms.

The Targhee has been employing physical road closures, such as gates and earth berms, for decades to manage access, improve wildlife habitat, and reduce impacts to soil, water, fisheries and other resources. Public access has included consideration of these local conditions during this time and reasonable and prudent travelers have accessed forest travelways safely and with limited adverse impacts or threat of harm. Forest travel plans and maps have consistently noted potential risks and hazards to public safety. Additionally, Forest administrative activities such as signing, posting safety notices, and public information efforts are expected to reduce safety risks. Overall, decommissioned roads are not expected to pose unreasonable safety risks to prudent travelers or their equipment and livestock under any of the action alternatives.

WILDERNESS AND RECREATION RESOURCES

The following topics present the effects and consequences of the alternatives on the various wilderness and recreation resources. Key alternative comparison indicators for these resources are displayed in Table II-1. Overall, total recreation use would not change much between alternatives, but the types of use probably would change slightly. The trend from Alternative 1M to 3M(-) would be away from semi-primitive motorized and roaded natural appearing (Recreation Opportunity Spectrum - ROS) to an increase in ROS of primitive and semi-primitive non-motorized, although some semi-primitive motorized opportunities would remain. This overall trend would be due to the reduction in motorized access. Such a trend would also support a shift from currently evolving tourism and rural development to a slower developing, eco-tourism type pattern.

Wilderness, Wilderness Study Areas (WSA), and Recommended Wilderness

Consequences Common to All Alternatives - Quality and character of designated wilderness, WSA, and recommended wilderness would not be degraded by any alternative. This is the same as indicated in the RFP-FEIS on page IV-47. No wilderness access point would be affected by any of the road closures or decommissioning.

Consequences Which Vary by Alternative - The number of acres of recommended wilderness would vary by alternative as it did in the Forest Plan analysis (RFP-FEIS, page II-20 and IV-47), but it does not significantly affect the miles of road or trail open to motorized use between alternatives.

Cumulative Effects - Since the Jedediah Smith Wilderness Plan would be in effect for all alternatives, there should be little cumulative impact or secondary effects on wilderness values.

Roadless Areas

Indicators: Miles of motorized road and trail in Roadless

Consequences Common to All Alternatives - Although some trails and minimally constructed roads remain open to motorized use in roadless areas in all alternatives, this is within national management policy and is not expected to have adverse effects on resources or on potential for wilderness designation. The motorized roads and trails are stable, and are not causing irnpacts to soils or vegetation. This is the same consequence as determined in the RFP-FEIS.

Consequences Which Vary by Alternative - Miles of motorized road and trail in roadless vary as follows:

Alternative 1M	776
Alternative 3M+R	572
Alternative 3M(+)	548
Alternative 3M	520
Alternative 3M(-)	469

This slight difference only effects the opportunity for recreation or other access, and as noted above, would have little effect on resources. The reduction (approximately 10 miles) of motorized trails in the

Indian Creek area of the Palisades roadless area would improve the experience level for recreationists desiring solitude.

Cumulative Effects - Inventoried roadless areas have essentially remained unchanged (total acres), even during the last Forest Plan (1985 - 1995). Projected roading and timber harvest never occurred in areas planned, and these road and trail management alternatives are not expected to have any significant affect on inventoried acres during the next decade.

Wild, Scenic and Recreational Rivers

Consequences Common to All Alternatives - The eligibility of these rivers will not be affected by any of the alternatives, and all of the outstanding resource values will be protected by management prescriptions of the Revised Forest Plan until such time as suitability studies are completed (RFP-FEIS, page IV-50).

Visual Resources

Consequences Which Vary by Alternative - There would be only slight differences in effects on visual resources between alternatives. Alternative 1M would have the most chance for ground-disturbing activity from motorized vehicles, but it would only be slightly higher than other alternatives. Alternative 3M(-) would have the least chance of adverse visual effects from motorized travel on roads and trails.

Developed Recreation

Consequences Common to All Alternatives - Consequences will basically be the same for all alternatives because developed recreation facility construction and reconstruction will be about the same in all alternatives (RFP-FEIS, page IV-51).

Cumulative Effects - As the alternatives become more restrictive in terms of motorized access and opportunity (i.e., Alternatives 3M and 3M-), there would likely be some displacement of recreation from areas now being used (RFP-FEIS, page IV-51). This could place a heavier burden on existing developed facilities and create a need for new ones in a more concentrated geographic area.

Dispersed Recreation

Consequences Common to All Alternatives - Approximately the same number of road-accessed, dispersed campsites (293) would continue to be used in all alternatives (RFP-FEIS, page IV-51). The number of sites would probably stay the same, because existing sites that would become unavailable due to new management allocations would simply be relocated to sites in other adjacent areas.

Cumulative Effects - It is possible in Alternatives 1M, 3M+R, and 3M(+) that some existing, dispersed camping sites and trails would need to be moved or closed to resolve conflicts with wildlife or aquatic management standards and guidelines (RFP-FEIS, page IV-52). In Alternatives 3M and 3M(-), displacement or closure of such areas would be due to less access and because aquatic buffer restrictions are greater. This could have an adverse impact on recreation experiences, due to having to add more facilities elsewhere or due to crowding or congestion in smaller geographic areas. This could result in a need for increased monitoring, law enforcement and management costs to prevent unacceptable impacts to soil, vegetation, aquatic or wildlife resources.

Outfitters and Guides

Consequences Which Vary by Alternative - The number of new outfitter and guide permits issued would probably be slightly less in Alternatives 3M and 3M(-) than in Alternatives 1M, 3M+R, and 3M(+), (RFP-FEIS, page IV-52). Overall activity and amount of outfitted use would also be less in Alternatives 3M and 3M(-). This is due to the closure of access routes that could be used for snowmachine or other motorized tours. Also, there is very little opportunity remaining in non-motorized, backcountry areas.

The type of activities outfitted in Alternatives 3M and 3M(-) would be more related to backcountry, nonmotorized uses than in Alternative 1M, 3M+R, and 3M(+), due to increased restrictions on motorized and mechanized equipment in roadless, recommended wilderness and designated wilderness.

Special Uses (Recreation)

Consequences Common to All Alternatives - Requests for special use permits for activities such as special events (e.g., races, group activities, etc.) and outfitting and guiding will likely increase gradually for all alternatives. At some point of saturation, the permitted activities would reach a plateau and level off (RFP-FEIS, page IV-52).

Consequences Which Vary by Alternative - The trend for special uses in response to alternatives would be similar to that for developed sites. In Alternatives 1M, 3MR+, and 3M(+), there would be more increase in demand for special events and motorized access permits. However, in Alternatives 3M and 3M(-), the trend would be more towards undeveloped, backcountry experiences such as mountain biking, backpacking, horsepacking, hunting and similar opportunities. The number of new special use permits would probably be less in the alternatives with less motorized access, and overall recreation use under permitted activities would also be less.

Cumulative Effects - Cumulative impacts of actual recreation use would likely be higher in alternatives 1M, 3M+R, and 3M(+), but those impacts would tend to be in the more easily accessed areas and closer to existing developed areas or special interest roads, trails or attractions. In Alternative 3M and 3M(-), the additional cumulative impacts of recreation use would tend to be in more undeveloped, backcountry areas with a more primitive experience level. These too, could have a slight, measurable effect on wildlife, etc.

ECONOMIC AND SOCIAL EFFECTS

Consequences Common to All Alternatives

Population - The area is experiencing significant population increases (REIS 1996). The rate of increase (itself a function of birth, death and net-migration) is not expected to be significantly affected by any of the alternatives under consideration.

As the population of the area continues to grow, the percentage of the population that looks to the Forest for recreational use is expected to increase. Correspondingly the percentage of the population that looks to the Forest as a source of timber and livestock forage is expected to decline.

Many people see the National Forest as a good neighbor - literally. Real estate which borders the Forest is frequently advertised as such. It is a selling point. The increased level of development of private property located within or along the Forest's boundaries, and the associated contributions to local tax bases and demands for government services, are expected to continue regardless of which alternative is selected. Increasing development may jeopardize traditional uses of private land like livestock grazing. It may simply not make good sense financially for an individual to run livestock on land ripe for real estate development.

In and of itself, the permanence of the Forest does provide a certain attraction for those considering relocating a family or business. Private property can be managed many different ways while the Forest will "always" be managed as a National Forest.

Land Use Patterns - Lands adjacent to and within the Forest are increasingly passing from traditional uses like ranching to new uses like subdivisions. Forest management has to consider these new neighbors when deciding how best to manage Forest resources - with particular attention being devoted to fire protection, visual quality and recreation opportunity. This challenge can be expected to continue to increase under all alternatives as the human population of the area increases.

Some newcomers to the area have deviated from long-held local custom by closing off access through their property to Forest lands. Their focus on having a Forest in a more natural condition has also been at odds with those who see the Forest as being a resource to be used. These sorts of

conflicts can be expected to continue, if not worsen, under all the alternatives due to continuing in-migration.

American Indians - Input from the Shoshone-Bannock tribes indicates their strong concern for continuing the viability and abundance of plants, fish and wildlife on the Forest for the use of their members consistent with their treaty rights (Shoshone-Bannock 1992 a-b). Some of that input has focused on providing designated routes for motorized access during the tribes' hunting season. The tribes have also commented on their need to have the public and the Forest Service respect their rights to practice their native religion. All the alternatives are structured so as to afford tribal members the rights guaranteed them by treaty.

Economics and Lifestyles - Jobs, personal income, and payments to local governments are not expected to be significantly affected by the selection of any given alternative. The alternatives do not vary significantly in terms of timber harvest, livestock grazing, or water available to downstream users. However, crowding is expected to occur on those trails which remain open to motorized use.

The overall level of recreational use is expected to continue to increase along with its associated income and employment opportunities. Increased recreation use means more people from outside the immediate local area visiting, spending money and in some cases investing in local property. The overall increase in recreation is expected to occur regardless of which alternative is selected. A certain percentage of the people visiting Yellowstone National Park can be expected to visit Forest attractions like Mesa Falls, for instance.

It is likely that there will be an increased level of summer motorized use on those roads and trails which remain open in each alternative. The increased use would change directly and in proportion to the amount of roads and trails closed to motorized use in each alternative. Surplus capacity exists for motorized use on Forest roads, but that is not the case with motorized trails.

As Yellowstone and Grand Teton National Parks become more crowded the Forest can expect to accommodate more of the resulting spillover traffic. For instance, because snowmachining in Yellowstone National Park is reaching saturation levels, the Forest is expected to receive more of that traffic - regardless of which alternative is selected.

The area also provides opportunities for further development of recreational activities. The recently opened Grizzly Bear/Wild Animal Park near Rigby is an example of the kind of development which might occur regardless of which alternative is selected.

Civil Rights - No civil rights effects associated with age, race, creed, color, national origin or sex have been identified.

Consequences Which Vary By Alternative

American Indians - Tribal members use the Forest in many ways. Some of these uses are identical to those of the general population and are described elsewhere herein. Other interests may be unique to tribal members. For instance, gathering Forest products is an important part of the culture of some tribal members. Those who rely on open roads or motorized trails to access favorite spots may have to find alternative sites if motorized access is restricted in a given alternative. It is also possible that closing some motorized access routes may effectively deny access to some areas for some users.

Discussions with the tribes to-date have not revealed a preference for more or less roading per se. Concerns have been voiced about closing roads during the tribes' hunting season - something that needs to be addressed on a continuing, site-specific basis. In general though, as the alternatives reduce the amount of roads and trails available for motorized use, the time and effort involved in hunting is expected to increase. That also applies to other tribal activities which require access to the land. Reducing motorized use may improve the suitability of the land for vision quest and various other cultural activities.

Attitudes, Beliefs, Values - Many people believe that the Forest should remain open to motorized access at previous levels. They point out that considerable money has been spent building and

maintaining Forest travel routes and want them to remain open for a variety of reasons associated with use and enjoyment of the Forest resource. Because Alternative 1 maintains the highest degree of motorized access, it would best address their values. The other alternatives are less responsive to their needs in direct proportion to the amount of motorized access eliminated.

Conversely, those whose enjoy the Forest for nonmotorized uses are likely to benefit more from those alternatives which restrict motorized use. Thus, closing a motorized route may deny one family access to a traditional firewood-gathering site; but create an enjoyable mountain bike trail for another.

Conflicts associated with enforcement efforts needed to ensure that roads and trails closed to motorized use are not used by motorized vehicles are likely to vary directly and proportionally to the amount of roads and trails closed to motorized use.

Big game hunting and in particular elk hunting, is a major event on the Forest. Participants eagerly await the season's arrival. Elk Vulnerability models indicate that the greater the degree of motorized access, and the higher the hunter densities, then a higher percentage of the elk population is harvested. On the Targhee, the major concern has been the high percentage of elk bulls harvested during the general rifle season. Land management agencies control the amount of motorized access, and State Fish and Game agencies control the hunter densities. In the past, high motorized access has resulted in the IDF&G using spike only hunting season regulations and shorter hunting seasons in some areas of the Forest to reduce the percentage of bulls being harvested. IDF&G goals include lengthening the general rifle season for bulls, and allowing any bull elk to be harvested. In order for these goals to be achieved, motorized access needs to be reduced.

Sense of Control, Sense of Self-sufficiency - To the extent that any individual's or group's sense of control or sense of self-sufficiency is associated with motorized access, that sense will be affected directly proportional to the extent of motorized access permitted in each alternative. Thus, those who find their motorized access to traditional hunting or recreation areas cut off, would likely feel their sense of control reduced. Those who enjoy a more physically demanding hunt or recreation opportunity, without the chance of a motorized unit disrupting the experience, might appreciate the reduction in motorized access.

Social Organization: Community Cohesion and Community Stability - Selecting any alternative as opposed to any other alternative would not likely affect community cohesion or community stability. Economic effects associated with these alternatives are minimal, if not unnoticeable. It's not a case of certain individual's or group's losing their jobs or a substantial portion of their personal income. It's more a case of whether the Forest is being managed along the lines of an individual's or group's preferences - which they hold to be very important.

Civil Rights - Those who require motorized access due to disability will find their access to the Forest affected directly and proportionally by the amount of roads and motorized trails restricted or decommissioned. This adverse effect would be the lowest with Alternative 1M and the highest with Alternative 3M(-). For those who hunt, this may be mitigated to an extent by a special program administered by the Forest with the assistance of the Idaho Department of Fish and Game to provide increased access for the disabled. As indicated in the Revised Forest Plan (page III-24), "During the big game hunting season, persons with disabilities may be permitted to use motorized vehicles, if needed for mobility, on restricted roads and trails which are designated for such use, with an authorized motor vehicle hunting permit issued by the District Ranger. These persons must have a Disabled Hunting Permit issued from the State Fish and Game Departments." In addition, we have chosen to implement a policy for disabled hunters on most of the Forest to allow retrieval of game up to 1000 feet from designated routes as described previously in the Access Management Section of this Chapter.

PRODUCTION OF COMMODITY RESOURCES

Timber

Consequences Common to All Alternatives - Access for timber management would be approximately the same for all alternatives because the open road system is almost the same in the areas of marketable timber. In alternatives with less access, additional roads could be decommissioned so that alternate access could be established (within road density) to reach desired timber areas.

Livestock Grazing

Indicators: None

Consequences Common to All Alternatives - For all alternatives, livestock permittees will be required to obtain a "travel permit" to have motorized access in travel restricted areas. This direction is identified on page III-30 of the Revised Forest Plan (Process Paper M, RFP-FEIS). As per their grazing permit, livestock permittees are required to maintain their assigned improvements and to properly manage their allotment. Doing so requires motorized access off designated routes. Depending on specific management prescriptions, all permittees will be required to comply with the road density standards on their allotments. Most grazing allotments have more than one management prescription area within their allotments.

Permitted livestock numbers, seasons of use, and AUM's as well as the number of permittees, allotments, and grazing permits will not be affected by any of the four alternatives. However, the RFP-FEIS (page IV-71) did show a reduction in number of permits, but this was due to grizzly bear and bighorn sheep concerns and not motorized access.

All maintenance and reconstruction of existing and proposed range improvements will be needed equally with all four alternatives as outlined in the Revised Forest Plan.

Consequences Which Vary by Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect livestock grazing or permittee management of grazing allotments.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Adverse Environmental Effects that Cannot be Avoided - There would be some irretrievable losses to soil hydrologic function and site productivity in areas (7,806 acres) of roads or road or trail maintenance or reconstruction (RFP-FEIS page IV-74). There would also be irretrievable loss of motorized access and recreation opportunities on decommissioned roads (394 miles) and trails (230 miles) due to restrictions. Irreversible commitments include soil losses caused by erosion and sedimentation from roads and trails. Intermittent and localized decrease in air quality may result due to dust from road construction; road maintenance and use; and due to smoke from wildfires, and campfires (RFP-FEIS page IV-74). Potential for additional conflicts between recreation use and other land use activities would increase in some alternatives (RFP-FEIS page IV-75) where proposed management would restrict recreation use such as motorized travel. Also, temporary disturbance of wildlife and their habitat conditions in localized areas may result from increased human activity or changed vegetation conditions. Increased soil compaction may occur on activity sites such as recreation or OHV use areas.

Short-term Uses of the Human Environment and the Maintenance of Long-term Productivity - Short-term uses include providing access for motorized and non-motorized recreation or hunting and fishing opportunity, seasonally. Short term uses would also include access for permittee, contractor or administrative uses. Long term productivity would be recovered from decommissioned roads as vegetation becomes established and disturbed sites become stabilized over time.

Appendix

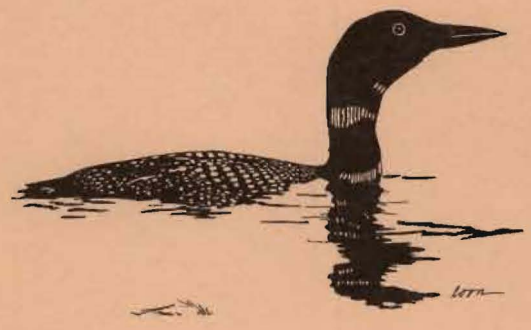
Appendix A. Travel Plan Wording and Matrices for New Travel Map

Appendix B. Road Decommissioning Process Guidelines

Appendix C. Appendix C(M) Access Status Tables

Appendix D. Biological Evaluation, Biological Assessment Process, and Biological Opinion

Appendix E. Response to Public Comments



APPENDIX A - TRAVEL PLAN WORDING AND MATRICES FOR NEW TRAVEL MAP

The purpose of this Appendix is to display the content of text to be placed on the new Travel Plan Map. The new map will be formatted like the 1997 Travel Map, but will contain this revised text. This Appendix refers to and updates the 1997 Travel Map, which was remanded for additional analysis. Most of the text comes from the March 24, 1998 Addendum which was written to guide interim travel management and to document corrections needed in the final Travel Plan. We have edited the Addendum to the 1997 Travel Map to clarify that it will be applied to the Travel Plan that is implemented as a result of this EIS process. That map will be composed of the selected alternative route map and the text content outlined in this Appendix.

This Appendix contains the cross-country matrices which remain unchanged (as explained in Chapter I) from the 1997 Travel Plan Map for the Dubois, Palisades, and Teton Basin District maps. The FEIS alternative maps display the location of the Area Reference letters (A, B, C, etc.) for each cross-country area designation in the matrices. The 1997 Travel Plan Maps are available at the Targhee National Forest Supervisor's Office and District offices.

To lessen impacts to disabled (permit from State wildlife agency) hunters, the Forest has decided to implement an access policy to retrieve big game shot within 1000' of designated routes. The intent is to allow hunters, with a State Fish and Game issued disabled hunter permit, to only retrieve any big game they may shoot which are beyond the 300' corridor and up to a total of 1000' from such designated roads. Disabled hunters must obtain the required permit from the State Fish and Game Department, and display it on the rear-view mirror or dashboard of their primary access vehicle parked within 300' of designated routes. Only ATV's less than 50 inches in width will be allowed to go beyond the 300' corridor, up to the 1000' maximum to retrieve game. This policy applies only to the areas of the Targhee National Forest outside the Bear Management Units. Therefore, this special disabled retrieval access will only be allowed <u>outside</u> the following Hunt Unit areas:

> Unit 61 east of Howard Cr.; Unit 62A east of railroad grade; Unit 62 (entire part of unit on Forest); Unit 73 (Wyo.) down to Dry Ridge.

This policy will allow disabled hunters to access small, isolated portions of the Forest within 300' of designated roads that have good visibility of openings in which game may be sighted. This policy is similar to the current policy of allowing limited access beyond a limited number of pre-determined gates which District Rangers have designated for disabled hunt areas.

The references to winter travel have also been left in this document as a matter of convenience only, since winter travel was decided in the Revised Forest Plan (also explained in Chapter I) and is not being revisited in this analysis. This Appendix A also contains the following Addendum to the 1997 Travel Plan Maps:

ADDENDUM TO 1997 TRAVEL PLAN MAPS - March 24, 1998

For purposes of clarification, the following changes/corrections will apply to the Winter and Summer Travel Plans for the **PALISADES** and **TETON BASIN** Ranger Districts:

<u>WINTER TRAVEL PLAN - (revisions to the 1997 plan/map)</u>

1. The following new introductory statement replaces the first and second paragraphs under **"TARGHEE NATIONAL FOREST WINTER TRAVEL PLAN":**

This map describes winter travel opportunities on the Targhee National Forest from THANKSGIVING DAY UNTIL SOMETIME IN THE SPRING as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage.

SEE THE ATTACHED NEW **"WINTER CROSS-COUNTRY USE AND WINTER DESIGNATED ROUTES"** MATRICES. THESE REPLACE THOSE AT THE BOTTOM OF THE 1997 TRAVEL PLAN

MAP AND GIVE DETAILED DIRECTIONS ABOUT OPPORTUNITIES AND RESTRICTIONS FOR WINTER TRAVEL.

Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding summer travel opportunities, see the reverse side of this map.

2. For the "**CROSS-COUNTRY USE**" Matrix, the following changes have been made:

a. DELETE the entire **"Wheeled Motorized Vehicles"** column and the associated footnote below the Matrix.

b. For "**Area Reference Letter B**" in the **"Non-motorized Uses"** column, the wording has been changed to read, **"Open April 15 to Dec 15 on the Palisades Ranger District and April 15 to Thanksgiving Day on the Teton Basin Ranger District".**

c. For "**Reference Area Letter C**" in the **"Over-snow Motorized Vehicles"** column, the wording has been changed to read **"Open Thanksgiving Day to June 1 on the Teton Basin Ranger District and Dec. 15 to June 1 on the Palisades Ranger District.**

SUMMER TRAVEL PLAN - (the new 1997 plan/map)

1. The following new introductory statement replaces the first and second paragraphs under **"TARGHEE NATIONAL FOREST SUMMER TRAVEL PLAN":**

Welcome to the **Palisades** and **Teton Basin Districts** of the Targhee National Forest, yours to enjoy and use for a variety of purposes. In order to protect forest values, safeguard users, and minimize conflicts between users, it has become necessary to establish certain regulations for the use -- both non-motorized and motorized -- of areas off designated routes and the use of designated roads and trails. This map identifies these opportunities and restrictions. Please study the map carefully. Your understanding and observance of these travel opportunities and restrictions will minimize the need for enforcement action.

This map is intended to help the summer recreationist enjoy the Targhee National Forest safely while protecting the natural resources. Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding winter travel opportunities, see the reverse side of this map and the attached addendum information.

PLEASE NOTE THE FOLLOWING:

1. Delete in their entirety the last paragraph under HOW TO USE THIS MAP and the paragraph under NOTICE -CLOSURE AREAS. Substitute the following paragraph:

UNLESS OTHERWISE POSTED, DIRECT MOTORIZED ACCESS IS ALLOWED FOR PARKING AND CAMPING WITHIN 300 FEET OF ROADS AND TRAILS WHICH ARE OPEN FOR MOTORIZED USE. PLEASE SELECT YOUR ACCESS ROUTES CAREFULLY SO AS TO AVOID DAMAGING VEGETATION AND OTHER FOREST RESOURCES. DO NOT CROSS MEADOWS AND AVOID CROSSING STREAMS.

REMEMBER, NO MOTORIZED (or mechanized--e.g. mountain bike or game cart) USE IS PERMITTED WITHIN DESIGNATED WILDERNESS.

2. If you have any questions about any aspect of the Travel Maps and regulations, please contact any Ranger District Office.

WINTER CROSS-COUNTRY USE MATRIX
(Opportunities and Restrictions off Designated Routes)

AREA REFERENCE LETTER	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
A	OPEN	CLOSED - except on designated routes	To protect wilderness or wildlife ranges and cross-country ski areas
B	Open April 15 to Dec. 15 on the Palisades RD and April 15 to Thanksgiving Day on the Teton Basin RD	CLOSED - except on designated routes	To protect wildlife in winter range areas
C	OPEN	OPEN Thanksgiving Day to June 1 on the Teton Bain RD and Dec. 15 to June 1 on the Palisades RD	To protect wildlife going to and from winter ranges
D	OPEN except in designated ski resorts during the ski season	CLOSED except for administrative purposes	For user safety

WINTER DESIGNATED ROUTES
(Opportunities and Restrictions)

DESIGNATED ROUTE	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
●●●●●●●	OPEN to cross-country skiing only	CLOSED	Cross-country ski routes
———	OPEN	OPEN	Designated winter travel route (frequently groomed for snowmobiles)
- - - - -	OPEN	OPEN	Designated winter travel route (may or may not be groomed for snowmobiles)

SUMMER CROSS-COUNTRY USE MATRIX
(Opportunities and Restrictions off Designated Routes)

AREA REFERENCE LETTER	NON-MOTORIZED USES	BICYCLES	TWO-WHEEL MOTORIZED VEHICLES	ALL TERRAIN VEHICLES (ATV's) <50" in width	HIGH CLEARANCE VEHICLES (4x4 & pickups) >50" in width	SEDANS <50" in width	PURPOSE OF REGULATION
A	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect wilderness and other special management area resource values
B	OPEN	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	To protect grizzly bear and other wildlife habitat and provide a variety of recreation experiences
C	OPEN	OPEN	OPEN June 1 to Sept 30	OPEN June 1 to Sept 30	CLOSED	CLOSED	To provide a semi-primitive motorized recreation experience
E (see the footnote below)	Generally open. HOWEVER, special use permits may restrict some of these uses.	Forest sites are closed. Areas under special use permits may restrict this type of use.	CLOSED	CLOSED	CLOSED	CLOSED	To protect developed recreation site facilities and offer a variety of developed recreation uses

FOOTNOTE: These areas (E) are generally too small to show on this map. They include all Developed Recreation Sites such as campgrounds, picnic areas, boating sites/ramps, trailheads, snowparks, scenic and wildlife viewing areas and fishing access points. Area E also applies to Special Use Permit Recreation Sites such as ski areas, resorts, summer home sites and organization camps.

ADDENDUM TO 1997 TRAVEL PLAN MAPS - March 24, 1998

For purposes of clarification, the following changes/corrections will apply to the Winter and Summer Travel Plans for the **ISLAND PARK** and **ASHTON** Ranger Districts:

WINTER TRAVEL PLAN- (revisions to the 1997 plan/map)

1. The following new introductory statement replaces the first and second paragraphs under **"TARGHEE NATIONAL FOREST WINTER TRAVEL PLAN":**

This map describes winter travel opportunities on the Targhee National Forest from THANKSGIVING DAY UNTIL SOMETIME IN THE SPRING as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage.

SEE THE ATTACHED NEW "**WINTER CROSS-COUNTRY USE AND WINTER DESIGNATED ROUTES**" MATRICES. THESE REPLACE THOSE AT THE BOTTOM OF THE 1997 TRAVEL PLAN MAP AND GIVE DETAILED DIRECTIONS ABOUT OPPORTUNITIES AND RESTRICTIONS FOR WINTER TRAVEL.

Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding summer travel opportunities, see the reverse side of this map.

2. For the **"CROSS-COUNTRY USE"** Matrix, the following changes have been made:

a. DELETE the entire **"Wheeled Motorized Vehicles"** column and the associated footnote below the Matrix.

b. For **"Reference Area Letter C"** in the **"Over-snow Motorized Vehicles"** column, the wording has been changed to read, **"OPEN Thanksgiving Day to June 1 on the Teton Basin, Ashton, and Island Park Ranger Districts."**

SUMMER TRAVEL PLAN (the new 1997 plan/map)

1. The following new introductory statement replaces the first and second paragraphs under **"TARGHEE NATIONAL FOREST SUMMER TRAVEL PLAN":**

Welcome to the **Island Park** and **Ashton** Districts of the Targhee National Forest, yours to enjoy and use for a variety of purposes. In order to protect forest values, safeguard users, and minimize conflicts between users, it has become necessary to establish certain regulations for the use -- both non-motorized and motorized-- of areas off designated routes and the use of designated roads and trails. This map identifies these opportunities and restrictions. Please study the map carefully. Your understanding and observance of these travel opportunities and restrictions will minimize the need for enforcement action.

This map is intended to help the summer recreationist enjoy the Targhee National Forest safely while protecting the natural resources. Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding winter travel opportunities, see the reverse side of this map.

2. For the **"CROSS-COUNTRY USE MATRIX"** shown on this new 1997 map, the following changes have been made:

a. For "Area Reference Letter F" in the "All Terrain Vehicles (ATV's) <50" in width" column, the wording has been changed to read "OPEN".

b. For "Area Reference Letter G" in the "Two-Wheeled Motorized Vehicles" column, the wording has been changed to read "Open Jun 15 to Sept 30".

c. For "Area Reference Letter G" in the "All Terrain Vehicles (ATV's) <50" width column, the wording has been changed to read "Open Jun 15 to Sept 30".

PLEASE NOTE THE FOLLOWING:

1. Delete in their entirety the last paragraph under HOW TO USE THIS MAP and the paragraph under NOTICE - CLOSURE AREAS. Substitute the following paragraph:

UNLESS OTHERWISE POSTED, DIRECT MOTORIZED ACCESS IS ALLOWED FOR PARKING AND CAMPING WITHIN 300 FEET OF ROADS AND TRAILS WHICH ARE OPEN FOR MOTORIZED USE. PLEASE SELECT YOUR ACCESS ROUTES CAREFULLY SO AS TO AVOID DAMAGING VEGETATION AND OTHER FOREST RESOURCES. DO NOT CROSS MEADOWS AND AVOID CROSSING STREAMS. **REMEMBER, NO MOTORIZED (or mechanized--e.g. mountain bike or game cart) USE IS PERMITTED WITHIN DESIGNATED WILDERNESS.**

2. If you have any questions about any aspect of the Travel Maps and regulations, please contact any Ranger District Office.

WINTER CROSS-COUNTRY USE MATRIX
(Opportunities and Restrictions off Designated Routes)

AREA REFERENCE LETTER	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
A	OPEN	CLOSED - except on designated routes	To protect wilderness or wildlife ranges and cross-country ski areas
C	OPEN	OPEN - Thanksgiving Day to June 1 on the Teton Basin, Ashton and Island Park RDs	To protect wildlife going to and from winter ranges
E	OPEN	OPEN January 1 to April 1	To protect wildlife going to and from winter ranges

WINTER DESIGNATED ROUTES
(Opportunities and Restrictions)

DESIGNATED ROUTE	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
●●●●●●●	OPEN to cross-country skiing only	CLOSED	Cross-country ski routes
———	OPEN	OPEN	Designated winter travel route (frequently groomed for snowmobiles)
- - - -	OPEN	OPEN	Designated winter travel route (may or may not be groomed for snowmobiles)
o—o—o—o	OPEN	OPEN	Designated winter travel route (occasional use routes. snow depths may not allow snowmachine use some years

SUMMER CROSS-COUNTRY USE MATRIX
(Opportunities and Restrictions off Designated Routes)

AREA REFERENCE LETTER	NON-MOTORIZED USES	BICYCLES	TWO-WHEEL MOTORIZED VEHICLES	ALL TERRAIN VEHICLES (ATV's) <50" in width	HIGH CLEARANCE VEHICLES (4x4 & pickups) >50" in width	SEDANS <50" in width	PURPOSE OF REGULATION
A	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect wilderness and other special management area resource values
B	OPEN	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	To protect grizzly bear and other wildlife habitat and provide a variety of recreation experiences
C	OPEN	OPEN	OPEN June 1 to Sept 30	OPEN June 1 to Sept 30	CLOSED	CLOSED	To provide a semi-primitive motorized recreation experience
D	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	To maintain or enhance the Scenic Visual Quality of areas
E (see the footnote below)	Generally open. HOWEVER, special use permits may restrict some of these uses.	Forest sites are closed. Areas under special use permits may restrict this type of use.	CLOSED	CLOSED	CLOSED	CLOSED	To protect developed recreation site facilities and offer a variety of developed recreation uses
F	OPEN	OPEN	OPEN	OPEN	CLOSED	CLOSED	To enhance long-term forest health along urban interface areas
G	OPEN	OPEN	OPEN June 1 to Sept 30	OPEN June 1 to Sept 30	CLOSED	CLOSED	To provide a semi-primitive motorized recreation experience

FOOTNOTE: These areas (E) are generally too small to show on this map. They include all Developed Recreation Sites such as campgrounds, picnic areas, boating sites/ramps, trailheads, snowparks, scenic and wildlife viewing areas and fishing access points. Area E also applies to Special Use Permit Recreation Sites such as ski areas, resorts, summer home sites and organization camps.

ADDENDUM TO 1997 TRAVEL PLAN MAPS - March 24, 1998

For purposes of clarification, the following changes/corrections will apply to the Winter and Summer Travel Plans for the **DUBOIS** Ranger District:

WINTER TRAVEL PLAN - (revisions to the 1997 plan/map)

1. The following new introductory statement replaces the first and second paragraphs under "TARGHEE **NATIONAL FOREST WINTER TRAVEL PLAN":**

This map describes winter travel opportunities on the Targhee National Forest from THANKSGIVING DAY UNTIL SOMETIME IN THE SPRING as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage.

SEE THE ATTACHED NEW **"WINTER CROSS-COUNTRY USE AND WINTER DESIGNATED ROUTES"** MATRICES. THESE REPLACE THOSE AT THE BOTTOM OF THE 1997 TRAVEL PLAN MAP AND GIVE DETAILED DIRECTIONS ABOUT OPPORTUNITIES AND RESTRICTIONS FOR WINTER TRAVEL.

Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding summer travel opportunities, see the reverse side of this map.

2. For the **"CROSS-COUNTRY USE"** Matrix, the following change has been made:

a. DELETE the entire **"Wheeled Motorized Vehicles"** column and the associated footnote below the Matrix.

SUMMER TRAVEL PLAN - (the new 1997 plan/map)

1. The following new introductory statement replaces the first and second paragraphs under **"TARGHEE NATIONAL FOREST SUMMER TRAVEL PLAN":**

Welcome to the **Dubois** District of the Targhee National Forest, yours to enjoy and use for a variety of purposes. In order to protect forest values, safeguard users, and minimize conflicts between users, it has become necessary to establish certain regulations for non-motorized and motorized use of areas and designated routes (roads and trails). This map identifies these opportunities and restrictions. Please study the map carefully. Your understanding and observance of these travel opportunities and restrictions will minimize the need for enforcement action.

This map is intended to help the summer recreationist enjoy the Targhee National Forest safely while protecting the natural resources. Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding winter travel opportunities, see the reverse side of this map and the attached addendum information.

2. Travel opportunities and restrictions for road and trail travel are the same as existed in 1997 as displayed in the individual 1996 District Travel Plan Map as revised March 24, 1998. **The statement: "If roads are open (not gated or otherwise closed), then travel is permitted on these routes" has been removed from the designated road and trail matrix on all maps.**

3. Delete in their entirety the last paragraph under HOW TO USE THIS MAP and the paragraph under NOTICE - CLOSURE AREAS. Substitute the following paragraph:

UNLESS OTHERWISE POSTED, DIRECT MOTORIZED ACCESS IS ALLOWED FOR PARKING AND CAMPING WITHIN 300 FEET OF ROADS AND TRAILS WHICH ARE OPEN FOR MOTORIZED USE. PLEASE SELECT YOUR ACCESS ROUTES CAREFULLY SO AS TO AVOID

DAMAGING VEGETATION AND OTHER FOREST RESOURCES. DO NOT CROSS MEADOWS AND AVOID CROSSING STREAMS.

4. If you have any questions about any aspect of the Travel Maps and regulations, please contact any Ranger District Office.

DUBOIS RANGER DISTRICT TRAVEL PLAN

WINTER CROSS-COUNTRY USE MATRIX
(Opportunities and Restrictions off Designated Routes)

AREA REFERENCE LETTER	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
A	OPEN	CLOSED - except on designated routes	To protect wilderness or wildlife ranges and cross-country ski areas
C	OPEN	OPEN - Thanksgiving Day to June 1 on the Dubois RD	To protect wildlife going to and from winter ranges

WINTER DESIGNATED ROUTES
(Opportunities and Restrictions)

DESIGNATED ROUTE	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
●●●●●●●	OPEN to cross-country skiing only	CLOSED	Cross-country ski routes
———	OPEN	OPEN	Designated winter travel route (frequently groomed for snowmobiles)
- - - - -	OPEN	OPEN	Designated winter travel route (may or may not be groomed for snowmobiles)
-o-o-o-o-	OPEN	OPEN	Designated winter travel route (occasional use routes. snow depths may not allow snowmachine use some years

SUMMER CROSS-COUNTRY USE MATRIX
(Opportunities and Restrictions off Designated Routes)

							
AREA REFERENCE LETTER	**NON-MOTORIZED USES**	**BICYCLES**	**TWO-WHEEL MOTORIZED VEHICLES**	**ALL TERRAIN VEHICLES (ATV's) <50" in width**	**HIGH CLEARANCE VEHICLES (4x4 & pickups) >50" in width**	**SEDANS <50" in width**	**PURPOSE OF REGULATION**
A	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect wilderness and other special management area resource values
B	OPEN	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	To protect grizzly bear and other wildlife habitat and provide a variety of recreation experiences
E (see the footnote below)	Generally open. HOWEVER, special use permits may restrict some of these uses.	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect developed recreation site facilities and offer a variety of developed recreation uses.

FOOTNOTE: These areas (E) are generally too small to show on this map. They include all Developed Recreation Sites such as campgrounds, picnic areas, boating sites/ramps, trailheads, snowparks, scenic and wildlife viewing areas and fishing access points. Area E also applies to Special Use Permit Recreation Sites such as ski areas, resorts, summer home sites and organization camps.

APPENDIX B

ROAD DECOMMISSIONING PROCESS GUIDELINES

The following is a description of the procedures to be followed during road reclamation and decommissioning as directed by the Revised Forest Plan:

Culverts - On perennial streams, culverts will be pulled and the edges of the fill slopes for bedding will be pulled back (maximum of 1:1 slope) until the slopes are rounded off, but not all of the bedding, fill will be removed from the trench. The material will be pulled away from the stream, and natural bankfull flow capacity and gradient (as determined by channel characteristics up and down-stream of the site) will be maintained. When working in live streams, remove all fill around pipes prior to bypass and pipe removal. On intermittent streams, the majority of the pipes will be pulled and treated as on perennial streams--especially where it is evident the culvert has carried water repeatedly. Dry culverts with no water flow evident will remain in place. These culverts generally have heavy vegetation growth of trees, grass, and bushes in the stream channel above the pipe. Where culverts are removed, dig to grade of natural stream channel and to a width that the stream will not undercut remaining fill.

Surface Ripping - This will be done on a case by case basis where needed to remove visual evidence of a road or access to it or adjacent areas. These are generally areas with long straight Right-of-Ways where there is little adjacent vegetation, or other barricade along wide open road surfaces. Ripping will also be done in areas where it would be important to expose additional soils to allow vegetation to reestablish.

Trenching/Berming/Surface Debris Placement - This will be done as needed, and mostly at the start of decommissioned segments to prevent summer, motorized travel. Berms or trenches will be built following R-4 standard design.

Fill Slopes - These will not be reclaimed or pulled back into the road cut - even when in AIZ or adjacent to a stream, unless significant stream impacts are occurring or are anticipated. These types of areas will be determined on a case by case basis as decommissioning directions are provided to the equipment operators.

Seeding - The seed mix developed by the Forest Botanist and Soil Scientist will be used on all disturbed soils in or near perennial stream channels or water bodies; on disturbed soils that occur within watersheds identified as Water Quality Limited (WQL) streams; and along road segments that have slopes that are over 10% grade. The contract inspectors will mark these areas needing seeding on forest maps, so that crews can easily locate the areas and apply the seed as soon after disturbance as possible. In areas away from water, and where natural seed sources are available, we will depend on natural seeding.

Location Direction - Roads inside the BMUs that have been or will be decommissioned are shown on Map #6(a-c) - Alternative 3M(+)R. These roads will be decommissioned according to the guidelines in this Appendix. Roads to be decommissioned outside the BMUs in the next few years will be decommissioned in a similar way to those inside the BMUs with treatments varying from complete obliteration in some cases to less intensive treatments as necessary to deter summer motorized use. Those routes outside the BMUs do not need to meet the Interagency Grizzly Bear Committee access management guidelines. so there will be more flexibility to use less intensive closure methods on these roads

Noxious Weeds - All construction machinery used in decommissioning is to be washed before entering work areas on the Forest, and again before moving from one County to another. This is to help prevent spread of noxious weeds. As monitoring of road decommissioning occurs over the next few years according to Forest Plan direction, disturbed areas will also be checked for new occurrences of noxious weeds, and appropriate control methods will be applied to any outbreaks.

Miscellaneous - Gates that are to be removed and used elsewhere will be removed before decommissioning begins. Turn-around space is to be provided/constructed where necessary for decommissioned roads--to minimize inconvenience to Forest users.

APPENDIX C

APPENDIX C(M)--ACCESS STATUS TABLES

The purpose of this table is to track motorized access and RS 2477 assertion routes only. Roads and trails have been rated in these forms according to the letters (routes open) or numbers (routes closed) on the decision criteria cover sheet. This access analysis is based on the same process outlined in the RFP-FEIS, pages C-1 through C-5. Page C-5 of the RFP-FEIS states:

> "Determinations for leaving a route open were made using a priority system. First priority was given to Federal Highway system roads, State and county roads, existing roads needed to access private property, Yellowstone National Park, State Parks and State lands, and existing roads that access administrative sites, electronic sites, communication sites (under permit) or high use recreation sites such as ski areas, boat ramps, etc. In some areas, the application of management prescriptions and the road density standard resulted in these "first priority" roads being the only roads designated "open" for the area. The Forest incorporated guidelines from the Eastside Ecosystem Management Project (EEMP) to establish a rule set to insure consistency as each District prepared their access maps. District personnel and Forest planning specialists met over several months to fine tune and coordinate motorized access between Districts. Roads and trails were selected for restriction or closure depending on the need to maintain wildlife habitat, prevent resource damage, and to balance the level of use to recreation opportunity. Cost of maintaining the road or trail was also a factor. A set of Road and Motorized Trail Decision Criteria Tables have been developed, showing the decision in making roads and trails open or closed in each alternative."

Roads that have been or will be decommissioned are shown as blue lines on Maps #6(a-c) - Alternative 3M+R and are shown on this map only. The decommissioned roads are the same for all alternatives inside the BMU's, but vary for each alternative outside the BMU's . Roads will be decommissioned according to the guidelines in Appendix B. Roads to be decommissioned outside the BMUs in the next few years will be decommissioned in a similar way to those inside the BMUs with treatments varying from complete obliteration in some cases to less intensive treatments as necessary to deter motorized use. Those routes to be decommissioned outside the BMUs do not need to meet the Interagency Grizzly Bear Committee access management guidelines, so there will be more flexibility to use less intensive closure methods on these roads. These routes are also displayed on map #4 in the map packet. These decommissioned roads have been fully considered in the consequences analysis in this EIS (see the Soils water, and access management consequences sections for specific analysis details).

APPENDIX C(M)

OPEN ROAD AND MOTORIZED TRAIL ROUTE (OROMTRD) DECISION CRITERIA TABLES

CRITERIA DEFINITIONS

Open to Motorized Use:

A. Core Access: Needed to access private property, adjoining State and Federal Parks or State Lands and roads that access administrative sites, campgrounds and picnic areas, electronic sites, permitted communication sites, ski areas, boat ramps and special recreation sites such as Mesa Falls and Big Springs.

B. First Priority: These roads were selected to remain open or be seasonally restricted because they are one of the only roads left on the system in the area.

C. Eastside Ecosystem Management Project (EEMP) Guidelines: EEMP guidelines used to establish a rule set to insure consistency as each District prepared their access maps.

D. Coordinated Access: Roads/trails that provide inter-District and intra-District access for administrative use.

E. Maintenance of Wildlife Habitat: Road /trail selected causes less impact.

F. Resource Damage: Road/trail selected caused less impact.

G. Cost: Lower cost to maintain road/trail.

H. District-specific criteria (e.g. historical, etc.).

I. District-specific criteria (e.g. berry picking, etc.).

J. RS 2477 assertions by county. These are the same for all alternatives but are shown only on Maps 6(a-c). The symbol (**) refers to assertions not evident on the ground. These are only given a general location, but not a route name or number. Also, a symbol J in 3M+R is a new assertion since DEIS. A symbol J in 3M+ was an assertion in the DEIS.

K. Additions within the Open Road Open Motorized Trail and Route Density (OROMTRD) in response to a specific road and trail comment.

* Roads that are seasonally restricted.

Closed to Motorized Use (year-round closure):

1. No longer needed for re-occurring resource activities.
2. For the protection of wildlife and reduced road or trail maintenance costs.
3. To avoid soil erosion and protect water quality.
4. To meet Open Road Open Motorized Trail and Route Density (OROMTRD).
5. To respond to specific road and trail comments.
6. No longer accessible.

Note: Roads and trails shown with letter(s)/number(s) are multiple segment routes, part of which are open and part closed. Refer to the Transportation Map for details.

The 3M+R column shows only roads or trails where a change in status has been made that is different than shown in 3M+. Otherwise, the rating space that is blank would remain the same as in 3M+.

Roads shown with a *** in the route number column are routes to be decommissioned (blue lines on 3M+R alternative map). Many of these are spurs and other low-use routes for which route numbers

were not considered essential for tracking between the table and maps. The data for these routes was analyzed in the GIS calculations for the EIS.

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **DUBOIS**						
ROADS						
80001	Modoc-West	B		BJ	B	B
80002	Stoddard Creek	AB		ABJ	AB	AB
80003	Stoddard Creek CG	A		A	A	A
80004	Idaho Creek	B		BJ	B	B
80005	Modoc	AB		ABJ	AB	AB
80006	West Camas-Miners Creek	ABD		ABDJ	ABD	ABD
80007	Alex Draw East	AB*		B*	AB*	B*
80008	Van Noy Canyon	AB		ABJ	AB	AB
80010	Pete Creek	AB/2,4		ABJ	AB/2,4	AB
80011	Alex Draw	AB *		ABJ*	AB*	AB*
80015	Allan Canyon	B		BJ	B	B
80016	McGarry Canyon	AB		ABJ	AB	AB
80017	Dairy Creek	AB	AB	ABJ	AB	AB
80019	Bear Gulch	AB/2,4	ABJ	AB	AB/2,4	AB
80020	Long Creek	AB		ABJ	AB	AB
80021	Three Mile	AB		ABJ	AB	AB
80022	Left Fork Middle Creek	B		J	3	3
80023	Coalmine	B		BJ	B	B
80026	Cottonwood Loop	AB		ABJ	AB	AB
80027	Ching Creek	AB		ABJ	AB	AB
80029	Trail Creek	AB		AB	AB	AB
***	Alex Draw Spur 3	B	2,4	B	B	B
80087	Dairy Cr. Spur	AB		ABJ	AB	AB
80171	Fritz Cabin	AB		ABJ	AB	AB
80173	Eightmile Canyon	AB		ABJ	AB	AB
80174	Italian Canyon	AB		AB	AB	AB
80176	Long Canyon	AB		ABJ	AB	AB
80177	Corral Creek	B		BJ	B	B
80178	Crooked Creek	AB		ABJ	AB	AB
80179	Crooked Creek Bench	B	ABJ	B	B	B
80180	Slate Basin	B		BJ	B	B
80181	McGarry Spur 1	B		B	B	B
80182	Rocky Canyon	B		BJ	B	B
80183	Mammoth Canyon	B		B	B	B
80184	Kelly Canyon	B		BJ	B	B
80185	Big Springs Creek	B		BJ	3	B
80187	Irving Creek	ABE		BJ	ABE	B
80188	Charcoal Kiln	AB		AB	AB	AB
80189	Willow Creek	ABD	ABJ	AB	ABD	AB
80190	Scott Canyon	AB	ABJ	AB	AB	AB
80191	Myers Creek	AB		ABJ	AB	AB
80192	Emigrant Trail	ABD		ABJ	ABD	AB
80193	East Fork Irving Creek	B		BJ	B	B
80195	Medicine Lodge Bench	ABD		ABJ	ABD	AB
80196	Webber Creek CG	AB		ABJ	AB	AB
80198	Grouse Canyon	AB		ABJ	AB	AB
80199	Fritz Creek	ABD		ABJ	ABD	AB
80200	West Dry-Huntley	B		BJ*	B	B
80201	Gallagher Canyon	B		BJ	B	B
80202	Chandler Canyon	B		BJ	B	B
80203	Blue Canyon	B		BJ	B	B
80204	Middle Creek	AB		ABJ	AB	AB
80205	West Indian Creek	B		BJ	B	B
80240	Kaufman Springs	B		B	B	B
80272	Viola Gulch	ABD		AB	ABD	AB
80275	Buckhorn	B		BJ	B	B
80278	Nicholia	B		BJ	B	B

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80279	Snaky Canyon	B		BJ	B	B
80280	Bannock Pass	AB		ABJ	AB	AB
80296	Spring Mountain	AB	AB/2	AB	AB	AB
80297	Kite Canyon	B		BJ	B	B
80298	Skull-Timber	ABD	AB	ABJ	ABD	AB
80300	Cow Camp	AB		ABJ	AB	AB
80323	Pleasant Valley	ABD		ABJ	ABD	AB
80325	Sheep Creek	AB		ABJ	AB	AB
80477	Middle Threernile	DE/24		ABJ	DE/2,4	AB
80478	Steel Creek	AB		ABJ	AB	AB
80479	Upper Corral Creek	B		BJ	B	B
80483	School Section	B		BJ	B	B
80530	Bartel Canyon	BE		BE	BE	BE
80531	Cedar Canyon	B		B	B	B
80532	Cliff Canyon	B		B	B	B
80533	Davis Canyon	BD		B	BD	B
80534	Deer Canyon	BE		BE	BE	BE
80537	Pierce Canyon	BD		BJ	BD	B
80538	South Fork Worthing	BD	BD	BDJ	BD	BD
80539	Surrett Canyon	B		BJ	B	B
80540	Tyler Canyon	BE	BEJ	BE	BE	BE
80564	Scalp Creek	B		BJ	B	B
80566	Prospect Main	BE/2,4		BEJ	BE/2,4	BE
***	Bear Gulch Spur 4	B		2,4	2,4	2,4
***	West Cottonwood East	B		2,4	2,4	2,4
***	Lower East Cottonwood	B		2,4	2,4	2,4
***	Bear Gulch Spur 8	B		2,4	2,4	2,4
***	Bear Gulch Spur 9	B		2,4	2,4	2,4
***	Lower Hershi	B		2,4	2,4	2,4
80678	Cow Creek	B	B	BJ	2,4	B
80679	Berry Creek	B		BJ	B	B
***	West Cottonwood E. Spur	B		2,4	2,4	2,4
***	Lava Creek	B		2,4	2,4	2,4
80684	Hann Site	B		B	B	B
***	Unnamed Spur 4	B		2,4	2,4	2,4
***	Unnamed Spur 7	B		2,4	2,4	2,4
***	Unnamed Spur	B		2,4	2,4	2,4
***	Unnamed Road	B		2,4	2,4	2,4
***	Clay Creek	B		2,4	B	2,4
***	Unnamed Spur 4	B		2,4	2,4	2,4
***	Unnamed Spur 10	AB		2,4	2,4	2,4
80824	Castle Creek	B		B	B	B
80836	McGarry Whip	B	B	BJ	B	B
***	Unnamed Spur 3	B		2,4	2,4	2,4
80823	Alex Draw Spur 1	AB		AB	AB	AB
***	Unnamed Spur 1	B		2,4	2,4	2,4
***	Unnamed Spur 2	B		2,4	2,4	2,4
80812	Electronic Site	AB		AB	AB	AB
80810	Boatman Spring	B		B	B	B
80820	Long Creek Spur A	B		B	B	B
***	Unnamed Spur 7	B		2,4	2,4	2,4
***	Unnamed Spur 10	2,4		2,4	2,4	2,4
***	Unnamed Spur 8	2,4		2,4	2,4	2,4
80814	Rattlesnake Loop	B		BJ	B	B
80818	Waters Flat	AB		AB	AB	AB
80817	Saw Creek	AB		AB	AB	AB
***	Unnamed Spur 8	B		2,4	2,4	2,4
80798	Kyle Canyon	B		B	B	B
80799	Kyle Canyon South Fork	B		B	B	B

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
***	Unnamed Spur 1	B		2,4	2,4	2,4
***	Unnamed Spur 5	B		2,4	2,4	2,4
***	Unnamed Spur 1	B		2,4	2,4	2,4
***	Unnamed Spur 4	B		2,4	2,4	2,4
***	Unnamed Spur 5	B		2,4	2,4	2,4
***	Unnamed Spur 6	B		2,4	2,4	2,4
***	Unnamed Spur 8	B		2,4	2,4	2,4
***	Unnamed Spur 2	B		2,4	2,4	2,4
80699	Box Springs	B		B	B	B
***	Unnamed Spur 2	B		2,4	2,4	2,4
80708	Bell Mountain Canyon	B		B	B	B
80709	McCoy Canyon	B		B	B	B
80710	Willow Canyon	B		B	B	B
80711	UC Gulch	B		B	B	B
80712	Willow Spring	B		B	B	B
80713	Magpie Spring	B		B	B	B
80714	Meadow Canyon A	B		B	B	B
***	Meadow Canyon Spur 1	B	2,4	B	B	B
***	Unnamed Spur 2	B		2,4	2,4	2,4
***	Unnamed Spur 2	B		2,4	2,4	2,4
80834	Hunting Camp	AB		AB	AB	AB
80831	Porky Spring	B		B	B	B
***	Unnamed Spur 3	B		2,4	2,4	2,4
***	Unnamed Spur 4	B		2,4	2,4	2,4
80851	Webber Spur	A		A	A	A
***	Unnamed Spur 2	B		2,4	2,4	2,4
***	Unnamed Spur 3	B		2,4	2,4	2,4
***	Unnamed Spur 6	B		2,4	2,4	2,4
***	Unnamed Spur 7	B		2,4	2,4	2,4
80801	Skyline Road	B		BD	BD	BD
***	Left Fork Indian Creek	B	2,4	BJ	B	B
80751	Diamond Peak #1	B		B	B	B
80835	Kaufman Springs Spur	B		B	B	B
80753	Diamond Peak #2	B		B	B	B
80754	Diamond Peak #3	B		B	B	B
***	Diamond Peak #4	B		2,4	2,4	2,4
80796	Diamond Peak #5	B		B	B	B
***	Unnamed Spur 2	B		2,4	2,4	2,4
***	Unnamed Spur 1	B		2,4	2,4	2,4
***	Unnamed Spur 2	B		2,4	2,4	2,4
***	Unnamed Spur 3	B		2,4	2,4	2,4
80832	Limestone	B		BJ	B	B
80833	Round Top	B		B	B	B
***	Unnamed Spur 7	B		2,4	2,4	2,4
***	Unnamed Spur 8	B		2,4	2,4	2,4
***	Unnamed Spur 9	B		2,4	2,4	2,4
***	Unnamed Spur 1	B		2,4	2,4	2,4
80683	Horseshoe Gulch	AB		AB	AB	AB
80837	Skull Mine	AB		ABJ	AB	AB
***	Unnamed Spur 1	B		2,4	2,4	2,4
80808	Swampy Draw	AB		AB	AB	AB
***	Unnamed Spur 3	B		2,3,4	2,3,4	2,3,4
***	Unnamed Spur 4	B		2,3,4	2,3,4	2,3,4
80821	Owens Creek	B		BJ	B	B
***	Unnamed Spur 5	AB		AB	2,4	AB
80815	Steel Creek North	B		B	B	B
80856	School Section Creek	AB		AB	AB	AB
***	Unnamed Spur 3	B		B	2,4	B
80670	Coal Kiln Spring	B		B	B	B

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80698	Coal Kiln Canyon	B		B	B	B
***	Unnamed Spur 5	B		B	2,4	B
80789	Hill Road	B		BJ	B	B
80793	Tyler D	B	BJ	B	B	B
80790	Tyler C	B		BJ	B	B
80794	Tyler Guzzler	AB	ABJ	AB	AB	AB
***	Unnamed Spur 1	B		2,4	2,4	2,4
***	Unnamed Spur 1	B		2,4	2,4	2,4
80838	Timber	B	B	BJ	B	B
80839	Long Canyon Spur	B		BJ	B	B
***	Unnamed Spur 7	B		2,4	2,4	2,4
80763	Windfall Canyon	B	BJ	B	B	B
80780	Post Canyon	B	BJ	B	B	B
80787	Big Dry Canyon	B	BJ	B	B	B
***	Unnamed Road	B		2,4	2,4	2,4
***	Unnamed Spur 1	B		2,4	2,4	2,4
80825	Spring Canyon	B		BJ	B	B
***	Unnamed Spur 5	B		2,4	2,4	2,4
***	Unnamed Spur 6	B		2,4	2,4	2,4
80827	Deadman Canyon	B		BJ	B	B
***	Unnamed Spur 8	B		2,4	2,4	2,4
80826	Bloom Canyon	B		BJ	B	B
***	Unnamed Spur 11	B		2,4	2,4	2,4
80828	Peterson Canyon	B		BJ	B	B
***	Unnamed Spur 13	B		2,4	2,4	2,4
***	Unnamed Road 1	B		2,4	2,4	2,4
***	Unnamed Road 2	B		2,4	2,4	2,4
***	Unnamed Road 3	B		2,4	2,4	2,4
***	Unnamed Road 4	B		2,4	2,4	2,4
80857	Opal Mine	AB		AB	AB	AB
***	Unnamed Spur 5	B		2,4	2,4	2,4
80797	Meadow Canyon	B		B	B	B
80716	Sagebrush Flat	B		B	B	B
***	Unnamed Spur 2	B		2,4	2,4	2,4
***	Unnamed Spur 6	B		2,4	2,4	2,4
***	Unnamed Spur 3	2,4		2,4	2,4	2,4
***	Unnamed Spur 4	B		2,4	2,4	2,4
80718	Keg Springs	B		B	B	B
***	Unnamed Spur 1	B		2,4	2,4	2,4
80717	Keg Gulch	B		B	B	B
80858	Little Elk Spring	B		B	B	B
80719	Rocky Canyon	B		B	B	B
***	Wagnor Canyon		2,4	B	B	B
80667	Sawmill	B		B	B	B
80722	Big Sawmill	B		B	B	B
80732	Kaufman Spring	B		B	B	B
***	Unnamed Spur 9	B		2,4	2,4	2,4
***	Big Horn Canyon	B	2,4	B	B	B
***	South Fork Bald Mt. Spring	B	2,4	B	B	B
80829	Reynolds Crossing	B		B	B	B
80830	Deep Creek	B		B	B	B
80661	Upper Antelope	B		B	B	B
80643	Middle Threemile Spur	B		BJ	B	B
80791	Tyler Canyon C	B		BJ	B	B
80635	Camp Creek	AB		AB	AB	AB
80636	Picnic Hollow	AB		ABJ	AB	AB
80840	Sagebrush	AB		AB	AB	AB
80638	Beacon Hill	AB		AB	AB	AB
80863	Kitty Springs	B	B	BJK	B	BK

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80864	North Fork Snaky Canyon	B		BJ	B	B
80865	Crystal Gulch	B	B	BJ	2	2
80866	Sage Hen	B	B	BJ	B	B
80868	Sullivan Ridge	B	B	BJ	B	B
80869	Black Mountain	B	B	BJ	B	B
80873	Heart Canyon	B	B	BJ	B	B
80874	Cole Canyon	B	BK	BJK	B	B K
80875	Buckboard Gulch	B	BK	BJK	B	B K
80876	South Fork Fritz	B	BK	BJ	B	B
80877	Horse Creek	B	BK	BJK	B	B K
80878	Limestone	B		BJ	B	B
80879	Lake Creek	B	BK	BJK	B	B K
80880	Telephone Creek	B		BJK	B	B K
80888	Sweet Springs	B		BJ	B	B
80889	Spring Creek	B	AB	2	2	2
80890	Scalp Creek	B		BJ	B	B
80891	Moose Creek	B	2	BJ	B	B
80892	Cross Country	B		BJ	B	B
80893	Spring Creek Ridge	2	B	2	2	2
80897	Fulwider Gulch	2	B	2	2	2
80898	Shamrock Springs	B	B	B	B	B
80899	Spring Mountain Canyon Spur	B D	BDJ	2	2	2
80902	Quartzite Canyon	BD	BDJ	2	2	2
80903	Corral	BD	BD	2	2	2
80904	Paint Canyon	B D	BD	2	2	2
80905	Indian Head Canyon	BD	BD	2	2	2
80906	Mahogany Canyon	B D	BD	2	2	2
80907	Right Fork Snaky Canyon	B D	BJ	BJ	2	2
***	North Fork Snaky Canyon	B D	2,4	BJ	2	2
80759	Bald Mountain	B D		B	B	B
**	Road west of Rattlesnake Creek		J			
80012	West Pete Creek	B *		BJ*	B*	B *
80050	Alex Draw Spur 2	B *		BJ*	B*	B *
***	Alex Draw Spur 4	B *	2,4	B*	B*	B*
80249	Stump Creek	B *		B*	B*	B*
***	Jug Creek	B *		2,4	2,4	2,4
***	Lower Stump	B *		2,4	2,4	2,4
***	West Camas A Spur	B *		2,4	2,4	2,4
80473	West Camas Spur	B *		BJ*	B*	B *
80481	West Camas "A"	B *		B*	B*	B*
***	Beaver Ponds	B *	2,4	B*	B*	B*
80542	Corral Creek Spur 3	B *		B*	B*	B*
80028	West Rattlesnake	2,4		2,4	2,4	2,4
80091	Warrior	2,4		2,4	2,4	2,4
80245	Steel Creek Spur 1	2,4		2,4	2,4	2,4
80668	Bear Gulch Spur 1	2,4		2,4	2,4	2,4
80669	Bear Gulch Spur 2	2,4		2,4	2,4	2,4
80175	Mandingo	2,4		2,4	2,4	2,4
80172	Pete Creek Breaks	2,4		2,4	2,4	2,4
80566	Prospect Main	2,4		2,4	2,4	2,4

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
TRAILS						
18002	Stoddard Creek	AB		ABJ	AB	AB
18003	West Camas Creek	2,4	J/2,4	2,4	2,4	2,4
18004	Continental Divide	2,4	B	2,4	2,4	2,4
18005	Signal Peak/Lookout Point	AB		ABJ	AB	AB
18008	Bear Gulch/Table Mountain	2,4	J/2,4	2,4	2,4	2,4
18025	North Fork Eight-Mile	B		B	B	B
18026	Pass Creek Lake	ABD		AB	ABD	AB
18034	Webber Creek Lakes	B		BJ	B	B
18045	South Fork Pass Creek	B		B	B	B
18047	Rocky Canyon	2,4		2,4	2,4	2,4
18081	Crooked Creek-Willow Creek	B		BJ	B	B
18110	Corral Canyon	B	J/2/B	BJ	2	2
18111	Webber Creek-Divide Creek	AB		ABJ	AB	AB
18113	Myers Creek	B		BJ	B	B
18175	Lone Pine Pass	B		BJ	B	B
18177	Van Noy Canyon	B		BJ	B	B
18179	Stoddard-Huntley Cutoff	B		BJ	B	B
18180	Allan Canyon	2,4		2,4	2,4	2,4
18018	Coal Kiln	2,4		2,4	2,4	2,4
18022	South Fork Eight-Mile	B	B	BJ	B	B
18024	Teepee Draw	B		BJ	B	B
18174	Scott Canyon Right Fork	B		B	B	B
18132	Goldmine	B		B	B	B
18001	Huntley	2	J/2	2	2	2
18135	Coal Mine	B	2	BJ	2,4	B
18136	West Modoc	B		BJ	2,4	B
18137	Little Table	B		BJ	2,4	B
18184	Long Canyon	B		BJ	2,4	B
18190	Pete Creek	B		BJ	2,4	B
18191	West Threemile Creek	B		BJ	2,4	B
18130	Nicholia Trail	B		BJ	2,4	B
18134	Buckhorn Trail	B		BJ	2,4	B
18006	Scott Canyon	2	BJ	2	2	2
18009	East Camas-Table Mountain	2,4	J/2,4	2,4	2,4	2,4
18181	Lake Creek	2,4	J/2,4	2,4	2,4	2,4
18011	Trail Creek	2,4	J/2,4	2,4	2,4	2,4
18013	Modoc/Corral Creek	2	BJ	2	2	2
18178	Dry Creek	2	J/2	2	2	2
18138	Robbins Creek	B		B	B	B
**	East Fork Trail by Road 80668		J/6			
**	Bear Gulch-Pete Creek Trail		J/6			
**	Spruce Creek Trail to Continental Divide		J/6			
**	Extension of Road 80012		J/6			

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **ISLAND PARK**						
ROADS						
80024	Sawtell Peak	A		A	A	A
80030	Kilgore-Yale	ABD		ABD	ABD	ABD
80033	West Fork Dry Creek	2,4		B/2,4	B	B
80034	Schneider Creek East	B		B	B	B
80035	Howard Creek	AB/2,4	AB	AB/2,4	AB/2,4	AB/2,4
80036	Schneider Creek West	A		A	A	A
80037	Taylor Creek	2,3,4	AB/2,3,4	2,3,4	/2,3,4	2,3,4
80039	Willow Creek Pit	A		A/1,4	A	A
80042	Keg Springs	AB		J/AB	AB	AB
80043	Upper Coffee Pot Campground	A		A	A	A
80044	Howard Spring	AB		AB	AB	AB
80045	Willow Creek Cutoff	AB		AB	AB	AB
80046	Willow Creek	AB/3,4		ABJ/3,4	A,B/3,4	AB/3,4
80047	Dry Canyon	2,4	B/2,4	2,4	B/2,4	2,4
80048	Blue Creek	B/2,4		B/2,4	B	B
80049	Icehouse	A		A	A	A
80051	Bootjack	A		A	A	A
80052	Stamp Meadows	ABD		ABD	ABD	ABD
80053	Red Rock	ABD		ABD	ABD	ABD
80055	Henrys Lake	ABD		ABD	ABD	ABD
80056	Divide	ABD		ABD	ABD	ABD
80057	Targhee Creek	AB		AB	AB	AB
80058	West Fork Mill Creek	A		A	A	A
80059	Big Springs Loop	ABD		ACD	ABD	ABD
80060	Meadow Creek	ABD		ACD	ABD	ABD
80061	Two Top Canyon	AB		ABJ/2,3,4	AB	AB
80062	North Fork Club	A		A	A	A
80064	Toms Creek Pole	A		A	A	A
80066	Black Canyon	AB/2,4		AB/2,4	AB/2,4	AB/2,4
80082	Fish Creek	ABD		ABDJ	ABD	ABD
80089	Black Canyon BPA Line	AB/2,4		AB/2,4	AB/2,4	AB/2,4
80100	IPS	B/2		B/2	B/2	B/2
80104	Hope Creek	B/2,4		2,4	B/2,4	B/2,4
80112	Eccles	BD		BD	BD	BD
80117	Old Chick Creek	ABD		ABD	ABD	ABD
80119	Trude Siding	ABD		ABD	ABD	ABD
80126	Buttermilk Loop	AD		AD	AD	AD
80127	McCrea Bridge CG	AB		AB	AB	AB
80128	Jackson Landing	AB		AB	AB	AB
80129	Mill Creek Landing	A		A	A	A
80130	Flatrock	BD		BD	BD	BD
80131	Flatrock C.G.	A		A	A	A
80134	Old Highway No. 3	AD		AD	AD	AD
80135	McCrea Timber	B		B	B	B
80136	Buffalo SH South	A		A	A	A
80137	Island Park R.S.	A		A	A	A
80138	Buffalo C.G.	A		A	A	A
80139	Island Park Dam	A		A	A	A
80141	Big Springs SH 2	A		A	A	A
80142	Thurmon Ridge	A		A	A	A
80143	Moose Creek SH Area	A		A	A	A
80144	Big Springs Boat Landing	A		A	A	A
80145	Bishop Well	BD		BD	BD	BD
80146	Big Springs Summer Home 1	A		A	A	A
80147	Big Springs C.G.	A		A	A	A
80148	North Fork SH Area	A		A	A	A
80149	IP Sanitary Landfill	A		A	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80150	Warm River Road	ABD		ABD	ABD	ABD
80167	Green Canyon	ABD		ABD	ABD	ABD
80223	Box Canyon Boat Launch	A		A	A	A
80284	Box Canyon C.G.	A		A	A	A
80287	Davis Lake	ABD		ABD	ABD	ABD
80291	Chick Creek	ABD		ABD	ABD	ABD
80292	Chick Creek Flat	ABD		ABD	ABD	ABD
80293	Ridge Road	B		B	B	B
80294	Mesa Falls Scenic Drive D-2	ABD		ABD	ABD	ABD
80301	Island Park Boat Landing	A		A	A	A
80311	Coffeepot	ABD		ABD	ABD	ABD
80327	East Dry Creek	AB		ABJ/2,4	AB/2,4	AB/2,4
80333	Toms Creek Spur	A		A	A	A
80334	Big Bay C. G.	AB		AB	AB	AB
80335	Rocky Point	A		A	A	A
80336	Island Approach	2,4		A/2,4	A	A
80337	Buttermilk C.G.	AD		AD	AD	AD
80338	Lagoon Access	A		A	A	A
80339	Lakeside	A		A	A	A
80357	Orme SH	A		A	A	A
80409	Weeks SH	A		A	A	A
80412	Reservoir North	A		A	A	A
80413	Dike	A		A	A	A
80414	BOR Site	A		A	A	A
80419	Elk Creek	A		A	A	A
80420	Elk Creek Estates-North	A		A	A	A
80421	Macks Substation	A		A	A	A
80422	Outlet No. 1	A		A	A	A
80423	Outlet No. 2	A		A	A	A
80424	Kooch Ranch	A		A	A	A
80426	Buffalo River	A		A	A	A
80437	Fransen Mill	A		A	A	A
80451	Crow Creek	A		A	A	A
80455	East Sawtelle	AD/2,4		AD/2,4	AD/2,4	AD/2,4
80456	West End A	A		A	A	A
80457	West End B	A		A	A	A
80458	West End C	A		A	A	A
80459	West End D	A		A	A	A
80463	Kenny Creek	A		A	A	A
80465	West End C.G.	A		A	A	A
80472	Kick Creek	A/2,4		A/2,4	A/2,4	A/2,4
80474	Big Bend	A		A	A	A
80552	Bishop Burn	BD		BD	BD	BD
80560	Pit	A		A	A	A
80563	Buffalo North	A		A	A	A
80843	Ripley Butte East	2		D/2	D/2	D
80870	Randy's Box Canyon Access	A		A	A	A
80871	Last Chance Fisherman Access	A		A	A	A
80872	Big Springs Snow Park	A		A	A	A
81211	Meadow Cr. Cutoff	BD		BD	BD	BD
81213	Orme Ranch	A		A	A	A
81214	Mickelsen Ranch	A		A	A	A
81217	Buffalo River Spur 1	A		A	A	A
81219	Head of Buffalo	A		A	A	A
81221	Coffee Pot Lodge	A		A	A	A
80628	State Shed Road	A		A	A	A
80371	Mill Creek	1		1,2	B	B
80372	Mill Creek North	A		1,2	A	A
81216	Ice House East	A		1,2	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80373	Trude North	A		A/1,3	A	A
80375	Trude Cut-across	A		A/1,3	A	A
80376	Macks Substation East	A		A	A	A
80378	Stamp Meadows South	A		A	A	A
80631	BPA Powerline/Last Chance	B		B	B	B
80395	Reynolds Pass	B		B	B	B
80126	McCrea Pit	A		4	4	A
80626	Powerline Road (Kilgore)	A		A	A	A
***	Unnamed Spur 5	B		1	1	1
80134	Old Hwy - Last Chance	A		A	A	A
80639	Bishop Well Cutoff	A		1	A	A
80147	Big Springs Campground -Well	A		A	A	A
80431	Island Park Siding Pit	A		A	A	A
80432	Trude South	A		1,3	A	A
80445	Coffeepot Spur	A		1,2	A	A
80446	Outlet 1A	B		B	B	B
80482	Outlet Spur 1B	B		B	B	B
80486	Outlet 2A	B		B	B	B
80632	Lagoon Access-West	A		A	A	A
80633	Fransen Mill South	A		A	A	A
80465	West End South	B		B	B	B
80465	West End East	A		A	A	A
80465	West End North	A		A	A	A
80465	West End Spur 6	A		A	A	A
80465	West End Loop	A		A	A	A
80465	West End Spur	A		A	A	A
80465	West End	B		A	B	B
***	Unnamed Road	B		1,2	1,2	1,2
80611	Coffeepot Lodge B	A		A	A	A
80536	Coffeepot Lodge Spur	A		A	A	A
80559	Coffeepot Lodge Loop	A		A	A	A
80629	Reynolds Rock Pit	AB		AB	AB	AB
80630	Jessie Creek	A		A	A	A
80627	Coffeepot Well	A		A	A	A
80484	Fish Creek A	A		A	A	A
80557	Fir	BD		BD	BD	BD
80509	Defasus Mine	A		A	A	A
80895	Walking Lake	2,4	K/2,4	2,4	2,4	2,4
80614	Coffeepot Lodge Spur C	A		1,2	A	A
80589	Coffeepot Lodge A	A		1,2	A	A
80040	White Elephant	4		4	4	4
80063	Garner Canyon	AB/2,4		AB/2,4	AB/2,4	AB/2,4
80067	West Road	2,4		2,4	2,4	2,4
80068	East Road	2,4		2,4	2,4	2,4
80072	Black Canyon Breaks	2,4		2,4	2,4	2,4
80083	North Fork	2,4		2,4	2,4	2,4
80098	Tie 1	2,4		2,4	2,4	2,4
80099	Dynamite Springs	2		2	2	2
80116	Log Haul No. 7	2,4		2,4	2,4	2,4
80118	Kick Creek Spur	2,4		2,4	2,4	2,4
80340	Bear Canyon	2,4		2,4	2,4	2,4
80394	Reynolds Pass Pit	2,4		2,4	2,4	2,4
80415	Smead Well	2		2	2	2
80417	Ripley Butte South	2		2	2	2
80418	Ripley Butte North	2	H/2	2	2	2
80443	Blind Willow South	2,4		2,4	2,4	2,4
80447	Log Haul 4 Spur 2	2,4		2,4	2,4	2,4
80448	Log Haul 4 Spur 3	2,4		2,4	2,4	2,4
80449	Blind Willow Spur 4	2,4		2,4	2,4	2,4

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80450	Eccles Spur 2	2		2	2	2
80496	Eccles Spur 1	2		2	2	2
80570	Smead Canyon	2		2	2	2
80845	East Fork Sheridian Cr	3		3	3	3
80846	East Fork Sheridian Cr Sp 1	3		3	3	3
80850	Bear Canyon Spur 1	2,4		2,4	2,4	2,4
80852	West Cooney Canyon	2,4		2,4	2,4	2,4
80853	East Cooney Canyon	2,4		2,4	2,4	2,4
80861	Moonshine	2,4		2,4	2,4	2,4
80862	White Lightnin	2,4		2,4	2,4	2,4
81215	Twin Creek	2,4		2,4	2,4	2,4
80369	Ripley North Spur A	2		2	2	2
80396	Dynamite Springs A	2		2	2	2
80397	Eccles Spur 1 West	2		2	2	2
80398	Dynamite Springs Loop	2		2	2	2
80416	Chick Creek West	2		2	2	2
80425	Chick Creek East	2		2	2	2
80495	Eccles Spur 2A	2		2	2	2
80513	Eccles Spur 1A	2		2	2	2
80436	Chick Creek Flat Spur 3	2		2	2	2
80452	Eccles Spur 4	2		2	2	2
80896	West Fork Sheridian Creek	1,2,4	AK	1,2,4	2,4	1,2,4
80121	Dugway Fork-Split Creek	2,4		J/2,4	2,4	2,4
80514	Eccles Spur 1B	2		2	2	2
80069	Thirsty Creek	2	A	2	2	2
80634	Eccles Spur 1C	2		2	2	2
80640	White Lightnin Spur	2,4		2,4	2,4	2,4
80393	Targhee Pass BPA	A		A	A	A
80105	Log Haul No 4	2,4		2,4	2,4	2,4
80465	West End	A*		A*	A*	A*
81209	Black Bear	1,2,4	2	1,2,4	1,2,4	1,2,4
80085	Dead Coyote	1,2,4	5	1,2,4	1,2,4	1,2,4
80106	Stoddard Mill #2	1,2,3	2,4	1,2,3	1,2,3	1,2,3
80001	Railroad/Reas Pass	1,4	A	1,4	1,4	1,4
80216	Garner Headgate		K/2,4			

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **ISLAND PARK**						
TRAILS						
28001	Railroad R-O-W	A		A	A	A
28004	Continental Divide Trail(See Travel Plan)Section of Road #066 - Seasonally Restricted	A		A	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **ASHTON**						
ROADS						
20006	Cave Falls CG	A		A	A	A
20027	Camp Loll	A		A	A	A
20032	Squirrel Meadows Spur 1	A		A/4	A	A
20043	Tillery Lake	A		A	A	A
20047	Fish Lake	A		A	A	A
20048	Loon Lake	A		A	A	A
20064	Hominy Peak Trailhead	A	1	A	A	A
20261	Ashton Flagg Ranch	ABD		ABD	ABD	ABD
20264	Jackass Loop Road	ABD		ABD	ABD	ABD
20265	Coyote Meadows	AB		AB	AB	AB
20582	Cave Falls	AB		AB	AB	AB
***	Unnamed Spur 2	1		1	1	1
***	Unnamed Spur 3	1		1	1	1
20589	Bergman Reservoir	A		A/2,4	A/4	A
80082	Fish Creek	ABD		ABDJ	ABD	ABD
***	Unnamed Spur 200	1		1	1	1
80092	Snow Creek	BD		BD	BD	BD
80094	Snow Creek Butte	AB/2,4		AB/2,4	AB/2,4	AB/2,4
80097	Warm River C.G.	A		A	A	A
80110	Warm River Look Out	AB		AB	AB	AB
80112	Eccles	BD		AB	BD	AB
80120	Bishop Mtn	AB		AB	AB	AB
80124	Wyoming Cr.	AB		AB	AB	AB
80150	Warm River	ABD		ABD	ABD	ABD
***	Unnamed Spur 300	1		1	1	1
80151	Wood Road 6	B		B	B	B
80153	Flat Canyon	AB		AB	AB	AB
80154	Warm River Springs	A		A	A	A
80156	Grave Yard Flats	B		B	B	B
80158	Warm River Butte	2,4		BD/2,4	BD	BD
80159	Gulch	A		A	A	A
80160	Pole Bridge C.G.	A		A	A	A
80161	Baker Draw	BD		BD	BD	BD
80162	Elk Butte	B		B	B	B
80163	Sheep Falls	AB		AB	AB	AB
80164	Anderson Mill Canyon	B		D	D	D
80168	N. Antelope Flat	BD		BD	BD	BD
80169	Sadorus Hill	B		BJ	B	B
80170	Lyle Springs	ABD		ABD	ABD	ABD
80241	Robinson Cr.	BD		BD	BD	BD
80242	Porcupine GS	A		A	A	A
80243	Fall River Ridge	AB		AB	AB	AB
80246	Horseshoe Lake	AB		AB	AB	AB
80261	Ashton-Flagg Ranch	ABD		ABD	ABD	ABD
80263	Conant-Fall River	BD		BD	BD	BD
80264	Jackass Loop	ABD		ABD	ABD	ABD
80265	Coyote Meadows	AB		AB	AB	AB
80286	S. Hatchery Butte	B		B	B	B
80289	Marysville Hill	ABD		ABDJ	ABD	ABD
80294	Mesa Falls-Scenic Drive	ABD		A	ABD	A
80295	Upper Mesa Falls	A		A	A	A
80299	Middle Rock Creek C.G.	A		A	A	A
80303	July Creek	B		B	B	B
80304	Riverside CG	A		A	A	A
80305	Lower Rock Creek C.G.	A		A	A	A
80307	Porcupine C.G.	A		A	A	A
80313	Wood Road 16	A		A	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80314	Wood Road 12	B/1,2		B/1,2	B	B
80315	N. Hatchery Butte	BD		BD	BD	BD
80317	Little Butte	BD		BD	BD	BD
80319	Highpoint	BD		BD	BD	BD
80331	Wood Road 11	B		B	B	B
80341	Lyle Springs Stock Driveway	ABD		ABD	ABD	ABD
80343	Free Use Canyon	B		B	B	B
80344	Rattlesnake	B/1,2		B/2,4	B/2,4	B/2,4
80348	Grandview C.G.	A		A	A	A
80349	Hale Canyon	ABD		ABD	ABD	ABD
80351	East Hatchery Ford	AB		AB	AB	AB
80352	Griffel	AB		AB	AB	AB
80352P	Black Mountain Spring Pit	B		B	B	B
80367	Wood Road 1	ABD		ABD	ABD	ABD
80374	IYTC Camp	A		A	A	A
80380	North Antelope Springs	BD		BD	BD	BD
80470	Shaeffer Creek	B		B	B	B
80501	Fall River Hollow	D		DK	D	D
***	Porcupine Spur	D	1,2,4	DK	D	D
80518	Snow Creek Butte Spur 5	B		B/2,4	B	B
80527	Snow Cr. Cutoff	BD		BD	BD	BD
80552	Bishop Burn	BD		BD	BD	BD
80553	South Antelope Flat	ABD		ABD	ABD	ABD
80555	Stock	BD		BD	BD	BD
80556	Parallel	BD		BD	BD	BD
80557	Fir	BD		BD	BD	BD
80558	Mt. Bell	A		A	A	A
80561	Sheep Ridge	B		B	B	B
80562	Fogg Butte	BD		BD	BD	BD
80572	Big Grassy	AB/2,4		AB/2,4	AB/2,4	AB/2,4
80582	Cave Falls	AB		AB	AB	AB
80584	County Cutoff	AD		AD	AD	AD
80590	REA Power Line	AD		AD	AD	AD
80606	Cold Springs	4		B	B	B
80607	Pioneer	BD		BD/1	BD	BD
80610	Wood Road 14	A		A	A	A
80621	Cinder Butte	A		A	A	A
80700	State Section Access	A		A	A	A
80701	West Hatchery Ford	AB		AB	AB	AB
80724	N. Hatchery Butte Spur 7	2,3		BD	BD	BD
80735	Sheep Falls Spur 1	A		A	A	A
80736	South Hatchery Butte Spur 1A	B		B	2,4	2,4
80760	Sheep Falls Trailhead	A		A	A	A
80764	Power Line Spur 1	2,3		A	A	A
80767	North Antelope Flat Spur 1	2,3		AB	AB	AB
***	North Antelope Flat Spur 3	B/2,3		1,2	1,2	1,2
80771	Antelope Cutoff	BD		BD	BD	BD
80773	Flat Canyon Spur 1	B/2,4		B/2,4	B/2,4	B/2,4
80776	Flat Canyon Spur 3	B/2,4		B/2,4	B/2,4	B/2,4
80779	Hidden Res.	BD		BD	BD	BD
20030	Squirrel Meadows Ranch	A		A	A	A
***	Wood Road 14A	2,3		4	4	4
80361	Thompson Hole	A		A	A	A
***	Unnamed Spur 1	A		1,2	1,2	1,2
***	Unnamed Spur 1	B		1,2	1,2	1,2
***	Unnamed Spur 2	B		1,2	1,2	1,2
80649	Twin Ponds	B		B	B	B
80362	Osborne Pit	A		A	A	A
***	Unnamed Spur 1	AB		1,2	1,2	1,2

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
***	Unnamed Spur 3	AB		1,2	1,2	1,2
***	Unnamed Spur 1	AB		1,2	1,2	1,2
***	Unnamed Spur 1	AB		1,2	1,2	1,2
80363	Little Butte Pit	A		1,2	A	A
***	Unnamed Spur 1	B		1,2	1,2	1,2
80346	Blue Creek Res.	A		1,2	D/2	D
***	Unnamed Spur 1	AB	AD/2,5	1,2	1,2	1,2
***	Unnamed Road	B		1,2	1,2	1,2
***	Unnamed Spur 400	B		1,2	1,2	1,2
***	Unnamed Spur 500	B		1,2	1,2	1,2
***	Unnamed Spur 1	AB		1,2	1,2	1,2
***	Unnamed Spur 1	B		1,2	1,2	1,2
***	Unnamed Spur 3	B		1,2	1,2	1,2
***	Unnamed Spur 1	A		1,2	1,2	1,2
***	Unnamed Spur 2	B		1,2	1,2	1,2
***	Unnamed Spur 1	B		1,2	1,2	1,2
80901	Robinson Ridge	2,3		K/4	1,2	1,2
20026	Lake of the Woods	2	AB	2	2	2
80612	Elk Butte Pit	2,4	A	2,4	2,4	2,4
80647	Conant West	2,4		AB	2,4	2,4
80772	Conant Creek	2,4		ABH/2	2,4	2,4
20642	Moose Lake	2,4		AB	2,4	2,4
20644	South Boone	2,4		AB	2,4	2,4
20645	Boone Bridge	2,4		AB	2,4	2,4
80285	Warm River Power Line	A*		AK*	A*	A*
80900	Search/Mesa Falls	AB		K*/2	2,4	2,4
20034	Hominy Creek	2,4	1	2,4	2,4	2,4
80488	Cow Camp	2,4		2,4	2,4	2,4
80123	Anderson Mill Spur 4	2,4		2,4	2,4	2,4
80516	Anderson Mill Spur 2	2,4		2,4	2,4	2,4
80554	Snow Creek Spur 1	2,4		2,4	2,4	2,4
80571	North Baker Draw	2,4		2,4	2,4	2,4
80578	Long Meadows	2,4		2,4	2,4	2,4
80702	Fish Creek Spur	2,4		2,4	2,4	2,4
80744	Fish Creek Spur 20A	2,4		2,4	2,4	2,4
80368	Yellowstone Ditch	2,4		2,4	2,4	2,4
80345	Rattlesnake Spur 5	2,4		2,4	2,4	2,4
80512	East/West Road	2,4		2,4	2,4	2,4
80491	Huckleberry Ridge	2,4		2,4	2,4	2,4
80749	Fish Creek Spur 3	2,4		2,4	2,4	2,4
80781	Twisted Draw	2,4		2,4	2,4	2,4
20033	Blue Creek Pit	2,4	ABK	2,4	2,4	2,4
80502	Spring Creek	A	K	2	2	2
80226	Mesa Marsh		E			
80393	Bear Gulch BPA		A			
80506	Rock Creek		A			
80648	Dry Creek		A			

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
OPEN TRAILS						
32002	Bitch Creek	A		A	A	A
38001	Railroad ORV Trail	A		A	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **PALISADES**						
ROADS						
20017	4th of July Commissary	ABHI		ABHI	ABHI	ABHI
20020	Long Springs-Alpine 4H	A		AI	AI	AI
20021	Alpine Summer Home	AF		AF	AF	AF
20024	Jordan Canyon	AF		AF	AF	AF
20037	Antelope Creek	AH	see trails	AH	AH	AH
20056	Gibson Creek	I		I	I	I
20057	Bally's Hole	AH		AHJ	AH	AH
20058	Bear Creek-Elk Jensen	ABI		ABI	ABI	ABI
20055	Bear Creek-Corral Road	AI		AI	AI	AI
20059	Long Gulch	AI		AI	AI	AI
20065	Fisher Road	A		A	A	A
20066	Blacktail Can-Pt Lookout	ABI		ABIJ	ABI	ABI
20070	Nelson Creek	AHI	see trails	AHI	AHI	AHI
20074	McNeel Creek	A		A	A	A
20076	Snake River-Calamity	AI		AI	AI	AI
20077	Fall Creek-Skyline	ADHI		ADHIJ	ADHI	ADHI
20079	Fleming Road	A		A	A	A
20081	Garden Canyon	AI		AJ	A	A
20082	Pritchard Creek	AI		AJ	A	A
20083	South Fork Bear Creek	I		I	I	I
20084	Lava Creek	AI		AI	AI	AI
20085	South Fork Fall Creek	I		AI	AI	AI
20086	Brockman Creek	AFHI		AFHI	AFHI	AFHI
20087	Salt River-McCoy	ABFHI		ABFHIJ	ABFHI	ABFHI
20138	Trout Creek	AI		AI	AI	AI
***	Corral Ridge	AI		4	4	4
20151	Sawmill Creek	ABI		ABI	ABI	ABI
20157	Indian Fork	AI		AI	AI	AI
***	Brockman Ridge	ADI		2,3,4	2,3,4	2,3,4
20159	Lombard Corral	DI		DI	DI	DI
20161	Indian Creek	AI		AI	AI	AI
20170	Rash Canyon	AI		AI	AI	AI
20060	Bagley	A/6		A/6	A/6	A/6
20173	South Fork Lava Creek	I		I	I	I
20067	McCoy Creek Campground	A		A	A	A
20182	Bates Canyon	AI		AIJ	AI	AI
20211	Lone Pine Ridge	ABI		ABI	ABI	ABI
20247	Bear Creek Trailhead	A		A	A	A
20248	Brockman GS	AH		AH	AH	AH
20274	Hell Creek	A		A	A	A
20277	Gravel Flats	A		A	A	A
***	Calamity Shortcut	I		1,3,6	1,3,6	1,3,6
20162	Mike Spencer Spur	I		IJ	I	I
20279	Tag Alder	AI		AI	AI	AI
20283	Brockman Basin	I		I	I	I
20286	Pat Canyon	ABDHI		ABDHI	ABDHI	ABDHI
20288	Hawthorne Hollow	ABI		ABI	ABI	ABI
20376	June Creek	ABI		ABI	ABI	ABI
20863	West Fork Elk Creek	AB		AB	AB	AB
80206	South Fork Snake	ABHI		ABHIJ	ABHI	ABHI
***	South Fork Snake Spur 1	I		1,3,4	1,3,4	1,3,4
80210	Big Burns	AH		AHJ	AH	AH
80212	Fullmer/Cottonwood Landing	A		AI	AI	AI
80213	Hinckley Creek	ABI		ABIJ	ABI	ABI
80217	Table Rock Canyon	AHI		AHIJ	AHI	AHI
80218	Kelly Canyon	AHI		AHIJ	AHI	AHI
80222	Browning Creek	A		AJ	A	A
80227	Cold Spring	I		I	I	I

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80229	Fleming Canyon	AB		AB	AB	AB
80230	West Pine Creek	A		AJ	A	A
80232	Graham Hollow	ABHI		ABHIJ	ABHI	ABHI
80238	Table Rock C.G.	A		A	A	A
80248	Pine Basin Ski Area	ABH	ABH/2,4	ABH	ABH	ABH
80250	Mike Spencer	ABI		ABJK	ABI	ABI
80252	Tie Canyon	AI		AIJ	AI	AI
80253	Upper Rainey Creek	ABDI		ABDIJ	ABDI	ABDI
80255	Palisades Campground	A		A	A	A
80257	Lower Rainey Creek	AB		ABJ	AB	AB
80258	North Moody Road	ABI		ABIJ	ABI	ABI
80259	Sawmill Canyon	A		A	A	A
80260	Sheep Creek	ABI		ABI	ABI	ABI
***	Sheep Creek 200 Spur	ABI		2,3	2,3	2,3
80262	Big Elk Creek	ABF		ABFJ	ABF	ABF
80268	Little Elk Creek	AI		AIJ	AI	AI
80270	Big Elk Creek Campground	A		A	A	A
80271	Blowout Canyon	ABI		ABI	ABI	ABI
80281	South Indian	ABI		ABIJ	ABI	ABI
80282	North Indian	AI		AIJ	AI	AI
80318	Windy Ridge	AI		AI	AI	AI
80399	Spaulding's Road-Table Rock	A		A	A	A
80401	Adams Homestead	AH		AH	AH	AH
80404	Spring Run	I		I	I	I
***	Fish Cr Sp 1-South Moody	AI		2,3,4	2,3,4	2,3,4
***	Fish Cr Sp 2-South Moody	AI		2,3,4	2,3,4	2,3,4
80467	Big Elk Creek Boat Landing	A		A	A	A
80651	Moody Swamp	ABFI		ABFIJ	ABFI	ABFI
80883	Wolverine	AI		AIJ	AI	AI
80887	Buckskin Morgan	ABI		ABI	ABI	ABI
***	Commissary Ridge Spur 3	I		2,4	2,4	2,4
20038	Alpine Cemetary Road	A		A	A	A
20019	Haul Road	A		A	A	A
20014	Pond Road	A		AI	AI	AI
***	Long Gulch E Spur	AI		2,4	2,4	2,4
20001	Fisher A Spur	A		A	A	A
20002	Fisher B Spur	A		A	A	A
***	Blacktail-Point Lookout A Spur	I		2,4	2,4	2,4
***	Blacktail-Point Lookout B Spur	I		2,4	2,4	2,4
***	Blacktail-Point Lookout C Spur	I		2,4	2,4	2,4
***	Blacktail-Point Lookout D Spur	AI		2,4	2,4	2,4
20072	Hawthorne Hollow County Road	AI		AI	AI	AI
20040	Spring Creek Boat Landing	AI		AI	AI	AI
***	River Access	A		1,4	1,4	1,4
20004	Bed Ground Road	I		I	I	I
***	Fall Creek-Skyline Spur 3	A		2,4	2,4	2,4
***	Fall Creek-Skyline Spur9	I		2,4	2,4	2,4
***	Fall Creek-Skyline Spur 10	I		2,4	2,4	2,4
***	Fall Creek-Skyline Spur 20	I		2,4	2,4	2,4
***	Fall Creek-Skyline Spur 33	I		2,4	2,4	2,4
***	Fall Creek-Skyline Spur 444	I		2,4	2,4	2,4
***	Fall Creek-Skyline Spur 200	I		2,4	2,4	2,4
20003	Phosphate Canyon	I		I	I	I
***	Lava Creek Spur 1	A		3,4	3,4	3,4
20005	Little Box	A		A	A	A
20102	Fish and Game A Spur	AI		AI	AI	AI
***	Corral Ridge Spur 143A	A		2,4	2	2
20073	Falls Creek Campground	A		A	A	A
20183	Falls Creek Campground Water System	A		A	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
***	Indian Fork Spur 4	I		4	4	4
***	Indian Creek A Spur	A		4	4	4
***	Rash Canyon Willow Spring Sp	I		2,3	2,3	2,3
***	Rash Canyon Extension	I		2,3	2,3	2,3
20242	Calamity C.G. Water System	A		A	A	A
20023	Gravel Flats Spur	AI		AI	AI	AI
20022	Antelope Creek, Head	AH		AHJ	AH	AH
20042	Little Box Canyon	AI		AI	AI	AI
20281	Tissue Point	AI		AI	AI	AI
***	Calamity Shortcut Spur 1	AI		1,2,3	1,2,3	1,2,3
***	Calamity Shortcut Spur 2	AI		1,2,3	1,2,3	1,2,3
***	June Creek Spur	I		2,3	2,3	2,3
***	Alpine Boat Landing Spur 2	A		1,3	1,3	1,3
***	Alpine Boat Landing Spur 3	A		1,3	1,3	1,3
***	Alpine Boat Landing Spur 4	A		1,3	1,3	1,3
80254	Roller Canyon	AI		AI	AI	AI
80277	Shurtliff Canyon	A		A	A	A
80283	Oakden Canyon	A		A	A	A
80302	Holland Canyon	A		A	A	A
***	Unnamed Road	A		1,2,3	1,2,3	1,2,3
80353	Mud Springs	A		A	A	A
***	Kelly Canyon Spur 1	I		3,4	3,4	3,4
***	Kelly Canyon Spur 2	I		3,4	3,4	3,4
80343	Kelly Sheep Corrals	A		A	A	A
***	Kelly Canyon Spur 4	I		3,4	3,4	3,4
***	Kelly Canyon Spur 5	I		3,4	3,4	3,4
80342	Morning Glory Mine	AI		AI	AI	AI
***	Kelly Canyon Spur 8	I		3,4	3,4	3,4
***	Kelly Canyon Spur 10	I		3,4	3,4	3,4
***	Kelly Canyon Spur 11	I		3,4	3,4	3,4
***	Browning Creek Spur 1	I		3,4	3,4	3,4
***	Browning Creek Spur 2	I		3,4	3,4	3,4
***	Browning Creek Spur 3	I		3,4	3,4	3,4
***	Fleming Canyon Spur 1	I		3,4	3,4	3,4
80232	Graham Hollow Spur 1	I	J	3,4	3,4	3,4
***	Graham Hollow Spur 2	I		3,4	3,4	3,4
80234	Lower Rainey Diversion	AI		AI	AI	AI
***	North Moody Spur 1	I		3,4	3,4	3,4
***	North Moody Spur 2	I		3,4	3,4	3,4
***	North Moody Spur 3	I		3,4	3,4	3,4
***	North Moody Spur 5	I		3,4	3,4	3,4
***	North Moody Spur 6	I		3,4	3,4	3,4
80231	Butler Canyon Road	AI		AI	AI	AI
***	Windy Ridge Spur 1	AI		3,4	3,4	3,4
***	Windy Ridge Spur 2	I		3,4	3,4	3,4
80400	Byrnes Homestead	AH		AH	AH	AH
***	Fish Creek South Moody Spur A	I		3,4	3,4	3,4
***	Moody Swamp Spur 1	AI		3,4	3,4	3,4
***	Moody Swamp Spur 2	AI		3,4	3,4	3,4
***	Moody Swamp Spur 3	AI		3,4	3,4	3,4
***	Moody Swamp Spur 4	AI		3,4	3,4	3,4
***	Wolverine Spur 1	I		3,4	3,4	3,4
80903	BPA Powerline B Spur	A		4	4	4
80903	BPA Powerline C Spur	A		4	4	4
***	Stateland	A		3,4	3,4	3,4
***	Private A	A		3,4	3,4	3,4
***	Private B	F		3,4	3,4	3,4
20035	Jordan Canyon Access	A		AF	AF	AF
80233	Little Sheep Road	A		A	A	A
80211	Table Rock Pit Road	A		A	A	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
80004	Alpine Boat Landing	A		A	A	A
20009	Papoose Creek (private)	A		A	A	A
20868	Hoffman Summer Home Loop	AD		AD	AD	AD
80329	Blowout Boat Ramp	A		A	A	A
20181	Hoffman Summer Home Area	A		A	A	A
20061	Calamity Summer Home Road	A		A	A	A
20062	Palisades Summer Homes	A		A	A	A
80269	Sheep Creek Summer Home Loop	A		A	A	A
80402	Mennonite Camp Road	A		A	A	A
20078	Boy Scout Camp Little Lemhi	A		A	A	A
20241	Calamity Campground	A		A	A	A
80322	Dry Canyon	A		4	4	4
80220	Tirnber	A		4	4	4
80221	Upper Tirnber Drive	A		J/4	4	4
80251	Lower Farnes	AI	K*	K	2,4	K
80273	Garner Ponds	A		2,4	2,4	2,4
80274	Upper Browning Creek	A		2,4	2,4	2,4
80659	Argument Ridge	A		2,4	4	2,4
80882	Kelly Mtn. Spur	A		4	4	4
20386	Travertine Mine Spur	AI		4	4	4
20406	Deer Creek	A		2,4	2,4	2,4
20166	Hoffman Water User	A		4	4	4
20167	Hoffman CG Water	A		4	4	4
80320	BPA Power Line	A		4	4	4
20320	BPA Power Line	A		4	4	4
80321	BPA Power Line	A		4	4	4
20069	Hoffman Campground	A		4	4	4
20280	Snake River Boat Club	A		HI	HI	HI
80256	Upper Farnes	AI*		AIJ*	AI*	AI*
80881	Kelly Mtn. Road	A*		AI*	A*	AI*
***	Lower Farnes Spur 1	A*		4	4	A
***	Upper Farnes Spur 3	A*		4	4	4
***	Upper Farnes Spur 4	A*		4	4	4
***	Upper Farnes Spur 5	A*		4	4	4
***	Upper Browning Creek Spur 2	A*		4	4	4
***	Garner Ponds Spur 1	A*		4	4	4
***	Argument Ridge A Spur	A*		4	4	4
***	Upper Farnes Spur 1	A*		4	4	4
80885	Cold Springs Road	A*		AJ*	A*	A*
***	Indian Fork Spur 1	I		4	4	4
***	Indian Fork Spur 2	I		4	4	4

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **PALISADES**						
TRAILS						
48196	Road Canyon Trail	A		K,J	2,4	2,4
42045	South Fork Indian Creek (sr)	BI		BI	BI	5
42046	Big Basin	BI		2,5	2,5	5
42053	Green Knoll	I		2,3	2,3	2,3
42055	Long Springs	BI		BI	BI	5
42061	Driveway Canyon	BI		BI	BI	5
42056	Divide	DI	DI/2,3,4	DI	G	A
42057	Burnt Timber	DI	2,5	K	DI	5
42058	Deadhorse	BI	2,5	BI	BI	5
42166	Antelope Creek		D			
42122	North Indian (sr)	BI		BI	BI	5
45004	Black Mountain	ADI		ADI	ADI	ADI
45026	Garden Creek	AI		AIJ	A I	A
45027	Pritchard Creek	AI		AIJ	AI	AI

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
45028	Porcupine Creek	AI		AI	AI	AI
45029	Bear Creek Sheep	AI		AI	AI	AI
45030	South Fork Fall Creek	AI		AI	AI	AI
45032	South Fork Rash Canyon	AI		AI	AI	AI
42127	Oat Canyon	BI	2,5	BI	BI	BI
45033	Fourth of July Ridge	AI		AI	AI	AI
45034	Fourth of July-Red Ridge	AI		AI	AI	AI
45035	Red Ridge	AI		AI	AI	AI
45036	Yeaman Creek	I		2,3,4	2,3,4	2,3,4
45037	Russell Creek	AI		AI	AI	AI
45038	Deadhorse Ridge	AI		AIJ	AI	AI
45039	Indian Creek	AI		AI	AI	AI
45040	White Springs	A		A	A	A
45041	Little Elk Mtn.	A		A	A	A
45042	Deadman Creek	I		I	I	I
45043	Currant Creek	I		I	I	I
45044	Muddy Creek	AI		AI	AI	AI
45047	Bear Creek	AI		AI	AI	AI
45048	South Fork Bear Creek	I		I	I	I
45049	North Fork Bear Creek	AI		AI	AI	AI
45126	Box Canyon	I		2,3,4	2,3,4	2,3,4
45130	Elk Mountain Ridge	I		I	I	I
45138	Garden Pritchard	AI		AI	AI	AI
45140	Horse Creek	AI		AI	AI	AI
45142	Echo Canyon Indian Creek	AI		AIJ	AI	AI
45144	Golden Gate	AI		AI	AI	AI
45148	Warm Springs	AI		AI	AI	AI
45157	Five Pine	I		AI	AI	AI
45158	Poker Peak	I		1,2,3,4	1,2,3,4	1,2,3,4
45159	Big Springs	I		1,2,3,4	1,2,3,4	1,2,3,4
48031	Hawley Gulch	AI		AI	AI	AI
48060	Carlton Cutoff	ADI		ADI	ADI	ADI
48201	Mike Spencer Loop	AI		AIJ	AI	AI
48064	Coalmine Canyon	AI		AIJ	AI	AI
48066	North/South Rainey Creek	AI		AIJ	AI	5
48067	Prospect Peak	AI		AIJ	AI	AI
48068	Big Burns Creek	AI		AIJ	AI	AI
48070	Hells Hole	A		AJ	A	A
48071	Little Burns Creek	AI		AI	AI	AI
48073	Little Burns Black Canyon	AI		AI	AI	AI
48167	Nelson Creek		D			
48074	Black Canyon	AI		AIJ	AI	AI
48076	Castle Lake	AI		AI	AI	AI
48077	Thousand Springs	ADI		ADIJ	ADI	ADI
48078	West Pine	AI		J/2,3,4	2,3,4	2,3,4
48079	Fleming Canyon	AI		AI	AI	AI
48080	Dry Canyon	AI		AI	AI	AI
48082	Wolverine Creek	AI		AI	AI	AI
48089	North Fork Rainey Creek	AI		AIJ	AI	5
48090	South Fork Rainey Creek	AI		AIJ	AI	5
48092	Water Canyon	I		2,3,4	2,3,4	2,3,4
48094	Dry Elk	I		2,3,4	2,3,4	2,3,4
48120	Spring Run	I		2,3	2,3	2,3
48155	South Fork Rim	AI		AI	AI	AI
48200	Tie Canyon	I		J/2,3,4	2,3,4	2,3,4
48065	Spencer Mountain	AI		AIJ	AI	AI
48122	North Indian			J		
42192	Green Knoll Hunter	A		2,3	2,3	2,3
42209	Red Slide	I		3	3	3
45021	Basin	I		I	I	I

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
45022	Pritchard Cr Cutoff	A		A	A	A
45023	Jim Hill	AB		AB	AB	AB
45024	Tag Alder	I		I	I	I
45025	Pritchard Nelson Creek	I		I	I	I
48005	Williams Creek			J		
45002	Thunder Mountain	I		2,3,4	2,3,4	2,3,4
45156	Pine Creek	I/2,3		2,3,4	2,3,4	2,3,4
45208	Red Ridge Repeater	A		A	A	A
45199	Little Currant	I		2,3	2,3	2,3
48125	Dry Canyon			J		
45059	Long Gulch /Indian	AI		AI	AI	AI
45013	Flatiron Pond	I		I	I	I
48051	Sheep Driveway	I/3,4		JI/3,4	I/3,4	I/3,4
45141	Flat Iron	A		A	A	A
45146	Hunter	I		I	I	I
48097	Big Elk Creek			J		
48117	Little Sheep	AI		2,3	2,3	2,3
48100	Sheep Creek - Little Elk	I		2,3	2,3	2,3
48115	Rainey Creek	AI		AIJ	AI	AI
48119	Quaker Flat	I		2,3	2,3	2,3
48131	Lookout Mountain	AI		AI	AI	AI
48139	Morning Glory Mine	AI		AIJ	AI	AI
48151	Little Elk Creek			J		
48169	Leaning Fir	ADI		ADI	ADI	ADI
48083	South State	I		I	I	I
45123	Blowout	I		2,3,4	2,3,4	2,3,4
48106	Garden Canyon	I		2,4,5	2,4,5	2,4,5
48086	Corral Canyon	A		JK/3	2,3,4	2,3,4
48087	Burnt Can-Dry Fork	A		JK	2,4	2,4
48116	Spring Canyon	A		JK	2,4	2,4
48210	North Indian Pass	I		2,3,4,5	2,3,4,5	2,3,4,5
48207	Upper Tie Canyon	I		J/1,2,3,4	1,2,3,4	1,2,3,4
48150	Fogg Hill	I		2,3	2,3	2,3
48091	Thompson Peak	I		J/2,3	2,3	2,3
48081	Hunts Corral	I/2,3		J/2,3,4	2,3,4	2,3,4
48107	Corkscrew	I		2,3,4	2,3,4	2,3,4
48103	Palisades Peak Ridge			J/2,3,4		
48104	Dry Canyon			J/2,3,4		
48111	Sheep Camp			J/2,3,4		
48093	Ice Cold			J/2,3,4		
48085	Upper Palisades Creek			J/2,3,4		
48084	Lower Palisades Creek			J/2,3,4		
48153	Chicken Springs Creek			J/2,3,4		
48149	Chicken Springs Ridge			J/2,3,4		
48052	North Fork Palisades Creek			J/2,3,4		
48095	Elbow Fork		J/2,3,4			
48088	Poison Creek			J/2,3,4		
48174	Pale Canyon			J/2,3,4		
48069	Trail Canyon			J/2,3,4		
48202	Fogg Hill/N. Fork Palisades			J/2,3,4		

(sr) These trails are seasonally restricted from 9/15 to 11/15.

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
DISTRICT: **TETON BASIN**						
ROADS						
20007	North Leigh	ABI		ABI	ABI	ABI
20008	South Leigh	ABI		ABI	ABI	ABI
20009	Teton	ABHI		ABJI	ABHI	ABI
20010	Rapid Creek	AH		AI	A	AI
20011	Teton Creek Spur	AI		AI	AI	AI
20012	Darby Canyon	ABHI		ABI	ABHI	ABI
20013	Dry Ridge	AIB		AIB	AIB	AIB
20016	Trail Creek C.G.	AI		AI	AI	AI
20025	Fred's Mountain	ABFI		ABFI	ABFI	ABFI
20049	Teton Campground	AI		AI	AI	AI
20050	Darby Girls Camp	AI		AI	AI	AI
20063	Fox Creek	ABH		ABI	AB	ABI
20098	Reunion Flat	A		AI	A	AI
20099	Horse Transfer Station	AI		AI	A	AI
***	Tiehack Spur 4	1,2,4		1,2,4	1,2,4	1,2,4
20125	Swanner Cr	1,2,4		1,2,4	1,2,4	1,2,4
20254	South Jackpine	AI/1,2,4		AI/1,2,4	AI/1,2,4	AI/1,2,4
20255	Steep Creek	AI		AI	AI	AI
20266	Jackpine/Pinochle	ABI		ABIJ	ABI	ABI
20267	Rammell Mountain	AH		AJ	AH	A
20276	Moose Creek	ABI		ABI	ABI	ABI
20383	Pole Canyon North	ABI	J	ABI	ABI	AI
20656	Indian Meadows	AI		AI	AI	AI
20809	Briggs Cabin	ABI		ABJI	ABHI	ABI
20813	Poachers Trail	AI		AI	AI	AI
20818	Commissary Ridge	1,2,4		A	A	A
80013	Dry Ridge	ABI		ABI	ABI	ABI
80207	Birch Spur	AI		AI	AI	AI
80219	Relay Ridge	ABI	ABI	ABIJ	ABI	ABI
80235	Horseshoe-Packsaddle	ABI	ABI	ABIJ	ABI	ABI
80236	Mahogony Creek	1,3	AB	ABJ	AB	AB
80237	Patterson Creek	AB	AB	ABJ	AB	AB
80239	Mike Harris	AI	AIJ	AI	AI	AI
80253	Upper Rainey	ABDI	ABDI	ABDIJ	ABDI	ABDI
80266	Jackpine-Pinochle	ABI	ABI	ABIJ	ABI	ABI
80267	Rammell Mountain	AH		AJ	AH	A
80276	Moose Creek	ABI	ABI	ABIJ	ABI	ABI
80328	Kirkham Hollow	ABI/1,2,3	ABI	ABJI/1,4	ABI/1,2,3	ABI/1,4
80330	Mike Harris Campground	AI		AI	AI	AI
80381	Rammel Hollow Rd-Packsaddle	A	A	AJ	AH	A
80383	Pole Canyon North	ABI	ABJI	ABI	AI	ABI
80543	Henderson Creek	AB	ABJ	AB	AB	AB
80544	Dry Fork Henderson	A	A	AJ	A	A
80546	Grove Creek	AB	AB	ABJ	AB	AB
80547	Pole Canyon South	ABI	ABI	ABIJ	ABI	ABI
80657	Grandview Guard Station	A	A	J/1,2,3	AH	1,2,3
80663	Grandview Main	ABI		ABIJ	ABI	ABI
80800	Carlton Creek	1,2		A	A	A
80802	Maytag	A		A	A	A
80809	Briggs Cabin	ABI		ABJI	ABHI	ABI
80175	Spur 18	AH		A	AH	A
80922	Bleggi Gooseneck	1,2,4	A/1,2,3	A J/1,2,4	1,2,4	1,2,4,5
***	Teton Canyon Spur 4	A		1,3	1,3	1,3
***	Teton Canyon Spur 6	A		1,3	1,3	1,3
***	Teton Canyon Spur 11	A		1,3	1,3	1,3
20019	Teton Pass/Microwave Station	A		1,4	1,4	1,4
20672	Baldy Knoll	AH		AJ	AH	A

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
20509	Baldy Knoll Spur 1	AH		1,3	AH	1,3
20912	Pinnical Road	AHI		AJI	AHI	AI
80031	BPA Powerline	AI	AIJ	AI	AI	AI
80088	Irene Creek (Spur 16)	AI	AJ	A	E	E
***	Spur 1	A		1,2,4	1,2,4	1,2,4
80209	Graham Springs	AI	AI	AIJ	AI	AI
80508	Packsaddle Dam	AI		AI	AI	AI
***	Spur 4	A		1,2,4	1,2,4	1,2,4
***	Spur 5	A		1,2,4	1,2,4	1,2,4
***	Spur 1	D		2,4	2,4	2,4
***	Spur 2	D		2,4	2,4	2,4
***	Spur 4	D		2,4	2,4	2,4
***	Spur 6	D		2,4	2,4	2,4
20018	Coal Creek	AI		AI	AI	AI
20466	Mail Cabin	AI		AI	AI	AI
80309	Pine Creek C.G.	AI		AI	AI	AI
20044	Bustle Creek	AI		A	A	A
20045	Dry Creek Power Lne	AI		A	A	A
20046	Cold Springs	A		A	A	A
80194	D (Horseshoe/Packsaddle)	AI		AI	E	2,4
20088	Kiln Creek	A*		A *	D	A
***	Kiln Cr. Spur 2	2		2,4	2,4	2,4
***	Tiehack 3	1,2,4		1,2,4	1,2,4	1,2,3
***	Tiehack 4	1,2,4		1,2,4	1,2,4	1,2,4
***	Bitch Creek	1,2,4		1,2,4	1,2,4	1,2,4
***	Tiehack Spur 1	1,2,4		1,2,4	1,2,4	1,2,4
***	Cave	1,2,4		1,2,4	1,2,4	1,2,4
***	Slow Elk	1,2,4		1,2,4	1,2,4	1,2,4
***	Jackpine Boundary	1,2,4		1,2,4	1,2,4	1,2,4
***	Jackpine Boundary S	1,2,4		1,2,4	1,2,4	1,2,4
***	809 D	1,2,4		1,2,4	1,2,4	1,2,4
***	Briggs Cabin Spur 1	1,2,4		1,2,4	1,2,4	1,2,4
20819	Wildcat	1,2,4		1,2,4	1,2,4	1,2,4
80321	BPA Road	2,3		J/2,3	2,3	2,3
80074	E-Spur 4	AI*	E*	EJ*	E*	E*
80070	J Spur 5	A*	EJ*	E*	E*	E*
80075	L Spur 12	A*	EJ*	E*	E*	E*
80076	M Spur 13	A*		E*	E*	E*
80155	N Spur 14	A*		E*	E*	E*
80073	O Spur 15	A*		E*	E*	E*
80140	B Spur 17	E*	EJ*	E*	E*	E*
80388	Wright Creek	1,2,4		A	1,2,4	1,2,4,5
***	Bitch Cr. N. Jackpine	1,2,4		1,2,4	1,2,4	1,2,4
80913	Sherman Springs	AH		AH	AH	AH
***	Twodraw	1,2,4		1,2,4	1,2,4	1,2,4
***	Horse Creek	1,2,4		1,2,4	1,2,4	A
80804	Tiehack Spur 2	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
***	Tiehack Spur 5	1,2,4		1,2,4	1,2,4	1,2,4
80806	Decoster	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
80807	Decoster Spur	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
***	867A (Morris Creek)	1,2,4		1,2,4	1,2,4	1,2,4
20089	Kiln Creek Spur 1	1,2,4		1,2,4	1,2,4	1,2,4
80545	Smith Canyon	A	J	A	A	A
20816	Badger Springs Spur 1	AI/1,2,4		AI/1,2,4	1,2,4	AI/1,2,4
***	Pole Canyon Spur	1,2,4		1,2,4	1,2,4	1,2,4
20386	Juniper	1,2,4		1,2,4	1,2,4	1,2,4
20392	Tiehack	1,2,4		1,2,4	1,2,4	1,2,4
20538	Grouse Cr Spur	1,2,4		1,2,4	1,2,4	1,2,4
20539	Wiggleton Hollow	1,2,4		1,2,4	1,2,4	1,2,4

ROAD		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
20540	Bear Walk	1,2,4		1,2,4	1,2,4	1,2,4
20541	Bear Walk Spur	1,2,4		1,2,4	1,2,4	1,2,4
20627	Yellow Cr	1,2,4		1,2,4	1,2,4	1,2,4
20651	Grouse Cr	1,2,4		1,2,4	1,2,4	1,2,4
20667	PolePatchA	1,2,4		1,2,4	1,2,4	1,2,4
20668	PolePatch B	1,2,4		1,2,4	1,2,4	1,2,4
20817	Little Dry Cr	1,2,4		1,2,4	1,2,4	1,2,4
***	Steep Creek Spur	1,2,4		1,2,4	1,2,4	1,2,4
80033	BPA Powerline	2,4		2,4	1,2,4	1,2,4
80382	Teepee	1,2,4		1,2,4	1,2,4	1,2,4
80208	Klein Spur	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
80387	Pony Bench	1,2,4		1,2,4	1,2,4	1,2,4
80389	Tepee Ridge	1,2,4		1,2,4	1,2,4	1,2,4
80390	Packsaddle Ridge	A		1,2,4	1,2,4	1,2,4
80392	Tiehack	1,2,4		1,2,4	1,2,4	1,2,4
80654	Teepee Ridge	1,2,4		1,2,4	1,2,4	1,2,4
80655	Lower Teepee	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
80385	Pole Canyon Spur	1,2,4		1,2,4	1,2,4	1,2,4
80658	Reservoir	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
***	Dry Creek	1,2,4		1,2,4	1,2,4	1,2,4
80664	Boundary Creek	1,2,4		J/1,2,4	1,2,4	1,2,4
80665	Crooked Creek	1,2,4		J/1,2,4	1,2,4	1,2,4
80666	Pony Creek	1,2,4		1,2,4	1,2,4	1,2,4
80803	Carlton Cr. Spur	1,2,4		1,2,4	1,2,4	1,2,4
80816	Calamity	1,2,4		1,2,4	1,2,4	1,2,4
80822	Kirkham Hollow Spur	1,2,4		1,2,4	1,2,4	1,2,4
80951	Mill Creek Ridge	1,2,4	J/1,2,4	1,2,4	1,2,4	1,2,4
***	Wildcat	1,2	J/1,2	1,2	1,2	1,2
80391	Wright Creek Spur	1,2,4		1,2,4	1,2,4	1,2,4
80902	Rex Spring	A		1,2,4	1,2,4	1,2,4

TRAIL		ALTERNATIVE				
NUMBER	NAME	1(M)	3M+R	3M+	3M	3M-
52077	Red Creek	A		3,4,5	3,4,5	3,4,5
58065	Blacktail	ADI	ADI	ADIJ	ADI	ADI
58069	Spur 1	A		AJ	3,4	A
58211	Henderson Cut Off	A	J	A	3,4	3,5
58070	Dry Henderson	AI	A	AJ	AI	3,5
58051	Sheep Driveway (1000 SPR)	ADI/1,3	ABI/1,3	ADJI/1,3	ADHI/1,3	ADI/1,3
52032	Spring Creek	AI		A	AI	AI
52034	Aspen	AI		2,3	2,3	2,3
52043	Burbank	A		3,4	3,4	3,4
58049	Mike Harris-Mail Cabin	A	3,4	J/3,4	3,4	3,4
58174	Pole Canyon	AI	JI	AJI	AHI	3,5
58053	Big Hole Crest	AI	AI	AIJ	AI	AI
58056	South Horseshoe	AI	AIJ	AI	AI	AI
58057	N. Mahogany-Elk Flat	AI	AI	AIJ	AI	AI
58062	Elk Flat-Relay Ridge	AI	AI	AIJ	AI	AI
58063	Canyon Creek-South Fork	AI	AI	AIJ	AI	AI
58064	Canyon Creek-North Fork	3,4	AI	AIJ	AI	AI
58066	Garns Mountain	AI	AI	AIJ	AI	AI
58067	Hilton	AI		AIJ	ADI	AI
58069	Twin Creek	AI	AI	AIJ	ADI	AI
58071	Wet Henderson	AI	AIJ	AI	A	3,5
58072	Grove	AI	AIJ	AI	AI	AI
58078	North Pine	AI	AIJ	AI	AI	2,3,5
58079	Rocky Peak	AI		AIJ	AI	AI
52013	Dry Ridge	A		2,3,4	2,3,4	2,3,4
52015	Indian Meadows-Bear Canyon	A		2,3,4	2,3,4	2,3,4
52036	North Game Creek	A		2,3,4	2,3,4	2,3,4
***	Gov. Pack Trail A	AI		3,4	2,3,4	3,4
58030	Gov. Pack Trail B	AI	AIJ	AI	AI	AI
58047	Wood Canyon Ridge	A		J/3,4	3,4	3,4
58052	Smith Canyon	A	AIJ	AI	A	AI
58054	Fork of Patterson	AI	AIJ	AI	AI	2,3,4,5
58058	Wright Trail	A		3,4	3,4	3,4
58059	Graham Trail	AI		AIJ	AI	AI
58060	Carlton Cutoff	A	A	AJ	A	A
58108	Middle Twin Creek		K			
58031	BPA Line	I	IJ	I	I	I
58061	Calamity Creek	AI	AI	AIJ	AI	3,4,5
58014	Allen Canyon	3,4		AI	AI	AI
58081	Murphy Creek	3,4		AIJ	AI	3,4,5
58076	Corral Creek	AI		3,4,5	3,4,5	3,4,5
58195	Nickerson Grove	3,4		AI	3,4	AI
58073	Drake Creek	AI	J	AI	AI	2,3
58044	Mail Cabin	2,3	J/2,3	2,3	2,3	2,3
58095	Elbow Flat	2,3	J/2,3	2,3	2,3	2,3
58075	Liars Pass		K	2,3		
58031	BPA Powerline Trail	1,2,4	AJ	A	A	A
58081	Murphy Creek	1,2,3	J/1,2,3	1,2,3	1,2,3	1,2,3
58164	McRenolds		2,3			

APPENDIX D

BIOLOGICAL EVALUATION AND BIOLOGICAL ASSESSMENT PROCESS

The Biological Evaluation (BE) and Biological Assessment (BA) for the 1997 Forest Plan Revision FEIS have been reviewed and considered in relation to the analysis of this FEIS. As indicated by the analysis in Chapter IV of this FEIS, there are no consequences which would indicate any different conclusions than those reached in the Biological Evaluation and Biological Assessment for the 1997 Forest Plan Revision. The summary of conclusion of effects for sensitive species is displayed in the following table.

SENSITIVE SPECIES BIOLOGICAL EVALUATION
SUMMARY OF CONCLUSION OF EFFECTS
for the
AGENCY PREFERRED ALTERNATIVE

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
WILDLIFE SPECIES				
Northern Goshawk		X		
Flammulated Owl		X		
Boreal Owl		X		
Great Gray Owl		X		
Trumpeter Swan		X		
Spotted Frog		X		
Common Loon		X		
Harlequin Duck	X			
Spotted Bat	X			
Townsend's Big-eared Bat	X			
Fisher		X		
Wolverine		X		
Three-toed Woodpecker	X			
Cutthroat Trout		X		
PLANT SPECIES				
Pink agoseris (*Agoseris lackschewitzii*)		X		
Sweet-flowered rock jasmine (*Adrosace chamaejasme* var. *carinata*)		X		
Lost River milkvetch (*Astragalus amnis-amissi*)	X			
L1emhi milkvetch (*Astragalus aquilonius*)		X		
Meadow milkvetch (*Astragalus diversifolius*)		X		

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
Park milkvetch (*Astragalus leptaleus*)		X		
Payson's milkvetch (*Astragalus paysonii*)		X		
White Cloud milkvetch (*Astragalus vexilliflexus* var. *nubilus*)	X			
Centennial rabbitbrush (*Chrysothamnus parryi* ssp. *montanus*)	X			
Douglass' wavewing (*Cymopterus douglassii*)		X		
Welsh rockcress draba (*Draba globosa* (D. densifolia var. *apiculata*)		X		
Payson's bladderpod (*Lesquerella paysonii*)		X		
Lemhi penstemon (*Penstemon lemhiensis*)		X		
Alkali primrose (*Primula alcalina*)	X			
Weber's saussurea (*Saussurea weberi*)	X			

X--represents evaluated level of effects

A BA addressing all listed and proposed (for listing) species, and reflecting the analysis in this document was prepared and submitted for consultation by the US Fish and Wildlife Service during the final analysis for this proposal. The summary of conclusion of effects for listed and proposed species is displayed in the following table. The Biological Opinion from the USFWS follows in this Appendix.

THREATENED, ENDANGERED & PROPOSED SPECIES
BIOLOGICAL ASSESSMENT
SUMMARY OF CONCLUSION OF EFFECTS
for the
AGENCY PROPOSED ACTION

Species	No Effect	Not Likely to Adversely Affect (NLAA) 1/	Not Likely to Jeopardize the Continued Existence 2/	Likely to Adversely Affect (LAA)
Bald Eagle *(Haliaeetus leucocephalus)*		MA, NLAA		
Peregrine Falcon *(Falco peregrinus anatum)*		MA, NLAA		
Grizzly Bear *(Ursus arctos horribilis)*		MA, NLAA		
Gray Wolf *(Canis lupus)*			X	
Canada Lynx *(Lynx canadensis)*			X	
Whooping Crane *(Grus americana)*			X	
Mountain Plover *(Charadrius montanus)*			X	
Ute ladies'-tresses *(Spiranthes diluvialis)*		MA, NLAA		

1/ This determination can include the following: MA, NLAA = 'may affect, not likely to adversely affect;' or BE, NLAA = 'beneficial effect, not likely to adversely affect.'
2/ This determination is only appropriate for nonessential experimental populations, which are gray wolf and whooping crane, and proposed species which are Canada lynx and mountain plover.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Basin Office, Columbia River Basin Ecoregion
1387 South Vinnell Way, Room 368
Boise, Idaho 83709

September 30, 1999

Jerry Reese, Forest Supervisor
Targhee National Forest
P.O. Box 208
St. Anthony, Idaho 83445

Subject: Biological Opinion for the Motorized Road and Trail Travel Plan for the Targhee National Forest Plan Revision (FWS #1-4-99-F-30; File # 116.0020)

Dear Mr. Reese:

The U.S. Fish and Wildlife Service (Service) has reviewed the July 16, 1999, biological assessment (BA) for the preferred alternative (3M+ Revised) for the Targhee National Forest Motorized Road and Trail Travel Plan (Travel Plan) in eastern Idaho and northwestern Wyoming. The Service is providing, under two separate headings, a biological opinion for the listed species and a conference opinion for the proposed Canada lynx (*Lynx canadensis*). In addition, the Service reviewed information provided in the BA regarding the petitioned Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), and presents our recommendations on that information. The Mountain plover (*Charadrius montanus*), a Forest Service species of concern, was covered in the 1997 Revised Forest Plan (1997 RFP). Since the Travel Plan has not changed the effects from the1997 RFP, this species is not addressed further in these documents.

This first section represents the Service's biological opinion (Opinion) on the effects of the Travel Plan on the threatened grizzly bear (*Ursus arctos horribilis*), bald eagle (*Haliaeetus leucocephalus*), the whooping crane (*Grus americana*), Ute Ladies'-tresses (*Spiranthes diluvialis*), and the endangered peregrine falcon (*Falco peregrinus*), and the experimental, non-essential population of gray wolf (*Canis lupus*). The proposed Travel Plan offers a balanced network of summer motorized roads and trails that meet the Targhee National Forest (Forest) transportation needs and the open motorized road and trail route density (OROMTRD) and total motorized access route density (TMARD) standards in the 1997 RFP.

This Opinion is based on information provided in the July 16, 1999, BA for the Travel Plan (USDA 1999), the March 31, 1997, biological opinion (March1997 biological opinion) for the Revised Forest Plan (USDI 1997), and telephone conversations and field investigations concerning the Travel Plan. A complete administrative record for this consultation is on file in the Service's Eastern Idaho Field Office, Chubbuck, Idaho.

Consultation History

The grizzly bear was listed as a threatened species in 1975. This action required Federal agencies under the conditions of sections 7(a)(1) and 7(a)(2) of the Endangered Species Act (Act) to: (1) utilize their authorities to carry out conservation programs for listed species; (2) ensure that their activities not jeopardize the continued existence of a listed species; and (3) ensure that their activities or programs not result in the destruction or adverse modification of critical habitat. Since that time, the following major consultation actions have taken place between the Forest and the Service concerning the grizzly bear.

1. The Service issued a biological opinion in 1984 for the Targhee Forest Land Management Plan (LMP). The biological opinion included Reasonable and Prudent Measures to require security areas be established for grizzly bears (USDI 1984).

2. Biological opinions for the Management Direction for the Grizzly Bear on the Portion of the Plateau Bear Management Unit (Strategy) on February 22, 1994, and April 20, 1995, (USDI 1994, 1995) developed management standards and guidelines for listed species that were incorporated into the existing 1985 LMP. These standards and guidelines were developed for the grizzly bear because of evidence that impacts to the bears occurred as a result of logging, roads, recreation, mining, grazing, etc.

3. In the 1994 biological opinion on the Strategy, core areas were delineated for Plateau Bear Managment Unit (BMU) Subunits 1 and 2 to address the issue of habitat security needs of the grizzly bear. Plans were in place to begin developing core and security areas for the Bechler-Teton BMU. The process of addressing each BMU separately was changed in the 1997 RFP to address all of the remaining BMU's at the same time.

4. Consultation on the 1997 RFP (USDA 1997) was completed when the Service issued a biological opinion March 31, 1997. The 1997 RFP was prepared to comply with the National Forest Management Act (NFMA) of 1976 which directs the Forest to review and/or update forest plans every ten to fifteen years, or more frequently when resource and management conditions change significantly. The 1997 RFP includes the provisions of the Resources Planning Act as amended by the NFMA, the Endangered Species Act of 1973, as amended, and other guiding documents that had been previously consulted on.

5. A Record of Decision (ROD) was issued by the Intermountain Regional Forester for the 1997 RFP in April 1997. The 1997 RFP contained travel management direction (Travel Plan) in the form of winter and summer transportation plans and management prescription direction for road density and cross-country travel. The final Travel Plan map, designed to meet road density standards specified in the 1997 RFP, was approved and a ROD signed by the Forest Supervisor in August 1997.

The August 1997 Travel Plan and maps were appealed and in January 1998, the Intermountain Regional Forester remanded the August 1997 Travel Plan because of procedural concerns and an incomplete assessment and analysis of the roles of the counties and the Forest in management of roads with RS 2477 assertions. RS 2477 roads are roads that were in existence before the Forest was established to which the counties may have potential rights of access.

To address this need, the Forest developed this proposed Travel Plan. The preferred alternative for the Travel Plan describes which combination of roads and trails will be open for summer motorized use and still maintain the density standards specified by management prescriptions in the 1997 RFP. The need for the Travel Plan is based on the Intermountain Regional Foresters January 1998 remand of the 1997 Travel Plan. That document directed that no decision in the 1997 RFP will be changed, revised, or superceded by the Travel Plan. Therefore, for the purposes of this consultation it is assumed that:

1. Winter travel as established in the 1997 RFP is not being changed by this Travel Plan;

2. Summer cross-country motorized travel as detailed in the 1997 RFP is not being changed;

3. OROMTRD and TMARD standards as decided in the 1997 RFP are not being changed, except for the correction of errors from the final analysis and document preparation for the 1997 RFP, and new RS 2477 assertions by Counties. None of the corrections affect the grizzly bear management units (BMU). OROMTRD and TMARD standards in the BMUs remain 0.6 and 1.0 miles/square mile, respectively.

The analysis of effects of the actions described in the 1997 RFP and the March 31, 1997, biological opinion remain the same. Consequently, all applicable Terms and Conditions established in the March 31, 1997, biological opinion for the 1997 RFP remain in effect, except as noted for the completion of the road closures. This September 30, 1999, biological opinion supplements the March 31, 1997 biological opinion.

Species not considered further in this consultation

The peregrine falcon was removed from the endangered species list on August 25, 1999, (64 FR 46542) and is no longer being addressed in the formal consultation process under the Endangered Species Act of 1973, as amended. However, this species will continue to be considered under provisions of the Migratory Bird Treaty Act, the Fish and Wildlife Coordination Act and the Forest Service sensitive species lists developed pursuant to 36 CFR 219.19, the National Forest Management Act (16 U.S.C. 1600) and the Federal Land Management and Policy Act (43 U.S.C. 1701).

The Travel Plan will not change the determinations for the bald eagle, Ute ladies'-tresses, gray

wolf, and whooping crane previously rendered in the March 1997 biological opinion. The Service concurs that the Travel Plan *may affect* but *is not likely to adversely affect these species*. These species will not be addressed further in this document, except as noted in the Conservation recommendations section.

BIOLOGICAL OPINION

Description of the proposed action

The following description of the proposed action applies to all species discussed in this document, including the Canada lynx and the Yellowstone cutthroat trout. As noted above, the preferred alternative for the Travel Plan describes which combination of roads and trails will be open for summer motorized use and still maintain the density standards specified by management prescriptions in the 1997 RFP. The maps and rationale for closure of specific roads were developed based on ecological, fiscal and biological parameters, including standards and guides for terrestrial and aquatic species, established jointly by the Forest, the Service, Idaho and Wyoming game and fish departments, county and state representatives, and public and private organizations and individuals. The final determination of which specific roads and trails will be open rests with the Forest Supervisor.

The Forest has implemented 85% (350 miles of the 411 miles) of the proposed road and motorized trail closures scheduled to be completed by the end of calendar year 1999 as detailed in the March 1997 biological opinion. Most of the remaining roads and motorized trails are currently gated. The additional decommissioning will ensure the effectiveness of the closures for summer motorized travel. The original Travel Plan was remanded by the Intermountain Regional Forester with direction to do a supplement to the final environmental impact statement; also, a lawsuit was filed which halted the Forest road and motorized trail closure efforts. Therefore, the Forest plans to complete the final decommissioning by September 30, 2000.

Status of the species

The status of the grizzly bear has not changed since the 1997 RFP.

Environmental baseline

The Travel Plan will not change the status of the species or the factors affecting the species and their habitats as described in the March 1997 biological opinion (USDI 1997) and BA for the 1997 RFP (USDA 1996). The environmental baseline has not changed from the conditions evaluated for the 1997 RFP.

Effects of the action

The Travel Plan indicates which roads and motorized trails currently open will be closed. Across the Forest the preferred alternative (3M+ Revised) would increase the number of stream crossings, the number of open and closed miles of roads, and the number of open miles of motorized trails by decreasing the number of miles of roads being closed compared to the 1997 RFP (Table 1). In the grizzly bear management units, OROMTRD and TMARD standards remain at 0.6 and 1.0 miles per square mile respectively. Cross country travel will be prohibited under Alternative 3M+. This will decrease the likelihood of additional trails being formed and stream crossings occurring at undesignated sites. No new roads, trails or crossings are proposed.

Table 1. Motorized Access Information in Each BMU Subunit for Alternative 3M+ Revised and Alternative 3M (Alternative 3M is in parentheses).

Motorized Access Category	**Henry's Lake 1**	**Henry's Lake 2**	**Plateau 1**	**Plateau 2**	**Bechler/Teton**
Open Road Miles	64.93 (64.00)	24.23 (20.70)	77.79 (75.00)	64.13 (64.70)	152.88 (144.10)
Restricted Road Miles	25.01 (22.30)	4.05 (4.60)	53.23 (55.30)	22.72 (23.30)	53.96 (50.90)
Open Motorized Trail Miles	0.0 (0.0)	4.01 (6.50)	3.38 (4.60)	0.2 (0.20)	2.64 (4.10)
Restricted Motorized Trail Miles	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
TMAR Miles	89.94 (86.30)	32.29 (31.80)	134.4 (134.90)	87.05 (88.20)	209.48 (199.10)
OROMTR Miles	64.93 (64.00)	28.24 (27.20)	81.17 (79.60)	64.33 (64.90)	155.52 (148.20)
Open Road Density (mi/sq mi)	0.56 (0.55)	0.42 (0.35)	0.57 (0.56)	0.54 (0.54)	0.51 (0.48)
Restricted Road Density (mi/sq mi)	0.21 (0.19)	0.07 (0.08)	0.39 (0.41)	0.19 (0.20)	0.18 (0.17)
Open Motorized Trail Density (mi/sq mi)	0.0 (0.0)	0.07 (0.11)	0.02 (0.03)	0.0 (0.0)	0.01 (0.01)
Restricted Motorized Trail Density (mi/sq mi)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
TMARD (mi/sq mi)	0.77 (0.74)	0.55 (0.54)	0.99 (1.00)	0.73 (0.74)	0.70 (0.67)
OROMTRD (mi/sq mi)	0.56 (0.55)	0.48 (0.47)	0.60 (0.59)	0.54 (0.55)	0.52 (0.50)

Implementation of the Travel Plan will not change any of the vegetative conditions on the Forest as described in the 1997 RFP. Closing roads and trails, removing culverts, and removing or hardening stream crossings in aquatic influence zones may have short term impacts from increased sediment releases into the stream. In the long term the riparian areas will benefit as they return to natural conditions and provide shade for the stream, and increased bank stability.

The Forest will complete decommissioning the remaining 15% (about 61 miles) of the roads and motorized trails by September 30, 2000. The delay is due to lawsuits and the Travel Plan being remanded. The road and motorized trail densities in the BMUs and subunits will still comply with the 1997 RFP density standards. As noted previously, the effects of these actions were analyzed in the March 1997 biological opinion.

Cumulative effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

There is one ski resort on the Forest that has been addressed in a separate consultation. Other winter snow machine use from private lands is regulated by winter travel regulations and is not a part of this Travel Plan consultation. There will be an increase in the miles of roads and motorized trails left open under Alternative 3M+ compared to what was proposed in the 1997 RFP (Table 1). However, these road and trail densities meet the grizzly bear habitat standards. Actions on private or state lands that may affect the listed species include development, grazing, and recreation. These actions will continue with or without the proposed Travel Plan and are not expected to result in additional impacts.

Conclusion

After reviewing the current status of the grizzly bear, the environmental baseline for the action area, the effects of the proposed Travel Plan and the cumulative effects, it is the Service's biological opinion that the Travel Plan as proposed is *not likely to jeopardize the continued existence* of this species. No critical habitat has been designated for this species, therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out of an otherwise lawful activity. Under

the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Forest so that they become binding conditions of any grant or permit issued to an applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Forest has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Forest or the applicant, must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

A special regulation for the grizzly bear pursuant to section 4(d) of the Act provides that no person shall take a grizzly bear in the 48 conterminous states, with certain specified exceptions [50 CFR §17.40(b)].

Amount or extent of take

The following is adapted from the March 1997 biological opinion the Service issued for the 1997 RFP and is to be applied to the Travel Plan, as appropriate.

The Service anticipates that use of the open and total route system on the Forest will increase as recreation use increases during this cycle of the 1997 RFP process, which includes implementation of the Travel Plan. Therefore, based on the most current biological information, the Service believes that until all the open and total route densities meet Interagency Grizzly Bear Committee (IGBC) and 1997 RFP standards, as supplemented by the Travel Plan, and habitat conditions for grizzly bear feeding, breeding, travel and sheltering are increased, take, direct and indirect, will continue at the present level. The Service believes the level of access and lack of cover in the BMUs is an indicator of the level of take, direct and indirect, that may be occurring.

As noted above, it is the opinion of the Service that the current level of incidental take associated with the existing use is not at a level that is likely to jeopardize the recovery and survival of the grizzly bear population in the Greater Yellowstone Ecosystem (GYE). This is based in part, on the fact that measured population parameters have met established recovery plan levels, with the exception of mortality of female grizzly bears across the GYE during the last 2 years (Chris Servheen, personal communication). However, the Service anticipates that the direct and indirect effects of implementing the Travel Plan will not reduce the level of take until completely implemented.

The Service also believes the level of human-grizzly bear conflict is an indicator of the potential level of take occurring and provides an early warning of changes in the level of take. Therefore, within the BMUs, all human-grizzly bear conflicts will be handled according to the IGBC Nuisance Grizzly Bear Guidelines and the Forest will immediately contact the Service and discuss the possible need to reinitiate consultation. Any incidents that occur outside the BMUs should also be handled according to the IGBC Nuisance Grizzly Bear Guidelines. The Forest should immediately contact the Service to discuss the conditions surrounding the incident and the possible need to reinitiate consultation. Problem bears translocated onto the Forest from other areas of the ecosystem under the direction of the IGBC Nuisance Grizzly Bear Guidelines would not cause reinitiation of consultation. However, the Forest should immediately contact the Service to discuss the conditions surrounding the incident.

The level of take may be in the form of direct take, as a result of illegal killing or human-grizzly bear conflicts, or in the form of indirect take such as harm resulting from displacement of grizzly bears from important habitats. The best scientific and commercial data available are not sufficient to enable the Service to quantify a specific amount of incidental take for the Travel Plan. The affects of the Travel Plan, as documented in the 1997 RFP, are largely unquantifiable in the short term and may be measurable only as long-term effects on the species' habitat and population levels. Without additional information and analysis that are currently unavailable, we must designate the anticipated level of incidental take for the Travel Plan as unquantifiable.

Therefore, in cases such as these where the amount of take is unquantifiable, the Service can use surrogate measures of take, such as measures of habitat parameters. In this instance, take would be exceeded if the total road and trail density standards are exceeded in a BMU or subunit; if the Forest does not meet the standards and guidelines and goals and objectives detailed in the 1997 RFP and this Travel Plan for the species; the IGBC Nuisance Grizzly Bear Guidelines are not followed when handling human-grizzly bear conflicts; or the terms and conditions of this Opinion are not implemented.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of the grizzly bear. The Forest shall:

1. Effectively implement and complete the open and total motorized route management direction for roads and trails on the Forest by September 30, 2000, that will contribute to the conservation, survival and recovery of the grizzly bear in the GYE as described in Section V of the 1997 RFP and the July 16, 1999, letter from the Forest requesting consultation on the Travel Plan.

2. Continue to implement and comply with the remaining reasonable and prudent measures, numbers 2 through 4, described in the March 1997 biological opinion for the 1997 RFP.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Forest must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The Forest shall, by September 30, 2000, have in place in each BMU or subunit, a precise open motorized route standard not to exceed 0.6 mile/square mile and a precise total route density standard not to exceed 1.0 mile/square mile. Forest activities that involve new road or motorized trail construction should be designed to improve, or be designed so as not to increase, existing open and/or total motorized route densities within a BMU or subunit above these levels.

2. The Forest shall adopt the open and total motorized route density recommendations of the IGBC Access Committee and implement these recommended levels of motorized access on areas of the Forest that are in the GYE Recovery Zone. This includes, but is not confined to, site specific restrictions (such as area closures, timing restrictions, etc.) on recreation and other activities to resolve human-grizzly bear conflicts, revision of access density standards, and use of the most current technological evaluation methods to refine core and security area percentages.

The Forest will ensure the above effective access restrictions are in place in the BMUs by September 30, 2000. At the end of 5 years from the date the Travel Plan ROD is signed, routes to be restricted that are in close proximity to, but outside the BMUs, will be effectively restricted according to the 1997 RFP standards and guidelines.

3. The Forest shall submit an annual report to the Service in December of each year. The report shall detail the progress in achieving the open and total route densities and core area criteria in the BMUs and subunits, including but not limited to listing road and trail closures and the number, location, and kinds of incidents and/or activities that occurred on closed roads and trails. The report to the Service should also document the duration, location, and type of activities proposed to take place in each BMU or subunit during the next activity season. The Forest will provide information to the Service on efforts taken to ensure that core areas contain seasonal habitat approximately proportional to its availability in the BMU and BMU Subunits.

The Service will use these reports to ascertain whether sufficient progress is being made toward realizing the Forest's 1997 RFP and 1999 Travel Plan objectives. Within 90 days after meeting the open and total road motorized access densities and core area requirements in each BMU or subunit, the Forest shall provide the Service with a final report for the BMU or subunit detailing all activities undertaken in association with the terms and conditions of

this biological opinion.

4. Implement and comply with all the remaining terms and conditions, numbers 4 and 5, as described in the Service's March 1997 biological opinion for the 1997 RFP.

Conservation recommendations

Section 7(a)(1) of the Act direct Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. All of the conservation recommendations from the 1997 RFP apply to this Opinion.

2. The 1997 RFP goals and objectives, and standards and guidelines for the bald eagle, Ute ladies'-tresses, gray wolf, and whooping crane are to be implemented as designed across the forest as proposed activities are considered that may affect the species or their habitats.

3. For the bald eagle, Ute ladies'-tresses, gray wolf, and whooping crane, provide a consolidated report at the end of each calendar year of the activities the Forest has consulted on and the results of that consultation.

In order to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

Reinitiation notice

This concludes formal consultation on the actions outlined in your July 16, 1999, request for consultation on the Travel Plan. As provided in 50 CFR §402.16, reinitiation of consultation is required when discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the Forest action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

CANADA LYNX

The Canada lynx was not addressed as a proposed species in the 1997 RFP and will be discussed in this conference opinion. The lynx was proposed for listing as a threatened species under the Endangered Species Act on July 8, 1998 (63 FR 36994). A final decision on the lynx listing is likely in early 2000.

Status of the species

The Canada lynx (*Lynx canadensis*), the only lynx in North America, is a reclusive forest-dwelling cat of northern latitudes and high mountains. It feeds primarily on small mammals and birds, and is especially dependent on snowshoe hares for prey. It was historically found throughout much of Canada, the forests of northern tier States, and subalpine forests of the central and southern Rockies. The lynx is a medium-sized cat, similar to the bobcat, but appears somewhat larger. It has longer legs and very large well-furred paws, adaptations to the deep winter snows typical throughout its range. It also has unique long tufts of hair on the ears and a short, black-tipped tail. Measurements for adult males average 22 pounds (lbs.) in weight and 33.5 inches in length, with an average weight for females at 19 lbs. and 32 inches in length.

In the western states lynx live in subalpine/coniferous forests of mixed age and structural classes. Mature forests with downed logs and windfalls provide cover for denning sites, escape, and protection from severe weather. Early successional forest stages provide habitat for the lynx's primary prey, the snowshoe hare. The home range of a lynx can be five to 94 square miles. They are capable of moving extremely long distances in search of food. Lynx are highly dependent on snowshoe hare, but when hare populations drop, they also prey on other small mammals and birds. This change in diet causes sudden drops in the productivity of adult females and survival of young.

Significant threats to the lynx and its habitat include: (1) loss and/or modification and fragmentation of habitat; (2) past commercial harvest (trapping), which is partially responsible for the extremely small lynx population; (3) inadequate regulatory mechanisms to protect lynx and their habitat; and (4) other factors such as increased human access into suitable habitat and human-induced changes in habitat allowing other species (e.g., bobcats and coyotes) to move into lynx habitat and compete with them. Examples of human alteration of forests include loss and conversion of forested habitats through urbanization, ski area and other developments; fragmentation that leads to isolation of forested habitats by highways or other major construction; and certain timber harvesting practices and fire suppression measures.

Elevated levels of human access into forests, particularly in the winter, are a significant threat to Canada lynx because that may result in more lynx deaths by intentional and unintentional shooting, trapping, and being hit or frightened off by automobiles and motorized vehicles. Human access into Canada lynx habitat in many areas has increased over the last several decades

because of increased construction of roads and trails and the growing popularity of snowmobiles and other off-road vehicles.

Forestry practices can be beneficial or detrimental for lynx depending on the manner by which they are conducted. Timber harvest can be used to achieve the early successional stages of forest habitat preferred by snowshoe hares, although it takes time (15 years or more depending on the type of forest) for harvested areas to reach this stage. Intensive tree harvest (i.e., clearcutting and thinning) can eliminate the mosaic of habitats necessary for Canada lynx survival, including late successional denning and early successional prey habitat. Specifically, these activities can result in reduced cover, unusable forest openings, and monotypic stands with a sparse understory that has been determined to be unfavorable for Canada lynx. Canada lynx avoid openings such as clearcuts and grasslands, because snowshoe hares also are unlikely to use such areas, and because these areas lack the cover necessary for both species.

Harvest (trapping) records, field surveys, and the number of lynx sightings reported are used as indicators of the population trends. Although trend information does not provide information on the size of a population, it does indicate if the size of the population is increasing, decreasing, or remaining stable. Several states, including Idaho in 1996, have closed or severely restricted trapping seasons in response to declining numbers of lynx harvested and/or reported. Further, substantial survey effort in some states have located few lynx in recent years.

Environmental Baseline

Historical and current lynx records occur primarily in Douglas-fir forest, spruce-fir forest, and fir-hemlock forest types. A gradient in the elevational distribution of lynx habitat is apparent across the Northern Rocky Mountains Geographic Area. In the higher latitudes of northern Idaho and northwestern Montana west of the divide, lynx habitat generally occurs above 4,000 feet (Koehler and Brittell 1990).

Aspen community types occur as scattered inclusions throughout all conifer habitat types in central and southeastern Idaho. Though common and widely distributed, aspen forests occupy a very small percentage of the total forested area. They do provide important habitat diversity and contribute to the quality of lynx foraging habitat. Aspen/tall forb community types, especially those that include snowberry, serviceberry and choke cherry shrub understories, are very productive. These communities are most prevalent in southeastern Idaho where they may provide good snowshoe hare habitat, especially where adequate aspen regeneration is occurring.

Lynx tend to avoid large openings, natural or man-made (Koehler and Aubry 1994), making travel corridors an important component of lynx habitat. Travel corridors provide cover for lynx moving between den sites and foraging habitat within their home range. Suitable travel cover (coniferous or deciduous) has a closed canopy, is generally greater than 2 meters (6 feet) in height, and is adjacent to denning and foraging habitat (Brittell et al. 1989).

Historically, Idaho supported a stable Canada lynx population in 8 of the 10 northern counties. Idaho Fish and Game records indicate 25 to 30 animals were taken annually from this region. Additional harvest is documented from the central Idaho counties of Blaine, Jerome, Lemhi and Valley, and southeastern counties of Bear Lake, Caribou, Fremont, and Madison. Currently the lynx is classified as a furbearer in Idaho, but the trapping season was closed in 1996. The lynx is considered a species of special concern in Idaho (Lewis and Wenger 1998).

Based on available information, it is not possible to accurately estimate the extent of the Canada lynx population on the Forest. Past records indicate the species has used and does use various portions of the Forest.

Effects of the action

The Travel Plan indicates which roads and motorized trails currently open will be closed. Implementation of the Travel Plan will not change any of the vegetative conditions on the Forest as described in the 1997 RFP. In the grizzly bear management units, OROMTRD and TMARD are no more than 0.6 and 1.0 miles per square mile respectively. These standards appear to meet or exceed the research standards of not exceeding 2.0 miles per square mile total open road density in lynx habitat. Ninety-three percent of the Forest has an OROMTRD of less than or equal to 2.0 miles per square mile (USDI 1999).

Plowed roads and groomed over-the-snow routes may allow competing carnivores such as coyotes and mountain lions to access lynx habitat in the winter, increasing competition for prey (Buskik et. al. in press 1999). However, preliminary information suggests lynx may not be directly influenced by roads through displacement or avoidance, except at very high summer traffic volumes. Therefore, at this time, there is no compelling evidence to recommend management of total road density for the conservation of lynx. As limited new road construction occurs on the Forest to meet the needs of specific projects, further research will be needed to address the effects of road density on lynx.

Summer use of roads and trails may have negative effects on denning habitat, if lynx are forced to move kittens because of disturbance. Incidental or illegal trapping or hunting may be a threat to lynx, and is likely more common near open roads.

Cumulative effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this conference opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

There is one ski resort on the Forest that was subject to a separate consultation and addressed

Canada lynx and other forest carnivores. Other winter snow machine use from private lands is regulated by winter travel regulations and is not a part of this Travel Plan. Actions on private or state lands that may affect the lynx include development, grazing, and recreation. These actions will continue with or without the proposed Travel Plan and are not expected to result in additional impacts to the species.

Conclusion

After reviewing the current status of the Canada lynx, the environmental baseline for the action area, the effects of the proposed Travel Plan and the cumulative effects, it is the Service's conference opinion that the Travel Plan as proposed is *not likely to jeopardize the continued existence* of the proposed species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The prohibitions against taking the species found in section 9 of the Act do not apply until the species is listed. However, the Service advises the Forest to consider implementing the following reasonable and prudent measures. If this conference opinion is adopted as a biological opinion following a listing, these measures, with their implementing terms and conditions, will be nondiscretionary, and must be undertaken by the Forest so they become binding conditions of any grant or permit issued to an applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Forest has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest (1) fails to implement the terms and conditions, and/or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse.

Amount or extent of take

Because actual observations and reports of the species on the forest are sparse, the Service anticipates incidental take of the Canada lynx will be difficult to detect. The use of the forest by lynx appears to depend on the availability of food and cover. Incidental or illegal trapping or hunting may be a threat to lynx, and is likely more common near open roads. Given these conditions of the Canada lynx on the Forest, take is documented in terms of the amount of access via roads and motorized trails on the Forest. The Service anticipates that use of the open and total route system on the Forest will increase as recreation use increases during this cycle of the 1997 RFP, which includes implementation of the Travel Plan. However, the Travel Plan will reduce the existing road and motorized trail densities in the grizzly bear management units, which may also be areas considered to be potential lynx habitat. A total of 411 miles of roads and trails will be closed, and a standard of 0.6 and 1.0 miles per square mile, or less, of total open motorized roads and trails will be maintained. It is anticipated these densities for summer travel access will greatly reduce the probability of incidental take in suitable lynx habitat.

Reasonable and prudent measures

The prohibitions against taking the species found in section 9 of the Act do not apply until the species is listed. However, the Service advises the Forest to consider implementing the following reasonable and prudent measures. If this conference opinion is adopted as a biological opinion following a listing or designation of critical habitat, these measures, with their implementing terms and conditions, will be nondiscretionary.

The Forest included in the BA a list of questions and explanations of how the 1997 RFP and the current Travel Plan maintain or improve Canada lynx habitat based on the current knowledge of the species (USDA 1999). The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of the Canada lynx on the Forest.

1. Effectively implement the sections of the 1997 RFP described in the BA, Table 10, that specifically refer to the Travel Plan and open road and motorized trail management, to conserve the lynx, and to avoid or reduce adverse effects from the spectrum of management activities carried out on the Forest.

2. Incorporate into planning activities an approach of preventing irretrievable commitment of resources that could ultimately prove crucial in maintaining or restoring viable, self-sustaining lynx populations within an ecosystem.

Terms and conditions

In order to be exempt from the prohibitions of section 9 of the Act once the proposed species is listed, the Forest must comply with the following terms and conditions, which implement the

reasonable and prudent measures described above and outline required reporting/monitoring requirements. If this conference opinion is adopted as a biological opinion following a listing or designation of critical habitat, these measures, with their implementing terms and conditions, will be nondiscretionary.

1. Identify, map, and prioritize site-specific locations within known occupied lynx habitat, using topographic and vegetation features, to determine where highway, road or trail crossings occur and reduce identified impacts on the species and maintain connectivity of lynx habitat.

2. Design new roads to the minimum standard necessary to complete the project. The new roads, especially the entrance, should be designed for effective closure following completion of the proposed activity.

3. Submit a complete report of survey activities and results for the lynx to the Service's Eastern Idaho Field Office, Chubbuck, Idaho, by December 31 of each year.

The reasonable and prudent measures, with their implementing terms and conditions, are designated to minimize incidental take that might otherwise result from implementation of the Travel Plan. If during the course of the actions, the minimized level of incidental take is exceeded, such incidental take represents new information requiring review of the reasonable and prudent measures provided. The Forest must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Conservation recommendations

Section 7(a)(1) of the Act direct Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

Little is known about Canada lynx, their habits, their prey base, and habitat requirements in Idaho and Wyoming except from limited studies and hunting and trapping reports. To better assess the effects of implementing the Travel Plan and evaluate future actions, the Service is providing the following recommendations.

1. Identify lynx analysis units for all areas with suitable lynx habitat using previously delineated and accepted units such as 6th field Hydrologic Unit Codes or other appropriate ecological units. This should include potential denning and foraging habitats, and movement and dispersal habitat for this species.

2. Design vegetation management strategies that are consistent with native succession and disturbance regimes. These strategies should include, at a minimum, the following points:

A. No more than 30 percent of a lynx analysis unit should be unsuitable habitat at any time.

B. Maintain high quality foraging habitat in proximity to denning habitat.

C. Maintain habitat connectivity within and between all lynx analysis units.

3. Maintain riparian areas, ridges and saddles to provide habitat structure and connectivity, particularly between lynx analysis units.

4. For new or on-going projects, develop stipulations for limitations on the timing of activities and surface use and occupancy during the term of the project.

5. Use agreed upon protocols to collect hair samples using a systematic sample design to document lynx presence. In conjunction with the surveys for lynx presence, continue to document and evaluate lynx observations, including snow track surveys, incidental observations and trapping of lynx. For such observations, data should include date, times, location, habitat features and conditions, an estimate of potential prey species and availability, and an indication of the certainty of identification and spatial accuracy of the observation.

In order to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes the conference for the effects of the Travel Plan on the proposed Canada lynx. You may ask the Service to confirm the conference opinion as a biological opinion issued through formal consultation if the Canada lynx is listed or critical habitat is designated. The request must be in writing. If the Service reviews the proposed action and finds there have been no significant changes in the action as planned or in the information used during the conference, the Service will confirm the conference opinion as the biological opinion on the project and no further section 7 consultation will be necessary.

After listing the Canada lynx and/or designating critical habitat for the species and any subsequent adoption of this conference opinion, the Forest shall request reinitiation of consultation if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may effect listed species in a manner or to an extent not

considered in this conference opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the species or critical habitat that was not considered in this conference opinion; 4) a new species is listed or critical habitat is designated that may be affected by the action; or 5) the agency cannot meet the general and site specific objectives described in the reasonable and prudent measures and terms and conditions of this conference opinion. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease pending reinitiation.

The incidental take statement provided in this conference opinion does not become effective until the species is listed and the conference opinion is adopted as the biological opinion issued through formal consultation. At that time, the action will be reviewed to determine whether any take of the Canada lynx has occurred. Modifications of the opinion and incidental take statement may be appropriate to reflect that take. No take of the Canada lynx may occur between the listing of the species and the adoption of the conference opinion through formal consultation, or the completion of a subsequent formal consultation.

YELLOWSTONE CUTTHROAT TROUT

In August 1998 the Yellowstone cutthroat trout was petitioned for listing under the provisions of the Endangered Species Act. The species was discussed in the 1997 RFP, however, additional information concerning the status of the species and its habitat were presented in the 1999 BA. The Service has evaluated the information in the BA for the 1999 Travel Plan and presents the following recommendations for your consideration.

Status of the species

The Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*) is a principle subspecies of cutthroat trout that historically occupied the upper portion of the Snake River in the Columbia River basin and the upper Yellowstone River in the Missouri River basin (May 1996). During historic exploration and settlement (1800 to 1900) of the West, cutthroat trout could be found in essentially the entire Snake River drainage above Shoshone Falls to the headwaters in what is now the Teton Wilderness area of the Bridger-Teton National Forest and Yellowstone National Park (Rollins 1935; Jordon 1891; Evermann 1891; Gilbert and Evermann 1894).

Historic Yellowstone cutthroat trout riverine habitat in Idaho was estimated to be 3,797 miles. This included approximately 210 stream miles of tributaries to the Salt River and the South Fork of the Snake River occupied by finespotted cutthroat trout. Today, approximately 1,622 miles or 43 percent of historic stream habitat is occupied by Yellowstone cutthroat trout (May 1996). Genetically unaltered populations of Yellowstone cutthroat trout occur in approximately 10 percent of the historical stream habitat and 85 percent of the lake habitat originally occupied by the species (Varley and Gresswell 1988). Approximately 91 percent of the habitats for genetically unaltered populations of Yellowstone cutthroat trout are in Yellowstone National Park. Nearly all of the rivers and streams on the Forest were once occupied by Yellowstone cutthroat trout and still are considered to be suitable habitat.

The Yellowstone cutthroat trout is the only indigenous trout on the Forest. The subspecies is believed to be comprised of two forms: the finespotted form, also referred to as the finespotted Snake River cutthroat trout, and the large spotted form (Behnke 1992, Gresswell 1995). However, until a definitive genetic determination is made by the experts, both forms will be treated as the Yellowstone subspecies (Delany 1997).

Environmental baseline

The Yellowstone cutthroat trout was addressed in the 1997 RFP. Extensive surveys completed since 1996, have documented the distribution of the population on the Forest. However, reports show very few pure cutthroat populations occurring there. Competition for food, spawning habitat, cover and hybridization with nonnative fish have impacted the numbers and genetic purity of the species in the area.

Genetic interactions between existing population segments have decreased from historic conditions due to decreased connectivity between streams and fragmentation of stream habitats resulting from construction of dams and diversions. These structures may de-water river and stream channels and, unless properly fitted with fish passage structures, can block migration corridors needed for spawning or for movement between summer and winter habitats. Many water diversions channel downstream migrants into cultivated fields and pastures where they die. This habitat fragmentation generally has increased genetic isolation and reduced genetic diversity among remnant populations and has contributed to localized extinctions on the Forest. In some cases, however, habitat fragmentation due to natural or man-made barriers (ie. culverts, water diversions, etc.) has allowed some populations of Yellowstone cutthroat trout to persist by geographically isolating them from nonnative salmonids such as brook and rainbow trout.

Forest-wide severe habitat degradation resulted from past road construction and use, logging, livestock grazing, and beaver trapping. In recent years, however, the trend in habitat condition has improved due to improved livestock grazing practices, reduced road densities, reduced beaver trapping, and implementation of "best management practices" associated with road construction and use and timber harvest.

The Yellowstone cutthroat trout is classified as "Sensitive" in the Intermountain Region of the Forest Service (Delany 1997). Idaho Department of Fish and Game and the American Fisheries Society recognize the Yellowstone cutthroat trout as a "Species of Special Concern" (Johnson 1987).

Effects of the action

The 1997 RFP Goals and Objectives for fisheries, water and riparian resources and the accompanying Standards and Guidelines, will not change when the Travel Plan is implemented. Across the Forest the preferred alternative (Alternative 3M+) proposes to increase the number of stream crossings, the number of open and closed miles of roads, the number of open miles of motorized trails, and decrease the number of miles of roads being decomissioned in the aquatic influence zones (AIZ) of occupied cutthroat trout habitat compared to the 1997 RFP proposal (USDA 1998). No new roads, trails or crossings are proposed, the only change will be the number of roads, trails or crossings that are left in place compared to the 1997 RFP.

Of the 39 primary watersheds on the Forest, 17 have been designated as native trout watersheds (USDA 1997a). Within these 17 watersheds, Palisades, Rainey, Burns, and Pine Creeks are key spawning and rearing habitats for native cutthroat trout (USDA 1998). The proposed plan will open several miles of trail and road accessing Rainey Creek that would have been closed under the 1997 RFP. A portion of the road along Palisades Creek will be closed, however, there are still recreation access concerns that have the potential to increase sediment along the stream that are not addressed in the BA.

Cross country travel will be prohibited under Alternative 3M+. This will decrease the likelihood of additional trails being formed and stream crossings occurring at undesignated sites.

Closing roads and trails, removing culverts, and removing or hardening stream crossings in AIZs may have short term impacts from increased sediment releases into the stream. In the long term the riparian areas will benefit as they return to natural conditions and provide shade for the stream and increased bank stability.

Recommendations for conservation

The Yellowstone cutthroat trout is a native trout species requiring high water quality and habitat diversity for survival. Habitat protection and restoration alone will not ensure future healthy populations on the Forest. Habitat conditions, although not ideal, are currently adequate to support healthy populations of Yellowstone cutthroat trout throughout the Forest. Halting the causes of the decline in population health (ie. hybridization, competition, loss of connectivity between watersheds) is critical to species recovery. Managers should consider all measures available to them to reduce loss of habitat, competition and hybridization with nonnative species, removal of migration barriers, and implement habitat restoration, protection and enhancement options while protecting existing strong populations.

The first priority should be the protection of healthy populations and their habitats. Maintenance of healthy populations and their habitats should be the second priority. The third priority should be to restore unhealthy populations and their habitats. By ensuring high quality waters, diversity of habitat, connectivity with other habitats, healthy riparian plant communities, and functioning watersheds are provided for Yellowstone cutthroat trout, all other associated species will benefit.

The 1997 RFP (USDA 1997) directs the Forest to coordinate with Idaho Department of Fish and Game, Wyoming Game and Fish Department, and other interested parties to develop specific habitat and population recovery goals and an implementation schedule for native cutthroat trout populations. Watershed analysis or site-specific analysis to more accurately define fisheries habitat needs, such as assessing stream crossings and their impact on the fishery, is a guideline the Forest should use (USDA 1997) in developing and implementing habitat and population goals. Application of the 1997 RFP expected values for healthy native fish habitat conditions at the watershed scale, including INFISH standards, will contribute to good fisheries habitat conditions and will be reflective of a healthy ecosystem when applied at the watershed scale.

Existing roads in the native trout watersheds, particularly streams known to be important spawning and rearing habitat, and those with genetically pure populations of Yellowstone cutthroat trout, should receive continued attention to ensure the habitat is maintained for the benefit of the native fish species as directed by the 1997 RFP.

On-going monitoring and research should continue to gather the additional information needed to make informed decisions affecting recovery. Public education, especially among politicians, anglers, and fishing guides, is needed to improve awareness of the situation, to bring about necessary changes in fishing philosophy and regulations, and to provide funding and workforce assistance to accomplish restoration projects.

Conclusion

The Yellowstone cutthroat trout is not a listed or proposed species at this time, however, it has been petitioned for listing. The Service will be reviewing that petition in the near future. Based on the information provided in the BA, the 1997 RFP and FEIS, the Service feels the measures outlined will contribute to the conservation of the species. We look forward to continued interactions with the Forest regarding management for the conservation of Yellowstone cutthroat trout.

This concludes consultation for the listed, proposed and petitioned species addressed in the BA for the preferred alternative (3m+ Revised) for the Targhee National Forest Motorized Road and Trail Travel Plan (Travel Plan) in eastern Idaho and northwestern Wyoming. If the status of the proposed or petitioned species changes, the Forest should contact the Service to review the proposed action and determine if there have been significant changes in the action as planned, or in the information used during this consultation process. If, after receiving a written request to review the proposed action, the Service finds there has been no change in the action, we will confirm the conference opinion for the Canada lynx as the biological opinion on the action, and no further section 7 consultation will be necessary for that species. If the petition to list the Yellowstone cutthroat trout is found warranted and the species becomes a proposed species, please contact the Service to discuss possible initiation of a conference action.

If you have any questions or comments about these consultation determinations, please contact Mike Donahoo of our Eastern Idaho Field Office in Chubbuck, Idaho at (208) 237-6975 extension 31.

Sincerely,

Robert D. Ruesink

Supervisor, Snake River Basin Office

cc: IDFG, Idaho Falls
FWS, Portland (Shake)
FWS, Portland (Salata)
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APPENDIX E

RESPONSE TO PUBLIC COMMENTS

This Appendix is the enclosed, separately bound document. The process whereby these comments were identified and responded to, is described inside the front cover of the document.

List of Preparers

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The following is a list of the current Forest Leadership Team (FLT) and Forest Interdisciplinary Team (IDT) members and others who developed this Travel Plan EIS, and supporting documents:

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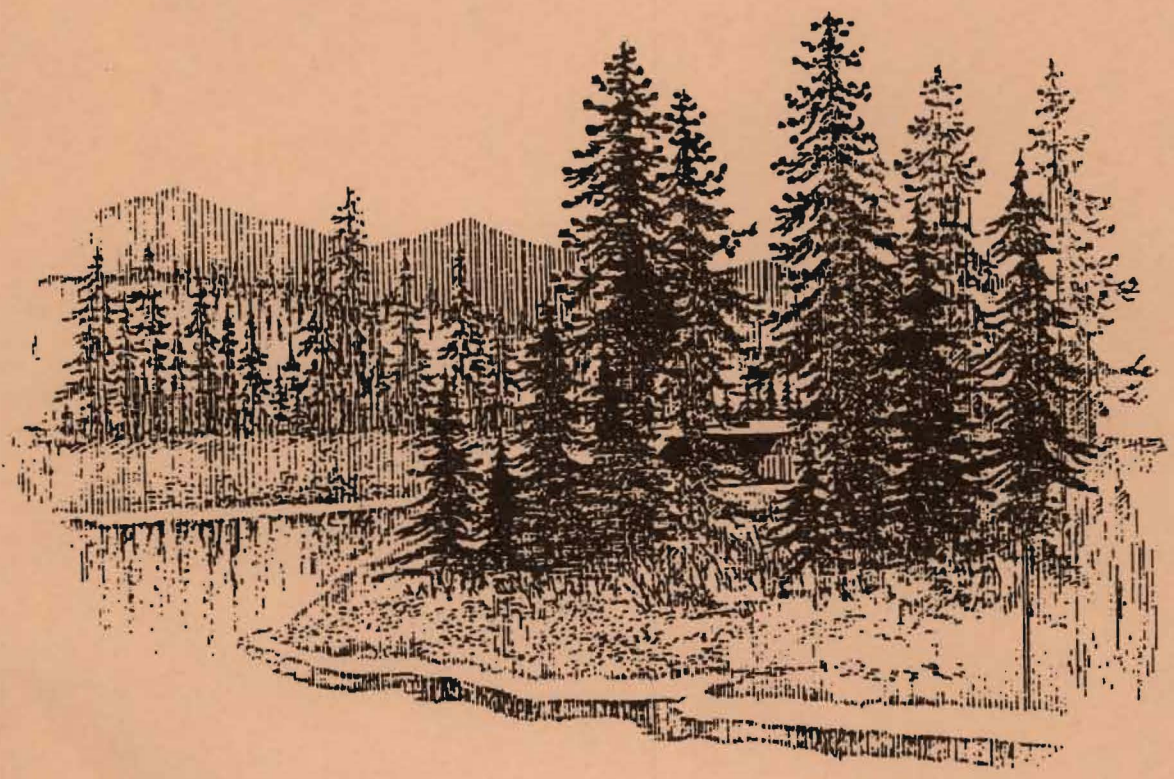

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BYINGTON, STEPHANIE
CAISSIE, BETH
CALAWAY, BLAIR
CALL, RANDY & DEAN
CALONGE, GALE
CALONGE, MARK

CAMINER, JOEL
CAMMACK HALL, GERI
CAMPBELL, JAMES & TASHA
CANDY, WALTER
CANTRAL, GARY & PATRICIA
CAPLES, TOM
CARD, DALE & PEGGY
CARLISLE, BRUCE SHERRY
CARLSON, BART
CARLSON, SCOTT
CARLSON, TIM
CARROLL, REBECCA
CARSON, ANDREW & NANCY
CARTER, DIANE
CARTER, JEFFREY
CARTER, JIM
CARTER, STEVEN
CASE, JAMES
CASE, JOEL
CASEY, CORY
CASPER, DALE
CASTEN, HEIDI
CATE, RANDY L.
CATES, ROYMA
CAVERHILL, DEBBY
CAVERHILL, SCOTT
CAZIER, CRAIG
CHADBURN, LLOYD
CHADWICK, TERRY
CHAFFEE, DAVE FERN
CHAFFEE, PAUL
CHAILOS, GEORGE
CHAMBERS, KEVIN
CHANDLER, LLOYD E.
CHANDLER, MARK & TAMMY
CHANDLER, STANLEY
CHAPPLE, BRET
CHASE, BLAINE
CHAVEZ, CELEDONIO & LINDA
CHENEY, KELLY
CHERNEY, EMIL O.
CHERRY, BART
CHONG, MICHELLE
CHRISTENSEN, BRYANT
CHRISTENSEN, ELWOOD & JOANN
CHRISTENSEN, GARY
CHRISTENSEN, LYNN
CHRISTENSEN, RON & CARLA
CHRISTENSEN, SCOTT
CHRISTENSEN, TIM
CHRISTENSON, JASON
CHU, TED
CHURCHILL, LEE & MARVA
CHYTRA, ANN MARIE
CICHOWSKI, STEVEN
CLANCEY, PAT
CLANCY, PATRICK
CLARK, ALEXIS
CLARK, DEBRA & LEWIS
CLARK, EUGENE & SHARON
CLARK, NATHAN
CLARY, LES
CLASSEN, THOMAS
CLAWSON, BRAD
CLIFFORD, PIER
CLINGER, CHUCK
CLINGER, DOUG & JANE
CLOPP, ALAN
CLYMER, DON A.
COBIA, LUCINDA
COBURN, BILL
COLE, KEN
COLE, PETE
COLLAR, MARTY
COLLINGE, MARY
COLLINS, CHARLES & JANICE JONES
COLLINS, JACK & STELLA
COLLINS, MICHAEL
COLVIN, VALEREE & MICHAEL
CONE, FRANCES
CONLEY, MONTY & BETTY
CONROY, JAMES
COOK, JAMES
COOK, JEFF
COOK, KEITH
COOK, NOEL
COOPER, KEN
COOPER, RICHARD
COPE, JIM
COPELAND, JEFF
CORDINGLEY, KURT
CORKRAN, DAVID & CHARLOTTE
CORNELL, STEPHEN
CORONA, RAY
COROVER, SCOTT
COSTA, GARRETT
COTT, D.W. & SANDRA
COTTLE, GARY
COUSINS, LLOYD & VERA
COX, JEFF
COX, JIM
CRABTREE, C. LARRY
CRANDALL, M.D., P.A., CHARLES
CRANDALL, ANGELA
CRANE, DAVID L. & PAM
CRANE, JEFFERY
CRANK, MIKE
CRAPO, LYNDEN
CRONE, MARTIE
CROW, SAUL
CUNNINGHAM, KIRK
CURRAN, CHARLES
CURTIS, KENNETH & DOREEN
CURTIS, MICHAEL
CURTIS, RICHARD
CUTTER, JOSH & MARALEE
CUTTER, MIKE & JEAN
CYNASTON, RON
DABELL, CHAD
DAKINS, MAXINE
DALLEY, DOUG
DALSEMER, RICHARD
DANSIE, VALERIE
DAVENPORT, JONATHAN
DAVENPORT, MEL
DAVIDSON, BILL
DAVIS, ARMAND
DAVIS, FRED
DAVIS, GARY
DAVIS, GLENN
DAVIS, NEAL & NICK
DAVIS, RICK
DAVLANTES, NANCY
DAW, DONA
DAY, NICK
DE FOREST, CLYDE
DE GROOT, ROBERT
DEAHL, VICTOR & ORA
DEBEVOISE, NANCY
DECKER, BOB
DECKER, BRIAN
DEFFINGER, PAUL
DENISON, MR. & MRS. JAMES
DENNETT, KATIE
DENNING, ROBBY
DENNIS, DENNY
DEWENTER, DAVID

DEXTER, JEFF
DIAMOND, JOAN
DICKARD, HELENE
DICKMAN, GEORGE
DIETRICH, PARRY
DINGER, MARILYN L.
DIPALMA, VIN
DIRKX, T.
DIXON, RON
DODD, CRAIG E.
DODDS, EARL
DODDS, MARK & JEANETTE
DOE, RUTH B.
DOPP, JUDY LYNN
DOSCHADES, CARL & GAIL
DOSCHADES, KEVIN & JUDI
DOWNS, BRENDA
DRAKE, DOUGLAS
DRAKE, VALORIE
DRAYTON, STEPHEN
DREBLOW, SCOTT
DREXLER, DEBRA
DREXLER, ED
DREXLER, LAWRANCE ,& CLAIRE
DRIGGS, DAVID
DUCKWORTH, PAUL
DUDMAN, BARBARA
DUKE, ROYCE & ROD
DULL, ANTHONY
DUNCAN, M.D., KENNETH
DUNCAN, LARRY J.
DUNN, JAMES & STELLA
DURNEY, J.L. & S.J.
DUSTIN, NORMAN
DUZIN, ECHEL
DYE, BRENT & LINDA
DYE, RON
DZIAK, JOHN
EASTER, MARK
EBORN, KELLY
ECK, BOBBY
ECK, DAVY, LESLIE, ROBERT
ECK, DONALD
ECK, REUEL
ECK, ROBERT
ECKMAN, BRIAN
ECKMAN, GARY & JUDY
ECONOMOU, CONSTANTINA
EIKE, RICK
EITTREIM, BILL CAROL
ELIESON, ROBERT
ELLINGFORD, DAN
ELLINGFORD, JAY & CAROLE
ELLINGFORD, JEFF
ELLINGFORD, JERRY & TRACY
ELLINGFORD, MILILON
ELLIOTT, KACY & JASON
ELLIS, DAN
ELLIS, IKE
ELTON, WALLACE
ELVENA, ROBERT
ENDECOTT, J.
ENGEL, ROBERT
ENGELMAN, JEFFREY
ENGET, BILL
ENGET, LOUISE
TARRAN &KIRA
ERICKSON, GLEN
ERICKSON, GRANT
ESBJORNSON, CARL
ESTES, JAMES
EVANKO, WENDI
EVANS, LINDA
EVANS, LORIEE
EVANS, MICHAEL
EVANS, STEVE
EVANS, TED
FALK, BRIAN
FARIAS, MARGIE & LOFGREN LEE
FARISH III, JOHN
FARLEY, JAMES H.
FARLEY, KYLE
FARMER, RANDY
FARMER, ROBERT E. & HELEN P.
FARRON, JEFF
FARRON, TRACEY
FEILER, JAMES G.
FEISTNER, ALAN
FELDMAN, JANE
FERGUSON, BILL
FERGUSON, BRENT & ANITA
FERGUSON, BRENT M.
FERGUSON, KAREN
FERGUSON, KAY
FERGUSON, KYM
FERGUSON, SYBIL
FIELDS, JACK
FIFE, GREG
FIFE, RONALD
FIFE, SHEILA
FIFE, TOM
FILIGAN, ROD
FINLAYSON, FRANK
FINLAYSON, FRED
FISHER, JUDD
FISHER, RANDY
FISHER, ROBERT
FISHER, SHANE
FISHER, VAL & MARJORIE
FITCH, FRANK L. & MICHELLE
FITCH, MARK
FITCH, MICHAEL S.
FLEMING, WADE
FOLLAND, CHUCK JERI
FONTANA, MARJORIE
FORD, JOSEPH
FOREHAND, DICK
FOSDICK, DEBORAH
FOSTER, JERRY
FOWLER, MICHAEL
FOWLER, MONTE
FOWLER, TIM & DIANE
FRALICK, GARY
FRANCE, TAYLOR
FRANKLIN, MARK
FRANZE, JUSTIN
FREDERICKSEN, DON
FREDERICKSEN, HARVEY H.
FREDINKSEN, KEVIN
FREDRICKSON, BRENT
FREEMAN, JASON
FREEMAN, JOHN & MARY
FREIDENBERGER, GEORGE
FRICKEY, TODD J.
FULLEN, BILL
FULLER, RALPH
FULLMER, JAMES, KAY, & RONNIE
FULLMER, RANDALL
FUNK, MARK
FUNK, WENDELL
FURNISS, DAVID SUE
GABRIELSON, STEVE
GADSKI, MARY ELLEN & ROBERT
GAILLARD, ELAINA
GALE, LELAND
GALLAGHER, MARTIN
GALLUP, GORDON
GALLUP, KENT
GALLUP, LORA

GARDNER, GINA
GARRETT, BRAD
GARTLAND, CHRIS & CAROL
GARY, BRAD
GARZ, DAVID & TONY
GASELE, JOHN
GASKILL, SHARON
GASSER, SALLEE
GASTON, WENDELL
GATCHELL, JOHN
GAUNA, ROXANNE
GAY, JOAN & GARY
GEISLER, GREG
GEORGE, DANIEL
GERBER, GWEN
GERRY, Z. ANDREW
GERSTELL, ARNOLD
GIBBON, BARBARA
GIBSON, PAT
GIESE, MR. & MRS. MICHAEL
GILBERT, TRACY
GILES, NEWMAN
GILGER, STEVE
GILLESPIE, BRIAN & GREG
GILSON, DENNIS
GILSTRAP, DAVE
GINORD, BUTCH
GLASMANN, ROBERT
GLEAVE, ROBERT KEITH
GLICK, JAY L.
GLIDDEN, RALPH & SUE
GNEITING, LLOYD
GOBLETSON, ROGER
GODFREY, THOMAS
GODINEZ, JENNIFER
GOEBEL, DAVID
GOETZ, PHD, SCOTT
GOFF, STIOFAIN
GOGGINS, ALAN
GOODFIELD, NICOLE
GOODWIN, DAN
GOODY, SHELBY
GORDON, MOCHAEL
GORDON, RAY & JEANIE
GORMAN, ALEXANDRA
GRACE, RAYMOND
GRANADOS, KOJAK
GRANDY, GARY
GRAVINA, DAVID
GRAVITT, RANDY
GRAY, LESLIE
GRAY, MERLIN
GRAY, RICK
GRAY, VALENE
GREEN, DAVID
GREEN, DECK
GREEN, JOHN K.
GREEN, LELAND
GREEN, MICHELLE & ZANE
GREEN, ROBERT, GLENDA, JAKE
GREEN, WILLIAM
GREGORY, ALAN & MONICA
GRIEBENOW, MERLE L.
GRIFFEL, HENRY & DONNA
GRIFFEL, RICHARD
GRIFFIN, LOUIS H.
GRIMES, C.D. & CLARA L.
GROENING, STEPHEN
GROLL, MARY FRAN
GROSSHANS, ELDON & JAN
GROVER, GARY
GROVER, RICHARD & PEGGY
GRSBSTAD, TIMOTHY
GUILFORD, DALE
GUNTHER, ANDREW
GUTKNECHT, GEORGE
HABENSCHUSS, TONY
HACKBARTH, KYLE
HADERLIE, DAVID
HADERLIE, VAUGHN
HAEFNER, DARYL
HAFENFELD, RICK
HAFLA, RICHARD E.
HAFLA, TONY
HAIDER, KEN
HALE, CLAY
HALE, ERIC
HALE, LEON
HALE, MILO
HALKAR, HARRY
HALL, GARTH
HALL, JOHN
HALL, LYNDON
HALL, MORGAN
HALL, NILE
HAMILTON, NORMA
HAMMAR, JAMES
HAMPTON, JERRY
HAMPTON, TODD & KATHY
HAND, MRS. JOHN
HANDY, CRAIG
HANKS, BURKE, KAREY & LANDON
HANKS, LOIS
HANKS, MONTE
HANNA, DAN
HANNI, MICKIE
HANSEN, B.
HANSEN, BOB
HANSEN, BRYAN
HANSEN, CLINT
HANSEN, DARIN & TERESA
HANSEN, DARWIN & KARIN
HANSEN, ELAINE
HANSEN, GEORGE
HANSEN, GRACH, PAIGE & J.
HANSEN, JACK & LAVERTA
HANSEN, JEREMY R.
HANSEN, LARRY LLOYD & DORENE
HANSEN, MARK & PAULEINA
HANSEN, SHAWN
HANSEN, STEVEN
HANSEN, TERRY
HANSON, JOHN
HANSON, ROBERT
HARBUCK, JOHN
HARDWICK, JOHN
HARDY, GARNEY
HARE, MERLIN
HARKER, TREVOR
HARKEY, ROYCE
HARMON III, DANIEL D.
HARPER, DAVID
HARPER, TRAVIS
HARRIGFELD, FRITZ
HARRIGFELD, JEFF
HARRIGFELD, MATTHEW
HARRIGFELD, WILLIAM
HARRIS, BRETT
HARRIS, DANNY
HARRIS, KEVIN
HARRIS, SCOTT
HARRYMAN, JOHN
HARSHBARGER, BRENT & PHYLLIS
HARSHBARGER, DON & WANDA
HART, DAVE & SANDY
HART, KELLEY
HART, KIRK

HARTSHORN, DAVID
HARTSHORN, JAMES ALAN
HARTUNG, JIM
HARVEY, DAVID
HARVEY, DOUG
HARVEY, STEVEN & ANNETTE
HATCH, GEORGE
HATHAWAY, JOHN RYAN
HAUTH, JAY
HAVLICK, DAVE
HAWKINS, RALPH A.
HAWKINS, STAN
HAY JR., RONALD O.
HAY, DAVID
HAYES, VIRGINIA
HAYMAN, CLIFF
HAYS, IRA
HAYSE M.D., BRUCE
HEADRICK, NANCY S.
HEATH, BRET
HEATH, SHAWN
HEBERTSON, CHRIS
HECKER, PAMELA
HEGSTED, JOHN
HEILESON, MAHLON
HEINRICH, MARTIN
HEISER, MIKE
HELGESON, KEITH
HENDERSON, DEWITT
HENDRICKSON, JOHN
HENDRICKSON, MR. & MRS. WILLIAM
HENRICKSON, ANGELA
HENRICKSON, ERNEST
HENRY, GERVANNIA
HENSEL, DAVID
HENSLEY, CORINNE
HENZE, YVONNE
HERMAN, JOHN
HERNANDEZ, JIMMY
HEYMANN, NANCY & RUSTY
HIBBEN, ROD
HIBBERT, REX A.
HIESTAND M.D., MAHLON & PATA
HIGBEE, SHANE
HIGGINSON, DAVID
HIGHTOWER, C.S.
HIGHTOWER, LIZ
HIGLEY, DONETTA
HILL, EDDIE
HILL, HARLEY
HILL, HOWARD
HILL, JAMES
HILL, JOHN
HILL, KYLE
HILL, PERSHING
HILL, ROBERT
HILL, SCOTT
HILL, SHANNON
HILL, TOM
HILL, TONI
HILL, VICTOR
HILLEARD, RICHARD & SARAH
HITTEL, EARLINE
HOELZEL, NATHANAEL
HOFFMAN, DAVID
HOFFMAN, T.W.
HOFLE, MARY M.
HOGAN, JAMES
HOGAN, THOMAS
HOHT, JON
HOLAK, ANDY & KIMBERLY
HOLAK, KIMBERLY
HOLDER, KARI
HOLLINGSWORTH, JEFF
HOLLIST, DAN
HOMER, SCOTT
HOODENPYLE, RON & ARDITH
HOOPER, DENNIS
HOOPER, DON
HOPKINS, JIM
HOPPERDIETZEL, PAUL
HOREJSI, BRYAN
HORMAN, RANDY
HOUGHTON, DAVID
HOULIHAN, KATHLEEN
HOWARD, CALVIN T. & EDNA
HOWARD, JOHN
HOWE, BRETT & TAMMIE
HOWELL, TODD & JORY
HOWELL, TOM
HUBBARD, KENNETH & PATTY
HUCKABAY, ARNOLD
HUDAK, HOWARD
HUDMAN, DOUGLAS
HUDMAN, KEVIN
HUDSON, JOHN
HUETT, JAMES
HUGHES, JOHN
HUGHES, MITCH
HUGHES, ROBERTA
HULSE, RUSSELL
HULTZ, LARRY & B.J.
HUM, JEANNE
HUMBERGER, JERRY & SIMS RENAE
HUMPHERYS, BRENT
HUMPHREY, COY
HUNT, JANE & RICHARD
HUNT, JODIE
HUNTSMAN, JOHN
HURLEY, KEVIN
HURLEY, RICHARD
HUSKEY, BILLIE & DONALD
HUSKEY, GREG
HUTCHENS, VERN
IDE, JOHN
IMM, NATHAN
INGRAM, DON
INN, JASON F
ISRAEL, NELLIE
ISTWAN, JOE
JACKSON, JIMMY
JACKSON, JOHN RITA
JACOBS, DARREN
JACOBSEN, JACOB J. & JULIE A.
JACOBSON, BLAIR
JACOBSON, ERIC
JAMES III, WILLIAM
JAMES, DOUGLAS
JANIKOWSKI, STUART
JARDINE, CARL & DEEDRA
JARDINE, JOHN A. & JOE
JARDINE, VERLE C. & NANCY
JEFIMOFF, JOHN
JELLICK, ROBERT
JENKINS, KYLENE
JENKINS, LEON
JENKINS, WAYNE
JENNINGS, LINDA
JENSEN, DENNIS L.
JENSEN, KURT
JENSEN, LARRY
JENSEN, MONTE
JENSEN, RICH
JENSEN, RONALD
JENSEN, RUSSELL
JENSEN, VERONIQUE
JEPHSON, JANE
JEPPESEN, BRENDA
JEPPESEN, GARRY

JEPPESEN, JERRY RITA
JEPPESEN, KYLE
JEPPSON, DEBORAH
JERNBERG, DARRELL
JOHNER, LAVAN
JOHNSON, BEVERLY
JOHNSON, HILLARY
JOHNSON, JIM
JOHNSON, JIM SUSAN
JOHNSON, JOE M. & DEBRA A.
JOHNSON, KEN
JOHNSON, MARK DAVID
JOHNSON, MIKE & RUSSELL
JOHNSON, ROBERT
JOHNSON, STEVEN
JOHNSON, TIM
JOHNSON, TIM
JOHNSON, VAL
JOHNSON, WYDELL & WAYNE
JOHNSTON, JULIA
JOLLEY, BOYD & DAREN
JOLLEY, MERLYN D.
JONES, AL
JONES, ANDREW
JONES, BRUCE
JONES, BRUCE
JONES, CEDRON
JONES, CLARK
JONES, CRAIG
JONES, DAVID
JONES, JOHN
JONES, MIKE
JONES, MURRAY
JONES, PAULA
JONES, RICHARD
JONES, RICK L. & RUTH
JONES, ROB
JONES, STEVE
JONES, WILLIAM M.
JONSSON, VALGARD
JORDAN, LYNETTE
JORDE, MIKE
JORGENSEN, JASEN
JOYCE, PETER
JUDD, FRED & JOANN
JUNG, JEFF A.
KAHN, DAVE
KAHN, DAVID
KAISER, JEFFERY
KAPECKI, JON
KATSMA, KENNETH & CAROLYN
KAUFMANN, FRANK
KEELY, BYRON
KEIM, SUSAN
KELLER, ED
KELLER, JOHN
KELLEY, KURT
KELLOM, THOMAS
KELLY, DAVE
KELLY, JEAN
KELSEY, J
KELSEY, SHANE & TAUNA
KEMBERLING, BARBARA
KENNEDY, BRYAN
KENNEDY, MARK E.
KERR, KIM
KERSTING, JIM & JANE
KEYS, PAUL
KIDD, JUSTIN
KIDD, SCOTT & KAY
KIDDER, BRIAN
KILMER, DYLAN, TOM & JUDY
KILMER, KATHY
KING, BECKY
KING, JOHN
KING, STEVEN
KINGHORN, MORRIS
KIRKHAM, DARRELL
KITZMILLER, MELISSA
KLEIN, FRED C.
KLINGLER, KARL & GAYE
KLINGLER, ROBERT E.
KLIPFEL, TIMOTHY
KLISPEE, LORIN
KLOCK, NANCY
KNIBB, DAVID
KNIGHT, GENEO
KNIGHT, ROBERT & LOUDINE
KNOWLTON, MARGARET
KNOX, CHRIS
KNUPP, PATRICK
KOEPKE, LINDSEY
KOLB, JEFF
KOLBERT, JOHN
KONTES, JAMES
KOONTY, TERI
KORBELIK, DAVID
KORBELIK, MARY HELEN
KORIN, HILAH
KORTYNA, ANDREW
KOZUSYN, RUTH
KRAH, ROBERT
KRAH, ROBERT & TYSON
KREFETZ, ELLIOT
KREGER, ALLEN
KRISTOFFERSON, KEITH
KROLL, D
KRONER III, LUDWIG F.
KRUEGER, GARY
KRUMENACKER, RICK & SHAUNA
KRUSCH, SUSAN
KUCERA, GEORGE
KUHN, LISA
KUNST, CHRIS CHLOE FRISSELLA & JAYLAYA
KUNZ, ARNOLD
KURTZ, PH.D, BARBARA
KYNASTON, RON SHIRLENE
KYNASTON, SHIRLENE
LAKAS, JULIE
LAKE, MORGAN
LAMB, BILL AND DE
LAMBERT, LYLE
LAMBERT, VIRGINIA
LANCASTER, JAMES C.
LANDERS, GLENN
LANDON, BLAKE
LANDON, IVAN
LANDON, SUE
LANE, EARL
LANG, JOAN
LANG, ROGER & SUE
LANGDON, D.
LARPLEY, ELLEN
LARSEN, DAVID
LARSEN, JACK
LARSEN, NILS
LARSON, SCOTT
LASLEY, LOUISE
LASSON, ED
LATHE, MARTY
LAUSCH, ROBERT
LAUTENSLEGER, STEVE
LAVALIER, CHRISTY
LAVIN, JOHN
LAW, RICHARD & LINDA
LAWTON, WARREN
LAYTON, FRANK AND LOIS
LEATHAM, BARRY
LEATHAM, DALE
LEAVIT, LEROY
LEAVITT, LEROY

LECLAIR, DESMOND
LEE, SEAN W.
LEES, KENNETH MIKE
LEES, ROBERT
LEHMAN, BOB
LEHMANN, SCOTT
LEHMKUHL, TIFFANY & JILL
LEHR, DAVID
LEMEN, MARTHA
LENT, JOHN
LENZ, BEN
LENZ, BRIAN
LENZ, DENNIS
LENZ, HAROLD & DE-LORES
LETENDRE, DAVID & CAROL
LEWIES, HARRY D.
LEWIS, MIKE
LEWIS, ORLIN
LEWIS, WILLIAM F.
LIBENGOOD, ANN
LIEBENTHAL, JACK & JEAN
LIECHTY, WENDELL
LIEN, DAVID
LINDERMAN, CURTIS
LINDSAY, JUDITH
LINDSTROM, LANE
LINFORD, HONORABLE GOLDEN
LINFORD, KENT
LINN, MARY
LINNEMANN, MARK
LIPE, ELLIS
LIPOVAC, PETER A.
LISTMAN, GERALD G.
LITTLE, KAREN
LIVERMORE, L J
LLOYD, MEREDEE
LOBAUGH, CLIFF
LOCKE, FRANCES
LOCKLEAR, ALAN
LONG, JOHN
LORAIN, JOHN
LORTH, MARTIN
LOTT, ALAN
LOUIS, KATTIANA
LOVELL, MARK
LOWE, FRANCIS
LOWELL, KENDALL
LOWER, RICHARD
LUCAS, LAWRENCE
LUCKEY, CONNIE
LUGAR, ROBERT
LUKE, DALE
LUNDHOLM, CARL
MICKIE
LUNDVALL, L. GARY
LUSK, GARY SUSAN
LYFORD, CHARLES
LYMAN, J & SAMUEL
LYMAN, SCOTT L.
LYNN, JEFF
LYON, JARED
LYON, LAVOY
LYON, SANDRA
LYON-BATEMAN, RUTH
MACHEN, KEVIN
MACKAY, CAMERON
MACKAY, DOUG
MACKERT, FRANK
MAI, STANLEY & DORIS
MAIER, JOSEPH
MAINLAND, EDWARD A.
MAKAY, GEORGE
MALKERSON, JOEL
MALONEY, KEN AND JULIE
MANESS, SHELLY
MANGUM, SANDRA
MANNCHEN, BRANDT
MANNE, JERRY
MARINUS, JIM
MARKOWSKI, DAVID
MARKOWSKI, JAN
MARLER, DICK
MARLOR, J. KENT
MARLOUISH, DAVID
MARSHELL, DENNIS
MARTIN, DAVID D. & RUTH C.
MARTIN, MICHAEL
MARZINELLI, MARTY
MASON, DALLON
MASON, EMERSON
MASON, NEIL
MASON, SANDY MARY
MATHEWS, CHRISTO-PHER
MATHEWS, RONALD
MATHEWSON, BARBARA
MATHEWSON, JUSTIN
MATHEWSON, ORVILLE H.
MATHEWSON, ROD & JUSTIN
MATHIAS, JIM
MATTHEWS, MATT
MATTIS, MICHELLE
MATTSON, FRANCIS R.
MAUGHAN, KEVIN
MAUGHAN, RALPH
MAUPIN, E. SEAN
MAUPIN, WILLIAM
MAY, SONYA
MAYER, MICHAEL
MAYER, SIGRID
MAYHUE, DRUSHA
MAYLE, DEAN
MAYNARD, ROBERT A.
MAYTAG, MARQUITTA
MC AULEY, LARRY D. & SUE
MC COY, THOMAS
MC DONALD, FAYE
MC DONALD, LARRY
MC GLINSKY, LEE & AL
MC KNIGHT, CLINT
MC MURTREY, SYD
MCARTHUR JR, DENNIS
MCBRIDE, DON
MCBRIDE, JIM
MCCANN, ELLEN
MCCLURE, CHARLES HAROLD
MCCORMICK, LARRY
MCCOY, SCOTT D.
MCDANIEL, KEITH A.
MCDANIEL, LARRY
MCDONALD, JAMES
MCFADDEN, BRENT G. & SHANE
MCGARRY, JACK
MCGARRY, THERON
MCGEE, J. SCOTT
MCINTIER, DENNIS & ELLEN
MCINTIRE, THOMAS
MCINTYRE, WILLIAM
MCKELLEY, REX
MCKENNA, PATRICK
MCKNIGHT, J.
MCLAUGHLIN, THOMAS
MCMILLEN, STEW & MIMI
MCMURTREY, B J
MCPHERSON, ROSS
MCRAE, BART
MEACHUM, TERESA
MECHAM, PAUL
MEDINA, SYLVIA
MEKERIGEN, DEWAYNE
MEKOLITES, EDWARD
MELLARD, JONATHAN
MELVILLE, CHI
MENDENHALL, ARLO

MENG, BRENT
MERHIGE, CHRIS
MERIGLIANO, MIKE
MERRIL, BRETT
MEYER, CLYDE E.
MEYER, DAN
MEYER, FRED
MEYER, NEIL & CAROL
MEYER, ROCKY
MEYER, RON, JAY & WINONAN
MICHAEL, T
MICHAELSON, PETER & WANDA
MICHNIEWICZ, EDWARD
MICKELSEN, WENDY
MIER, ANNE
MIKKOLA, MELVIN
MILBY, LYLE
MILES JR., FRANK
MILL, GARY LIZ
MILLAR, JOHN W.
MILLER, BRYAN
MILLER, DUSTY
MILLER, JEROME
MILLER, KARL
MILLER, KENT
MILLER, LAWRENCE (TROY)
MILLER, RANDALL
MILLER, T. KARL
MILLER, VERL
MILLWARD, GEORGE
MINZER, SHARON
MISKIN, AFTON & GUY E.
MISKIN, S. KENT & SHELMA
MITCHELL, BRETT LEROY & SALLY
MITCHELL, DON & MARGARET
MITCHELL, LANNY & KAREN
MITCHELL, LANY
MITCHELL, MARJEE
MITCHELL, ROBERT
MITCHELL, ROLAND
MITCHELL, RONALD & DARLENE
MITCHELL, TROY
MOENKHAUS, DAVID
MOFFITT, LAYNE
MOHR, DOUG H.
MOISEYEV, MAYA
MONDY, RICHARD
MONTGOMERY, EARL
MOON JR, JOHN
MOON, ROBERT
MORAN, LEE
MORGAN, DAVID
MORGAN, ROBERT & NICOLE
MORGAN, RON & MARIE
MORGAN, SHANE & TERRY
MORIS, DAVID
MORRIS, LYLE
MORRIS, MARK
MORRISEY, JERRY
MORSE, CINDY
MORTENSEN, CURT
MORTENSEN, EVERETT PAUL & JOYCE
MORTENSEN, LEE & SHERRY
MORTENSEN, LYNN
MORTENSON, HONORABLE MAX
MORTENSON, RULON
MORTON, ALLISON
MORTON, RITA
MOSELEY, ROBIN
MOSER, CLAIRE LOIS
MOSER, RANDY
MOSS, ERNEST
MOSSMAN, RALPH
MOULTON, RODNEY
MUCKLEROY, WILLIAM
MUELLER, ROBERT
MUMM, JACOB
MUMM, JERRY
MUNDEN, JAMES
MUNDT, GEORGE
MUNRO, MAC
MURDOCH, SCOTT & MEL
MURDOCK, BRETT
MURDOCK, MICHAEL & RENIE
MURDOCK, NICOLE
MURDOCK, PHIL
MURDOCK, RAMONA
MURDOCK, STEVE
MURRI, CALVIN
MUSGROVE, JAMES
MYLER, DON
NAGLE, DAN KELLY
NAGLE, DUSTY
NAGLE, KRISTY
NAKAMURA, LISA
NALDER, DEAN
NASH, JAMES
NATE, RANDY
NAUMANN, PATTY
NEAL, PH.D., AMBER
NEAL, CHRIS
NEAL, CHUCK
NEDROW, DICK
NELSEN, MARK DONALD
NELSON, BRAD
NELSON, CARL J.
NELSON, DEBRA
NELSON, GREG D.
NELSON, LEE
NELSON, LYNN
NELSON, NORMA
NELSON, PERRY
NELSON, STEVEN & DEBRA
NEMUTH, MIKE
NESTA-BERRY, JEAN
NEUBER, TESS
NEWBER, BEA
NEWBOLD, KEN
NIELIE, BILL
NIELSON, JAMES
NIELSON, LINDA
NIZNIK JR., A..J.
NOBLE, JILL
NOBLE, JIM & PATRICIA
NOLAN, JAMES
NOLTHENIUS, JUERGEN
NORD, DARRIN
NORMAN, MATTHEW
NORRELL, KAREN
NOSSAMAN, SARAH
NYGARD, SHANNON
O NEIL, JILL
OAKLEY, GLENN
OBENDORF, RON
OCHI, JOHN
OFFENBACKER, LINDLE
OGDEN, MYRLIN D.
OHS, CHARLES
O'KELLY PH.D, BARBARA
OLEN, S
OLMSTED, BILL LORENE
OLSON, CODY JANICE
OLSON, DIRK & MARGARET
OLSON, LYLE CAROL
OLSON, MARC
OLSON, RUSSELL
O'NEAL, DENNY
ONIEL, CHUCK

ORR, MARVIN L.
ORR, WENDELL
OSBORNE, PAMELA
OSTERHOUT, CHARLES R.
OSWALD, DIXIE
OSWALD, KEVIN
OTTENBERG, MARJORIE
OTTO, BOB & DUSTY
OVERMAN, ERIC
OVERSON, EDWARD
OWEN, MARTY & CONNIE
OWENS, ANTHONY
OWENS, DAVE
OWENS, WESLEY
P, D
PACKARD, JERRY & ELVA H.
PACKER, COREY
PACKER, GRANT & BEVERLY
PACKER, LYLE
PACKHAM, CHARLES & SCOTT
PACKHARD, JERRY
PAGE, JOHN & SUSAN
PALMER, ELIZABETH
PALMER, KEN
PALMER, LAIRD
PANTING, MIKE
PARK, JOHN
PARK, KENDALL
PARK, RAY
PARK, ROBERT
PARKE, DAVID
PARKER, DARRIN
PARKER, HERBERT
PARKER, JADE
PARKINSON, JIM
PARKS, PEGGY
PARMER, KREG & BRENDA
PARRI, LOUIS
PARRY, KELLY
PARUK, JIM
PASKEY, WALTER
PASSINO, CARL
PATLA, DEBRA
PATLA, SUSAN M.
PATTERSON, JUDY
PAVIA, JERRY
PAYNE, BRET
PAYNE, BUDDY CATHY TRINA
PAYNE, CHRIS
PAYNE, CLIFFORD
PAYNE, DAVID
PAYNE, PAUL
PAYNE, REED
PEARSON, MARK
PEASE, ELIZABETH
PECK, BETH
PECK, JOHN
PELKEY, JO
PENDERGRAFT, JOHN & DEBBY
PENDREY, PATRICK
PENHALIGEN, CHARLES
PENNOCK, SHELLY
PERETTI, KEVIN
PEREZ, GEORGE
PEREZ, TERRY
PERKINS, ROD
PERRENOUD, NORMA & KAY
PERRY, BILLIE
PERRY, DON
PERSONS, WAYNE
PETERS, RALPH
PETERSON, BILL
PETERSON, CHUCK
PETERSON, DON J.
PETERSON, GEORGE L.
PETERSON, KATHRYN
PETERSON, KENNY
PETERSON, RONALD J.
PETERSON, TREVER C.
PETERSON, VICKEY
PETERSON, WARREN & PAM
PETERSON, WILL
PETTET, JOSHUA & MARK
PETTY, CLARENCE
PFAENDER, WARNER R.
PHELPS, ERIC & TERESA
PHELPS, JAMES
PHELPS, TRENT & ANN
PHILBRICK, DEAN
PHILLIPS, ALI
PHILLIPS, JOHN
PHILLIPS, JOHN
PHILLIPS, RICHARD M.
PICKREIL, JAMES
PIERCE, WAYNE
PIEROTTI, JOHN & FELICIA
PIFER, HARRY
PINSON, PENNY
PITKIN, LINDEN
PITTROFF, WOLFGANG
PLESKO, ILDIAKO
PLOGER, SCOTT
POKORNY, TAMARA
POLATIS, GORDON & CHRIS
POLATIS, GORDON MARLA CANDICE
POND, GAYLEN S. & LOIS
POOLE, JOHN
POOLE, ROBERT
POOR, CATHY
PORTER, TROY
POST, PAULA
POTTER, JIMMY
POUND, DON
POVAH, PAT
POWELL, DAVID & NADINE
POWELL, DON & RAE EL
POWELL, GARY L.
POWELL, JOE
PRAHASTO, G.
PREBLEANOW, JOHN
PRESTON, DOUGLAS
PRESTON, EARL
PRESTON, JEREMY
PRESTON, JOSH & ANDREW
PRICE, EDD
PRICE, MIKE
PRICE, RICK
PRICE, ROGER
PRIMN, JERRY
PROPHET, RICK
PRUIETT, JOEL
PUDER, SUSAN
PULVERS, CARIEANN MORRISSEY
QUINTON, DICK
QUINTON, KEN
RADEMACHER, STEVEN
RADOVICH, NICHOLAS
RAGOTZKIE, KIM
RAMMELL, RICKY
RANDALL, CLAIR
RANKIN, DAVID
RANSOM, MAX
RANSOM, TED
RANSON, RODNEY
RASH, VOSCO
RASKER, RAY
RASMUSSEN, GREG & RONDA
RASMUSSEN, RICHARD

RAUSH, RICHARD
RAUZI, DAVID
RAVNDAL, TIMOTHY
RAWLINGS, DARIN
RAY, RUSSELL
RAYAN, COREY
RAYMOND, RON
RAYMOND-YAKOUBIAN, BRENDEN & JULIE
REDFERN, REX D.
REECE, DAVID
REECE, GRACE
REECE, LELAND & LINDA
REECE, ORVAL J.
REED, BRYON
REED, MARK
REEDER, MIKE & LYNN
REES, STEVE
REESE, DAMIAN
REESE, GORDON
REEVES, MIKE
REEVES, RALPH
REICH, ANDREW
REILLY, CHRISTINE
REIMANN, MAGGIE
REIMANN, ROBERT
REINKE, DAVID
REISWIG, BARRY & MONICA
RESCHEKE, ROBERT
REUTER, JOANNA
REYNOLDS, JOHN
REYNOLDS, SHAWN
REYNOLDS, TERESA
REYNOLDS, WELDON
REYNOLDS, WELDON
RHEIM, JAMES
RHODES, WILL
RICE, DARYL
RICE, JES
RICHARDS, DIRK & DENA
RICHARDS, GLADE
RICHARDS, TODD
RICHARDSON PH D, ALBERT
RICHARDSON, DAVE
RICHARDSON, DAVE & SHIRLEY
RICHARDSON, GRANT
RICHARDSON, HONORABLE MEL
RICHINS, THOMAS
RICHMOND, KATHY
RICKS, DALLAS
RICKS, GARVIN
RICKS, KIMBER
RICKS, REED
RIDLEY, M. PAT
RIEGEL, CINDY
RILEY, KENT
RIMENSBERGER, JOE & HANNAH
RINE, BECKY
RINEER, ROY
RINGEL, B.J. & ADRIAN
RININGER, RICHARD
RIPPLINGER, FRANCIS
RIRIE, GLADE JO & SYLVAN
RIVAS, RUDOLFO & ROBIN
ROBERSON, LA NOIR
ROBERTS, ALLEN
ROBERTS, T L
ROBERTS, WILLIAM
ROBERTSON, BARRY
ROBEY, WADDELL
ROBINSON, MAX
ROBISEN, STEVEN
ROBISON, LARRY
ROBLES, JOLENE
ROBSON, BRENT
ROBSON, GARY
ROCKEFELLER, MARK F.
ROCKWOOD, MARGUERITE
ROCO, JAKE
RODGERS, BRAD
RODGERS, STAN
RODMAN, SAYRE
ROEH, ARTHUR PAUL
ROGERS, M.D., BRIAN
ROHE, RHONDA
ROMAN, WES
ROSEN, DELMAR & MAREE
ROSENBLUM, MIRIAM
ROSS, CONNIE & MONTE
ROSS, ERIC & LINDA
ROTH, DON & LESLIE
ROTHSTEIN, RICHARD & LORI
ROWBERRY, FRANK
ROWE, JOHN
ROYING, THOMAS
RUBIN, ENID
RUDOLPH, GEORGE & BESSIE
RUFFY, RUDOLPHE
RUPE, DOUGLAS
RUSCOE, DEAN
RUSHFORTH, SAMUEL
RUSNAK, RICHARD
RUSSELL, M.L.
RUST, JOHN
RYAN, JACK F.
RYDALCH, ANN
RYDALCH, RYAN
RYDER, EOLEEN
SACKETT, RANDY
SAINER, DARRELL
SALVESEN, DAVE
SAMENFELD, HERBERT W.
SANDERSON, ROGER
SANDERSON, ROGER & SHIRLEY
SARGIS, DAVID
SATTLER, JAMES
SAUER, GREG
SAUER, GREG
SAUNDERS, DAVE
SAUNDERS, DIANE
SAWYER, KATHRYN
SAXTON, ANN
SAYLES, DORIS
SAYLES, RICHARD
SCANLAN, MIRIAM
SCHANZ, DON
SCHER MD, SARAH
SCHERFF, TED
SCHIESS, TIM T.
SCHMAHL, MARK & JESSICA
SCHMIDT, JOHN
SCHNEIDER, JACK
SCHNELLER, ANDREW
SCHOFIELD, DON
SCHOLES, H. THAD
SCHOONBECK, MARK
SCHOONEN, D.
SCHUBERT, D.J.
SCHULIDES, BRIAN
SCHULTE, DAWN
SCHUTT, PAUL
SCHWARTZ, ANGELA
SCHWARTZ, JOSEPH
SCHWARTZ, LYLE & SUSAN
SCOTT, CHRIS
SCOTT, GARY
SCOTT, JANET
SCOTT, JASON
SCOTT, LARRY
SCOTT, SHANE

SEARS, BILL
SEELEY, ERNEST
SEHORN, CHARLENE
SEILHEIMER, TITUS
SELLERS, JOAN
SEMLER, DANIEL
SENAPE, NICK
SERAND, MARK
SEYMOUR, CRAIN
SEYMOUR, LARRY KEN
SHADLICK, WILLIAM
SHADY, RICHARD & ELNEDA
SHAIL, GEORGE L.
SHANE, DALE
SHAPIRO, NATALIE
SHARP, DEMAR
SHARP, RICHARD
SHAW, JOEL
SHEA, RUTH & ROD DREWIEN
SHEARER, PAM
SHENTON, GREG
SHEPARD, LARRY
SHEPHERD, BRENT
SHEPHERD, LYNN
SHERBINE, TERRI
SHERICK, DONALD MARK
SHERMAN, MICHAEL
SHICK, JONATHAN
SHIELDS, TOM
SHINNEMAN, DOUGLAS
SHIPMAN, R.
SHIRLEY, ROD PATTY
SHIRLEY, TODD
SHULER, CRAIG
SHULTZ, ROB
SHURTLEFF, BILL K.
SIBLEY, EDWARD
SIBLEY, GEORGE
SIDDOWAY, PAUL
SIEGEL, BILL & ANNETTE
SIEVERS, DENNIS
SIFERS, SARAH
SIMMONS, BLAIRE
SIMMONS, GARNER
SIMMONS, LEAH
SIMON, JAMES
SIMON, W.J.
SIMPSON, ROBERT
SINE, JOSEPH
SINGLETON, BRENT
SKIDMORE, DAVID
SKIDMORE, RANDY
SKINNER, BLAINE & DEANN
SLEAVIN, KATHY
SLIDER, FRANCIS
SLIN, KAY
SMITH, BRENT
SMITH, BRYAN
SMITH, CAROL RAE
SMITH, DAN
SMITH, DAVID
SMITH, DAVID
SMITH, DAVID M.
SMITH, DON F.
SMITH, DR. & MRS. RICHARD
SMITH, GARY & BRENDA
SMITH, GLENN
SMITH, GREG
SMITH, JUNE SHANE
SMITH, KEITH
SMITH, KELLAN
SMITH, MERLIN
SMITH, MIKE
SMITH, NED
SMITH, REBECCA
SMITH, RICH
SMITH, SEAN
SMITH, TOM
SMITH, VAUGHN L.
SNIDER, DONALD & JYMME
SODERMAN, JOY
SOJOURNER, MARY
SOLECKI, JIM
SOLLENDER, JERRY
SOMMER, SUSAN
SOMMERS, JAMES
SONDAU, RICHARD
SORENSEN, LADAWN
SOUTH, ED
SOUZA, BILL & SHIRLEY
SOUZA, WILLIAM R.
SPAHR, JOHN
SPAULDING JR., LAWRENCE O.
SPENCER, JULIE
SPENCER, LAVELL & SHANETTE
SPERTUS, ROBERT
SPETTIGUE, ELIZABETH B.
SPEZIA, JOHN
SPITZ, ZEV
SPOGIS, FABIAN
SPOTTS, DONNA
SPOTTS, RICHARD
SPRENGEL, MARK
ST. JAMES, CAROLYN
STAEB, ROD K.
STAFFANSON, ROBERT
STAHL, KEVIN
STANGER, BRAD
STANGER, BRUCE & KATHRYN
STANGER, ROXANN
STANGER, ROXANN
STANLEY, JENNIFER
STAPLES, TATE
STATEN, RICHARD
STAUB, AL
STEARS, ALLEN LINDA
STEED, DENNIS
STEEL, DOUG
STEELE, KERRY M.
STEELE, ROGER
STEENERSON M.D., RONALD
STEGELMIRE, LORIN
STEINACKER, NANCY
STEMPLE, JAMES
STEPHENS, ALAN & ANN
STEPHENS, BRUCE
STEVEN, ANNIE
STEVENS, EARL
STEVENS, J
STEVENS, JOHN
STEWART, JAY
STEWART, PATRICIA D.
STEWART, SETH
STILSON, CHARLES
STILSON, WILLIAM
STIMPSON, J.C. & JANICE
STIX, AMY
STOCKS, JUSTIN
STOLENBURG, ELDON
STOLL, FRED
STOLL, RICHARD
STONE, DAVID
STONE, HALLIE
STONE, JEFF
STONE, TROY
STONES, FRANK
STORE, MONEIO
STORER, CLYDE
STORMS, RULON
STOWE, DAVID
STOWELL, BARTLEY
STOWELL, KAY
STOWELL, TODD
STRAIN, JACK

STROBEL, MARK & JOAN
STROMBERG, KENNETH
STROUD, WALLAS
STRUKS, GARY
STUART, DOROTHY
STURDEVENT, MICHAEL
STURM, JACK
STURM, TED
STYHL, GARY
STYHL, NICK
SUCHAN, FRANK
SUDDUTH, ELIZABETH
SULLIVAN, FRANK
SULLIVAN, TIMOTHY
SUMMER, KIM
SUMMERS, ERIC
SUMMERS, KENNY & PHIL
SUMMERS, KIM
SUTTON, GARTH
SUTTON, KEN
SUTTON, TODD
SWAIN, CRAIG
SWANEY, JAMES
SWANSON, ALLEN
SWANSON, JOHN
SWINTZ, BOB
SYMES II, RICK
TALBOT, STEVE
TANNER JR., JOHN E.
TANNER, MICHAEL M.
TAPPER, SHANE
TARPLEY, KEITH & ELLEN
TARPLEY, MITCH
TAUSCHER, MICHAEL
TAVENNER, BOB
TAYLOR, ALBERT E.
TAYLOR, BRENT
TAYLOR, DANIEL
TAYLOR, HARRY J. & B.J.
TAYLOR, JED & JARED
TAYLOR, JOHN
TAYLOR, K
TAYLOR, MICHAEL
TAYLOR, MICHAEL
TAYLOR, MISTY
TEPPER, LINDA ROTHCHILD
TERRY, BRENT
THERWOOD, CHRIS
THIELKE, NORMA
THOMAS, BILL
THOMAS, BUTCH
THOMAS, GEORGE
THOMAS, TERRY
THOMPSON, DOUG
THOMPSON, GARY
THOMPSON, JAMES
THOMPSON, LYLE
THOMPSON, PAM
THOMPSON, PHYLLIS
THOMPSON, ROD & KRISTI
THOMPSON, ROLAND
THOMPSON, SID
THRASNES, CALVIN
THUESON, R.J.
THURMAN, KAY
TILL, TED
TILTON, STEPHANIE
TIMCHAK, JOSEPH
TINOCO, JACLYN
TOBIN, PATTI
TODD, WILLIAM
TOLBERT, KELLY
TOOLE, RACHEL
TORGERSON, WAYNE
TORRES, CINDY
TOURANGEAU, DICK & PAT
TRAHANT, THOMAS
TRAPPER, SHANE
TREFONAS, JASON
TREMELLING, TRACY
TRENKLE, KATHY
TREVVETT, THOMAS
TRIMBLE, JEFFREY RICHARD
TROTTER, LELAND
TROUT, MICHAEL J.
TROWBRIDGE, WILLIAM KAY
TRUMAN, KIM
TRUMAN, LANDON
TRUPP, MARK
TUCKER, MIKE
TUCKETT, CASANDRA & KALA
TUMA, GARY
TURLEY, ANTHON H.
TURNER, ALFRED & VALEEN
TURNER, BETTY
TURNER, BILL
TURNER, CURT
TURNER, ED
TURNER, FRANK
TURNER, FRANK
TURNER, LEVI & ANN
TURNER, TERRY D.
TURNER, VANCIE
TYNER, PAUL & ROBIN
UIHLIEN, PAM
UMBACH, SHERYL
UNFRIED, STEPHEN M.
UNGER, JAMES & SANDRA
UNREADABLE, DAVID
UNREADABLE, ERIC
UNREADABLE, JOHN
UNREADABLE, SHANE
UNRUH, JERRY AND DIANA
URIONA, LOUIS
VADNAIS, STEVE
VADNAIS, THOMAS
VALLONE, CHERYL
VAN NOY, DEAN
VAN SICLEN, CLINTON & GINI
VAN WAGANAN, RANDY
VANDER DOES, TOM & JOELLA
VANDERVORT, FRANK
VANDEWIELE, FELIX R.
VANEK, GRETCHEN & DAVID
VANORDEN, JARED
VARNER, VICKI
VECCHIO, MIKE
VERTREES, GERALD
VESPERMAN, GARY
VIGNERE, JOEL
VIVIAN, GREG
VON ALTEN, THOMAS & JEANETTE
VON METTENHEIM, MARKUS
VONDERHEIDE, BLAKE
VOORHIES, BILL & MARILYN
VOS, BIEFKE
VOYLES, KEVIN
WADDELL, DEBI
WADSWORTH, COREY W.
WAGNER, MARY
WAGONER, LANE
WALDRON, JAN
WALKER, MAX
WALKLEY, ROBERT
WALLACE, BRUCE LINDA
WALLACE, LINDA
WALLACE, LINDA

WALLACE, STEPHEN L.
WALLS, BARBARA M
WALLS, KIM
WALTERS, MITCHELL
WALTON, KYLE
WANLASS, IVAN
WARD, CHRISTY
WARHOL, MARK
WARNBURG, TAMMY
WARNER, DONALD
WASDEN, WENDY
WATERS, BRIAN & SHERRY
WATERS, HARVEY
WATERS, LARRY & DORLA
WATERS, MIKE
WATERS, MONTE & MICHELLE
WATES, RONALD
WATTENBARGER, DEVERLE
WATTERS, JAMES L.
WATTERS, WALTER
WEBER, FRED
WEBSTER, GENE
WEBSTER, JOHN
WEBSTER, MIKE A.
WEBSTER, SHAWN
WEEKES, BART
WEEKES, STEVEN
WEHR, RON
WEIGHALL, STEVEN L.
WEINBERG, PERRY
WELKER, FAY & ELSIE
WELKER, LARRY
WELLES, GEORGIA
WELLS, WADE
WEMPLE, BOB
WEST, CONNIE DORAN
WEST, JUNE
WEST, MOLLY
WEST, SHANE & KIMBERLY
WEST, WENDALL
WESTERGREN, GARY
WESTON, LEON
WESTON, MARTIN & BARBARA
WESTON, PAUL & DARLENE
WESTPHAL, BRIAN
WHEATLEY, BRUCE
WHEELER, CAMERON & BEVERLY
WHEELER, CODY
WHEELER, JEMMIE
WHEELER, RANDY & KATHY
WHITAKER, CAL
WHITAKER, DONALD W.
WHITAKER, GARRY & ALMA
WHITBECK, BRUCE
WHITE, CASEY
WHITE, LORNIE
WHITE, NIC
WHITHAM, MARK
WHITLEECH, BRAD
WHITMORE, DAN
WHITWORTH, LIN & CAROL
WIGHT, TEDDY
WILCOX, JOHN
WILCOX, RON
WILDER, KEN BEVERLY
WILES, GARY
WILKE, JOHN
WILKSON, JON & TERRI
WILLFORD, CAMERON
WILLIAMS, CRAIG
WILLIAMS, DUANNE
WILLIAMS, FRANK
WILLIAMS, JACK
WILLIAMS, RICK
WILLIAMS, RONA
WILLIAMS, RONALD D.
WILLIAMS, SHARELYNN W.
WILLIAMS, TED
WILLIAMSON, ALICE
WILLIAMSON, STEVEN
WILLIARD, CALVIN
WILLIE, DALE RODNEY
WILLIS, BLAIR
WILLIS, DAN
WILLSON, JIM & TERRI
WILSON, BILL C.
WILSON, CHYEL
WILSON, DON WADE
WILSON, EVE
WILSON, HAROLD
WILSON, HOWARD
WILSON, RICHARD
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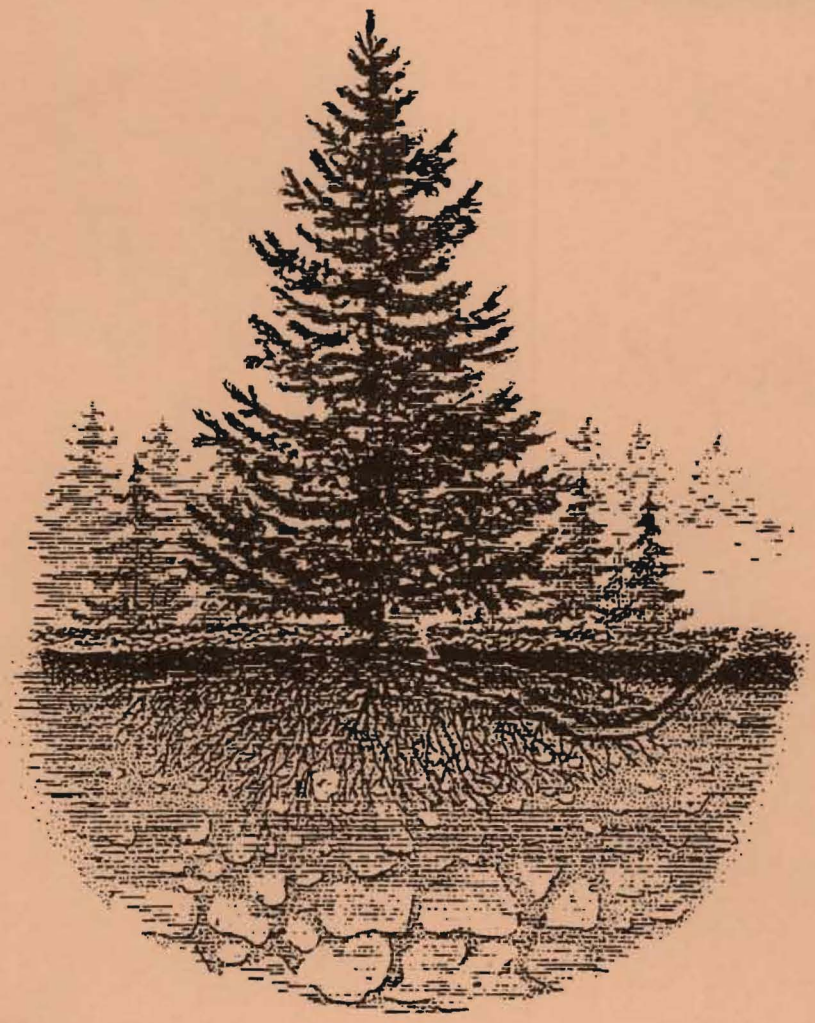

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